PUBLIC UTILITY DISTRICT NO. 1 *of* CHELAN COUNTY
P.O. Box 1231, Wenatchee, WA 98807-1231 • 327 N. Wenatchee Ave., Wenatchee, WA 98801
(509) 663-8121 • Toll free 1-888-663-8121 • www.chelanpud.org

November 6, 2007

VIA ELECTRONIC FILING

Honorable Kimberly D. Bose, Secretary
FEDERAL ENERGY REGULATORY COMMISSION
888 First Street, NE
Washington, DC 20426

Re: **Lake Chelan Hydroelectric Project No. 637-022**
Article 404 – Final Lake Chelan Fishery Plan dated November 6, 2007

Dear Secretary Bose:

The Federal Energy Regulatory Commission (Commission) issued the "Order on Offer of Settlement and Issuing New License"[1] (License) and "Order on Rehearing"[2] for the Lake Chelan Hydroelectric Project (Project) on November 6, 2006, and April 19, 2007, respectively. License Article 404 requested the Public Utility District No. 1 of Chelan County, Washington (Chelan PUD or Licensee), to file the following plan for Commission approval.

- Article 404. *Lake Chelan Fishery Plan.*

  Within one year of the issuance date of the license, the licensee shall file for Commission approval a Lake Chelan Fishery Plan to restore and enhance, where feasible, native fisheries in Lake Chelan and its tributaries and to support the lake's recreational sport fishery. In addition to the measures set forth in Article 6 of the Lake Chelan Settlement Agreement (included in Appendix A), the plan shall include the following measures for the plan components below:

  (a) *Tributary Barrier Removal.* The Lake Chelan Fishery Plan shall contain a detailed description of the methods to be employed to determine if the alluvial barriers re-form and a schedule for implementing the monitoring plan.

  (b) *Fish Stocking Plan.* The Lake Chelan Fishery Plan shall contain a detailed stocking plan, developed to maintain the recreational sport fishery and promote the recovery of

[1] 117 FERC ¶ 62,129
[2] 119 FERC ¶ 61,055

native west slope cutthroat trout in Lake Chelan and its tributaries, that includes, but is not limited to: (1) a provision for stocking of 5,000 pounds of salmonid fingerlings and 33,000 pounds of catchable-size salmonids in Lake Chelan and its tributaries; (2) a description of the stocking locations and species; (3) an implementation schedule; and (4) a provision and schedule for an annual review and revision of the stocking plan and management objectives with the U.S. Park Service (Park Service), U.S. Forest Service (Forest Service), U.S. Fish and Wildlife Service, NOAA National Marine Fishery Service (NMFS), Washington Department of Fish and Wildlife (Washington Fish and Wildlife), Washington Department of Ecology, Confederated Tribes of the Colville Reservation, Yakama Nation, the Confederated Tribes of the Umatilla Indian Reservation, City of Chelan, and the Lake Chelan Sportsman's Association. The licensee shall file the annual report with the Commission 30 days following the review by the consulted entities. The annual report shall include any recommendation for reducing or eliminating the stocking program and any recommended fish enhancement measures to be implemented in place of stocking. The licensee shall not implement the measures until approved by the Commission.

(c) *Entrainment Sampling Plan.* The Lake Chelan Fishery Plan shall contain an entrainment sampling plan designed to determine the potential for entrainment of adult westslope cutthroat trout at the project intakes. The entrainment sampling plan shall include a description of: (1) the methods that would be used to enumerate westslope cutthroat trout in the vicinity of the project intakes, including a schedule of sampling events and (2) the conditions that would trigger entrainment sampling and how the licensee will determine when those conditions have been met. This plan shall be filed for Commission approval at least one year prior to its planned implementation. Annual results of any entrainment sampling shall be compiled in a final report and filed with the Commission no later than March 1 of the subsequent year. The report shall also contain any recommendations for continued sampling, or other studies to evaluate entrainment of cutthroat trout.

The Lake Chelan Fishery Plan shall be developed in consultation with the U.S. Park Service, U.S. Forest Service, U.S. Fish and Wildlife Service, NOAA National Marine Fishery Service, Washington Department of Fish and Wildlife, Washington Department of Ecology, Confederated Tribes of the Colville Reservation, Yakama Nation, the Confederated Tribes of the Umatilla Indian Reservation, City of Chelan, and the Lake Chelan Sportsman's Association. The licensee shall include with the plan documentation of consultation, copies of recommendations on the completed plan after it has been prepared and provided to the consulted entities, and specific descriptions of how the entities' and the Forum's comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies and the Lake Chelan Fishery Forum to comment and to make recommendations before filing the plan with the Commission. If the licensees do not adopt a recommendation, the filing shall include the licensees' 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.

In accordance with the above License requirements, Chelan PUD hereby files the Final Lake Chelan Fishery Plan dated November 6, 2007. Appendix A provides a record of consultation with the entities mentioned above during the development of the plan.

Please do not hesitate to contact me or Jeff Osborn (509-661-4176) of my office regarding any questions or comments regarding this plan.

Sincerely,

Michelle Smith
Licensing and Compliance Manager
michelle.smith@chelanpud.org
(509) 661-4180

cc: Erich Gaedeke, FERC-PRO

LAKE CHELAN FISHERY PLAN

LICENSE ARTICLE 404

Final

LAKE CHELAN HYDROELECTRIC PROJECT
FERC Project No. 637

November 6, 2007

Public Utility District No. 1 of Chelan County
Wenatchee, Washington

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EXECUTIVE SUMMARY

The Federal Energy Regulatory Commission (FERC) Order on Offer of Settlement and Issuing New License (License) and Order on Rehearing for the Lake Chelan Hydroelectric Project No. 637 (Project) were issued November 6, 2006, and April 19, 2007, respectively, to the Public Utility District No. 1 of Chelan County (Chelan PUD). Article 404 of the new Project License requires Chelan PUD to submit to FERC a Lake Chelan Fishery Plan by November 6, 2007. This plan describes the methods and schedule used to demonstrate compliance with efforts to restore and enhance, where feasible, native fisheries in Lake Chelan and its tributaries, and to support the lake's recreational sport fishery required by the new license, as specified in the License articles, and the Lake Chelan Comprehensive Settlement Agreement (Settlement Agreement), October 8, 2003 (Appendix A of the Project License). Included in this plan are provisions for developing a bioenergetically-based food web model, implementing a monitoring and evaluation program, removing tributary mouth barriers, fish stocking, entrainment sampling, and collecting large woody debris.

SECTION 1: INTRODUCTION

License Article 404 requires Chelan PUD, within one year of the license issuance date, to file with FERC a Lake Chelan Fishery Plan (LCFP).

The components of the LCFP are food web model development, monitoring and evaluation program implementation, tributary barrier removal, fish stocking, entrainment sampling, and large woody debris collection, as specified in License Article 404 and Appendix A of the License.

The LCFP was developed in consultation with the Lake Chelan Fishery Forum (LCFF), which includes the National Park Service, USDA Forest Service, U.S. Fish and Wildlife Service, National Marine Fishery Service, Washington Department of Fish and Wildlife, Washington Department of Ecology, Confederated Tribes of the Colville Reservation, Yakama, Nation, the Confederated Tribes of the Umatilla Indian Reservation, City of Chelan, and the Lake Chelan Sportsman's Association.

The LCFP supersedes and is a revised version of Chapter 6: Lake Chelan Comprehensive Fishery Management Plan of the Lake Chelan Comprehensive Plan that was submitted as part of the Lake Chelan Settlement Agreement. Primarily, revisions include a rewrite of the Introduction (Section 1) and Implementation (Section 4) sections to: 1) provide the FERC with proposed actions, schedules, and methods; 2) provide the FERC with as much detail as possible regarding future plans for implementing license measures for Lake Chelan fisheries; and 3) to preserve the background and intent of the Settlement Agreement in order to guide the LCFF during the later years of license implementation.

Chelan PUD recognizes that the level of detail available at this time is somewhat limited due to, among other things, the dynamic nature of the Chelan basin environment and the adaptive management practices to be used in implementing the measures contained in the plan. Further detail will become available as implementation progresses. Chelan PUD will keep the FERC apprised of further progress and detail through future compliance reports.

It is important to note that this plan includes not only the actions to be taken by Chelan PUD, but also the actions to be taken by several state and federal agencies. The actions to be taken by the agencies are included in order to provide FERC the context within which Chelan PUD will be meeting its obligations under the new license.

SECTION 2: LAKE CHELAN FISHERY PLAN GOALS

The goals of the LCFP are to: 1) provide guidance for the management of the fishery resources in Lake Chelan; 2) protect native fish populations while maintaining a healthy recreational sport fishery in Lake Chelan; and 3) develop a monitoring and evaluation program to assess the efficacy of management actions.

The primary LCFF management objectives are to:

1. Emphasize restoration/enhancement of native species, where feasible;
2. Support the recreational sport fishery;
3. Manage the lake elevation to enhance tributary production and recreation (see Section 3.1 and Figure 1);
4. Determine compatibility of management actions with potential future bull trout re-introduction;
5. Develop a monitoring and evaluation program that provides flexibility for future changes in both implementation and the monitoring and evaluation program (see Section 4).
6. Monitor and address entrainment of fish from Lake Chelan into the Project intake per section 4.2.5.

The measures proposed in Section 4 of this LCFP are designed to meet the goals and objectives stated above.

The Lake Chelan Hydroelectric Project Area is shown in Figure 1.

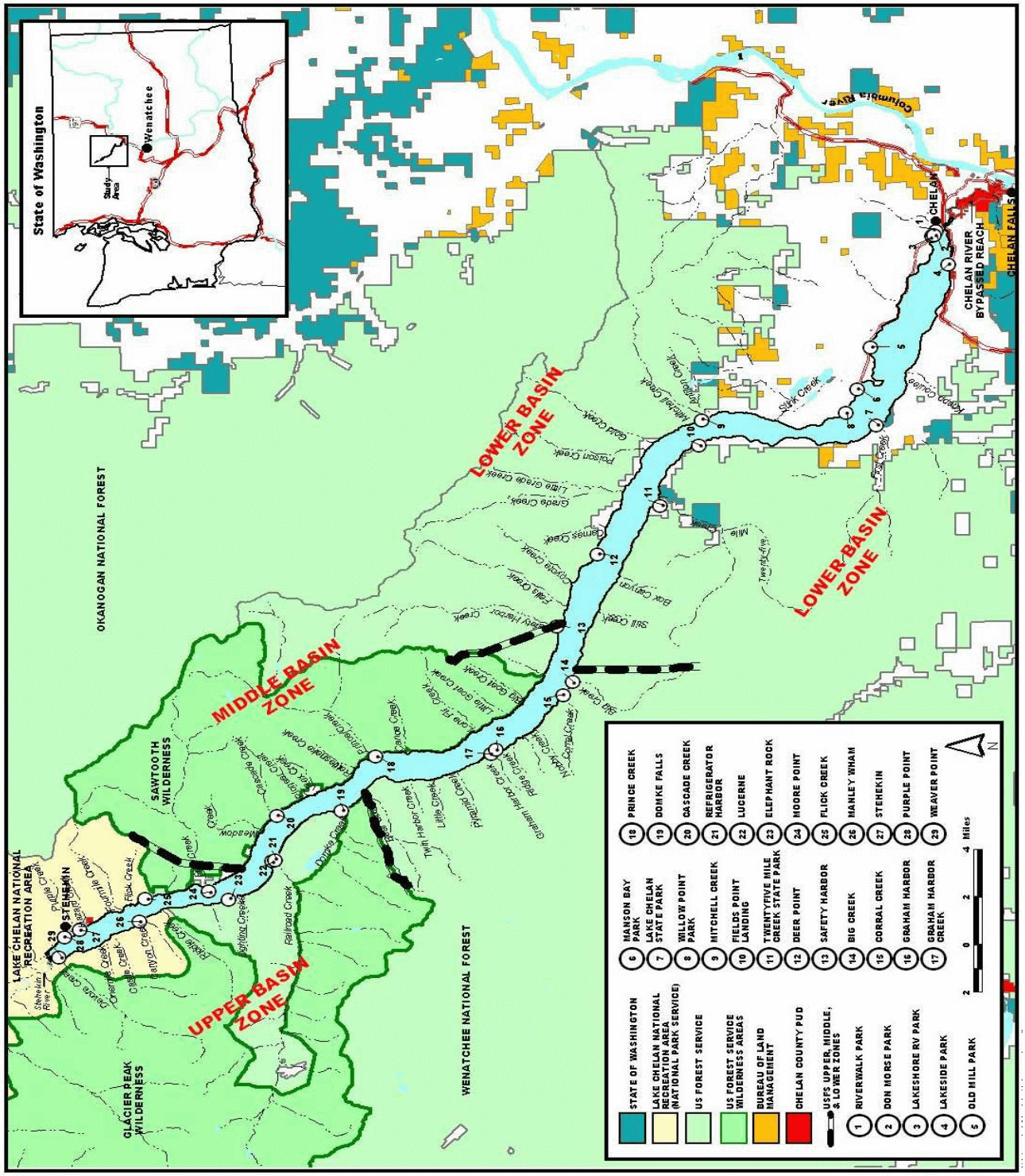

Figure 1: Lake Chelan Hydroelectric Project Area

SECTION 3: FISH SPECIES IN LAKE CHELAN

This section provides an overview of the history and significance of each Lake Chelan fish species followed by a list of primary issues and management recommendations for each species (based on areas of agreement among all of the agencies and organizations participating in the development of the LCFP). These management recommendations form the basis for the measures proposed in section 4 of this LCFP.

It is important to note that ultimate authority for fishery management activities on Lake Chelan rests with each of the relevant resource agencies. Agency authorities and obligations regarding the LCFP are described in section 4.1. Chelan PUD's license requirements and responsibilities are described in section 4.2.

