



State of Washington
DEPARTMENT OF FISH AND WILDLIFE

Mailing Address: 600 Capitol Way N • Olympia, WA 98501-1091 • (360) 902-2200, TDD (360) 902-2207
Main Office Location: Natural Resources Building • 1111 Washington Street SE • Olympia, WA

June 11, 2001

Mr. Michael Johnson
Hydro Technology Systems
Meyers Falls Hydroelectric Project
Post Office Box 683
Kettle Falls, Washington 99141

**SUBJECT: Powerhouse Reconstruction at Meyers Falls Hydroelectric Project,
FERC No. 2544**

Dear Mr. Johnson:

The Washington Department of Fish and Wildlife has reviewed your proposal to reconstruct the old powerhouse and increase electrical generation at the Meyers Falls Hydroelectric Project on the Colville River. WDFW staff also attended the public meeting and site visit regarding your proposed facility upgrade. WDFW is particularly interested in the project's affect on fish and wildlife and the measures that are proposed to protect, mitigate, and enhance those resources.

The material we received describes the existing conditions and the measures that are proposed to restore historic project facilities and increase project generation. It appears that existing conditions at your project site would preclude traditional measures for fisheries resource protection. In recognition of the difficulties at your site, you proposed an alternative fishery enhancement measure that will help facilitate recovery of a locally adapted, native stock of rainbow trout. This action will ultimately allow the Department to return this native stock of trout into waters within the project area.

According to your letter, Hydro Technology Systems Inc., will make a financial contribution of five thousand dollars (2001\$) to WDFW for the purpose of assisting in the completion of the Phalon Lake Broodstock Collection Facility, which is located near the Project in Stevens County, Washington. The purpose of this fish management program is to recover and culture the red band rainbow trout, which are native to Northeast Washington. Once the new facility is complete and the stock has developed the productive capacity, red band rainbow trout will be stocked in the project area, downstream of the project intakes. Hydro Technology's participation in the red band rainbow trout program will contribute to the recovery of a local native strain of rainbow trout and the return of those fish into the project area on the Colville River.

Mr. Michael Johnson

Page 2

June 11, 2001

In light of your willingness to participate in efforts to restore a native strain of rainbow trout and the limited opportunities for traditional fisheries protective measures and the low probability of finding listed species in the project area, WDFW endorses your proposal as a reasonable compromise which will benefit local fish resources and allow increased power generation. We accept that your proposal is contingent upon the Federal Energy Regulatory Commission (FERC) approving the operation of the restored Meyers Falls Hydroelectric Project.

We appreciate your interest in protecting Washington's fish and wildlife resources and your willingness to participate in activities that directly support those resources. To make final arrangements regarding the enhancement proposal, please notify us, in writing, as soon as you receive a decision from the FERC regarding your project. If you have any further questions, please call me at (360) 902-2422 or Allen Palmanteer at (509) 738-2364. Good Luck with your project.

Sincerely,



Curt Leigh
Major Project Section
Habitat Program

CL:bt

cc: David Mudd, WDFW
Kevin Robinette, WDFW
Allen Palmanteer, WDFW
Curt Vail, WDFW
Bill Frymire, AAG
Joe Peone, Colville Tribe
Dan Trochta, Spokane USFWS

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Washington Water Power Company

Project No. 2544-010
Washington

ORDER MODIFYING AND APPROVING SALMONID RECRUITMENT AND
WATER TEMPERATURE STUDY PLAN

(Issued July 21, 1995)

Washington Water Power Company (licensee) filed for Commission approval, on December 27, 1994, and supplemented on March 30, and May 3, 1995, a plan for performing a study of water temperature constraints on trout spawning success in the Colville River downstream of the project. This plan is required by article 405 of the license for the ~~Washington Water Power Company~~.

Article 405 requires the licensee to consult with the Washington Department of Ecology (WDE), Washington Department of Fish and Wildlife (WDFW), and the U.S. Fish and Wildlife Service (FWS) and develop a plan for performing a study of water temperature impacts on trout spawning success and refuge areas in the Colville River downstream of the project.

The plan shall include, but not be limited to: (1) a schedule for installing the water temperature monitoring equipment; (2) the proposed location, design, and calibration of the monitoring equipment; (3) a schedule for collecting the trout spawning and refuge habitat identification data, including a timetable for terminating the data collection and potential reasons why termination should occur; (4) method of how the water temperature data will be correlated with trout and refuge habitat data collected concurrently with the temperature data; (5) identification of other trout enhancement measures if water temperature is found to be limiting success of trout in the Colville River; and (6) a schedule for implementing the data collection program, consulting with the appropriate federal and state agencies concerning the results of the monitoring, and filing the results, agency comments, and licensee's response to agency comments for Commission approval.

Licensee's Proposed Plan

To evaluate if water temperature may limit salmonid production downstream of the project, the licensee proposes to use Hobo Temp and Hobo XT (Onset Instruments Corporation) monitoring equipment to monitor water temperatures at two locations, directly below the project and approximately 3 miles further downstream near the confluence of Lake Roosevelt. The

2

licensee plans to monitor temperatures when embryos or fry are most susceptible to increasing temperature (i.e., prior to, and shortly following emergence). The licensee plans to calibrate the monitoring equipment prior to installation via comparison to a certified thermometer and annually after installation. The licensee proposes to download and review the water temperature data monthly.

The licensee proposes to sample water temperature several times daily (to account for diel fluctuations) for four months from approximately May 1 through August 31 at the two downstream locations beginning in 1995. The licensee proposes to monitor temperature at the project for five field seasons (May 1 through August 31), with earlier termination if sampling provides sufficient information to identify water temperature constraints. The licensee stated that the proposed study is designed to address water temperature impacts on spawning success and that initial sampling may conclusively depict temperature related problems, eliminating the need for further monitoring.

If water temperatures are recorded at or above 20° Celsius (C) during the monitoring period, the licensee proposes to implement additional studies that include surveys of downstream spawning habitat, electrofishing to determine salmonid fry presence, and identification of thermal refugia below the project, as described below. The licensee proposes to conduct these additional surveys in one field season when temperatures are measured at or above 20° C. The licensee stated that the 20° C tolerance limit is based upon the available literature concerning optimum temperatures for rainbow trout.

The licensee proposes to identify potential spawning habitat from Meyers Falls downstream to Lake Roosevelt by walking the river, visually noting gravel deposits where salmonids may spawn. The licensee proposes to map potential spawning areas estimating the area of each deposit, and sum all areas to determine the total potential spawning area. The licensee stated some locations where gravel is observed may be noted but not considered suitable spawning habitat because of instream characteristics, extreme sedimentation, or insufficient size.

The licensee proposes to conduct backpack electrofishing along the shoreline areas to determine fry presence. The licensee proposes to concentrate efforts in areas defined as potential spawning habitat in the survey described above. The licensee plans to map the sample sites and estimate area shocked and success of fry collection, along with other species observed. If the agencies determine that certain abnormal conditions may have affected the results, the licensee proposes to conduct additional sampling in a subsequent low flow season, if deemed necessary.

¹ 65 FERC ¶ 62,210.

To identify thermal refuge areas, the licensee proposes to measure water temperatures near the substrate at approximately 100-foot intervals in the river from Meyers Falls to Lake Roosevelt. The licensee proposes to identify tributary flow (stream or seep) and determine if the area may be used as a thermal refuge area. The licensee proposes to define a thermal refuge as an area with a significant deviation in temperature from the main river flow (5° C below ambient river water). The licensee proposes to map cold water sources, noting approximate flow and areal influence.

In areas where thermal refugia are identified, the licensee proposes to assess salmonid use by electrofishing or snorkeling. If fry are observed in the apparent thermal refuge areas, the licensee proposes to survey surrounding areas with similar habitat to determine if surrounding areas are also thermal refuge areas. The licensee proposes to rate the importance of the thermal refugia for supporting salmonid production based on the correlation of relative size of refugia and use of habitat, versus normal Colville River conditions.

The licensee proposes to continue to consult with the agencies during the proposed study. The licensee proposes to provide annual reports to WDFW concerning the results of the proposed monitoring and to consult with WDFW when temperatures have reached 20° C, which will initiate the additional studies.

The licensee plans to submit a final report, based upon the proposed monitoring, to the agencies within 90 days following completion of the proposed monitoring. The licensee proposes to include summarized data, interpretation, identification of thermal refuge areas, and potential enhancement measures. The licensee proposes to file the final report and agency comments with the Commission within 6 months following completion of the proposed study.

Agency Comments

The WDFW and FWS commented on the proposed salmonid recruitment and temperature study plan in letters dated September 22, and September 27, 1994, respectively. The WDE, in a letter dated November 10, 1994, stated they had no comments on the proposed plan.

The WDFW, in its September 22 letter, recommended that the licensee provide funding to the WDFW in order to assign a staff biologist to participate in the planning and implementation of proposed surveys, data collection, data analysis, and the development of enhancement measures. The WDFW stated that the plan should address other trout enhancement measures to be implemented if temperature is found to be limiting the success of trout. Other comments contained in WDFW's September 22 letter,

were incorporated into the licensee's proposed plan.

The FWS, in its September 27 letter, stated that the plan should be expanded to examine potential enhancement measures for thermal refuge areas. Further, the FWS recommended the licensee's proposed studies that include spawning habitat surveys, thermal refugia surveys, and fry sampling not be limited to only one field season when water temperatures are measured at or above 20° C. Instead, FWS recommends these studies be conducted a minimum of five years, to account for natural annual variability.

Licensee's response to agency comments

In the licensee's response to WDFW and FWS comments, included in the proposed plan, the licensee stated potential enhancement alternatives will be developed based upon the results of the study and habitat characteristics identified in the field. The licensee stated that these enhancement measures will be included in the final report.

In response to WDFW's request for funding a WDFW staff biologist to assist in implementation of the plan, the licensee stated that the goals of the monitoring can be accomplished using the licensee's biologists. The licensee stated that the WDFW will be consulted as the study progresses to facilitate communication and ensure any input is considered in all phases of the proposed plan. However, providing funding for a WDFW staff biologist would not be a cost effective approach to completing the study.

The licensee, in response to FWS's recommendation that the spawning habitat, thermal refugia, and fry sampling surveys be carried out over a minimum of five years, stated that the goal of the study is for "performing a study of temperature impacts on trout spawning success and refuge areas in the Colville River downstream of the project" (from article 405). To determine impacts of water temperature on salmonids, the licensee stated the study will require water temperatures to approach or exceed known limits. The licensee stated the monitoring period was extended to include five years, with termination of the study following a period of critical temperatures when refugia and general habitat conditions are identified.

Recommendations and Conclusion

The licensee's proposed plan includes those requirements stipulated in article 405. Completion of the study should provide the licensee with sufficient information to determine if temperature is limiting trout spawning success downstream of the project.

During temperature monitoring, it is necessary to collect and review temperature data on a frequent basis to determine if the defined tolerance limit has been reached and to allow for adequate identification of trout spawning habitat and thermal refuge areas. Additional studies (spawning habitat surveys, thermal refugia surveys, and fry sampling) should be initiated as soon as possible after determining critical temperatures have been reached. Retrieving and reviewing data on a monthly basis may not provide the licensee with the time necessary to initiate the additional studies. During warmer months of the monitoring period when the potential exists for water temperatures to reach critical levels, the licensee should retrieve and review data every two weeks to determine if the additional studies should be initiated.

The licensee proposes to terminate the five season study at any time when an annual sampling season provides sufficient information to identify water temperature constraints. The licensee would also terminate the additional studies after one field season if during any field season of the five-year monitoring period, water temperatures are measured at or above 20° C.

Data collected from only one field season, however, may not represent river conditions that accurately describe trout spawning and thermal refuge habitat. For example, conditions may vary from one year to another because the survey period may have been preceded by abnormally dry or wet periods. Identification of yearly variation in temperature distribution is important in accurately determining what, if any, temperature constraints exist downstream of the project.

For these reasons, the licensee should not terminate the water temperature monitoring upon the licensee's determination that an annual sampling season allows identification of trout temperature constraints. In addition the additional surveys should occur any year of the five field seasons when water temperatures are at or above 20° C. Therefore, the licensee should monitor temperature for five years after approval of the proposed plan and conduct the additional surveys during any year of the five-year monitoring period in which water temperatures reach 20° C.

The licensee may request approval from the Commission to terminate or modify the study prior to the end of the 5-year monitoring period if the licensee can provide analyses showing that the data collected to date is representative of natural varying river conditions. If the licensee can provide such analyses and/or determines that changes to the approved sampling plan are necessary, the licensee should provide a report to the Commission, with recommendations, for Commission approval, on changing the schedule and sampling procedures. The report should

include comments from the consulted agencies on the licensee's recommendations. The Commission should reserve the right to require changes to the recommendations on the schedule and sampling procedures.

The WDFW recommended the licensee provide funding for a WDFW biologist to participate in the execution of the proposed monitoring and surveys. The licensee is responsible for executing the proposed monitoring and analyzing the results. The licensee has proposed to consult with the agencies on a regular basis; any agency concerns relating to the monitoring can be recognized during this consultation process. Therefore, funding provided to the WDFW by the licensee is not necessary.

Article 405 requires the licensee to identify trout enhancement measures if water temperature is found to be limiting the success of trout in the Colville River. Since water temperature constraints on trout spawning are not well-defined in the area below the project, it is appropriate for the licensee to address potential enhancement measures in the final report, as described in the proposed plan. Article 405 requires the final monitoring report be filed for Commission approval. The final report should be filed with the Commission by March 1 of the year following the completion of the study. The final report should include recommendations, for Commission approval, on any needed trout enhancement measures. The filing should include documentation of consultation with WDE, WDFW, and the FWS; each agency should be given 30 days to comment. The Commission should reserve the right to require changes to the enhancement recommendations.

The licensee's proposed salmonid recruitment and temperature study plan, with the modifications discussed, should be approved.

The Director orders:

(A) The licensee's salmonid recruitment and temperature study plan filed on December 27, 1994, and supplemented on March 30, and May 3, 1995, as modified in paragraphs (B) through (D), is approved.

(B) The licensee shall monitor water temperature for five years downstream of the project and conduct potential spawning habitat surveys, thermal refugia surveys, and fry sampling during any year of the five-year monitoring period in which water temperatures reach 20° C.

The licensee shall file a report, if needed, requesting Commission approval to terminate or modify the study prior to the 5-year study period. The report shall include analyses showing that the data collected to date is representative of natural

varying river conditions. The report shall include recommendations, for Commission approval, on changing the schedule for the monitoring study and/or any needed changes in the sampling procedures. The report shall include comments from the consulted agencies on the licensee's recommendations. The Commission shall reserve the right to require changes to the recommendations on the schedule and sampling procedures.

(C) During warmer months of the monitoring period when the potential exists for water temperatures to reach critical levels, the licensee shall retrieve and review data every two weeks to determine if the additional studies shall be initiated.

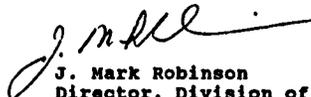
(D) The final report shall be filed with the Commission by March 1 of the year following completion of the study. The final report shall include recommendations, for Commission approval, on any needed trout enhancement measures. The filing shall include documentation of consultation with WDE, WDFW, and the FWS; each agency should be given 30 days to comment. The Commission shall reserve the right to require changes to the enhancement recommendations.

(E) Unless otherwise directed in this order, the licensee shall file an original and seven copies of any filing required by this order with:

The Secretary
Federal Energy Regulatory Commission
Mail Code: DPCA, HL-21.1
825 North Capitol Street, N.E.
Washington, D.C. 20426

In addition, the licensee shall serve copies of these filings on any entity specified in this order to be consulted on matters related to these filings. Proof of service on these entities shall accompany the filings with the Commission.

(F) This order constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days from the date of issuance of this order, pursuant to 18 CFR § 385.713.


J. Mark Robinson
Director, Division of Project
Compliance and Administration

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

2

Washington Water Power Company

Project No. 2544-013
Washington**ORDER MODIFYING AND APPROVING REVEGETATION PLAN**

(Issued March 24, 1995)

On December 27, 1994, the Washington Water Power Company, licensee for the Meyers Falls Project, filed a revegetation plan. The plan was filed to satisfy the requirements of article 407 of the license.¹

Background

On December 10, 1993, a new license was issued for the Meyers Falls Project. Article 407 requires the licensee to file a plan, for Commission approval, for planting native vegetation around the project's forebay. The plan must contain (1) mapped locations of areas to be planted, (2) planting densities, (3) an implementation schedule, (4) a monitoring program to evaluate plant survival, and (5) contingency measures in case plant survival is inadequate. It was determined during licensing that additional plantings would benefit wildlife.

The Licensee's Revegetation Plan

The licensee will plant black cottonwood, willow, chokecherry, and serviceberry in selected locations around the project's forebay and along the riverbank just downstream of the project dam. The goal is to establish plants in bare areas and to augment existing vegetation. A total of about 1,000 feet of shoreline will be planted.

The licensee intends to begin planting in the spring of 1996; all plantings should be completed by June 30, 1996. Planted areas will be monitored each July of years 1, 3, and 5 after the June 30, 1996 completion date.

The licensee will use a combination of direct observation, photo point recordation, and line transects to determine planting success. If, after any year of monitoring, it's determined that less than 70 percent of each individual planted species have survived, the licensee will perform additional plantings to achieve the 70 percent goal.

¹ 65 FERC ¶ 62,210.

Consultation

Article 407 requires the licensee to solicit agency comments on its plan from the Washington Department of Fish and Wildlife and the U.S. Fish and Wildlife Service. The licensee obtained agency comments as shown below:

Agency	Date of Letter
The Washington Dept. of Fish and Wildlife....	September 22, 1994
The U.S. Fish and Wildlife Service.....	September 27, 1994

Both agencies recommended that the licensee modify the plan to include quantitative monitoring and species success goals. The licensee modified the plan accordingly.

Monitoring Reports

So we may keep track of the licensee's progress in implementing it's revegetation plan, we are requiring a monitoring report for each year monitoring is performed. Monitoring reports will be due by December 31 of years 1, 3, and 5 after all initial plantings have been completed. The licensee should solicit comments from the Washington Department of Fish and Wildlife and the U.S. Fish and Wildlife Service before filing reports with the Commission. The final monitoring report should be for Commission approval and should contain recommendations, if necessary, for additional plantings or for changes to the revegetation plan.

Conclusion

The licensee's revegetation plan should benefit wildlife around the project. The plan, as modified by this order, satisfies article 407 and should be approved.

The Director Orders:

(A) The licensee's revegetation plan filed December 27, 1994, as modified by paragraph (B) below, is approved. The Commission reserves the right to make changes to the revegetation plan.

(B) The licensee shall file a revegetation monitoring report with the Commission by December 31 of years 1, 3, and 5 after all initial plantings are completed. The final report shall be for Commission approval and shall include recommendations, if necessary, for additional plantings or changes to the revegetation plan. The licensee shall solicit agency comments on all monitoring reports from the Washington Department of Fish and Wildlife and the U.S. Fish and Wildlife

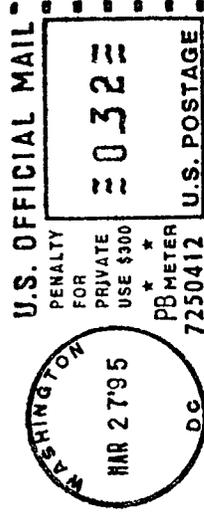
Service. The agencies shall be given at least 30 days to make comments. Documentation of agency consultation and any comments received shall accompany monitoring reports. The licensee shall respond to all agency recommendations.