Over the course of the license term, Lake Chelan fishery management recommendations may be revised by the LCFF based on the results of the monitoring and evaluation program to be implemented by Chelan PUD. However, the only potential change that may affect Chelan PUD's license requirements would be to the fish stocking measure. Any recommendation for reducing or eliminating the stocking program and any recommended fish enhancement measures to be implemented in place of stocking will be submitted to the FERC in an annual report for approval prior to implementation.

The LCFP is based on relicensing studies that were conducted in 1999, 2000, and 2001 to determine the current status of fishery resources in Lake Chelan. The studies investigated: (1) sport catch through a creel survey; (2) the incidence of barriers to upstream spawning migration in lake tributaries; (3) timing of fry emergence; (4) tributary spawning and rearing habitat availability; (5) tributary fish populations; (6) limnological conditions; (7) habitat availability, fish species and use, and recreational fishing in the Stehekin River; and (8) the role of large woody debris (LWD). Much of the relicensing work repeated studies conducted by Brown (1984), so that current conditions could be compared with conditions that existed in 1982 and 1983.

The remainder of this section provides the overview of the history and significance of each Lake Chelan fish species followed by a list of primary issues and management recommendations for each species.

3.1 Westslope Cutthroat Trout

Few Westslope cutthroat trout (WSCT) were captured during relicensing studies, either in the creel survey or tributary investigations (DES 2000a). The few WSCT caught in the creel survey indicates that the current juvenile WSCT stocking effort, approximately 90,000 annually from 1980 to 1999, is not contributing to the WSCT population in the Chelan Basin. Tributary trout populations estimated during relicensing studies, particularly WSCT, are lower than those estimated by Brown (1984). Barriers to upstream spawning migration were identified in most tributary mouths investigated (DES 2000b). Barriers identified were in the form of depth, gradient, and/or velocity barriers. The Natural Sciences Working Group (NSWG), the relicensing group comprised of federal and state fish and wildlife agencies, Tribes, and other interested

parties, concluded that these barriers were created as a result of Project operations since 1981 (when the second license was issued), and are, most likely, contributing to trout population decline in the Lake Chelan tributaries. The fishery agencies (USFWS, WDFW) have stated a strong desire to restore native species in the Chelan Basin, particularly WSCT, as part of the relicensing process. Local community representatives have also stated a strong desire to maintain the existing recreational trout fishery.

Primary issues raised by stakeholders during the relicensing process

- Phase out rainbow trout (RBT) stocking – Washington Department of Fish and Wildlife (WDFW), USDA Forest Service (USDA-FS), Lake Chelan Sportsman's Association (LCSA), National Park Service (NPS)
- Re-establish/supplement tributary populations where suitable – USDA-FS, WDFW
- Maintain present angling restrictions for WSCT- USDA-FS, NPS, WDFW
- Restrictive harvest of WSCT until population rebuilds – USDA-FS, NPS, WDFW
- Manage water levels to optimize spawning, incubation and rearing - NPS, USDA-FS, WDFW
- Monitor levels of hybridization between WSCT and RBT - NPS, WDFW
- Minimize loss from entrainment/spills - NPS, LCSA, WDFW
- Support habitat enhancement - WDFW
- Delay stocking until spill completed - LCSA
- Develop a monitoring and evaluation program - WDFW, USDA-FS, LCSA, NPS

LCFF Management Recommendations

1. Over a four-year period, with careful monitoring and evaluation, replace the current allotment of 100,000 RBT with increasing proportions of Twin Lakes WSCT until only WSCT are stocked. WSCT from Twin Lakes, Washington, is the preferred donor stock because WSCT from Lake Chelan were planted in Twin Lakes in the early 1900s. Thus, Twin Lakes WSCT are genetically very similar to the WSCT that originally inhabited Lake Chelan.
2. Eliminate, immediately, stocking of RBT in high lakes and tributaries of the Chelan watershed.
3. Move toward stocking WSCT of Twin Lakes origin. Accomplish through:
   - stocking catchable-size Twin Lake WSCT
   - planting Twin Lake WSCT eyed eggs in tributaries
   - maintain recreational trout fishery with Twin Lake WSCT
   - fish management needs of Lake Chelan will take priority over other waters throughout the state in the allocation of Twin Lake WSCT eyed eggs
   - locate an alternative source of Twin Lakes WSCT or other stocks of WSCT to be used in other waters throughout the state.
4. Manage lake water levels and conduct mechanical barrier removal to provide tributary access for spawning, incubation, and rearing.
5. Develop a monitoring and evaluation program to assess the efficacy of management actions.
6. Maintain fishing closure at mouths of lake tributaries to protect spring spawning adult salmonids until the WSCT population recovers.

7. Delay stocking of catchable WSCT until after spill is terminated, to allow stocked fish to survive the winter in the lake, return to Lake Chelan tributaries to spawn, and contribute to natural reproduction.

WDFW began a gradual conversion of rearing 33,000 pounds of catchable-sized RBT to WSCT in 2002. Approximately 25 percent of the total poundage was converted to WSCT in 2002, 50 percent in 2003, 75 percent in 2004, and 100 percent to WSCT in 2005. WSCT eggs were obtained from Twin Lakes and taken to the Chelan Hatchery for incubation and rearing to release size.

During the conversion of RBT to WSCT, WDFW has experienced fish health issues with raising 33,000 pounds of WSCT at the Chelan Hatchery. To maintain the number of catchable-sized salmonids released for recreational fishing in the Wapato Basin, WDFW has released some triploid RBT in addition to WSCT[1]. The fish health issues experienced at the Chelan Hatchery are being addressed by Chelan PUD by developing an Integrated Hatchery Improvement Plan (IHIP) for all PUD hatchery facilities. The intent of the plan is to identify future hatchery facility needs to ensure that the PUD will be able to provide the level of production agreed to in the Anadromous Fish Agreements and Habitat Conservation Plans for the Rocky Reach and Rock Island projects (HCPs), the Rocky Reach Comprehensive Settlement Agreement, and the Lake Chelan Comprehensive Settlement Agreement during the terms of these agreements.

One WSCT enhancement measure that has been implemented is installation and operation of remote site incubators in First and Twentyfive Mile creeks. Eyed WSCT eggs from Twin Lakes stock were placed in incubators to incubate, hatch, and seed the creeks with newly emerged fry, with the intent to supplement the natural populations currently existing in those creeks. Additionally, WSCT fry and fingerlings have been released in Mitchell, Safety Harbor, and Prince creeks with the same intent to supplement natural populations.

3.2 Rainbow Trout

Rainbow trout have been stocked in Lake Chelan since the early 1900s (DES 2000a). Recent stocking efforts, since 1990, have been conducted to make up for a shortfall in kokanee production, and to support a recreational fishery in the Wapato Basin of Lake Chelan. However, it has been well documented in other systems that introduction of RBT has detrimental effects on WSCT populations, due to competition and hybridization. The NSWG concluded that reducing, and eventually eliminating, RBT stocking would be an important step in restoring WSCT populations in the Chelan Basin.

Primary issue raised by stakeholders during the relicensing process

- Phase out RBT stocking - WDFW, USDA-FS, LCSA, NPS

[1] See section 4.2.4

LCFF Management Recommendations

1. Over a four-year period, with careful monitoring and evaluation, replace the current allotment of 100,000 RBT with increasing proportions of Twin Lakes WSCT until only WSCT are stocked.
2. Eliminate, immediately, stocking of RBT in high lakes and tributaries in the Chelan Basin, and in the Lucerne Basin of Lake Chelan.
3. Investigate feasibility of stocking triploid RBT to support recreational fishery if fish in addition to WSCT are needed.

No RBT with reproductive potential have been stocked in Lake Chelan or its tributaries since 2005. Triploid rainbow have been stocked to support the recreational fishery in the Wapato Basin. See previous update on WSCT and section 4.2.4.

3.3 Kokanee

Kokanee are the most popular recreational fish in Lake Chelan (DES 2000a). Recreational fishers have indicated a strong desire to maintain the size and number of fish at current levels. Spawning surveys conducted in recent years show that the Lake Chelan kokanee population is as high, or higher, than historical numbers (Fielder 2000). Expanding kokanee populations in the Stehekin River are a growing concern among NPS managers, particularly in light of continued stocking. Major NPS and USFWS concerns regarding kokanee include impacts to native fish and invertebrate communities, alteration of natural nutrient levels in the Stehekin system, bear/human interactions related to use of kokanee carcasses as a food source, changes in the distribution of other wildlife species that feed on kokanee carcasses or derive benefits from enhanced nutrient levels related to carcass decomposition, and transfer of metals and pesticides from the lake to the Stehekin River via movement of the large numbers of kokanee into the river.

The NSWG recognized the need to re-evaluate the effectiveness of kokanee and landlocked Chinook stocking in light of the potential biological benefits (i.e. WSCT establishment; increased kokanee survival) that will result from the discontinuation of lake trout stocking in the lake. However, population objectives and methods for monitoring population size, species interactions, competition, and other factors first need to be developed for Lake Chelan for all species.

Primary issues raised by stakeholders during the relicensing process

- Conduct annual spawning ground surveys - WDFW, NPS
- Adjust stocking numbers to balance population with other species - WDFW
- Develop Lake Chelan strain of kokanee for planting - WDFW, USDA-FS
- Adjust stocking methods: scatter release from barge - WDFW, LCSA
- Remove Twenty-five Mile Creek barrier and rehabilitate spawning channel - WDFW, USDA-FS, LCSA
- Remove tributary mouth barriers – WDFW, USDA-FS
- Develop population management objective compatible with recovery/protection of native species - NPS, USDA-FS, WDFW
- Supplement population if objective is not met, and only if it can be shown that stocking increases population - NPS, USDA-FS, WDFW

- Improve tributary habitat - USDA-FS
- Rely on natural production - USDA-FS
- Manage as principal sport fish species - USDA-FS
- Delay stocking until spill is completed - LCSA
- Reduce predation loss by discontinuing stocking of lake trout - NPS, WDFW
- Balance Chinook and kokanee abundance to provide an optimal number of kokanee of an acceptable size and as many salmon as needed for this balance -WDFW, USDA-FS, LCSA
- Minimize loss from entrainment/spills - NPS, LCSA
- Develop monitoring and evaluation program - WDFW, USDA-FS, LCSA, NPS

LCFF Management Recommendations

1. The first priority of the LCFF is to develop an Interim Stocking Plan for all species stocked in Lake Chelan and its tributaries, with particular emphasis on addressing the issue of stocking kokanee. It is expected that this Interim Stocking Plan will remain in place until the monitoring and evaluation program can be implemented, thereby providing better information upon which to make longer term management decisions.
2. Develop population size objectives compatible with recovery and protection of native fish species, and compatible with NPS management goals for the Stehekin River.
3. Monitor population:
   - stock when a population declines below the established population objective, using locally adapted or "naturalized" Lake Chelan stock for supplementation, instead of Kootenai or Whatcom stocks
   - maintain a recreational kokanee fishery
   - develop a monitoring and evaluation program to assess the efficacy of management actions, particularly whether the stocking of kokanee increases the kokanee population in the lake, and whether it increases the kokanee spawning population in the Stehekin basin.
4. Stocked fish should be released after spill has stopped (September/October).

The first effort to secure a locally-adapted source of kokanee eggs for Lake Chelan occurred in fall 2006. An attempt was made to trap adult at the mouth of the Stehekin River, which proved unsuccessful. Kokanee adults were captured in Company Creek, using electrofishing techniques, spawned, and eggs transported to the Chelan Hatchery. Eggs were incubated and reared to appropriate size for release into Lake Chelan. However, the number of potential spawning adults, based on the 2007 spring fishery, was judged sufficient to support the kokanee population in Lake Chelan. Therefore, the kokanee production collected from the Stehekin in 2006 was released into Banks Lake**.**

3.4 Landlocked Chinook Salmon

Landlocked Chinook salmon were considered the trophy fish in Lake Chelan. Landlocked Chinook supported a very strong recreational and commercial (guided) fishery in the late 1980s and early 1990s. The LCSA depended on the annual Chinook Derby on Lake Chelan to raise funds for implementing fishery enhancement projects in the Lake Chelan basin. Additionally, the Chinook Derby was a significant economic event for the community of Chelan, as it drew participants from all parts of Washington and adjoining states. The LCSA and the Chelan

community strongly desire to rebuild the Chinook fishery and restore the annual Chinook Derby, if feasible.

Conversely, the NPS and USFWS believe that Chinook, like kokanee, lake trout, and RBT, have been stocked in Lake Chelan in spite of continuing declines in native fish populations and without careful evaluation of primary and secondary trophic level impacts. The NPS and USFWS believe that the LCFF should develop an Interim Stocking Plan, which would remain in effect until the effects of stocking can be further evaluated.

The population of Chinook has declined over the past several years, according to harvest statistics (DES 2000a). The NSWG examined many possible causes of decline, such as low survival of stocked fish, low natural reproduction, changes in race/deme of stocked fish, changes in rearing conditions of stocked fish, smolt emigration from the lake, and excessive harvest. As with other Lake Chelan species, an important part of the LCFP is development of a monitoring and evaluation program to assess species interactions and the affects of management actions.