(C) This order constitutes final agency act for rehearing by the Commission may be filed with the date of this order, pursuant to 18 C.F.R. §38 requests ys of

J. Mark Robinson
J. Mark Robinson
Director, Division of Subject
Compliance and Administration

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, D.C. 20426

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE. \$300

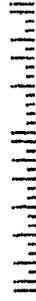


101827
P-2544
CURT SMITH DIRECTOR
WASHINGTON DEPT. OF FISH & WILDLIFE
600 CAPITOL WAY NORTH
OLYMPIA, WA 98504-1091

RECEIVED

MAR 31 1995

WDFW HABITAT PROGRAM



70 FERC ¶ 62,186
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Washington Water Power Company

Project No. 2544-012
Washington

ORDER APPROVING GENERAL SEDIMENT REMOVAL PLAN

(Issued March 23, 1995)

On December 27, 1994, the Washington Water Power Company, licensee for the Meyers Falls Project, filed a general sediment removal plan. The plan was filed to satisfy the requirements of article 404 of the license.¹

Background

On December 10, 1993, a new license was issued for the Meyers Falls Project. Article 404 requires the licensee to file a plan, for Commission approval, for the periodic removal of sediment, as necessary, during the term of the new license. The plan must contain those procedures the licensee would follow before removing any sediment. Article 404 requires (1) advanced consultation with the Washington Department of Ecology (WDOE) and the Washington Department of Fish and Wildlife (WDFW), (2) the identification of all necessary federal, state, and local permits, and (3), the filing of a specific plan for each sediment removal operation. All individual sediment removal plans are for Commission approval.

The Licensee's General Sediment Removal Plan

In its plan, the licensee says it will consult with the WDOE and the WDFW and obtain all necessary federal, state, and local permits. The licensee will file, for Commission approval, an individual plan for each sediment removal operation at least 45 days before any proposed work. Each individual plan will contain:

- the general scope and a schedule of the proposed sediment removal operation;
- the amount and method of removing sediment;
- measures employed to minimize water quality impacts;
- methods of disposing sediment and proposed sediment disposal sites with reclamation plans if needed; and
- any measures necessary to reclaim and stabilize access areas.

¹ 65 FERC ¶ 62,210.

DC-A-7

copy to court
1995
2

Consultation

The licensee obtained comments on its general sediment removal plan from the WDOE and the WDFW as listed below:

Agency	Date of Letter
The Washington Department of Fish and Wildlife	September 22, 1994
The Washington Department of Ecology	November 10, 1994

Both agencies generally agreed with the plan.

Conclusion

The licensee's general sediment removal plan should ensure the orderly filing of individual plans when sediment must be removed at the project. The licensee's plan satisfies article 404 and should be approved.

The Director Order:

(A) The licensee's general sediment removal plan filed December 27, 1994, is approved. The Commission reserves the right to make changes to the general sediment removal plan.

(B) This order constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days of the date of this order, pursuant to 18 C.F.R. §385.713.

Joseph H. Robinson
J. Mark Robinson
Director, Division of Project
Compliance and Administration

RECEIVED

MAR 28 1995

WDFW HABITAT PROGRAM

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, D.C. 20426

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE. \$300



U.S. OFFICIAL MAIL

PENALTY
FOR
PRIVATE
USE \$300

032

PB METER
7250412

U.S. POSTAGE

P-2544 101827
CURT SMITH DIRECTOR
WASHINGTON DEPT. OF FISH & WILDLIFE
600 CAPITOL WAY NORTH
OLYMPIA, WA 98504-1091



The licensee stated under its wetland protection measures that any activity proposed within the wetland area would be screened for permitting requirements and that appropriate agencies would be consulted. Wetland protection was required by the project license to protect and enhance important wildlife habitat and to ensure continued preservation and long-term protection from human-caused impacts. Construction activities within the wetland boundaries could conflict with the wetland protection goals. Therefore, we require that any construction or ground-disturbing activity, proposed within the wetland area, be filed for Commission approval following consultation with the appropriate agencies.

The Commission is concerned that the use of certain pesticides or herbicides may be detrimental to other wildlife within the wetland system. Since no information was provided that allows the Commission to monitor any activities regarding the noxious weed program, if the Stevens County Weed Board recommends any weed control activities, we request that the licensee file a report detailing the proposed weed control plan.

The licensee's Wildlife Recreation Area Management Plan satisfies the requirements of Article 406 of the license, issued December 10, 1993; this plan should be approved as modified below.

The Director orders:

(A) The wildlife recreation area management plan filed on December 27, 1994, pursuant to Article 406 of the license, issued December 10, 1993 as modified by paragraphs (B), (C), (D), and (E), is approved.

(B) The licensee shall monitor off-road vehicle use monthly.

(C) Any construction or ground-disturbing activity proposed within the wetland area must be filed for Commission approval following consultation with the appropriate agencies.

(D) Any weed control activities recommended by the Stevens County Weed Board should be filed with the Commission. The Commission reserves the right to require changes to noxious weed control measures.

(E) The Commission reserves the right, based on results of the monitoring, to require changes to the wildlife recreation area management plan.

(F) This order constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days of the date of issuance of this order, pursuant to 18 CFR § 385.713.

Joseph D. Mayan
 J. Mark Robinson
 Director, Division of Project
 Compliance and Administration

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Washington Water Power Company

Project No. 2544-008
Washington**ORDER APPROVING AND MODIFYING NEST BOX MONITORING PLAN**

(Issued February 1, 1995)

On December 27, 1994, Washington Power Company (licensee) filed a nest box monitoring plan, pursuant to Article 408 of the license issued December 10, 1993 for the Meyers Falls Project. Article 408 requires the licensee to file a plan to monitor the effectiveness of the existing bird nest boxes on project property. The plan was required to include annual maintenance, replacing nesting material, recording nest use, determining need for additional nest boxes, and provisions for filing monitoring results with the Commission. The plan was also to include comments of the Washington Department of Fish and Wildlife (WDFW) and the U.S. Fish and Wildlife Service (FWS).

The filed plan includes methodology for annual maintenance, repairs, and upgrades before the spring/summer nesting period and for replacing nesting material in the boxes before the annual nesting period. Monitoring of the nest boxes would occur as soon after nesting period as possible. A field data sheet would be used to record species which occupy the nest boxes. If all boxes were being used by native, desirable cavity nesting species, then additional nest boxes would be added. The licensee stated that, due to the marginal economics of the Meyers Falls Project, the total number of nest boxes would be limited to ten. Monitoring data would be filed with the Commission every five years.

The filing included comment letters from the WDFW and the FWS dated September 22 and September 27, 1994. The FWS had no comments regarding the nesting box monitoring plan. The WDFW stated that other bird species as well as wood ducks would use the nest boxes and that nest box use is influenced by location, overall nest box size, and opening size. They also stated that documented use levels of the boxes of all species could determine whether additional boxes are necessary.

In response to the WDFW's comment, the licensee stated that in the original draft they used the words "target species;" in the final plan this phrase was changed to "native, desirable species". The licensee indicated they did not intend for the boxes to be exclusively used by wood ducks but would be used by the full complement of native desirable cavity nesting species. The boxes would be designed to discourage use by predator species such as raccoons.

DC-A-10

We concur with the licensee that the nesting boxes should not be limited to wood ducks and that their use should be encouraged by native desirable species. However, the intent of the license article and the Environmental Assessment¹ for the project license was specific to bird species. The licensee did not state what actions would be taken if undesirable species were using the nesting boxes. We recommend that, if two consecutive years of monitoring reveal a nesting box is being used by non-native avian species or by mammals, the box be modified or relocated to an area that may be more attractive to native avian species.

The licensee stated that, due to the marginal nature of the project, the maximum number of nesting boxes would be limited to ten. The licensee did not provide any economic information justifying their claim nor has any monitoring been conducted to determine the ultimate number of nest boxes. Therefore, we are unable, at this time, to determine the maximum number of nest boxes. The Commission reserves the right to make changes to the nest box monitoring plan based on the monitoring results, which includes but is not limited to, the maximum number of nesting boxes, modifications of the boxes, and survey methodology.

The licensee stated that the results of the monitoring studies would be filed with the Commission in five-year intervals. They did not state when the first report would be filed. We recommend that the results of the first monitoring report be filed with the Commission December 31, 2000.

The licensee's nest box monitoring plan satisfies the requirements of Article 408 of the license, issued December 27, 1993; this plan should be approved as modified below.

The Director orders:

(A) The nest box monitoring plan filed on December 10, 1994, pursuant to Article 408 of the license, issued December 10, 1993, as modified by paragraphs (B), (C), and (D), is approved.

(B) The licensee shall design and locate the nesting boxes for use by desirable native bird species. If the results of monitoring reveal that the boxes are being used by undesirable or non-native species for 2 consecutive years, the nesting boxes will be modified or relocated.

(C) The Commission reserves the right, based on results of the monitoring, to require changes to the nest box monitoring plan, which includes but is not limited to, the maximum number of

¹ 65 FERC ¶ 62,210.

RECEIVED

FEB 06 1995

WDFW HABITAT PROGRAM

nesting boxes, modifications of the boxes, and survey methodology.

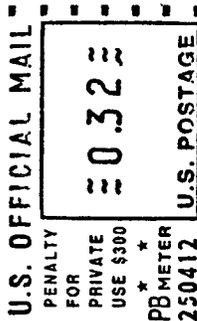
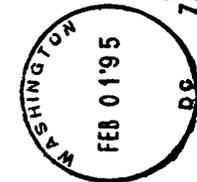
(D) The results from the first five-year monitoring report will be due December 31, 2000. Additional reports will be due every 5 years thereafter. The licensee shall include in its reports documentation of consultation with the U.S. Fish and Wildlife Service and the Washington Department of Fish and Wildlife. Copies of agency comments shall also be provided. The licensee shall allow a minimum of 30 days for the agencies to comment prior to filing reports with the Commission. If the licensee does not agree with a recommendation, the report shall include the licensee's reasons, based on project-specific information.

(E) This order constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days of the date of issuance of this order, pursuant to 18 CFR § 385.713.