Primary issues raised by stakeholders during the relicensing process

- Rear 19-20 months prior to release - WDFW, LCSA
- Release no earlier then mid to late September (after spill terminated) - LCSA
- Stock identified spawning areas with eyed eggs - WDFW, LCSA
- Reduce daily limit - WDFW, LCSA
- Experiment with different stock - WDFW
- Employ coded wire tag (CWT), ventral clip - WDFW
- Balance kokanee and Chinook population - WDFW
- Reduce stocking of Chinook by 50 percent - USDA-FS
- Limit future stocking to triploid Chinook only - WDFW, NPS, USDA-FS
- Collect data on species interactions during the monitoring and evaluation period (perhaps 5 yrs.), and then use the results as the basis for future management decisions - USDA-FS, WDFW, NPS
- Allow natural production to sustain fishery long-term - USDA-FS
- Significantly reduce stocking until evaluation of impacts to native species is completed - NPS
- Monitor natural production and evaluate effects on native fish - NPS

LCFF Management Recommendations

1. The first priority of the LCFF is to develop an Interim Stocking Plan for all species stocked in Lake Chelan and its tributaries, with particular emphasis on addressing the issue of stocking landlocked Chinook[2]. It is expected that this Interim Stocking Plan will remain in place until the monitoring and evaluation program can be implemented, thereby providing better information upon which to make longer term management decisions.
2. Investigate landlocked Chinook as a predator species:
   - investigate feasibility of stocking triploid Chinook
   - set interim harvest restrictions to protect population size

[2] See section 4.2.4

   - support recreational fishery
3. Evaluate impacts of Chinook on native fish species in Lake Chelan, and investigate management actions that would limit potential impacts. Support recreational fisheries for Chinook if impacts on native fish populations are minimal.
4. Discontinue lake trout stocking:
   - discontinue stocking juveniles
   - reduce adult population
   - study presence/absence of natural reproduction of lake trout in Lake Chelan and associated tributaries
5. Develop monitoring and evaluation program to assess efficacy of management actions.

Enhancement efforts for Chinook salmon have continued using remote site incubators and adjusting angling restrictions. Triploid Chinook salmon eggs have been place in a remote site incubator in Mill Creek since Chinook salmon fingerling plants were discontinued. Additionally, angling for Chinook salmon has been limited to only the month of May, with a one fish limit and minimum size restriction of 15 inches.

3.5 Bull Trout

Bull trout have not been observed in Lake Chelan or its tributaries since the early 1950s. The causes of decline, and apparent demise, of the bull trout population, have been speculated to be a catastrophic epizootic event (disease outbreak), unsuccessful spawning and loss of spawning habitat during floods in the late 1940s and early 1950s, excessive harvest, or a combination of the above (Brown 1984).

Several relicensing stakeholders, and primarily the USFWS, want to investigate the feasibility of restoring bull trout to the Chelan Basin. The USFWS is currently preparing a Bull Trout Recovery Plan, which may address Chelan Basin recovery efforts. However, NSWG members expressed serious concern about Chelan Basin perturbations i.e., non-native species introductions, remaining presence of pathogens, availability of bull trout donor stock, etc., that may preclude bull trout re-introduction. Due to these concerns, the LCFP focuses, initially, on conducting a bull trout restoration feasibility assessment before actually attempting to re-introduce the species into the basin.

If feasible, the ultimate goal of the state and federal Agencies is to attempt to reintroduce self-sustaining populations of bull trout in waters they historically inhabited in the Stehekin River and tributaries that drain into the Stehekin River or directly into Lake Chelan. The first step will be to conduct a survey designed to locate any bull trout population that might still exists in the system. If a fluvial bull trout population is found, the second step will be to determine if habitat conditions exist which have limited their re-colonization of the system. The next step would be to eradicate the factor(s) that have been limiting bull trout or determine if enough fish exist to use as a brood stock, so we could avail them the survival advantage of the hatchery system. If no bull trout population is found, then, if feasible, an appropriate stock of fluvial fish from another river may be chosen to use for reintroduction. Possibly bull trout from the Chiwawa River stock, which are adfluvial, could be used.

Primary issues raised by stakeholders during the relicensing process

- Reintroduce fluvial bull trout - WDFW, USFWS
- Conduct survey to locate possible remaining population in Lake Chelan and the Stehekin watershed - WDFW, USFWS
- If feasible, attempt to reintroduce using identified stock - WDFW, USFWS, City of Chelan
- Determine appropriate donor stock - WDFW, USFWS
- Delay re-introduction until the following issues are evaluated - USDA-FS, NPS, USFWS, WDFW:
  - Determine interactions between bull trout and brook and lake trout;
  - Determine effects of re-introduction of resident/fluvial bull trout on native cutthroat trout;
  - Determine fish pathogens present;
  - Identify and evaluate bull trout donor source(s);
  - Determination for the potential of angling restrictions affecting sport fishing;
  - Identify appropriate locations for re-introduction.
- Maintain recreational fishing opportunities for other species as a high priority (similar to Lake Wenatchee mgt.) - USDA-FS, NPS, LCSA, WDFW, City of Chelan
- Do not attempt bull trout re-introduction - LCSA, PFLC
- Phase out stocking of RBT and discontinue stocking of lake trout - NPS, WDFW
- Manage kokanee and Chinook populations at levels to minimize interference with potential bull trout recovery efforts - NPS, USDA-FS, WDFW
- Disease screening of hatchery fish - NPS, WDFW
- Manage water levels for fish - NPS
- Minimize loss from entrainment/spills – NPS, LCSA, WDFW
- Develop monitoring and evaluation program - WDFW, USDA-FS, LCSA, NPS, USFWS

LCFF Management Recommendations

1. Investigate feasibility of re-introducing fluvial and adfluvial bull trout.
2. Maintain recreational fishing opportunities for other species as a high priority (Lake Wenatchee mgt.)
3. Develop management and evaluation program to assess efficacy of management actions.
4. Discontinue stocking brook and lake trout;
5. Reduce adult population of brook and lake trout.

The NPS, USFWS, and USDA Forest Service have conducted rigorous snorkel surveys in the Stehekin drainage and other primary Lake Chelan tributaries attempting to locate bull trout. To date, no bull trout have been observed in any of the NPS surveys conducted in the upper and lower mainstem Stehekin River, Bridge Creek and its accessible tributaries Park Creek and Flat Creek. The USFWS also surveyed sections of the upper Stehekin mainstem, Park Creek and Flat Creek in 2002 (Halupka et al. 2002). Their results showed that the habitat was suitable for bull trout. However, no bull trout were observed at the 19 stations that were snorkeled. Other tributaries surveyed by the USFWS and USDA Forest Service were Railroad Creek (Kelly Ringel 2003), Fish Creek (De La Vergne 2005), Prince Creek (De La Vergne 2005), Safety

Harbor Creek (De La Vergne 2005), and Agnes Creek south fork/Swamp Creek (USDA Forest Service 2003). No bull trout were observed in any of these tributaries.

3.6 Lake Trout

Lake trout have also contributed significantly to the trophy fish fishery in Lake Chelan. The Washington State record, a 35 lb. 7 oz. fish, was caught in December 31, 2001. Additionally, a 33 lb. 6.5 oz. fish was caught in August 2001; a 31 lb. 2.5 oz. fish was taken in May 2000; and another 30 + lb. fish was taken in May 1999. Popularity of the lake trout fishery has increased in recent years as the landlocked Chinook salmon fishery has declined. A primary concern of the LCFP is restoration of native species. Management objectives are aimed at minimizing the impacts of non-native apex predators on native species and to provide additional sportfishing opportunity. Literature acquired from other systems that include lake trout indicate strong potential for adverse species interactions between lake trout, kokanee, landlocked Chinook, WSCT, and bull trout. Due to the potential adverse effects on native species and landlocked Chinook salmon, continued stocking of lake trout is being questioned at this time. However, an important aspect of the monitoring and evaluation program is to investigate these potential impacts and develop appropriate management actions for lake trout.

Studies conducted in 1999 and 2000 for relicensing support indicate that lake trout are reproducing naturally in Lake Chelan (DES 2000a). A lake trout fry, approximately 32 mm in length, was observed off the mouth of First Creek during snorkel surveys conducted in July 2000. This fish was much smaller than the lake trout planted on June 15, 2000. The two biologists who observed the fry were confident that the fish was not any of the *Oncorhynchus* species or a bull trout. Additional evidence supporting lake trout natural reproduction in Lake Chelan is observation of three lake trout juveniles (75-100 mm) in a side channel in lower mainstem Stehekin River on September 12, 2000 during snorkel surveys.

Primary issues raised by stakeholders during the relicensing process

- Discontinue stocking program - WDFW (Alt. 1), USDA-FS, NPS
- Continue stocking program - LCSA
- Survey to determine number and origin of fish - WDFW, LCSA
- Increase limit - WDFW
- Explore the need for active removal programs - NPS
- Assess kokanee population - WDFW, LCSA
- Attempt to balance kokanee and lake trout populations - WDFW, LCSA
- Develop monitoring and evaluation program - WDFW, USDA-FS, LCSA, NPS
- Do not support any efforts to significantly reduce population of lake trout - LCSA, City of Chelan
- Monitor the circulation of bioaccumulative contaminants through the food web as the species balance changes through application of the fishery management plan - Ecology

LCFF Management Recommendations

1. Discontinue lake trout stocking program.
2. Evaluate population size, recruitment, distribution, spawning areas and investigate feasibility of potential eradication methods.

3. Develop monitoring and evaluation program to assess efficacy of management actions.
4. Study presence/absence of natural reproduction in Lake Chelan and associated tributaries.

The lake trout abundance in Lake Chelan has increased rapidly since 2003, based on sport catch. Due to the rapid increase in the population, sport harvest restrictions have been removed (no limit) for lake trout.

Extensive fish population sampling, primarily targeting lake trout, has been occurring in support of an ongoing Bioenergetics study of the aquatic biota assemblage of Lake Chelan by the University of Washington (Beauchamp and Schoen 2005). Unpublished preliminary catch data (Schoen 2006) are summarized in Table 1. The UW sampling period encompassed 32 sampling days during the months of August, September, November, February, and May during the time period from August 18, 2004 to February 23, 2006. Sampling methods included horizontal sinking gillnets, midwater suspended gillnets, minnow trapping and occasional hook-and-line. During September 2004, WDFW conducted littoral sampling in the Wapato basin using electrofishing (boat) and night gillnetting. Their results are also summarized in Table 1. Note that this is the first documented occurrence of largemouth bass and pumpkinseed in Lake Chelan. The duration (3 years), timing (year round, day and night), intensity (more than 30 discrete sampling events), and rigor of the combined (WDFW and UW) bioenergetics fish sampling cause heavy weighting of this line of evidence in support of the assumption of extirpation of bull trout from Lake Chelan. Additional sampling results will be added as data become available.

Table 1: Fish Species Captured During WDFW and UW Sampling, 2004-2006

Species	WDFW (9/13/04)	U.W. (2004-06)
Peamouth	4	519
Lake trout	0	416
Suckers	121 (mostly largescale)	283 (mostly bridgelip)
Burbot	0	137
Westslope cutthroat trout	18	~102
Kokanee	0	~74
Smallmouth bass	243	41
Northern pikeminnow	632	~30
Three-spine stickleback	3	~30
Rainbow trout	63	8
Chinook salmon (landlocked)	0	5
Sculpin spp.	0	~5
Tench	19	4
Pumpkinseed	13	0
Largemouth bass	2	0
Brown bullhead	0	1

3.7 Burbot

Little is known of the burbot biology and population characteristics in Lake Chelan. The only data currently available are harvest data. Burbot population dynamics need to be investigated more thoroughly in order to develop sound future management actions.

Primary issues raised by stakeholders during the relicensing process

- Assess burbot population trends via index sampling - WDFW, LCSA, NPS
- Use otoliths for age structure - WDFW
- Routine sample gonads - WDFW, USDA-FS, LCSA
- Angling restrictions if population continues to decline - USDA-FS, NPS
- Disease screening - NPS
- Investigate life history requirements of burbot in the Chelan watershed - NPS
- Assess hydro Project related impacts – NPS

LCFF Management Recommendations

1. Develop monitoring and evaluation program to assess efficacy of management actions.
2. Monitor trends in abundance, survival, recruitment and evaluate effects of angling regulations and disease screening.

The LCFF has a serious concerned regarding the status of the burbot population in Lake Chelan. Numerous samples of hard, black, necrotic ovaries have been observed in female burbot captured in recent years. The cause of the abnormalities observed in burbot ovaries has been identified as an unknown fungus. Dr. Tim Walsh, histopathologist from the Washington Animal Disease Diagnostic Laboratory (WADDL), has been investigating this fungus since 1999. Though he has been unable to culture the organism, he has been able to sequence the DNA. This DNA sequence has not been described previously. He is still interested in trying to culture this fungus. To date they have been unsuccessful, despite numerous attempts and consultation with other mycologists. The significance of this fungus to the reproductive health of these fish is unknown.

Due to the concern regarding the unknown pathogen affecting burbot gonads and the apparent decline in the population, WDFW increased angling restrictions for burbot. WDFW eliminated the use of set-lines for recreational fishing for burbot beginning in 2005. This regulation is still in effect.

3.8 Smallmouth Bass

Smallmouth bass were introduced illegally into Lake Chelan some time around 1990. The smallmouth population has increased in the lake and supports an active sport fishery. This species will require some management to maintain control/confinement of the population. The LCFF recommends no enhancement measures for this species at this time.

Primary issues raised by stakeholders during the relicensing process

- No change in angling regulations - WDFW
- Monitor isolation to Wapato Basin - USDA-FS, LCSA, NPS, WDFW
- Remove any developing populations in the Lucerne Basin - NPS, WDFW
- WDFW will not direct any enhancement measures toward smallmouth bass
- Develop enforcement efforts necessary to ensure population is controlled and no further “illegal relocations” take place

LCFF Management Recommendations
1. Develop monitoring and evaluation program to assess efficacy of management actions.
2. No enhancement measures for this species are recommended at this time.
3. Conduct water temperature and smallmouth distribution and abundance monitoring in the Lucerne Basin and Stehekin Flats.
4. Implement management actions to remove smallmouth if found in the Lucerne Basin.

3.9 Eastern Brook Trout

Eastern brook trout have become established in Twenty-five Mile Creek and the Stehekin River from historic stocking efforts. The NSWG had a strong desire to remove brook trout from the Chelan Basin due to adverse impacts from this species through competition and disease on native salmonids. Any recovery efforts for WSCT and bull trout populations would be hampered by the presence of Eastern brook trout in the Chelan Basin.

Primary issues raised by stakeholders during the relicensing process

- Eradicate, if possible, Eastern brook trout from Twenty-five Mile Creek and Stehekin River – USDA-FS, NPS, WDFW, USFWS
- Angling regulations should be adopted to encourage selective harvest of Eastern brook trout, unless bull trout restoration is pursued and there is a possibility of incidental catch of bull trout due to misidentification – USDA-FS, NPS, USFWS

LCFF Management Recommendations
1. Take all feasible actions to eradicate Eastern brook trout from Twenty-five Mile Creek and the Stehekin River.
2. Monitor success of eradication efforts.

The recreational angling limit for Eastern brook trout in Twenty-five Mile Creek has been proposed to be increased from the current level, five per person per day, in an attempt to eradicate this species from these waters. However, the angling limit has not yet been approved by WDFW. The last dates and locations brook trout have been stocked in the Lake Chelan Basin are as follows: Twenty-five Mile Creek (1980), Antilon Lake (1986), Lake Chelan proper (1988), Dry Lake (1981), Wapato Lake (1991), and Roses Lake (1983) (WDFW fish stocking database pre-1982 and 1982-1994).

3.10 Other Native Fish Species

- Pygmy whitefish
- Mountain whitefish
- Threespine stickleback
- Peamouth chub
- Chiselmouth
- Northern pikeminnow

The effects of non-native fish stocking on these native species is unclear. Pygmy whitefish, of particular concern, is listed as a Washington State species of concern. Additional data collection

on Pygmy whitefish and other native species need to be included in the LCFP monitoring and evaluation program in order to develop sound future management actions.

Primary issues raised by stakeholders during the relicensing process

- Periodic surveys to assess population trends and to evaluate status of populations - USDA-FS, NPS, Ecology
- Avoid management actions that would push these species to extirpation - USDA-FS, Ecology

LCFF Management Recommendation
1. Develop monitoring and evaluation program to assess efficacy of management actions.

3.11 Other Non-native Introductions

Primary issues raised by stakeholders during the relicensing process

- No new introductions of non-native species - USDA-FS, NPS, WDFW, LCSA
- Investigate feasibility of sockeye introduction – Yakama Nation (YN)

LCFF Management Recommendations
1. No new introductions of non-native species.
2. No introductions of anadromous fish to the lake - USDA-FS, NPS, WDFW, LCSA [Columbia River Inter-Tribal Fish Commission (CRITFC)/YN dissenting].

Increasing numbers of bluegill have been observed in Lake Chelan. One specimen was captured during baseline entrainment sampling in 2001 (DES 2001a). Fourteen were observed in the lower section of Reach 3 of the Chelan River in 2007 during a routine snorkel after spill was terminated at the Chelan Dam (Osborn, pers. com). Presumably, these fish originated from Lake Chelan and were carried downstream into the Chelan River during spill.

Additionally, WDFW conducted electrofishing and gillnetting efforts in 2004 in the Wapato Basin of Lake Chelan in support of the U.W. bioenergetically-based food web model development and captured two largemouth bass and 13 pumpkinseed sunfish. This is the first documentation of largemouth bass and pumpkinseed presence in Lake Chelan.

3.12 Aquatic Invasive Species

Invasion of Lake Chelan by aquatic invasive species, such as Eurasian watermilfoil, Zebra mussels, and Quagga mussels, is a concern of Ecology and the LCFF. To assist in regional efforts to prevent the spread of aquatic invasive species, Chelan PUD will provide signage at PUD operated boat launches to inform the public of aquatic invasive species and methods to prevent the transmission of these species to other water bodies. Chelan PUD will also report to Ecology and the LCFF any the presence of aquatic invasive species observed during project inspections and monitoring and evaluation efforts.

SECTION 4: IMPLEMENTATION

Chelan PUD will implement the following measures required by License Article 404 and Article 6 of the Lake Chelan Settlement Agreement to restore and enhance, where feasible, native fisheries in Lake Chelan and its tributaries and to support the lake's recreational sport fishery.

The components of this implementation section include bioenergetically-based food web model development, implementation of a monitoring and evaluation program, tributary barrier removal, fish stocking, entrainment sampling, and large woody debris collection.

Over the course of the license term, Lake Chelan fishery management recommendations may be revised by the LCFF based on the results of the monitoring and evaluation program to be implemented by Chelan PUD as described in section 4.2 below. However, the only potential change that may affect Chelan PUD's license requirements would be to the fish stocking measure. Any recommendation for reducing or eliminating the fish stocking program and any recommended fish enhancement measures to be implemented in place of stocking will be submitted to FERC in an annual report for approval prior to implementation.

The extent to which all the desired management recommendations described in section 3 of this LCFP are fulfilled is dependant upon the federal and state agencies ability to raise funds through cost-sharing or other means. Potential agency funding limitations will not affect Chelan PUD's license requirements and responsibilities described in section 4.2.

As noted in section 1, the LCFP depends on coordination among the management agencies with authority over fishery resources in Lake Chelan. The following provides an overview of individual management agency commitments under the LCFP. FERC has jurisdiction only over Chelan PUD and cannot compel the agencies to meet their responsibilities under this section. However, the LCFF has included this discussion of agency responsibilities in order to put the entire effort in context. Chelan PUD's license requirements and responsibilities are identified in section 4.2.

4.1 Agency Responsibilities

4.1.1 WDFW

WDFW intends to continue funding all programs at the Chelan Hatchery, other than those that Chelan PUD is required to fund in the new license. WDFW will also diligently pursue cost-sharing opportunities with federal, state, and private entities in order to fund the monitoring and evaluation program.

4.1.2 USDA Forest Service

The USDA Forest Service will also diligently pursue cost-sharing opportunities with federal, state, and private entities in order to fund the monitoring and evaluation program. The USDA Forest Service will continue to provide data as part of its ongoing monitoring and evaluation program on its lands. It will also seek grants to provide additional funding for LCFP implementation.

4.1.3 NPS

The NPS will also diligently pursue cost-sharing opportunities with federal, state, and private entities in order to fund the monitoring and evaluation program. The NPS will continue to provide data as part of its ongoing monitoring and evaluation program on its lands, particularly in the Stehekin River watershed. The NPS will also diligently pursue grants to provide additional funding for LCFP implementation.

4.1.4 USFWS

The USFWS will also diligently pursue cost-sharing opportunities with federal, state, and private entities in order to fund the monitoring and evaluation program. The USFWS will provide data sharing and bull trout monitoring in the Stehekin drainage. The USFWS will seek grants to provide additional funding for LCFP implementation.

4.1.5 Lake Chelan Sportsman's Association (LCSA)

The LCSA has provided funding for projects in the past, such as First Creek culvert replacement, eyed WSCT egg plants, fish stocking programs, funding and labor to improve docks, an annual kids fishing program, and continued community efforts to raise awareness about the Lake Chelan fishery. LCSA also provided considerable support (lodging, dock space, fish samples, fishing guide knowledge, data collection, etc) to assist with data collection for the food web model study. LCSA members have stated that they are willing to fund measures that provide enhancement to Lake Chelan fisheries. The LCSA has also been a strong proponent of developing a sound monitoring and evaluation program to determine effectiveness of management decisions, and could provide funding for a portion of the monitoring and evaluation program.

4.2 *Chelan PUD Responsibilities*

Chelan PUD will implement the following in accordance with the License Order paragraph 49 and Article 404. An implementation schedule for all Chelan PUD license requirements and responsibilities is provided in Section 5.

4.2.1 Food Web Model Development

Article 6(a) of the Settlement Agreement requires Chelan PUD to make available $100,000 (2003 dollars) for developing a food web model for Lake Chelan.

The bioenergetically-based food web model will be used as a tool for evaluating the potential impacts of species interactions, production potential, and environmental conditions (i.e., inter-annual changes in temperature regimes) within a temporal, spatial, and size-structured framework. Information gathered from the model will be used by fishery managers to evaluate current and/or proposed fish stocking strategies and management regulations within the context of ecological feedback from the lake food web.

The initial phase of development for the Lake Chelan food web model was conducted by the University of Washington (UW), supported by funding acquired by the NPS, and logistical support from the USDA Forest Service, WDFW, and LCSA. Field sampling was conducted in Lake Chelan between August 2004 and August 2006, and included intensive gillnetting,

hydroacoustic, and limnological sampling activities. Gill net sets were stratified by lake basin and depth (above thermocline, within thermocline, and two depth intervals below the thermocline) with replicate sites sampled within each basin. Zooplankton and mysid shrimp were sampled at replicate sites with vertical hauls from 0-80 m depth.

Distribution, diet, size and growth data for key fish species, and vertical temperature profiles, zooplankton density, and mysid density data were collected seasonally during the following sampling periods: summer (August and September 2004, August 2005), autumn (November 2004, 2005), winter (February 2005, 2006), and spring (May 2005, 2006). Supplemental zooplankton, mysid, and hydroacoustic sampling was conducted during June, July, and August 2006 to capture density and distribution changes of kokanee, mysids, and zooplankton on a finer timescale during the summer.

Additionally, UW researchers recommend the following analyses to be conducted in the future in order to refine and apply the data currently in-hand to further food web model development:

1. Develop visual foraging models to estimate consumption of pelagic prey by lake trout and Chinook salmon under varying scenarios of predator and prey density and distribution.

2. Test fish stocking strategies to determine which techniques allow for the least number of newly stocked fish to be lost to predation.

3. Improve existing diet data by
    a. Identifying salmonid prey found in predator stomachs to species level using genetic analysis.
    b. Analyzing stomach samples of warm-water fish collected by WDFW.

4. The researchers also suggest that the lake managers begin collecting data necessary to track lake trout population and demographic trends in the Wapato Basin.

The $100,000 to be made available by Chelan PUD for food web model development will be used to address these recommendations. Model development is anticipated to begin in 2008.

The LCFF intends to make the food web model and its results available to the relevant agencies and public. For example, the results of the model may be useful to the Washington Department of Ecology as it investigates the bioaccumulation of toxins in the Wapato Basin of Lake Chelan.

4.2.2 Monitoring and Evaluation (M&E) Program

Article 6(b) of the Settlement Agreement describes Chelan PUD's obligation to make funds available for a monitoring and evaluation program for Lake Chelan fishery resources:

> (1) Within 180 days of the effective date of the New License, and by January 31st of each subsequent year, including any subsequent annual licenses, Chelan PUD shall make available $20,000, to be used by the NPS, the USDA Forest Service, or WDFW, pursuant to a plan developed and adopted by the NPS, USDA Forest Service, and WDFW for

monitoring and evaluating fish in Lake Chelan, as described in Chapter 6 of the Comprehensive Plan. The NPS, USDA Forest Service, and WDFW plan to consult with the LCFF in the course of developing such plan. If, in any year, the NPS, USDA Forest Service, and WDFW fail to develop and adopt such a plan, and submit it to Chelan PUD by January 10, Chelan PUD shall carryover that year's $20,000 in funding until such plan has been developed, adopted, and submitted to Chelan PUD.

(2) Within 180 days of the effective date of the New License, and by January 31st of each subsequent year, Chelan PUD shall make available an additional $20,000, to be used by the NPS, the USDA Forest Service, or WDFW, pursuant to the plan to be developed and adopted pursuant to subsection (b)(1) of this Article. However, Chelan PUD shall only be required to expend such additional $20,000 on the basis of a one-for-one match (in cash or in-kind) in such year by the NPS, the USDA Forest Service, the USFWS, the Washington Department of Ecology (Ecology), the WDFW, or any other organization approved as a source of matching funds by the LCFF. Funds made available in any such year, but not matched by December 31 of the following year, shall cease to be available. For any year in which a plan pursuant to subsection (b)(1) of this Article is not submitted to Chelan PUD, Chelan PUD shall carryover such additional $20,000 in available funding until December 31 of the following year. If such plan is not submitted to Chelan PUD by December 31 of such following year, and one or more requests for payment has not been received by Chelan PUD for such additional $20,000 by December 31 of such following year, such additional $20,000 shall no longer be available. (Note: Costs are in 2003 dollars).

The monitoring and evaluation program will assess the efficacy of NPS, USDA Forest Service, USFWS, Ecology, and WDFW management actions, and aid in evaluating the need for potential future changes as conditions and data analyses dictate.

The LCFF objectives of the monitoring and evaluation program are to:

- Gather data for input into fishery management decisions to protect, conserve, and restore native fish populations, and to maintain quality recreational fishing opportunities,
- Evaluate whether measures implemented are providing desired results,
- Maintain future options and prevent making any irreversible decisions regarding ecosystem function; and
- Prepare annual report of monitoring and evaluation results and provide future recommendations.

Measures of the monitoring and evaluation program may include, but are not limited to, the following:

- Kokanee surveys
  - current effort
  - expanded effort
- Creel surveys

- Tributary indexing
  - 10 representative reaches
  - Westslope cutthroat trout spawning surveys
  - Westslope cutthroat trout and rainbow trout recruitment and abundance surveys
  - Barrier analysis
- Westslope cutthroat trout genetic analysis (influence of rainbow trout in the Stehekin River primarily below Bridge Creek)

The funding level provided by Chelan PUD as part of the license requirement will be used to implement as many of measures of the monitoring and evaluation program as possible. Beyond that, the extent to which these monitoring and evaluation measures will be implemented depends on the ability of the federal and state agencies to provide additional funds, through cost-sharing or other means.