J. Mark Robinson
J. Mark Robinson
Director, Division of Project
Compliance and Administration

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, D.C. 20426

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, \$300



P-2544
101864
ROBERT TURNER DIRECTOR
WASHINGTON DEPT. OF FISH & WILDLIFE
1111 WASHINGTON STREET, S.E.
P. O. BOX 43155
OLYMPIA, WA 98504-3155



UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Washington Water Power Company

Project No. 2544-001
Washington

ORDER ISSUING SUBSEQUENT LICENSE
(Minor Project)

(Issued December 10, 1993)

INTRODUCTION

Washington Water Power Company (Washington Water Power) filed a license application under Part I of the Federal Power Act (FPA) 1/ for the continued operation and maintenance of the 1.2-megawatt (MW) Meyers Falls Hydroelectric Project, located on Colville River, in Stevens County, Washington, near the town of Kettle Falls. The project would affect the interests of interstate or foreign commerce.

BACKGROUND

Notice of the application has been published. No protests were filed in this proceeding, and no agency objected to issuance of this license. Comments received from interested agencies and individuals have been fully considered in determining whether to issue this license. Motions to intervene were filed by the Washington Department of Wildlife (Department of Wildlife) and Washington Department of Ecology (Department of Ecology).

In their motion, the Department of Wildlife says that the project has adversely affected anadromous and/or resident game fish and wildlife, and lists the following areas of concern:

- Resident fish have been negatively impacted;
- Spawning and rearing areas are being flooded, reducing total fish population;
- Stream fishing areas are being lost;
- Turbine intakes must be properly screened, and designed to prevent air entrainment and the resulting gas supersaturation in the powerhouse discharge; and
- Velocities at the screen face must meet required criteria.

1/ 16 U.S.C. §§792-823(b).

The Department of Ecology filed its motion for the purpose of becoming a party to this proceeding and does not object to the issuance of this license.

An Environmental Assessment (EA) was prepared by my staff and issued on June 15, 1993, and is attached to and made a part of this license. Staff addresses the Department of Wildlife's concerns in sections V.B. and V.C.2 of the EA attached to this order. A Safety and Design Assessment (S&DA) was also prepared, and is available in the Commission's public file on this project.

Project Description

The existing project consists of a 24.5-foot-high, 306-foot-long dam; a reservoir with a surface area of about 10 acres with no operational storage; a forebay; an intake canal; an intake structure; a 48-inch-diameter, 323-foot-long pipe; a powerhouse containing two generating units with a total installed capacity of 1,200 kW; a tailrace; a 3,500-foot-long, 11-kV transmission line; and related facilities. The project would continue to be operated run-of-river. There is a 1,300-foot-long bypassed reach of the Colville River between the project's dam and powerhouse.

A more detailed description of the project proposal can be found under ordering paragraph (B), and under section III of the EA.

Applicant's Plans and Capabilities

The staff evaluated Washington Power's record as a licensee for these areas: (1) conservation efforts, and (2) compliance history and potential for complying with the subsequent license. I accept the staff's findings in each of these areas.

Here are the staff's findings:

Section 10(a)(2)(c): Conservation Efforts

In accordance with section 10(a)(2)(c) of the FPA 2/, the staff reviewed Washington Water Power's efforts to encourage and help its customers to conserve electricity. Staff found that Washington Water Power's plans and activities to promote and achieve conservation of electric energy and to reduce the peak demand for generating capacity have been extensive.

Washington Water Power submits an updated "Least-Cost" 20-year plan, every 2 years, to the Washington Utilities and Transportation Commission. The purpose of this effort is to

2/ 16 U.S.C. §803(a)(2)(C).

RECEIVED
DEC 13 1993
13

develop and implement strategies that will assure future needs are met with efficient energy services.

In the April, 1991 plan, Washington Water Power lists these features:

- (1) redeveloping hydro resources;
- (2) using efficient appliances and construction standards in new buildings on Washington Water Power's system; and
- (3) conducting research and analysis programs to build future conservation capability and to develop a better understanding of conservation resources in its service area.

Based on the above, Washington Water Power is making a good faith effort to conserve electricity.

Compliance History and Potential for Complying with the Subsequent License

The staff reviewed Washington Water Power's compliance with the terms and conditions of the existing license. Staff finds that Washington Water Power's overall record of making timely filings and compliance with its license is satisfactory.

Based on past performance, Washington Water Power would be able to comply with the terms and conditions of this subsequent license.

Water Quality Certification

Washington Water Power requested certification of project water quality pursuant to Section 401 of the Clean Water Act 1/ on December 2, 1991. Department of Ecology acknowledges receipt of Washington Water Power's request as of December 4, 1991. The Department of Ecology issued a 401 certification on December 4, 1992, with specific conditions which require the licensee to: (1) release a minimum daily average instream flow of 25 cfs or natural flow conditions, whichever is less, into the bypass reach to maintain state water quality standards; (2) monitor the instream flow releases on a daily basis; (3) monitor water quality during project operation; and (4) monitor temperatures in the area downstream of the tailrace, in the bypass and in the forebay.

1/ 33 U.S.C. §1341.

Staff concurs in most of the Department of Ecology's requirements, but does not agree with its requirement that Washington Water Power install devices to monitor water temperatures. Staff disagrees with this requirement because the minimal forebay size and continuation of the existing operation of the project do not significantly alter instream temperatures. I concur with the staff. However, this measure is a condition of the water quality certificate and the licensee is required to follow it.

Further discussion of the 401 certification can be found in the Water Resources section, section V.C.1 and the Fishery Resources section, section V.C.2 of the EA.

Coastal Zone Management Program

Section 307(c)(3)(A) of the Coastal Zone Management Act of 1972, as amended 4/ requires that license applicants for projects "...in or outside the coastal zone, affecting any land or water use or natural resource of the coastal zone of that state shall provide..." a [self] certification that the project complies with the state's approved (by the U.S. Department of Commerce) Coastal Zone Management Program and that the project would be consistent with the program. "At the same time, the applicant shall furnish to the state or its designated agency a copy of the certification..." It also states that no license shall be granted "...until the state or its designated agency has concurred with the applicant's certification or until, by the state's failure to act, the concurrence is conclusively presumed..."

Because the project is not located in the state-designated coastal zone management area, there isn't a need for the Department of Ecology to make a determination of consistency with the state coastal zone management program.

Cultural Resources

The Advisory Council on Historic Preservation signed the Memorandum of Agreement (MOA) for the management of archeological and historic sites at Meyers Falls Hydroelectric Project on October 12, 1993. Article 410 requires implementation of the MOA to avoid and mitigate impacts to historic and archeological sites.

4/ 16 U.S.C. §1456(c)(3)(A).

Recommendations of Federal and State Fish and Wildlife Agencies

Section 10(j) 5/ of the FPA requires the Commission to include license conditions, based on recommendations of federal and state fish and wildlife agencies, submitted under the Fish and Wildlife Coordination Act, for the protection, mitigation, and enhancement of fish and wildlife.

The EA and this order address the recommendations of the federal and state fish and wildlife agencies, and conditions are provided in this license consistent with those recommendations, with the exception of the Department of Wildlife's 10(j) request that the turbine intakes be screened.

In the EA, the staff did not recommend adopting the Department of Wildlife's recommendation to screen the turbine intakes because the few trout that would pass through the project area during and after high flow spring events would likely pass over the project spillway. Thus, there is not a sufficient need for the Department of Wildlife's recommended measure to justify the cost of retrofitting a fish screen at the intake.

Therefore, the staff found that the recommendation was inconsistent with the public interest standard of section 4(e) and the comprehensive development standard of section 10(a) of the FPA.

Under section 10(j) (2) of the FPA 6/, whenever the Commission believes that any recommendation of federal and state fish and wildlife agencies may be inconsistent with the FPA or other applicable law, the Commission shall attempt to resolve such inconsistencies.

By letter dated June 29, 1993, staff requested the Department of Wildlife to consider other options that would be agreeable to them and would adequately protect resident trout and be consistent with other project purposes. Staff requested that the Department of Wildlife submit these options to the Commission within 45 days of the date of staff's letter.

The Department of Wildlife responded by letter dated August 11, 1993, recommending that staff consider two additional measures instead of their previously recommended intake screens for the turbines. These recommendations were to:

5/ 16 U.S.C. §803(j).

6/ 16 U.S.C. §803(j)(2).

1. Perform a study of temperature impacts on spawning success, consisting of at least the following objectives:
 - a) Identify yearly variation in temperature distribution based on ambient temperature and flows;
 - b) Correlate temperature parameters with temporal and spatial distribution of spawning activity; and
 - c) Identify fish refuge areas and potential enhancement measures.
2. Purchase or otherwise protect and enhance the riparian corridor in the Colville River downstream of the Meyers Falls Project.

Since these two proposed recommendations did not appear to relate to the Department of Wildlife's original request of installing screens to protect trout that would potentially be entrained or injured by the project, staff held a telephone conference with representatives of the Department of Wildlife and Washington Water Power on September 23, 1993. The purpose of the call was to seek clarification from the Department of Wildlife on their most recent recommendations and to try to resolve the inconsistency.

During the telephone conference, the Department of Wildlife said that their goal was to improve trout habitat in a 5-mile reach of the Colville River between the project and the river mouth. The Department of Wildlife believes their recommendation to study temperature impacts on trout spawning in this reach of the river would help identify ways of enhancing trout populations in the Colville River.

The Department of Wildlife also believes their recommendation for Washington Water Power to purchase or otherwise protect and enhance the riparian corridor in this same reach of the river would benefit trout populations by eliminating the threat of proposed recreational and residential development within this riparian zone.

Washington Water Power said that since it will be collecting temperature data at several sites at the project as part of a 3-year mandatory study required by the Department of Ecology under the state 401 water quality certificate, it would be willing to add an additional temperature monitoring station to a site below the project as part of the temperature study.

Washington Water Power also said it would be willing to conduct some fish sampling studies to identify trout refuge and spawning areas below the project. However, Washington Water Power said that any temperature and trout habitat studies should

be limited or phased studies that would be discontinued if the results show that stream conditions are not conducive to trout survival and reproduction.

Staff concludes that the Department of Wildlife's recommendations to study temperature impacts on spawning success for trout in the Colville River below the project is a measure that will increase staff's understanding of trout survival and could lead to other measures for enhancing trout populations in the Colville River. Therefore, staff recommends that Washington Water Power be required to develop a plan and schedule in consultation with the Department of Wildlife to conduct a study of temperature impacts on trout spawning in the stream reach below the project (Article 405).

This plan at a minimum should consist of: (1) identifying yearly variation in temperature distribution based on ambient temperature and flows; (2) correlating temperature parameters with temporal and spatial distribution of spawning activity; and (3) identifying fish refuge areas and potential enhancement measures. The plan should also include a timetable for terminating this study based on conclusive evidence showing any unfavorable conditions for resident trout.

Staff concludes that the Department of Wildlife's recommendation to have the applicant purchase, protect, and enhance the riparian corridor of a 5-mile reach of the Colville River between the project and the stream mouth is not warranted for the following reasons:

- There is no nexus between the trout protection issue associated with intake screens on the project and off-site riparian enhancement;
- The project doesn't adversely affect downstream riparian habitats; and
- Staff will be requiring Washington Water Power to perform extensive on-site wildlife and wetland enhancement measures that will provide long-term benefits to the project site and surrounding area.

In the EA, staff acknowledged the importance of wildlife and wetland resources and recommended the following four measures to protect these resources: 1) designate about 70 acres of project lands for management of native plant and animal communities; 2) develop a plan for planting vegetation beneficial to wildlife in a wetland found in the project forebay; 3) continue to maintain and monitor the bird box program; and 4) establish an interpretive signage program to educate and inform visitors of

the project site's natural setting and discourage incompatible public uses.

In addition, the Department of Wildlife's recommendation to protect riparian habitat is not justified because it would cost nearly \$240,000 and it is uncertain what long-term benefits would accrue from this action given the fact that the riparian zone in some portions of the 5-mile river reach already has some level of protection under the county shoreline management act.

Although staff was not able to completely resolve the 10(j) inconsistency between the Department of Wildlife intake screening recommendation and the FPA, staff was able to bridge the gap by requiring the study of temperature impacts on trout spawning.

In accordance with section 10(j)(2) of the FPA, if the Commission, after attempting to resolve inconsistencies, does not adopt a recommendation of a fish and wildlife agency, the Commission is required to publish findings that: (1) an agency recommendation is inconsistent with the purposes and requirements of Part I of the FPA or other applicable law [section 10(j)(2)(A)]; and (2) conditions selected by the Commission comply with the requirements of section 10(j)(1) of the FPA (i.e., that the license conditions will adequately and equitably protect, mitigate damages to, and enhance fish and wildlife) [section 10(j)(2)(B)].

Section 10(j)(2)(A) Finding

Section 10(a)(1) 7/ of the FPA requires that the Commission shall license the project that, in the judgment of the Commission, will be best adapted to a comprehensive plan for improving or developing a waterway for the improvement or use of water power development, for the adequate protection, mitigation, and enhancement of fish and wildlife, and for other beneficial public uses, including irrigation, flood control, water supply, recreation and other project purposes referred to in section 4(e) of the FPA.

Section 4(e) of the FPA 8/ requires the Commission, in deciding whether to issue a license, in addition to the power and development purposes of the project, shall give equal consideration to the purposes of energy conservation, the protection, mitigation of damage to, and enhancement of fish and wildlife, the protection of recreational opportunities, and the preservation of other aspects of environmental quality. Thus, the Commission must give equal consideration to developmental and

7/ 16 U.S.C. §803(a)(1).

8/ 16 U.S.C. §797(e).

non-developmental values but must also resolve competing demands in the public interest, which may mean that competing values are not given equal treatment.

I find the Department of Wildlife's recommendation to screen the project intakes to protect trout to be inconsistent with the public interest standard of section 4(e) of the FPA and with the comprehensive development standard of section 10(a) of the FPA. Staff's analysis in the EA shows that the minimal benefits to the fishery resource from installing intake screens are not worth the cost (\$1.6 million) of installing screens.

In light of the above, I find the Department of Wildlife's recommendation for screens to be inconsistent with the provisions of section 4(e) and 10(a) of the FPA.

Section 10(j)(2)(B) Finding

Pursuant to section 10(j)(2)(B), I find the conditions included in this license comply with the requirements of section 10(j)(1).

This license (specifically Articles 401 through 405) requires the applicant to operate the project run of river, maintain a minimum flow in the bypass, safely remove spoil from the reservoir, and conduct temperature and fish habitat studies below the project to ensure adequate protection to the trout resources. This license also requires substantial wildlife enhancement measures (articles 406 through 408).

Thus, I conclude the conditions of this license adequately and equitably protect, mitigate damage to, and enhance fish and wildlife resources affected by the project, and they comply with the requirements of section 10(j) of the FPA.

Cumulative Impacts

The Department of Wildlife requested that the staff evaluate the cumulative effects caused by the presence and operation of this and other projects in the area.

Other than the licensee's application for subsequent license for the project, there are no other pending license or exemption applications or existing hydro projects in the Colville River Basin. In the preparation of the EA, staff evaluated the cumulative effects of the project on environmental resources of the Colville River Basin. In Section V.B. of the EA, staff indicated that it had not identified any environmental resources in the Colville River Basin that had regional or national significance.

Comprehensive Plans

Section 10(a)(2)(A) of the FPA, 16 U.S.C. §803 (a)(2)(A), requires the Commission to consider the extent to which a project is consistent with federal or state comprehensive plans for improving, developing, or conserving a waterway or waterways affected by the project 2/. Under Section 10(a)(2)(A), federal and state agencies filed sixty-four plans that address various resources in Washington. Of these, the staff identified and reviewed five comprehensive plans that are relevant to this project 10/. No conflicts were found.

Comprehensive Development

Sections 4(e) and 10(a) of the FPA require the Commission to give equal consideration to all uses of the waterway on which a project is located. When the Commission reviews a proposed project, the recreational, fish and wildlife, and other nondevelopment values of the involved waterway are considered equally with the power and other developmental values. In determining whether, and under what conditions, a hydropower license should be issued, the Commission must weigh the various economic and environmental tradeoffs involved in the decision. These purposes are considered in the comprehensive development section of the attached EA.

In the EA, staff analyzed the following three alternatives for the Meyers Falls Project: (1) the project as proposed by the applicant; (2) the project as proposed by the applicant with staff-recommended measures; and (3) the no-action alternative. Staff recommends the second alternative---the project as proposed by the applicant with staff-recommended measures--as the

2/ Comprehensive plans for this purpose are defined at 18 C.F.R. §2.19 (1992).

10/ (1) Washington's Statewide Comprehensive Outdoor Recreation plan, 1985, Interagency Committee for Outdoor Recreation, Olympia, Washington; (2) Washington outdoors: assessment and policy plan 1990-1995, 1990, Interagency Committee for Outdoor Recreation, Tumwater, Washington; (3) Northwest conservation and electric power plan, 1986, Northwest Power Planning Council, Portland, Oregon; (4) Columbia River Basin fish and wildlife program, 1987, Northwest Power Planning Council, Portland, Oregon; and (5) Water resources management program - Colville River Basin, 1979, Washington State Department of Ecology, Olympia, Washington.

preferred alternative. The reasons for staff recommendation are explained below.

In order to protect and enhance environmental conditions at the project site, staff recommended adoption of the following ten enhancement measures proposed by Washington Water Power.

- (1) Conducting supplemental water quality monitoring;
- (2) Supporting the Stevens Conservation District's ongoing water quality study of the Colville River Basin;
- (3) Maintaining existing bypass flows for aquatic resources;
- (4) Designating the entire project property (about 70 acres) as a wildlife protection area;
- (5) Protecting and enhancing all wetlands in the forebay;
- (6) Improving vehicle access and parking facilities;
- (7) Restricting vehicle use to developed roads;
- (8) Enhancing the existing observation platform at the reservoir to accommodate disabled users;
- (9) Developing a viewing promenade overlooking Meyers Falls;
- (10) Developing and implementing a management plan to protect the historic project facilities.

Staff also recommends implementation of the following five additional enhancement measures:

- (11) A plan to assure an average daily minimum flow of 25 cfs, with a minimum instantaneous flow of 22 cfs, is released into the bypass reach;
- (12) A plan to remove sediment from the intake canal in consultation with the Department of Wildlife and Department of Ecology;
- (13) A Wildlife Protection Plan;

(14) A Wetland Management Plan; and

(15) A plan and schedule to study temperature impacts on trout spawning.

One additional enhancement measure--installing intake screens--was analyzed by staff and not recommended for implementation because only minor environmental benefits would be derived at a significant cost to Washington Water Power. Each of these enhancement measures are discussed in detail in the individual resource sections of the attached EA.

Only one of the recommended enhancement measures--providing recreation facilities--would affect project economics.

The cost of the recreational enhancement measures (\$21,000) would be small compared to the expected recreational benefits from improved access. Staff believes the recreational facilities would receive substantial use and would provide recreational benefits for the project site and vicinity. The economics of this measure is discussed in detail in the Development Resources section and the Recreation section, V.C.7 of the EA.

Although the project would continue to have a minor impact to the sportfishery habitat in the impoundment and an insignificant number of fish would continue to be potentially affected by turbine entrainment and mortality, the recommended alternative would give the public the greatest benefits from the waterway for the following reasons: (1) the staff-recommended environmental measures--a minimum flow monitoring plan, a sediment removal plan, wildlife protection plan, wetland management plan, and temperature monitoring plan--would supplement the applicant's proposal in mitigating project impacts and would protect and enhance the environment at a minor cost; (2) the project would continue to economically generate an average of 7.4 GWh of energy annually, helping to meet a part of the projected power need in the area; and (3) the clean energy that would be produced by the project would continue to displace fossil-fueled power generation, thereby conserving nonrenewable energy resources and reducing the emissions of noxious gases that contribute to atmospheric pollution and global warming.