4.2.3 Tributary Barrier Removal

Article 6(c) of the Settlement Agreement describes Chelan PUD's obligation to remove alluvium barriers in tributaries to Lake Chelan. License Article 404 requires a detailed description of the methods to be employed to determine if the alluvial barriers reform and a schedule for implementing the monitoring plan.

> (1) Chelan PUD shall be responsible for removing alluvium barriers in tributaries to Lake Chelan for the term of the New License, including any subsequent annual licenses, in order to facilitate adfluvial salmonid access for spawning, as described in Chapter 6 of the Comprehensive Plan. Potential sites are listed alphabetically in Table 6-1 of Chapter 6 of the Comprehensive Plan, and in the following Table 2:

Table 2: Potential Tributary Barrier Removal Sites

Bear Creek	Lightning Creek
Big Creek	Little Big Creek
Cascade Creek	Lone Fir Creek
Castle Creek	Mitchell Creek
Coyote Creek	Poison Creek
Deep Harbor Creek	Prince Creek
First Creek	Pyramid Creek
Fish Creek	Railroad Creek
Four mile Creek	Riddle Creek
Gold Creek	Safety Harbor Creek
Grade Creek	Twenty-five Mile Creek
Graham Harbor Creek	

> (2) Within the first five years of the New License, Chelan PUD shall implement the following actions within the drawdown zone of such tributaries: (i) remove existing barriers in up to 10 high priority tributaries, and (ii) monitor up to an additional 10 tributaries to determine if the new lake level operating regime described in Article 8 and Chapter 8 of the Comprehensive Plan effectively removes existing barriers from the mouths of these tributaries.

> (3) Every two years during the remaining term of the New License, or at a frequency recommended by LCFF and approved by NPS and USDA Forest Service, Chelan PUD shall fund monitoring of up to 10 tributaries, to determine if barriers are present or have reformed; and to remove any such barriers from up to two tributaries annually, unless barriers are clearly not caused by the Project (e.g., the result of fire, earthquakes, landslides, etc.).

As provided in Article 6(c)(5), the estimated cost to Chelan PUD of these activities is $100,000 (in 2003 dollars).

Monitoring methods to identify and remove barriers, and determine if tributary barriers reform

Tributary barrier identification analysis was conducted using two methods: Forest Practices Board Emergency Rule (2003) and Thompson (1972). Gradient barriers were determined using the Forest Practices Board Emergency Rule (2003). Gradients greater than 20 percent are considered an impassable barrier to fish migration. Streams channels with gradients of 16 to 20 percent are also considered a barrier to fish passage, but may be passable if step-pools are present where fish may rest during upstream migration.

Water depth and velocity barriers were determined using methods outlined by Thompson (1972), also known as the "Oregon Method." Adult trout require a minimum depth of 0.4 ft with water velocity less than 4.0 ft. per second (ft/sec). These criteria must be met over 25 percent of the total stream width, with a continuous section of at least 10 percent of the total stream width.

Standard barrier removal techniques will be used to provide adfluvial salmonids access for spawning. Design development of tributary mouth restoration, selection of tributaries for barrier removal, and monitoring regarding tributary barrier removal will be based on the recommendations of the LCFF, and subject to the approval of the NPS regarding tributaries on its lands, the USDA Forest Service for tributaries on its lands, and the WDFW for tributaries on state lands.

These same methodologies (the Forest Practices Board Emergency Rule and "Oregon Method") will be used during the monitoring process to determine whether barriers have reformed after streams have been treated and existing barriers removed.

In addition to mechanical barrier removal to provide tributary access for Westslope Cutthroat spawning, the lake level will be managed, as described in Appendix A, Article 8 of the Project License, Chapter 8 of the Comprehensive Plan.

After alluvial barriers are mechanically removed, tributary mouths will be monitored to evaluate if they are accessible by spawning fish. Monitoring will involve surveying the tributary mouths on an as-needed basis (once every three to five years) to identify formation of new depth, velocity, or gradient barriers. The goal is to ensure channel integrity sufficient to maintain upstream and downstream fish passage between the lake and the tributary.

Baseline Studies and Background

Barriers to upstream fish passage were identified in seven of the nine study tributaries to Lake Chelan (Table 3) during relicensing baseline studies (DES 2000b). Table 2 lists the study tributaries, type of barrier present in each stream, lake elevation at which upstream passage would become possible, and the dates in 1999 when passage became possible. Six of the creeks had upstream fish passage barriers due to insufficient water depth, three of the creeks had barriers due to high water velocity, and five of the creeks had gradient barriers.

These barriers become exposed to varying degrees when the lake is drawn down from its high pool elevation of 1,100 feet (ft) mean sea level (MSL). All seven barriers are exposed when the lake is below a pool elevation of 1,090 ft. The barriers can become exposed during the period in the spring when adfluvial WSCT and RBT may be attempting to migrate up the tributaries to spawn.

Table 3: Results of the barrier assessment in alluvial fans, April 1999.

CREEK	DISCHARGE (cfs)	GRADIENT BARRIER	DEPTH BARRIER	VELOCITY BARRIER	PASSAGE ELEVATION (ft above msl)	DATE PASSAGE ACHIEVED
First	74.16	No	No	No	1,083	4/20/99
Mitchell	27.04	Yes	Yes	No	1,095	6/17/99
Gold	19.08	No	Yes	No	1,092	6/12/99
Twenty-five Mile	107.54	No	No	No	1,083	4/20/99
Grade	23.28	Yes	Yes	No	1,094	6/16/99
Safety Harbor	30.58	Yes	Yes	Yes	1,092	6/12/99
Prince	73.83	Yes	Yes	Yes	1,092	6/12/99
Railroad	176.73	No	No	Yes	1,097	6/23/99
Fish	27.83	Yes	Yes	No	1,090	6/3/99

Management recommendations are to manage lake water levels, as described in Appendix A, Article 8, Chapter 8 of the Comprehensive Plan, and conduct mechanical barrier removal, as described in Appendix A, Article 6(c), and Chapter 6 of the Comprehensive Plan to provide tributary access for WSCT spawning.

The USDA Forest Service has developed Table 4 of Lake Chelan tributary status, which can be used as a compilation of current information, and as a potential prioritization tool for barrier removal efforts.

Table 4: Information on Trout Populations, Habitat Availability and Potential Migration Barriers for Selected Tributaries to Lake Chelan (excluding the Stehekin system)

Stream	Trout Population Estimate[1]	Density: Trout per square meter[1]	Habitat accessible: square meters[1,2]	Westslope Cutthroat present?[1,2]	Barrier Analysis Needed?[2]	Reason*
Bear	67	0.21	319	Y	Y	H,CT
Big	236	0.85	278	Y	Y	P,D,H,CT
Cascade	453	1.63	278	Y	Y	P,D,H,CT
Castle	3	0.13	23	Y	N	
Coyote	18	0.37	49	N	N	
Deep Harbor	130	2.36	55	N	Y	P,D
First	2483	0.46	5398	N		
Fish	773	0.36	2147	Y		
Four Mile	431	0.48	898	Y	Y	P,D,H,CT
Gold	1478	2.10	704	N		
Grade	824	0.49	1682	N		
Graham Harbor	109	1.52	72	N	Y	P,D
Lightning	26	0.22	118	Y	Y	H,CT
Little Big	9	0.07	129	Y	Y	H,CT
Lone Fir	24	0.37	65	N	N	
Mitchell	480	0.36	1333	N		
Poison	234	1.60	146	N	Y	P,D,H
Prince	1146	0.68	1685	Y		
Pyramid	522	0.53	985	Y	Y	P,D,H,CT
Railroad	430	0.06	7167	Y		
Riddle	77	0.32	241	Y	Y	H,CT
Safety Harbor	1032	0.85	1214	Y		
25 Mile	7776	0.50	15552	N		

1 – From: Brown (1984)
2 – From: USDA Forest Service sources and other relicensing studies (USDA Forest Service, 2000b)
* - P = Population D = Density H = Habitat CT = cutthroat present
Streams in bold: High priority streams for study and barrier analysis
Shaded Areas: Study streams included in Lake Chelan Fisheries Investigation (Chelan PUD 2000)

From this list, the USDA Forest Service provided to Chelan PUD the following priority list for tributary barrier removal (Table 5).

Table 5: USDA Forest Service Tributary Barrier Removal Priority List

Priority	Creek	Priority	Creek
1	Safety Harbor	2	Mitchell
1	Prince	3	First
1	Fish	3	Twenty-five Mile
2	Grade	3	Railroad
2	Gold		

4.2.4 Fish Stocking in Lake Chelan and its Tributaries

Article 6(d) and Section 4.6.3 of Chapter 6 of the Comprehensive Plan require Chelan PUD to make available to the WDFW sufficient funding to rear annually the following resident fish at the Chelan Hatchery for stocking in Lake Chelan:

1. Approximately 5,000 pounds of salmonid fingerlings (for example: 500,000 fish at 100 fish/lb., presently kokanee).
2. Approximately 33,000 pounds of catchable-sized salmonids (for example: approximately 100,000 fish at 3 fish/lb., presently WSCT and triploid RBT).

As provided in Article 6(d)(1), the estimated cost to Chelan PUD of these activities is $30,000 per year (in 2003 dollars).

Article 6(d)(2) and Section 4.6.3 of Chapter 6 of the Comprehensive Plan provide that:

> (2) If WDFW, after coordination with the NPS, USDA Forest Service, and USFWS, and after consultation with the LCFF, decides, at any time during the term of the New License or any subsequent annual licenses, to reduce or eliminate fish stocking into Lake Chelan, the resulting savings shall be available to WDFW for other Lake Chelan fish management activities. Funds to be made available from reductions in fish production shall be determined as equivalent to the proportion of fish production poundage reduced. The funds saved shall be calculated as follows: take the number of pounds of fish production reduced, divide by the 38,000 pounds of fish initially to be produced, and multiply by the $30,000 (as adjusted under section 19 of the Agreement up to the year of the decision to reduce production). For example, if 5,000 pounds of kokanee production was eliminated, $3,950 would be available for other fish management activities (5,000/38,000 x $30,000 escalated = $3,950 escalated).

An Interagency Agreement exists between Chelan PUD (PUD No. 06001) and WDFW (WDFW No. 06-1456) to provide funding for fish stocking.

<u>Stocking locations and species</u>

Prior to 2007, kokanee were stocked annually in the Wapato Basin of Lake Chelan near "The Monument" in May. However, due to concerns regarding predation by lake trout on stocked kokanee, WDFW made releases in 2007 in the Wapato Basin at Mill Bay and Lakeside.

Prior to 2007, catchable-size salmonids, primarily RBT but now converted to WSCT, have been stocked annually in the Wapato Basin at First and Twentyfive Mile creeks in June and July. In 2007, WDFW changed the stocking plan, due to fish health issues with rearing all catchable-sized WSCT, to releasing 50,000 WSCT (at a size of 15 fish/pound) at Lakeside and Mill Bay in March, and 50,000 triploid RBT (at a size of 3 fish/pound) at Lakeside in August and September (Art Viola, WDFW, pers. com.).

Recommendations for fishery management are designed to: 1) provide guidance for the management of the fishery resources in Lake Chelan; 2) maintain a healthy recreational sport fishery in Lake Chelan; and 3) develop a monitoring and evaluation program to assess the efficacy of management actions.

Implementation schedule and annual review

Chelan PUD will convene a meeting of the LCFF no later than April 1 each year for review and revision of the stocking plan and management objectives by the LCFF members. Chelan PUD will file an annual report with the FERC each year following the 30-day review by the LCFF members. The annual report will include any recommendation for reducing or eliminating the stocking program and, in the event that stocking is reduced or eliminated, any recommended fish enhancement measures to be implemented in place of stocking.

As stated in section 2, the LCFF plans to manage fish stocking in a manner that preserves the potential for bull trout reintroduction in the future. Current challenges facing bull trout reintroduction include: 1) disease potential; 2) inter-breeding with brook trout; 3) competition with lake trout; and 4) bull trout donor stock availability. The extirpation of bull trout from Lake Chelan is not well understood; postulated causes are loss of spawning habitat from storm and erosion events, over-fishing, and the outbreak of an epizootic. The disease that caused the epizootic is unknown and may still be present in the lake. Attempts to eradicate brook trout and lake trout from former bull trout habitat in other systems has shown limited success. The intent for the LCFF is to not introduce any additional challenges to bull trout reintroduction through additional fish stocking in the event that the existing challenges are overcome in the future.

4.2.5 Entrainment

Article 6(e) describes the methods that would be used to enumerate Westslope cutthroat trout in the vicinity of the Project intakes, the conditions that would trigger entrainment sampling, and how Chelan PUD will determine if and when those conditions have been met:

> (1) Chelan PUD shall conduct no more than 140 days of entrainment sampling over four sampling years, using the same methodology used during the 2000 and 2001 field seasons, or another methodology of comparable cost recommended by the LCFF, and approved by WDFW, USFWS, and WDOE. Upon request of WDFW, Chelan PUD shall develop a sampling plan in consultation with USFWS, WDOE, and the LCFF, subject to approval by WDFW. The plan shall specify the sampling years and the allocation of sampling days among such years. The first sampling year shall not be prior to the seventh anniversary of the effective date of the New License, and the last sampling year shall be no later than the 35th anniversary of the effective date of the New License. The purpose of the sampling is to determine if significant numbers of adult spawnable age/size adfluvial westslope cutthroat trout are entering the power tunnel entrance.
>
> (2) If less than 500 adult spawning age/size adult adfluvial westslope cutthroat trout are physically captured within any calendar year prior to completion of the four years of sampling, Chelan PUD, in consultation with LCFF, shall prepare an evaluation of the results of the entrainment monitoring and the method used. Chelan PUD, WDFW,

USFWS, and WDOE shall determine whether the remainder of the four years of sampling should be conducted, at what intervals and what method should be used.