In summary, I conclude that significant environmental benefits derived from these enhancement measures outweigh the cost to Washington Water Power. Therefore, Washington Water Power should adopt all fifteen measures.

Project Retirement

The Commission has issued a Notice of Inquiry (NOI), dated September 15, 1993, requesting comments that address the

decommissioning of licensed hydropower projects 11/. The NOI states that the Commission is not proposing new regulations at this time, but is inviting comments on whether new regulations may be appropriate. Alternatively, the Commission may consider issuing a statement of policy addressing the decommissioning of licensed hydropower projects, or take other measures. The Meyers Falls Hydroelectric Project may be affected by future actions that the Commission takes with respect to issues raised in the NOI. Therefore, I have included Article 204, which reserves authority to the Commission to require the licensee, to conduct studies, make financial provisions, or otherwise make reasonable provisions for decommissioning of the project.

Term of the License

In 1986, the Electric Consumers Protection Act (ECPA) modified Section 15 of the FPA 12/ to specify that any license issued shall be for a term which the Commission determines to be in the public interest, but not less than 30 years, nor more than 50 years. The Commission's policy, which establishes 30-year terms for those projects which propose no new construction or capacity, 40-year terms for those projects that propose a moderate amount of new development, and 50-year terms for those projects that propose substantial new development, is consistent with the provision.

Washington Water Power does not propose new construction or capacity for the existing project works for the Meyers Falls Project. Therefore, I am issuing this subsequent license for a term of 30 years.

Summary of Findings

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

The project will be safe if operated, and maintained in accordance with the requirements of this license. Analysis of related issues is provided in our S&DA.

11/ Notice of Inquiry, Project Decommissioning at Relicensing, Dockets No. RM93-23-000, September 15, 1993

12/ 16 U.S.C. §803 as amended.

I conclude that the Meyers Falls Hydroelectric Project does not conflict with any planned or authorized development and is best adapted to comprehensive development of the Colville River for beneficial public uses.

The Director orders:

(A) This license is issued to Washington Water Power Company (licensee), for a period of 30 years, effective January 1, 1994, to continue to operate, and maintain the Meyers Falls Hydroelectric Project. This license is subject to the terms and conditions of the FPA, which is incorporated by reference as part of this license, except for those sections waived in ordering paragraph (D) and subject to the regulations the Commission issues under the provisions of the FPA.

(B) The project consists of:

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

Exhibit G-	FERC No. 2544-	Showing
1	23	General plan & recreation facilities

(2) Project works consisting of: (a) a 24.5-foot-high, 306-foot-long concrete dam with a crest elevation at 1,520.6 feet msl; (b) a spillway in the center of dam containing five 18 feet by 10 inch spillgates; (c) a reservoir with a surface area of approximately 10 acres with no operational storage; (d) a forebay; (e) a 360-foot-long partially lined intake canal, varying in width from 46 feet to 10 feet; (f) a 13.5-foot-wide, 12-foot-long, 20-foot-deep reinforced concrete intake structure consisting of headgates and trashracks; (g) a 48-inch-diameter, 323-foot-long steel pipe, bifurcating upon entry into the powerhouse; (h) a 31.5-foot-long, 55.5-foot-wide, 15.5-foot-high reinforced concrete powerhouse containing two generating units with a total rated capacity of 1,200 kW; (9) a 11-kV, 3,500-foot-long transmission line to the Greenwood substation; and (10) related facilities.

The project works generally described above are more specifically shown and described by the following exhibits that also form a part of the application for license and that are designed and described as:

Exhibit A-Description of Project, sections (1)(i) and (1)(ii).

Exhibit F:

Exhibit F	FERC No. 2544-	Showing
1	15	Plan & Elevation of Dam
2	16	Upper Bulkhead Details
3	17	Lower Bulkhead & Details
4	18	Apron & Footing Details
5	19	Gate Seals and Guides
6	20	Details of Flashboard Gates Hoists, & Footbridge
7	21	Powerhouse floor plan
8	22	Wiring Diagrams

(3) All of the structures, fixtures, equipment or facilities used to operate or maintain the project and located within the project boundary, all portable property that may be employed in connection with the project and located within or outside the project boundary, and all riparian or other rights that are necessary or appropriate in the operation or maintenance of the project.

(C) Exhibits A, F, and G, as designated in ordering paragraph (B) above are approved and made part of the license.

(D) The following sections of the FPA are waived and excluded from the license for this minor project:

4(b), except the second sentence; 4(e), insofar as it relates to approval of plans by the Chief of Engineers and the Secretary of the Army; 6, insofar as it relates to public notice and to the acceptance and expression in the license of terms and conditions of the FPA that are waived here; 10(c), insofar as it relates to depreciation reserves; 10(d); 10(f); 14, except insofar as the power of condemnation is reserved; 15; 16; 19; 20; and 22.

(E) This license is subject to the articles set forth in Form L-12, (October 1975), entitled "Terms and Conditions of License for Constructed Minor Project Affecting the Interests of Interstate or Foreign Commerce", except article 15, and the following additional articles:

Article 201. The licensee shall pay the United States an annual charge, effective January 1, 1994, for the purpose of reimbursing the United States for the cost of administration of Part I of the FPA, as determined by the Commission. The authorized installed capacity for that purpose is 1,600 horsepower.

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

Article 203. (a) In accordance with the provisions of this article, the licensee shall have the authority to grant permission for certain types of use and occupancy of project lands and waters and to convey certain interests in project lands and waters for certain types of use and occupancy, without prior Commission approval. The licensee may exercise the authority only if the proposed use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and other environmental values of the project. For those purposes, the licensee shall also have continuing responsibility to supervise and control the use and occupancies for which it grants permission, and to monitor the use of, and ensure compliance with the covenants of the instrument of conveyance for, any interests that it has conveyed, under this article. If a permitted use and occupancy violates any condition of this article or any other condition imposed by the licensee for protection and enhancement of the project's scenic, recreational, or other environmental values, or if a covenant of a conveyance made under the authority of this article is violated, the licensee shall take any lawful action necessary to correct the violation. For a permitted use or occupancy, that action includes, if necessary, canceling the permission to use and occupy the project lands and waters and requiring the removal of any non-complying structures and facilities.

(b) The type of use and occupancy of project lands and water for which the licensee may grant permission without prior Commission approval are: (1) landscape plantings; (2) non-commercial piers, landings, boat docks, or similar structures and facilities that can accommodate no more than 10 watercraft at a time and where said facility is intended to serve single-family type dwellings; and (3) embankments, bulkheads, retaining walls, or similar structures for erosion control to protect the existing

shoreline. To the extent feasible and desirable to protect and enhance the project's scenic, recreational, and other environmental values, the licensee shall require multiple use and occupancy of facilities for access to project lands or waters. The licensee shall also ensure, to the satisfaction of the Commission's authorized representative, that the use and occupancies for which it grants permission are maintained in good repair and comply with applicable state and local health and safety requirements. Before granting permission for construction of bulkheads or retaining walls, the licensee shall: (1) inspect the site of the proposed construction, (2) consider whether the planting of vegetation or the use of riprap would be adequate to control erosion at the site, and (3) determine that the proposed construction is needed and would not change the basic contour of the reservoir shoreline. To implement this paragraph (b), the licensee may, among other things, establish a program for issuing permits for the specified types of use and occupancy of project lands and waters, which may be subject to the payment of a reasonable fee to cover the licensee's costs of administering the permit program. The Commission reserves the right to require the licensee to file a description of its standards, guidelines, and procedures for implementing this paragraph (b) and to require modification of those standards, guidelines, or procedures.

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

(d) The licensee may convey fee title to, easements or rights-of-way across, or leases of project lands for: (1) construction of new bridges or roads for which all necessary state and federal approvals have been obtained; (2) sewer or effluent lines that discharge into project waters, for which all necessary federal and state water quality certification or permits have been obtained; (3) other pipelines that cross project lands or waters but do not discharge into project waters;

(4) non-project overhead electric transmission lines that require erection of support structures within the project boundary, for which all necessary federal and state approvals have been obtained; (5) private or public marinas that can accommodate no more than 10 watercraft at a time and are located at least one-half mile from any other private or public marina; (6) recreational development consistent with an approved exhibit R or approved report on recreational resources of an exhibit E; and (7) other uses, if: (i) the amount of land conveyed for a particular use is five acres or less; (ii) all of the land conveyed is located at least 75 feet, measured horizontally, from the edge of the project reservoir at normal maximum surface elevation; and (iii) no more than 50 total acres of project lands for each project development are conveyed under this clause (d)(7) in any calendar year. At least 45 days before conveying any interest in project lands under this paragraph (d), the licensee must submit a letter to the Director, Office of Hydropower Licensing, stating its intent to convey the interest and briefly describing the type of interest and location of the lands to be conveyed (a marked exhibit G or K map may be used), the nature of the proposed use, the identify of any federal or state agency official consulted, and any federal or state approvals required for the proposed use. Unless the Director, within 45 days from the filing date, requires the licensee to file an application for prior approval, the licensee may convey the intended interest at the end of that period.

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

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

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

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

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

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

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

Article 204. The Commission reserves authority to require the licensee, in the context of a rulemaking proceeding, a statement of policy, or proceeding specific to this license, to conduct studies, make financial provisions, or otherwise make reasonable provisions for decommissioning of the project.

Article 401. The licensee shall operate the project in a run-of-river mode for the protection of water quality and aquatic resources in the Colville River.

The licensee shall at all times act to minimize the fluctuation of the reservoir surface elevation by maintaining a discharge from the project so that, at any point in time, flows, as measured immediately downstream from the project tailrace, approximate the sum of the inflows to the project reservoir.

Run-of-river operation may be temporarily modified if required by operating emergencies beyond the control of the licensee, and for short periods upon mutual agreement between the licensee and the Washington Department of Wildlife. If the flow is so modified, the licensee shall notify the Commission as soon as possible, but no later than 10 days after each such incident.

Article 402. The licensee shall release from the Meyers Falls Project, into the Colville River a daily average flow of 25

cubic feet per second (cfs), or inflow to the project reservoir, whichever is less, as measured immediately below the dam in the bypass reach, for the protection and enhancement of fish and wildlife resources, water quality, and aesthetic resources in the bypass reach of the Colville River.

The flow release shall at no time drop below an instantaneous flow of 22 cfs, or inflow, whichever is less.

This flow requirement may be temporarily modified if required by operating emergencies beyond the control of the licensee, and for short periods upon agreement between the licensee and the Washington Department of Ecology and the Washington Department of Wildlife. If the flow is so modified, the licensee shall notify the Commission as soon as possible, but no later than 10 days after each such incident.

Article 403. Within 6 months from the effective date of this license, the licensee shall file with the Commission, for approval, a plan to monitor compliance with run-of-river operation and minimum flow release to the bypass, as required by Articles 401 and 402, respectively.

The plan shall include, but not be limited to: (1) a schedule for installing the monitoring equipment; (2) the proposed location, design, and calibration of the monitoring equipment; (3) the method of flow data collection, and (4) a provision for providing flow data to the consulted agencies, within 30 days from the date of the agencies' request for the data.

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

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

Article 404. Within 6 months from the effective date of this license, the licensee shall file with the Commission, for approval, a plan for the future removal and disposal of accumulated sediment from the project intake canal to minimize

impacts on fish, wildlife, water quality, and recreational resources.

The plan shall describe the procedures to be implemented prior to any removal of sediment at the project, and shall provide for: (1) advanced consultation with the Washington Department of Ecology (WDOE) and Washington Department of Wildlife (WDW); (2) the acquisition of all necessary federal and state permits; and (3) the subsequent filing of a specific plan for each removal/disposal operation with the Commission for approval at least 45 days before the start of any sediment removal.

The licensee shall prepare the plan after consultation with WDOE and WDW. The license shall allow 30 days for the agencies to comment and make recommendations prior to filing the plan with the Commission. The licensee shall include with the plan documentation of consultation, and copies of comments and recommendations by the agencies. If the licensee does not adopt an agency recommendation, the filing shall include the licensee's reasons for not adopting the recommendation.

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

Article 405. Within 6 months from the effective date of this license, the licensee shall file with the Commission, for approval, a plan for performing a study of temperature impacts on trout spawning success and refuge areas in the Colville River downstream of the project.

The plan shall include, but not be limited to: (1) a schedule for installing the temperature monitoring equipment; (2) the proposed location, design, and calibration of the monitoring equipment; (3) a schedule for conducting the trout spawning and refuge habitat identification data, including a timetable for terminating the data collection and potential reasons why termination should occur; (4) method of how the temperature data will be correlated with trout spawning and refuge habitat data collected concurrently with the temperature data; (5) identification of other trout enhancement measures if temperature is found to be limiting success of trout in the Colville River, and (6) a schedule for implementing the data collection program, consulting with the appropriate federal and state agencies concerning the results of the monitoring, and filing the results, agency comments, and licensee's response to agency comments for Commission approval.

The licensee shall prepare the plan after consultation with the Washington Department of Ecology, Washington Department of Wildlife, and the U.S. Fish and Wildlife Service. The licensee

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

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

Article 406. Within 6 months from the effective date of this license, the licensee shall file with the Commission, for approval, a management plan for the designated Washington Water Power-Wildlife Recreation Area. The Washington Water Power-Wildlife Recreation Area shall be designed to enhance wildlife and wetland values on the entire project-leased property, including the forebay wetlands (about 70 acres), and provide associated recreational opportunities. The resource management plan shall incorporate, in part, guidelines contained in Natural Resource Land Use Classifications for Washington Water Power Lands.

The plan shall include, but not be limited to:

- (1) topographic map(s) identifying the area boundaries;
- (2) specific conservation and recreational use objectives/goals for the property;
- (3) specific actions and practices to be employed;
- (4) wetland protection measures;
- (5) an implementation schedule, as appropriate; and
- (6) a monitoring and follow-up program of actions and measures prescribed.

The licensee shall prepare the plan after consultation with the Washington Department of Wildlife and U.S. Fish and Wildlife Service. The licensee shall include with the plan, documentation of consultation and copies of comments on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations prior to filing the plan with the Commission. If the licensee

does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

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

Article 407. Within 6 months from the effective date of this license, the licensee shall file with the Commission, for approval, a plan to plant native vegetation beneficial to wildlife in the forebay wetland area. The species selected for planting are chokecherry, serviceberry, black cottonwood, and willows. The plan should describe and/or show:

- (1) the mapped location(s) to be planted;
- (2) planting densities;
- (3) an implementation schedule that provides for planting within the wetland area;
- (4) a monitoring program to evaluate effectiveness of the plantings; and
- (5) a description of procedures to be followed if monitoring reveals that the plantings are not successful.

The licensee shall prepare the plan after consultation with the Washington Department of Wildlife and U.S. Fish and Wildlife Service. The licensee shall include with the plan, documentation of consultation and copies of comments on the completed plan after it has been prepared and provided to the agencies. The licensee shall allow a minimum of 30 days for the agencies to comment prior to filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

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

Article 408. Within 6 months from the effective date of this license, the licensee shall file with the Commission, for approval, a plan to continue maintaining and monitoring effectiveness of the existing bird nest boxes on the project property. The plan shall include:

- (1) annual maintenance, repairs, and upgrades as necessary before the spring/summer nesting period;

- (2) replacing nesting material in the boxes before the annual nesting period;
- (3) recording nesting use of various species;
- (4) determining need for additional nest boxes in the area; and
- (5) provisions for filing the monitoring results with the Commission.

The licensee shall prepare the plan after consultation with the Washington Department of Wildlife and U.S. Fish and Wildlife Service. The licensee shall include with the plan, documentation of consultation and copies of comments on the completed plan after it has been prepared and provided to the agencies. The licensee shall allow a minimum of 30 days for the agencies to comment prior to filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

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

Article 409. Within 6 months from the effective date of this license, the licensee shall establish interpretive and informative signs in the wetland vicinity, as proposed on pages 20 and 21 of the application (Volume One). The signs shall educate and inform visitors of the natural setting of the reservoir and wetlands associated with the project, and discourage incompatible public uses.

Article 410. The licensee shall implement the Memorandum of Agreement (MOA) executed on October 12, 1993, to avoid and mitigate impacts to the historic project facilities and archeological sites at the Meyers Falls Hydroelectric Project.

By September 1, 1994, the licensee shall file, for Commission approval, the Historic Properties Management Plan identified in the MOA. The Commission may require additional work and changes to the plan based on this filing.

Article 411. The licensee, before starting any future land-clearing or land-disturbing activities associated with the project, other than those activities authorized in this license, shall consult with the Washington State Historic Preservation Officer (SHPO), and shall conduct a cultural resources survey of the affected areas. Further, the licensee shall file the following: (1) a report containing the survey results; (2) a cultural resources management plan, approved by the Commission,

to avoid or mitigate impacts to any significant archeological or historic sites identified during the survey; and, (3) the written comments of the SHPO on the report and the plan.

If the licensee discovers any previously unidentified archeological or historic sites during the course of constructing or developing project works or other facilities at the project, the licensee shall stop all land-clearing or land-disturbing activities in the vicinity of the sites, consult with the SHPO, and file for Commission approval a cultural resources management plan to avoid or mitigate impacts to significant resources, together with the written comments of the SHPO on the plan.

The survey and the plan shall be based on the recommendations of the SHPO and adhere to the Secretary of the Interior's Guidelines for Archeology and Historic Preservation. The Commission may require additional survey, revisions to the survey report, and changes to the plan based on the filing. The licensee shall not implement a cultural resources management plan or begin any land-clearing or land-disturbing activities until informed by the Commission that the requirements of this article have been fulfilled.

Article 412. The licensee shall implement the recreation and land use enhancement measures filed on December 27, 1991 (exhibit E, pages 32 through 35) and September 17, 1992 (additional information response to item number 2, page 3).

The recreation and land use enhancements consist of:

- (1) improving vehicle access by renovating the access road to accommodate RV use and grading and graveling the parking lot;
- (2) posting "No ORV" signs along the project's northern boundary;
- (3) enhancing the existing observation platform at the reservoir to accommodate disabled users;
- (4) developing a viewing promenade overlooking Meyers Falls, with a trail and interpretive signs describing the historical significance of the project site; and
- (5) managing the project property as a Wildlife Recreation Area.

The licensee shall complete construction of the recreational facilities described above within two years from the effective date of the license. Within 90 days after finishing construction, the licensee shall file for Commission approval revised exhibits A, F, and G to describe the recreational facilities as-built.

(G) This order is issued under authority delegated to the Director and constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days from the issuance date of this order, pursuant to 18 C.F.R. 385.713. Failure to request rehearing shall constitute acceptance of the license.



Fred E. Springer
Director, Office of
Hydropower Licensing

FEDERAL ENERGY REGULATORY COMMISSION

TERMS AND CONDITIONS OF LICENSE FOR CONSTRUCTED
MINOR PROJECT AFFECTING THE INTERESTS OF
INTERSTATE OR FOREIGN COMMERCE

Article 1. The entire project, as described in this order of the Commission, shall be subject to all of the provisions, terms, and conditions of the license.

Article 2. No substantial change shall be made in the maps, plans, specifications, and statements described and designated as exhibits and approved by the Commission in its order as a part of the license until such change shall have been approved by the Commission: Provided, however, That if the Licensee or the Commission deems it necessary or desirable that said approved exhibits, or any of them, be changed, there shall be submitted to the Commission for approval a revised, or additional exhibit or exhibits covering the proposed changes which, upon approval by the Commission, shall become a part of the license and shall supersede, in whole or in part, such exhibit or exhibits theretofore made a part of the license as may be specified by the Commission.