(3) If more than 500 adult spawnable age/size adult adfluvial westslope cutthroat trout are physically captured within a calendar year in the immediate vicinity of the power tunnel entrance, the WDFW, USFWS, or the WDOE may request that Chelan PUD install fish protection or exclusion devices for the power tunnel entrance, or that Chelan PUD implement other actions recommended by the LCFF and approved by WDFW, USFWS, and WDOE. Chelan PUD may object to the request on the grounds that such fish protection or exclusion devices, or such other actions, as the case may be, are not necessary. To assist in the determination of whether such fish protection or exclusion devices, or other actions, are necessary, Chelan PUD may conduct entrainment sampling in the power tunnel. If Chelan PUD so objects and it cannot reach agreement with the Agency or Agencies making the request, the matter shall be referred to dispute resolution pursuant to Section 16 of this Agreement. If Chelan PUD does not object, or the dispute resolution process results in a decision to install fish protection or exclusion devices, Chelan PUD shall seek recommendations from the LCFF regarding the design of fish protection or exclusion devices or such other actions. Chelan PUD shall conduct such tests as necessary to determine the effectiveness of such fish protection or exclusion devices or such other actions. Upon development of a successful design, Chelan PUD shall install such fish protection or exclusion devices or implement such other actions.

(4) For purposes of this Article, "adult" is defined as naturally-produced (non-stocked), spawnable age or size adfluvial westslope cutthroat trout. The size of adult westslope cutthroat is defined as 9-12 inches in total length, based on current Twin Lakes stock spawner size, but such definition may be adjusted upon a recommendation by the LCFF to WDFW, USFWS, WDOE, and Chelan PUD.

Entrainment sampling reporting

The annual results of any entrainment sampling will be compiled in a final report and filed with the FERC no later than April 30 of the subsequent year. The report shall also contain any recommendations for continued sampling, or other studies to evaluate entrainment of Westslope cutthroat trout.

Background and sampling methods

The target species for entrainment studies are salmonids native to the Lake Chelan system, i.e. bull trout and Westslope cutthroat trout in their adult life stage. Based on conversations with fishery managers during the relicensing process, it was determined that adult, adfluvial Westslope cutthroat trout would be most active in spring and travel the lake most extensively during their spawning period in search of suitable tributary spawning habitat. Westslope cutthroat trout spawning periodicity is thought to occur from April through June in the Lake Chelan tributaries.

The objective of entrainment sampling will be to determine the relative abundance of bull trout and Westslope cutthroat trout in the vicinity of the Project (i.e., dam, intake structure and spillway) at the time of year when these species would most likely be present (April through early July). The following study methods were used to investigate entrainment during relicensing baseline studies (DES 2001a). These same methods, or others recommended by the LCFF, will be employed for future entrainment investigations.

Hook and Line
Hook and line fishing was conducted at the Project intake, along the trash boom above the dam, and in areas from the dam upstream to the second bridge.

Oneida Trap
An Oneida trap, belonging to Chelan PUD, was placed off the right bank (looking downstream), downstream of the boat launch about 50 feet from the intake structure. The trap was set in place three to four days a week beginning on May 9 and ending July 12, 2001. Biologists checked the trap twice daily. Fish caught in the trap were identified, measured, and released.

Gillnet
Fishery managers participating in the relicensing process assumed that salmonids migrating to the portion of the lake near the Lake Chelan Dam would be utilizing the upper portion of the water column and could be intercepted by gillnets suspended from the water surface. Gillnets are highly selective in regard to the size of the fish captured. Therefore, gillnets with various-sized mesh panels were used in order to bracket the optimum size of the target species and life stage and potentially capture a broader size range of fish. Two 150 ft-long variable-mesh (1/2- to 3-inch mesh) floating gillnets were used. The gillnets were placed on the downstream side of the floating catwalks in front of the dam and extended from the pier nose on the right bank to approximately 35 feet from the central spillway.

Video
Water clarity in front of the intake structures was sufficiently good that fish could be observed easily swimming directly in front of the trashracks while biologists were looking down from the pier apron. To document the fish behavior, biologists deployed a Fish-eye™ camera attached to long pole submerged into the water directly in front of the intakes. The video feed was attached to a video cassette recorder. During the video-taping, the Project was running at full capacity, drawing 2200 cfs through the intake.

4.2.6 Large Woody Debris

Article 3, and Chapter 3 of the Comprehensive Plan, describe Chelan PUD's obligation to make funds available for obtaining and transporting large woody debris (LWD) for erosion control efforts and tributary barrier removal and rehabilitation (note: costs are in 2003 dollars).

> (a) Within 180 days of the effective date of the New License, and by January 31st of each of the next nineteen years, Chelan PUD shall make available five thousand dollars ($5,000) for the benefit of the WDFW to be used in obtaining or transporting Large Woody Debris (LWD) or other bioengineered bank protection and in-lake fish habitat restoration, enhancement, and mitigation materials (hereafter referred to as "bank and

habitat materials") for use on state or private land within or adjacent to Lake Chelan, in accordance with Chapter 3 of the Comprehensive Plan, which is incorporated herein by reference. LWD consists of trees, logs, root wads, woody debris, and other similar materials.

The schedule for implementing this measure depends upon the availability of LWD in Lake Chelan, which is controlled by spring and fall high flow events caused by snow melt and storms that carry LWD from upland areas into Lake Chelan. This measure will be implemented following these high flow events as they occur over the first 20 years of the new license, in coordination with the WDFW Region 2 Habitat Biologist.

SECTION 5: IMPLEMENTATION SCHEDULE

5.1 Implementation Schedule

Table 6 (below) provides a summary of Chelan PUD's schedule to implement license required measures of the Lake Chelan Fishery Plan.

Table 6:. Chelan PUD's Implementation Summary and Schedule for the Lake Chelan Fishery Plan

License Order Article No.	Settlement Agreement Article No.	Measure	Description and Funding Level*	Timeframe	FERC Reporting
404	NA	Submit Lake Chelan Fishery Plan	NA	November 6, 2007	NA
404	6(a)	Develop Food Web Model	Total funding: $100,000	2008-2009	Not required
404	6(b)	Monitoring & Evaluation Program	Annual payment $20,000; Annual $20,000 matching, if matching obtained by agencies	Years 1-50, annually	Not required
404	6(c)	Tributary Barrier Removal	Years 1-5: remove barriers in up to 10 tributaries; monitor up to 10 tributaries for barriers removed as a result of the new lake level operating regime.	2008: Evaluation of current barriers 2009: two #1 priority streams 2010: one #1 and one #2 priority streams 2011 two #2 priority streams 2012: two#3 priority streams 2013: one #3 priority stream and one other stream TBD	Not required
404	6(c)	Tributary Barrier Monitoring	Monitor up to 10 tributaries to determine whether barriers are present or reform; Remove up to 2 reformed barriers annually if needed.	Years 6-50, monitoring every 2 years	Not required
404	6(d)	Fish Stocking Plan	Funding to rear 5,000 lbs. of fingerlings and 33,000 lbs. catchable-sized salmonids. Annual action plan to determine fish stocking	Years 1-50, annually	Annually, April 30
404	6(e)	Entrainment Sampling Plan	Entrainment sampling conducted using methods described in sec 4.2.5. If entrainment identified, Chelan may install fish protection or exclusion devices or implement other actions.	Years 7-35, 140 days total	Annually following sampling, April 30
NA	3(a-c)	LWD	Annual payment: $5,000	Years 1-20, annually	Not required

* Costs are in 2003 dollars.

SECTION 6: FUNDING

6.1 Chelan PUD and Agency Payment Agreement

All payments by Chelan PUD for work conducted by the USDA Forest Service, NPS, and WDFW will be in accordance with Section 19 of the Settlement Agreement. Funding will be provided on a reimbursement basis within (90) ninety days of the Agency submitting a quarterly invoice/variance form, and only after review and approval by Chelan PUD. As a condition of payment by Chelan PUD for any work performed under the Settlement Agreement, the USDA Forest Service, NPS, and WDFW must submit a certification that the work was performed in a manner consistent with the Settlement Agreement, as well as annual planning reports no later than January 31 of each year. The annual planning reports must document all work that was completed during the preceding year, and the actual cost of that work. In addition, the annual planning reports must contain a detailed description of the work to be undertaken in the current year, a general description of the work to be undertaken in the following year, and the estimated costs of that work.

SECTION 7: LITERATURE CITED

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APPENDIX A: CONSULTATION WITH STAKEHOLDERS

Article 404 of the Project License requires that the Lake Chelan Fishery Plan (LCFP):

"… be developed in consultation with the U.S. Park Service, U.S. Forest Service, U.S. Fish and Wildlife Service, NOAA National Marine Fishery Service, Washington Department of Fish and Wildlife, Washington Department of Ecology, Confederated Tribes of the Colville Reservation, Yakama Nation, the Confederated Tribes of the Umatilla Reservation, City of Chelan, and the Lake Chelan Sportsman's Association. The licensee shall include with the plan documentation of consultation, copies of recommendations on the completed plan after it has been prepared and provided to the consulted entities, and specific descriptions of how the entities' and the Forum's comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies and the Lake Chelan Fishery Forum 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 licensees' reasons, based on project-specific information."

Chelan PUD has completed the consultation requirements, beginning February 21, 2007 by consulting with the Lake Chelan Fishery Forum (LCFF) on the outline for the LCFP. The LCFF met on the following dates in 2007 to develop the LCFP: January 30, April 25, July 10, and August 29. The draft plan was provided to the members of the LCFF, listed below, on September 28, 2007 and comments were received through October 29, 2007. All comments received were incorporated into the plan. Comments received are contained in a following section. Agendas and meeting minutes for LCFF meetings are attached in the following section.

<u>LCFF Member List</u>
Washington State Department of Fish and Wildlife
United States Department of Agriculture Forest Service
National Park Service
United States Fish and Wildlife Service
Confederated Tribes of the Colville Reservation (CCT)
Washington State Department of Ecology
Lake Chelan Sportsman's Association
City of Chelan
Confederated Tribes of the Umatilla Indian Reservation (CTUIR)

Two entities, the Indian Nation (YIN) and National Marine Fisheries Service, were invited to participate in LCFF meetings but chose to participate in only the Chelan River Fishery Forum, where measures implemented to enhance anadromous fish, their primary interest, were addressed.

Lake Chelan Fishery Forum Meeting Agendas and Minutes

Lake Chelan Fishery Forum (LCFF) Meeting

Date: February 21, 2007
Time: 9:00 am – 12:00 noon
Location: Chelan PUD Headquarters, Wenatchee, WA
Commission Board Room

Call in number: (509)661-4844, Password is 4000.

Meeting called by:	Jeff Osborn, Chelan PUD	Type of meeting:	LCFF Meeting
		Note taker:	Tracy Dunning

CRFF Members

Name	Agency	Phone	Email
Art Viola	WDFW	509-665-3337	violaaev@dfw.wa.gov
Tony Eldred	WDFW	509-662-0452	eldredte@dfw.wa.gov
Carmen Andonaegui	WDFW	509-679-4159	andonca@dfw.wa.gov.
Alex Martinez	USDA-FS	509-662-4335	ramartinez@fs.fed.us
Phil Archibald	USDA-FS	509-784-1151	parchibald@fs.fed.us
Joe Kastenholz	USDA-FS	509-682-2576	jkastenholz@fs.fed.us
Reed Glesne	NPS	360-856-5700 x369	Reed_Glesne@nps.gov
Steve Lewis	USFWS	509-665-3508 x14	Stephen_Lewis@.fws.gov
Jerry Marco	CCT	509-634-2114	jerry.marco@colvilletribes.com
Pat Irle	Ecology	509-454-7864	Pirle461@ecy.wa.gov
Jeff Osborn	Chelan PUD	509-661-4176	jeffa@chelanpud.org
Steve Hays	Chelan PUD	509-661-4179	steveh@chelanpud.org
Gary Denniston	LCSA	509-687-4078	geedee@cablespeed.com
Jay Witherbee	City of Chelan	509-682-8018	mayor@cityofchelan.com
Carl Merkle	CTUIR	541-966-2354	carlmerkle@ctuir.com

Meeting Purpose: First meeting of the Lake Chelan Fishery Forum to initiate Lake Chelan license implementation

Agenda

Task	Time	Discussion Lead
Welcome and Introductions	9:00 to 9:10	Jeff Osborn
Review Lake Chelan Fishery Forum ground rules, goals and objectives	9:10 to 9:45	Michelle Smith, Forum
Review License Order conditions • Implementation plan outline review	9:45 to 10:15	Jeff Osborn, Forum
Review Fishery Project schedules	10:15 to 10:30	Janel Duffy, Forum
Discuss and provide input on Lake Chelan Fishery Plan development • Food web model • Tributary barrier removal • Fish stocking • Entrainment • Monitoring and Evaluation Program	10:30 to 11:45	Jeff Osborn; Forum
Next Steps • Review Action Items • Schedule future LCFF meetings	11:45 to 12:00	Jeff Osborn, Forum

Additional Information

Handouts: forum goals and objectives; project schedules; License document (FERC License Order; Settlement Agreement; License articles); implementation plan outline.

Lake Chelan Fishery Forum (LCFF) Meeting

Date: February 21, 2007
Time: 9:00 am – 12:00 noon
Location: Chelan PUD Headquarters, Wenatchee, WA
Commission Board Room

Call in number: (509)661-4844, Password is 4000.