Article 3. The project area and project works shall be in substantial conformity with the approved exhibits referred to in Article 2 herein or as changed in accordance with the provisions of said article. Except when emergency shall require for the protection of navigation, life, health, or property, there shall not be made without prior approval of the Commission any substantial alteration or addition not in conformity with the approved plans to any dam or other project works under the license or any substantial use of project lands and waters not authorized herein; and any emergency alteration, addition, or use so made shall thereafter be subject to such modification and change as the Commission may direct. Minor changes in project works, or in uses of project lands and waters, or divergence from such approved exhibits may be made if such changes will not result in a decrease in efficiency, in a material increase in cost, in an adverse environmental impact, or in impairment of the general scheme of development; but any of such minor changes made without the prior approval of the Commission, which in its judgment have produced or will produce any of such results, shall be subject to such alteration as the Commission may direct.

Article 4. The project, including its operation and maintenance and any work incidental to additions or alterations authorized by the Commission, whether or not conducted upon lands

of the United States, shall be subject to the inspection and supervision of the Regional Engineer, Federal Energy Regulatory Commission, in the region wherein the project is located, or of such other officer or agent as the Commission may designate, who shall be the authorized representative of the Commission for such purposes. The Licensee shall cooperate fully with said representative and shall furnish him such information as he may require concerning the operation and maintenance of the project, and any such alterations thereto, and shall notify him of the date upon which work with respect to any alteration will begin, as far in advance thereof as said representative may reasonably specify, and shall notify him promptly in writing of any suspension of work for a period of more than one week, and of its resumption and completion. The Licensee shall submit to said representative a detailed program of inspection by the Licensee that will provide for an adequate and qualified inspection force for construction of any such alterations to the project. Construction of said alterations or any feature thereof shall not be initiated until the program of inspection for the alterations or any feature thereof has been approved by said representative. The Licensee shall allow said representative and other officers or employees of the United States, showing proper credentials, free and unrestricted access to, through, and across the project lands and project works in the performance of their official duties. The Licensee shall comply with such rules and regulations of general or special applicability as the Commission may prescribe from time to time for the protection of life, health, or property.

Article 5. The Licensee, within five years from the date of issuance of the license, shall acquire title in fee or the right to use in perpetuity all lands, other than lands of the United States, necessary or appropriate for the construction maintenance, and operation of the project. The Licensee or its successors and assigns shall, during the period of the license, retain the possession of all project property covered by the license as issued or as later amended, including the project area, the project works, and all franchises, easements, water rights, and rights or occupancy and use; and none of such properties shall be voluntarily sold, leased, transferred, abandoned, or otherwise disposed of without the prior written approval of the Commission, except that the Licensee may lease or otherwise dispose of interests in project lands or property without specific written approval of the Commission pursuant to the then current regulations of the Commission. The provisions of this article are not intended to prevent the abandonment or the retirement from service of structures, equipment, or other project works in connection with replacements thereof when they become obsolete, inadequate, or inefficient for further service due to wear and tear; and mortgage or trust deeds or judicial sales made thereunder, or tax sales, shall not be deemed voluntary transfers within the meaning of this article.

Article 6. The Licensee shall install and thereafter maintain gages and stream-gaging stations for the purpose of determining the stage and flow of the stream or streams on which the project is located, the amount of water held in and withdrawn from storage, and the effective head on the turbines; shall provide for the required reading of such gages and for the adequate rating of such stations; and shall install and maintain standard meters adequate for the determination of the amount of electric energy generated by the project works. The number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, shall at all times be satisfactory to the Commission or its authorized representative. The Commission reserves the right, after notice and opportunity for hearing, to require such alterations in the number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, as are necessary to secure adequate determinations. The installation of gages, the rating of said stream or streams, and the determination of the flow thereof, shall be under the supervision of, or in cooperation with, the District Engineer of the United States Geological Survey having charge of stream-gaging operations in the region of the project, and the Licensee shall advance to the United States Geological Survey the amount of funds estimated to be necessary for such supervision, or cooperation for such periods as may be mutually agreed upon. The Licensee shall keep accurate and sufficient records of the foregoing determinations to the satisfaction of the Commission, and shall make return of such records annually at such time and in such form as the Commission may prescribe.

Article 7. The Licensee shall, after notice and opportunity for hearing, install additional capacity or make other changes in the project as directed by the Commission, to the extent that it is economically sound and in the public interest to do so.

Article 8. The Licensee shall, after notice and opportunity for hearing, coordinate the operation of the project, electrically and hydraulically, with such other projects or power systems and in such manner as the Commission may direct in the interest of power and other beneficial public uses of water resources, and on such conditions concerning the equitable sharing of benefits by the Licensee as the Commission may order.

Article 9. The operations of the Licensee, so far as they affect the use, storage and discharge from storage of waters affected by the license, shall at all times be controlled by such reasonable rules and regulations as the Commission may prescribe for the protection of life, health, and property, and in the interest of the fullest practicable conservation and utilization of such waters for power purposes and for other beneficial public uses, including recreational purposes, and the Licensee shall release water from the project reservoir at such rate in cubic feet per second, or such volume in acre-feet per specified period

of time, as the Commission may prescribe for the purposes hereinbefore mentioned.

Article 10. On the application of any person, association, corporation, Federal agency, State or municipality; the Licensee shall permit such reasonable use of its reservoir or other project properties, including works, lands and water rights, or parts thereof, as may be ordered by the Commission, after notice and opportunity for hearing, in the interests of comprehensive development of the waterway or waterways involved and the conservation and utilization of the water resources of the region for water supply or for the purposes of steam-electric, irrigation, industrial, municipal or similar uses. The Licensee shall receive reasonable compensation for use of its reservoir or other project properties or parts thereof for such purposes, to include at least full reimbursement for any damages or expenses which the joint use causes the Licensee to incur. Any such compensation shall be fixed by the Commission either by approval of an agreement between the Licensee and the party or parties benefiting or after notice and opportunity for hearing. Applications shall contain information in sufficient detail to afford a full understanding of the proposed use, including satisfactory evidence that the applicant possesses necessary water rights pursuant to applicable State law, or a showing of cause why such evidence cannot concurrently be submitted, and a statement as to the relationship of the proposed use to any State or municipal plans or orders which may have been adopted with respect to the use of such waters.

Article 11. The Licensee shall, for the conservation and development of fish and wildlife resources, construct, maintain, and operate, or arrange for the construction, maintenance, and operation of such reasonable facilities, and comply with such reasonable modifications of the project structures and operation, as may be ordered by the Commission upon its own motion or upon the recommendation of the Secretary of the Interior or the fish and wildlife agency or agencies of any State in which the project or a part thereof is located, after notice and opportunity for hearing.

Article 12. Whenever the United States shall desire, in connection with the project, to construct fish and wildlife facilities or to improve the existing fish and wildlife facilities at its own expense, the Licensee shall permit the United States or its designated agency to use, free of cost, such of the Licensee's lands and interests in lands, reservoirs, waterways and project works as may be reasonably required to complete such facilities or such improvements thereof. In addition, after notice and opportunity for hearing, the Licensee shall modify the project operation as may be reasonably prescribed by the Commission in order to permit the maintenance and operation of the fish and wildlife facilities constructed or improved by the United States under the provisions of this article. This article shall not be interpreted to place any obligation on the United States

to construct or improve fish and wildlife facilities or to relieve the Licensee of any obligation under this license.

Article 13. So far as is consistent with proper operation of the project, the Licensee shall allow the public free access, to a reasonable extent, to project waters and adjacent project lands owned by the Licensee for the purpose of full public utilization of such lands and waters for navigation and for outdoor recreational purposes, including fishing and hunting: Provided, That the Licensee may reserve from public access such portions of the project waters, adjacent lands, and project facilities as may be necessary for the protection of life, health, and property.

Article 14. In the construction, maintenance, or operation of the project, the Licensee shall be responsible for, and shall take reasonable measures to prevent, soil erosion on lands adjacent to streams or other waters, stream sedimentation, and any form of water or air pollution. The Commission, upon the request or upon its own motion, may order the Licensee to take such measures as the Commission finds to be necessary for these purposes, after notice and opportunity for hearing.

Article 15. The Licensee shall clear and keep clear to an adequate width lands along open conduits and shall dispose of all temporary structures, unused timber, brush, refuse, or other material unnecessary for the purposes of the project which results from the clearing of lands or from the maintenance or alteration of the project works. In addition, all trees along the periphery of project reservoirs which may die during operations of the project shall be removed. All clearing of the lands and disposal of the unnecessary material shall be done with due diligence and to the satisfaction of the authorized representative of the Commission and in accordance with appropriate Federal, State, and local statutes and regulations.

Article 16. If the Licensee shall cause or suffer essential project property to be removed or destroyed or to become unfit for use, without adequate replacement, or shall abandon or discontinue good faith operation of the project or refuse or neglect to comply with the terms of the license and the lawful orders of the Commission mailed to the record address of the Licensee or its agent, the Commission will deem it to be the intent of the Licensee to surrender the license. The Commission, after notice and opportunity for hearing, may require the Licensee to remove any or all structures, equipment and power lines within the project boundary and to take any such other action necessary to restore the project waters, lands, and facilities remaining within the project boundary to a condition satisfactory to the United States agency having jurisdiction over its lands or the Commission's authorized representative, as appropriate, or to provide for the continued operation and maintenance of nonpower facilities and fulfill such other obligations under the license as the Commission may prescribe. In addition, the Commission in its discretion, after notice and opportunity for hearing, may

also agree to the surrender of the license when the Commission, for the reasons recited herein, deems it to be the intent of the Licensee to surrender the license.

Article 17. The right of the Licensee and of its successors to assigns to use or occupy waters over which the United States has jurisdiction, or lands of the United States under the license, for the purpose of maintaining the project works or otherwise, shall absolutely cease at the end of the license period, unless the Licensee has obtained a new license pursuant to the then existing laws and regulations, or an annual license under the terms and conditions of this license.

Article 18. The terms and conditions expressly set forth in the license shall not be construed as impairing any terms and conditions of the Federal Power Act which are not expressly set forth herein.