Meeting called by:	Jeff Osborn, Chelan PUD	Type of meeting:	LCFF Meeting
		Note taker:	Tracy Dunning

CRFF Members

Name	Agency	Phone	Email
Art Viola	WDFW	509-665-3337	violaaev@dfw.wa.gov
Tony Eldred	WDFW	509-662-0452	eldredte@dfw.wa.gov
Carmen Andonaegui	WDFW	509-679-4159	andonca@dfw.wa.gov.
Alex Martinez	USDA-FS	509-662-4335	ramartinez@fs.fed.us
Phil Archibald	USDA-FS	509-784-1151	parchibald@fs.fed.us
Joe Kastenholz	USDA-FS	509-682-2576	jkastenholz@fs.fed.us
Reed Glesne (via conference phone)	NPS	360-856-5700 x369	Reed_Glesne@nps.gov
Steve Lewis	USFWS	509-665-3508 x14	Stephen_Lewis@.fws.gov
Jerry Marco	CCT	509-634-2114	jerry.marco@colvilletribes.com
Pat Irle (via conference phone)	Ecology	509-454-7864	Pirle461@ecy.wa.gov
Jeff Osborn	Chelan PUD	509-661-4176	jeffa@chelanpud.org
Steve Hays	Chelan PUD	509-661-4179	steveh@chelanpud.org
Gary Denniston	LCSA	509-687-4078	geedee@cablespeed.com
Jay Witherbee	City of Chelan	509-682-8018	mayor@cityofchelan.com
Carl Merkle	CTUIR	541-966-2354	carlmerkle@ctuir.com
Chris Fairbanks (via conference phone)	Anchor Environmental	360-733-4311	cfairbanks@anchorenv.com
Janel Duffy	Chelan PUD	509-661-4400	Janel.Duffy@chelanpud.org
Ryan Anderson	Ecology	509-575-2642	Rand461@ecy.wa.gov

Attendees listed in bold above.

Meeting Purpose: First meeting of the Lake Chelan Fishery Forum to initiate Lake Chelan license implementation.

Agenda

Task	Discussion	Action Items
Welcome, Introductions, and Ground Rules	Introductions were made and ground rules were discussed.	Jeff will look into changing ground rules (change word validate on line : Areas of agreement and/or disagreement will be acknowledged and recorded)
Goals and Objectives	Decision making process was reviewed.	Statement of Agreement from the HCP group will be sent to forum members as an example.
Review License Order conditions • Implementation plan outline review		Jeff will rewrite the outline to include all of the sections in Chapter 6 of the License Order and submit to the forum for comment.
Review Fishery Project schedules	LCFF task timeline was reviewed.	
Discuss and provide input on Lake Chelan Fishery Plan development	• Food web model • Tributary barrier removal • Fish stocking • Entrainment • Monitoring and Evaluation Program	Jeff will check with John Shimek on potential dates for a tour of tributary barriers and let forum members know. Art will write up questions for FERC regarding implementing some measures (e.g. kokanee surveys)

	prior to Lake Chelan Fishery Plan approval. Art will write up questions and concerns about Lake Chelan Fish Management with Dr. Beauchamp. Jeff will look into set up a conference call with Dr. Dave Beauchamp and Erick Schoen regarding Food web model and explore an in person meeting (possibly next LCFF meeting or sooner).
Schedule future LCFF meetings	Next forum meeting scheduled for May 16, 2007 Future forum meeting date: July 25, 2007 Final review meeting date will be assigned at a future meeting.
Additional Information	
Handouts: forum goals and objectives; project schedules; License document (FERC License Order; Settlement Agreement; License articles); implementation plan outline.	

Lake Chelan Fishery Forum (LCFF) Meeting

Date: May 16, 2007
Time: 9:00 am – 12:00 noon
Location: Chelan PUD Headquarters, Wenatchee, WA
Chelan PUD Auditorium

Call in number: (509)661-4844, Password is 4000.

Meeting called by:	Jeff Osborn, Chelan PUD	Type of meeting:	LCFF Meeting
		Note taker:	Tracy Dunning

CRFF Members

Name	Agency	Phone	Email
Art Viola	WDFW	509-665-3337	violaaev@dfw.wa.gov
Tony Eldred	WDFW	509-662-0452	eldredte@dfw.wa.gov
Carmen Andonaegui	WDFW	509-679-4159	andonca@dfw.wa.gov.
Alex Martinez	USDA-FS	509-662-4335	ramartinez@fs.fed.us
Phil Archibald	USDA-FS	509-784-1151	parchibald@fs.fed.us
Joe Kastenholz	USDA-FS	509-682-2576	jkastenholz@fs.fed.us
Reed Glesne	NPS	360-856-5700 x369	Reed_Glesne@nps.gov
Steve Lewis	USFWS	509-665-3508 x14	Stephen_Lewis@.fws.gov
Jerry Marco	CCT	509-634-2114	jerry.marco@colvilletribes.com
Pat Irle	Ecology	509-454-7864	Pirle461@ecy.wa.gov
Jeff Osborn	Chelan PUD	509-661-4176	jeffa@chelanpud.org
Steve Hays	Chelan PUD	509-661-4179	steveh@chelanpud.org
Gary Denniston	LCSA	509-687-4078	geedee@cablespeed.com
Jay Witherbee	City of Chelan	509-682-8018	mayor@cityofchelan.com

Meeting Purpose: Second meeting of the Lake Chelan Fishery Forum to continue Lake Chelan license implementation: discuss next steps for food-web model development; continue developing Lake Chelan Fishery Plan

Agenda

Task	Time	Discussion Lead
Welcome and Introductions	9:00 to 9:05	Jeff Osborn
Discuss food web model development next steps	9:05-10:00	Dr. Beauchamp, Erik Schoen, Forum
Safety Minute and Evacuation Plan	10:00 to 10:10	Jeff Osborn, Forum
Review last meeting's action items and discuss minutes	10:10 to 10:20	Jeff Osborn, Forum
Review HCP Statement of Agreement	10:20 to 10:30	Steve Hays, Forum
Discuss and provide input on Lake Chelan Fishery Plan development • Tributary barrier removal • Fish stocking • Entrainment • Monitoring and Evaluation Program	10:30 to 11:45	Jeff Osborn; Forum
Next Steps • Review Action Items • Schedule future LCFF meetings	11:45 to 12:00	Jeff Osborn, Forum

Additional Information

Handouts: agenda; 2/21/07 meeting minutes; HCP Statement of Agreement; food web model progress report; draft Lake Chelan Fishery Plan.

Lake Chelan Fishery Forum (LCFF) Meeting

Date: May 16, 2007
Time: 9:00 am – 12:00 noon
Location: Chelan PUD Headquarters, Wenatchee, WA
Chelan PUD Auditorium

Call in number: (509)661-4844, Password is 4000.

Meeting called by:	Jeff Osborn, Chelan PUD	Type of meeting:	LCFF Meeting
		Note takers:	Tracy Dunning and Pat Smith

CRFF Members

Name	Agency	Phone	Email
Art Viola	WDFW	509-665-3337	violaaev@dfw.wa.gov
Tony Eldred	WDFW	509-662-0452	eldredte@dfw.wa.gov
Carmen Andonaegui	WDFW	509-679-4159	andonca@dfw.wa.gov.
Alex Martinez	USDA-FS	509-662-4335	ramartinez@fs.fed.us
Phil Archibald	USDA-FS	509-784-1151	parchibald@fs.fed.us
Joe Kastenholz	USDA-FS	509-682-2576	jkastenholz@fs.fed.us
Reed Glesne – via conference phone	NPS	360-856-5700 x369	Reed_Glesne@nps.gov
Steve Lewis – via conference phone	USFWS	509-665-3508 x14	Stephen_Lewis@.fws.gov
Jerry Marco	CCT	509-634-2114	jerry.marco@colvilletribes.com
Pat Irle	Ecology	509-454-7864	Pirle461@ecy.wa.gov
Jeff Osborn	Chelan PUD	509-661-4176	jeffa@chelanpud.org
Steve Hays	Chelan PUD	509-661-4179	steveh@chelanpud.org
Michelle Smith	Chelan PUD	509-661-4180	Michelle.smith@chelanpud.org
Gary Denniston	LCSA	509-687-4078	geedee@cablespeed.com
Jay Witherbee	City of Chelan	509-682-8018	mayor@cityofchelan.com
Mark Peterschmidt	Ecology	509-454-7843	Mape461@ecy.wa.gov
Dave Beauchamp – via conference phone	U of WA	(206) 221-5791	davebea@u.washington.edu
Erik Schoen	U of WA	(206) 616-3660	erschoen@u.washington.edu

Attendees listed in bold above.

Agenda

Task	Discussion	Action Items
Welcome and Introductions		Jeff Osborn
Discuss food web model development next steps		Jeff will ensure that food web model presentation is posted on website. Dr. Beauchamp and Erik will draft a proposal to continue research this summer and in the future. Research to include: 1. Refining bioenergetics model 2. Constructing visual foraging model (i.e. hydro acoustics). 3. Completing data gaps Art will look into methods to assess kokanee spawning in Stehekin River and where to stock kokanee to avoid predation. Eric encouraged forum members to contact him with any questions in future. Reed will compile side channel survey regarding kokanee spawning in the Stehekin River and report results to forum.
Safety Minute and Evacuation Plan		
Review last meeting's action items and discuss minutes	Jeff reviewed previous meeting minutes and action items.	

Payment agreements	Michelle Smith reviewed payment agreements with forum. PUD will meet with FERC to address level of detail they want in plan.	
Review HCP Statement of Agreement	Steve Hays reviewed HCP Statement of Agreement and suggested forum consider mechanism for documenting and memorializing decisions.	
Discuss and provide input on Lake Chelan Fishery Plan development • Tributary barrier removal • Fish stocking • Entrainment • Monitoring and Evaluation Program	Draft Lake Chelan Fishery Plan was reviewed.	Forum members have two weeks to review draft Lake Chelan Fishery Plan. Jeff suggested forum provide input on monitoring and evaluation measures now, even though measures might be removed after PUD meets with FERC. Phil suggested forum decide on criteria for defining a barrier. He will check if regional USFS team has developed criteria and could provide assistance in barrier removal/monitoring. Jeff will craft language regarding bull trout reintroduction and add to the Lake Chelan Fishery Plan in section 3.2, end of paragraph 1.
Next Steps • Review Action Items • Schedule future LCFF meetings		Next meeting is scheduled for July 25, 2007.

Parking lot items

Lake Chelan Fishery Forum (LCFF) Meeting

Date: July 25, 2007
Time: 9:00 am – 3:30 pm
Location: Chelan PUD Headquarters, Wenatchee, WA
Hydro Services Conference Room

Call in number: (509)661-4844, Password is 4000.

Meeting called by:	Jeff Osborn, Chelan PUD	Type of meeting:	LCFF Meeting
		Note taker:	Pat Smith

CRFF Members

Name	Agency	Phone	Email
Art Viola	WDFW	509-665-3337	violaaev@dfw.wa.gov
Tony Eldred	WDFW	509-662-0452	eldredte@dfw.wa.gov
Carmen Andonaegui	WDFW	509-679-4159	andonca@dfw.wa.gov.
Alex Martinez	USDA-FS	509-662-4335	ramartinez@fs.fed.us
Phil Archibald	USDA-FS	509-784-1151	parchibald@fs.fed.us
Joe Kastenholz	USDA-FS	509-682-2576	jkastenholz@fs.fed.us
Reed Glesne	NPS	360-856-5700 x369	Reed_Glesne@nps.gov
Steve Lewis	USFWS	509-665-3508 x14	Stephen_Lewis@.fws.gov
Jerry Marco	CCT	509-634-2114	jerry.marco@colvilletribes.com
Pat Irle	Ecology	509-454-7864	Pirle461@ecy.wa.gov
Jeff Osborn	Chelan PUD	509-661-4176	jeff.osborn@chelanpud.org
Steve Hays	Chelan PUD	509-661-4179	steveh@chelanpud.org
Gary Denniston	LCSA	509-888-0047	geedee@nwi.net
Jay Witherbee	City of Chelan	509-682-8018	mayor@cityofchelan.com

Meeting Purpose: Third meeting of the Lake Chelan Fishery Forum to continue Lake Chelan license implementation: continue developing Lake Chelan Fishery Plan

Agenda

Task	Time	Discussion Lead
Welcome and Introductions	9:00 to 9:05	Jeff Osborn, Forum
Review last meeting's action items and discuss minutes	9:05 to 9:20	Jeff Osborn, Forum
Discuss food web model development next steps (Eric Schoen proposal)	9:20 to 9:45	Forum
ESA consultation and permitting for licensing work	9:45 to 10:15	Forum
Discuss and provide input on Lake Chelan Fishery Plan development • Document format • Tributary barrier removal • Monitoring and Evaluation Program	10:15 to 12:00	Forum
Break for Lunch	*12:00 to 1:00*	*All*
(cont.) Discuss and provide input on Lake Chelan Fishery Plan development	1:00 to 3:15	Forum
Next Steps • Review Action Items • Schedule future LCFF meetings	3:15 to 3:30	Jeff Osborn, Forum

Additional Information

Handouts: agenda; 5/16/07 meeting minutes; food web model progress report; second draft Lake Chelan Fishery Plan.

Lake Chelan Fishery Forum (LCFF) Meeting

Date: July 25, 2007
Time: 9:00 am – 3:30 pm
Location: Chelan PUD Headquarters, Wenatchee, WA
Hydro Services Conference Room

Call in number: (509)661-4844, Password is 4000.

Meeting called by:	Jeff Osborn, Chelan PUD	Type of meeting:	LCFF Meeting
		Note taker:	Tracy Dunning

LCFF Members

Name	Agency	Phone	Email
Phil Archibald	USDA-FS	509-784-1511 X551	parchibald@fs.fed.us
Gary Denniston	LCSA	509-687-4078	geedee@nwi.net
Tony Eldred	WDFW	509-662-0452	eldredte@dfw.wa.gov
Reed Glesne	NPS	360-856-5700 X639	Reed_Glesne@nps.gov
Steve Hays	Chelan PUD	509-661-4179	Steve.hays@chelanpud.org
Pat Irle	Ecology	509-454-7864	Pirl461@ecy.wa.gov
Joe Kastenholz	USDA-FS	509-682-2576	jkastenholz@fs.fed.us
Steve Lewis – via conference phone	USFWS	509-665-3508 X14	Stephen_Lewis@fws.gov
Jerry Marco	CCT	509-634-2114	jerry.marco@colvilletribes.com
Alex Martinez	USDA-FS	509-662-4335	ramartinez@fs.fed.us
Carl Merkle	CTUIR	541-966-2354	carlmerkle@ctuir.com
Jeff Osborn	Chelan PUD	509-661-4176	jeff.osborn@chelanpud.org
Mark Peterschmidt	Ecology	509-454-7843	mape461@ecy.wa.gov
Art Viola	WDFW	509-665-3337	violaaev@dfw.wa.gov
Jay Witherbee	City of Chelan	509-682-8018	mayor@cityofchelan.com
Jennifer Burns	Chelan PUD	509-661-4474	jennifer.burns@chelanpud.org
Michelle Smith	Chelan PUD	509-661-4180	michelle.smith@chelanpud.org

Attendees listed in bold above.

Minutes

Task	Discussion	Action Items
Welcome and Introductions		
Review and approve May 16th meeting minutes.	Action items were reviewed and minutes were approved.	Jeff will follow up with Dr. Beauchamp on visual foraging model. Phil will check if regional USFS team has developed criteria and could provide assistance in tributary barrier removal/monitoring.
Review lake level operation	Michelle gave an overview of upcoming lake level operation. Start drawdown after Labor Day and get to 1097.4 by October 1st (one foot lower than previous license). Tributary Barrier report: Safety Harbor = 1092, Prince = 1092, and Fish = 1090 There will be a news release to publicize drawdown.	Jeff will verify actual lake level elevation on October 1, 2007 with the minimum elevation allowed in license. Forum members' support implementing the new license Lake Chelan lake level operation in August 2007 – 2008. Jeff will contact Anton Jones regarding public outreach ideas.

Discuss food web model development next steps (Eric Schoen proposal)	Food web model project budget was discussed.	Jeff will contact Dr. Beauchamp and obtain total project cost and scope. Jeff will check with Dr. Beauchamp on what is recommended as future action plan after food web model is complete.
ESA consultation and permitting for licensing work	Michelle informed group of six month extension for Chelan River project being submitted to FERC. Approval needed from both Chelan River Fishery Forum and this forum; updates will be given at future meetings. Jennifer recommended detailed design drawings for each project for a Nationwide permit. She also recommended we start with 2 projects for a one year permit. Safety Harbor and Prince Creek are scheduled to start next year.	Steve Lewis will consult with Jeff about programmatic agreement. Jeff will work with Jennifer to arrange discussion with Corp of Engineers to facilitate permit process. Reed will check on availability of John Reidel to assist in barrier removal projects.
Discuss and provide input on Lake Chelan Fishery Plan development • Document format • Tributary barrier removal • Monitoring and Evaluation Program	Group discussed revising format of Plan. Reed shared map of Stehekin upper and lower channels with forum and 2000 kokanee spawner lower channel survey. Tributary barrier removal (process) : 1. Develop RFP for tributary barrier 2. Select a consultant 3. Spring 2008- evaluate tributaries 4. Consultant submits report 5. Removal/repair – Spring 2009 Group discussed future plans for Monitoring and Evaluation plan.	After next draft, forum members will contribute updated information on current species to include in Section 3. Jeff will research estimate of cost for the kokanee surveys and coordinate with Finance department. Reed will attempt to provide a cost estimate for side channel surveys and snorkel surveys. Reed and Art will work together on alternatives for main channel surveys. Jeff will put together an RFQ and solicit request for tributary barrier consulting. Intent is to have Forum review RFQ and approve by September 15th. Jeff will send out the final draft of the Lake Chelan Fishery Plan to forum by August 3rd. After forum has a chance to provide input, it will be submitted to the stakeholder list provided by FERC in the License Order for additional review.
Next Steps • Next meeting scheduled for either September 10th or 17th. • September 15 - start 30 day review period		
Parking Lot Items:		

Lake Chelan Fishery Forum (LCFF) Meeting

Date: September 10, 2007
Time: 9:00 am – 3:30 pm
Location: Chelan PUD Headquarters, Wenatchee, WA
Human Resources Conference Room

Call in number: (509)661-4844, Password is 4000.

Meeting called by:	Jeff Osborn, Chelan PUD	Type of meeting:	LCFF Meeting
		Note taker:	Debby Bitterman

CRFF Members

Name	Agency	Phone	Email
Art Viola	WDFW	509-665-3337	violaaev@dfw.wa.gov
Tony Eldred	WDFW	509-662-0452	eldredte@dfw.wa.gov
Carmen Andonaegui	WDFW	509-679-4159	andonca@dfw.wa.gov.
Alex Martinez	USDA-FS	509-662-4335	ramartinez@fs.fed.us
Phil Archibald	USDA-FS	509-784-1151	parchibald@fs.fed.us
Joe Kastenholz	USDA-FS	509-682-2576	jkastenholz@fs.fed.us
Reed Glesne	NPS	360-856-5700 x369	Reed_Glesne@nps.gov
Steve Lewis	USFWS	509-665-3508 x14	Stephen_Lewis@.fws.gov
Jerry Marco	CCT	509-634-2114	jerry.marco@colvilletribes.com
Pat Irle	Ecology	509-454-7864	Pirle461@ecy.wa.gov
Jeff Osborn	Chelan PUD	509-661-4176	jeff.osborn@chelanpud.org
Steve Hays	Chelan PUD	509-661-4179	steve.hays@chelanpud.org
Gary Denniston	LCSA	509-888-0047	geedee@nwi.net
Jay Witherbee	City of Chelan	509-682-8018	mayor@cityofchelan.com

Meeting Purpose: Meeting of the Lake Chelan Fishery Forum to continue Lake Chelan license implementation: finalize the Lake Chelan Fishery Plan

Agenda

Task	Time	Discussion Lead
Welcome and Introductions	9:00 to 9:05	Jeff Osborn, Forum
Review last meeting's minutes and discuss action items	9:05 to 9:20	Jeff Osborn, Forum
Discuss food web model development next steps	9:20 to 9:45	Forum
Discuss and provide input on Lake Chelan Fishery Plan development • Tributary barrier removal RFQ	9:45 to 12:00	Forum
• Monitoring and Evaluation Program costs		Forum, Janel Duffy
Break for Lunch	*12:00 to 1:00*	*All*
(cont.) Discuss and provide input on Lake Chelan Fishery Plan development	1:00 to 3:15	Forum
Next Steps • Review Action Items • Review schedule for submitting Lake Chelan Fishery Plan to FERC	3:15 to 3:30	Jeff Osborn, Forum

Additional Information

Handouts: agenda; 7/25/07 meeting minutes; draft final Lake Chelan Fishery Plan.

30 Day Comments

Jeff-
I just wanted to check in with you and let you know that Ecology has no comments of substance that we wish to make at this time on the Lake Chelan Fishery Plan.
The only minor comment that I have is that it would be nice for Ecology to be acknowledged at the stakeholder that raised the issue of bioaccumulative contaminants circulation in Section 3.6 Lake Trout, Primary Issues raised by stakeholders during the relicensing process, Page 14 of the posted draft.

Mark Peterschmidt

From: Bitterman, Deborah [mailto:Deborah.Bitterman@chelanpud.org] **On Behalf Of** Osborn, Jeff
Sent: Friday, September 28, 2007 1:57 PM
To: eldredte@dfw.wa.gov; Archibald, Phil; violaaev@dfw.wa.gov; brose@yakama.com; carlmerkle@ctuir.com; mayor@cityofchelan.com; geedee@cablespeed.com; jerry.marco@colvilletribes.com; Peterschmidt, Mark F. (ECY); Irle, Pat (ECY); Reed_Glesne@nps.gov; richard.domingue@noaa.gov; Stephen_Lewis@fws.gov
Cc: Smith, Michelle
Subject: Chelan PUD: Request for Comment re Final Lake Chelan Fishery Plan Pursuant to Article 404 for the Lake Chelan Project No. 637

PUBLIC UTILITY DISTRICT NO. 1 of CHELAN COUNTY
P.O. Box 1231, Wenatchee, WA 98807-1231 • 327 N. Wenatchee Ave., Wenatchee, WA 98801
(509) 663-8121 • Toll free 1-888-663-8121 • www.chelanpud.org

To: Lake Chelan Fishery Plan:
Phil Archibald, USDA Forest Service
Reed Glesne, National Park Service
Steve Lewis, US Fish and Wildlife Service
Rich Domingue, National Marine Fishery Service
Tony Eldred, Washington Department of Fish and Wildlife
Art Viola, Washington Department of Fish and Wildlife
Pat Irle, Washington Department of Ecology
Mark Peterschmidt, Washington Department of Ecology
Jerry Marco, Confederated Tribe of the Colville Reservation
Bob Rose, Confederated Tribes and Bands of the Yakama Indian Nation
Carl Merkle, Confederated Tribes of the Umatilla Indian Reservation
Jay Witherbee, City of Chelan
Gary Denniston, Lake Chelan Sportsman Association

From: Jeff Osborn, License Program Coordinator
Public Utility District No. 1 of Chelan County (Chelan PUD)

Re: Lake Chelan Hydroelectric Project No. 637
License Article 404 – Lake Chelan Fishery Plan

Lake Chelan Fishery Forum and Other Parties:

In accordance with Article 404, Chelan PUD invites comment letters on the attached final draft Lake Chelan Fishery Plan. To open the document, click on the following link: http://www.chelanpud.org/documents/9220_2(1).pdf

Please submit your comment letters on or before 5:00 p.m., October 29, 2007 to me via email at jeff.osborn@chelanpud.org or via fax to (509) 661-8155.

Pursuant to License Article 404, Chelan PUD will file the Lake Chelan Fishery Plan with FERC by November 6, 2007. All received comment letters will be appended to the plan with a description of how each comment or recommendation was incorporated in the plan, or, if the licensee does not adopt a recommendation, the filing with the Commission will include the licensee's reasons, based on project-specific information for not adopting such recommendation.

If you have any questions, please do not hesitate to contact me.

Jeff: this message will serve to transmit comments from the USDA Forest Service, Okanogan Wenatchee National Forest. As a member of the Lake Chelan Fishery Forum, the Forest Service has participated in the development of the Lake Chelan Fishery Plan. We note that the Plan does an excellent job of representing Forest Service issues and interests in the operation of the Lake Chelan Project and the recommendations of the negotiated settlement agreement. The Forest Service is strongly supportive of the Plan in its present, expanded form because (as stated in Section 1: Introduction, page 2) this document carries the detail and background needed to "provide the FERC with as much detail as possible regarding future plans for implementing license measures for Lake Chelan fisheries and to preserve the background and intent of the Settlement Agreement in order to guide the LCFF during the later years of license implementation." In view of the length of the license, the foundation provided in the Lake Chelan Fishery Plan will be invaluable to the fishery and resource managers of the future who inherit this Plan from those who developed it.

A brief comment on the few remaining "holes" in the Plan that appear to be awaiting input from other agencies. We trust that these will be filled prior to release of the Final document and that the additional background information will not alter the intent of the Plan.

The Forest Service is looking forward to implementation of the Plan.

Philip Archibald
Fishery Biologist
Entiat/Chelan Ranger Districts
Wenatchee National Forest
parchibald@fs.fed.us
509-784-1511

"Osborn, Jeff" <jeffa@chelanpud.org>
Sent by: "Bitterman, Deborah" <Deborah.Bitterman@chelanpud.org>

To <eldredte@dfw.wa.gov>, "Archibald, Phil" <parchibald@fs.fed.us>, <violaaev@dfw.wa.gov>, <brose@yakama.com>, <carlmerkle@ctuir.com>,

09/28/2007 01:56 PM

Please respond to "Osborn, Jeff" <jeffa@chelanpud.org>

<mayor@cityofchelan.com>, <geedee@cablespeed.com>, <jerry.marco@colvilletribes.com>, <Mape461@ecy.wa.gov>, "Pat Irle" <pirl461@ecy.wa.gov>, <Reed_Glesne@nps.gov>, <richard.domingue@noaa.gov>, <Stephen_Lewis@fws.gov>

cc

"Smith, Michelle" <Michelle@chelanpud.org>

Subject

Chelan PUD: Request for Comment re Final Lake Chelan Fishery Plan Pursuant to Article 404 for the Lake Chelan Project No. 637

P U B L I C U T I L I T Y D I S T R I C T N O . 1 o f C H E L A N C O U N T Y

P.O. Box 1231, Wenatchee, WA 98807-1231 * 327 N. Wenatchee Ave., Wenatchee, WA 98801

(509) 663-8121 * Toll free 1-888-663-8121 * www.chelanpud.org

To: Lake Chelan Fishery Plan:

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Tony Eldred, Washington Department of Fish and Wildlife

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Carl Merkle, Confederated Tribes of the Umatilla Indian Reservation

Jay Witherbee, City of Chelan

Gary Denniston, Lake Chelan Sportsman Association

From: Jeff Osborn, License Program Coordinator

Public Utility District No. 1 of Chelan County (Chelan PUD)

Re: Lake Chelan Hydroelectric Project No. 637

License Article 404 - Lake Chelan Fishery Plan

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