

BONNEVILLE POWER ADMINISTRATION

YAKIMA FISHERIES PROJECT (YFP)

RECORD OF DECISION

Summary. As Administrator of the Bonneville Power Administration (BPA), I have decided to implement Alternative 2 of the proposed Yakima Fisheries Project (YFP) to undertake fishery research and mitigation activities in the Yakima River Basin in south-central Washington. The project responds directly to a need for knowledge of viable means to rebuild and maintain naturally spawning anadromous fish stocks in the Yakima Basin. Alternative 2 would experimentally supplement depressed populations of upper Yakima spring chinook salmon that spawn naturally, as well as undertake a study to determine the feasibility of re-establishing a naturally spawning population and significant fall fishery for coho salmon (now eliminated in the Basin).

Background. Populations of anadromous fish in the Pacific Northwest have become severely depleted. Current salmonid runs in the Yakima River have been reduced to about 1 percent of the estimated historical run size. The Northwest Power Planning Council (Council) believes it is important to proceed with the YFP as soon as possible because of the importance of the added production to be provided by the project and the potential learning benefits of the project.

In addition to being consistent with the Council's Columbia River Basin Fish and Wildlife Program (CRBFWP), the project aims (1) to test the assumption that new supplementation techniques can be used in the Basin to increase natural production and to improve harvest opportunities, while maintaining long-term fitness and controlling adverse ecological interactions; and (2) to provide knowledge about the use of supplementation, so that it may be used to mitigate effects on anadromous fisheries throughout the Yakima River Basin. There is currently no adequately detailed understanding of optimal techniques for situations where supplementation might be applied in the Yakima Basin or elsewhere. The project would provide that knowledge.

As part of Alternative 2, supplementation has been selected for evaluation as an alternative approach to conventional hatchery development and release of fish. Supplementation aims to rebuild naturally produced spawning runs by raising and releasing artificially propagated fish into natural streams and by enhancing natural production of both naturally and artificially produced fish. Its goal is to increase the numbers of naturally spawning fish, while maintaining the long-term genetic fitness of the fish population being supplemented and keeping adverse genetic and ecological interactions with non-target species or stocks within acceptable limits. Its ultimate goal is to produce enough naturally spawning fish with a high enough survival rate that artificial propagation can be phased out. See section 1.2 of the environmental impact statement (EIS) for more information on supplementation.

The second part of Alternative 2, the coho study, would seek to determine the feasibility of re-establishing a naturally spawning population and a significant fall fishery for coho salmon in the Yakima Basin. Coho smolts are currently being imported from another basin under the Columbia River Fish Management Plan (CRFMP), a non-BPA-funded action that would most likely continue with or without Alternative 2. The YFP would monitor (1) the survival of these fish through various life stages, and (2) the rate of predation by the coho smolts on juvenile fall chinook, in order to determine whether it is feasible to re-establish a naturally spawning population of coho in the Yakima River Basin. See section 2.4 of the EIS for more information on the coho study.

Authority. BPA has prepared the YFP EIS and Record of Decision (ROD) pursuant to the process specified in the National Environmental Policy Act (NEPA), regulations of the Council on Environmental Quality (40 CFR Part 1505), Implementing Procedures of the Department of Energy (57 FR15122; April 24, 1992), and under the authorities of the Pacific Northwest Electric Power Planning and Conservation Act (Northwest Power Act; P.L. 96-501; December 5, 1980).

The Final EIS was also prepared for purposes of compliance by the Washington Department of Fish and Wildlife (WDFW) with the Washington State Environmental Policy Act (SEPA). The WDFW is the lead agency for SEPA compliance for the project. The Yakama Indian Nation (YIN) has also chosen to participate in this process as a cooperating entity. BPA is the lead agency for the Federal decisions on this project. All three entities favor the implementation of Alternative 2.

History. After preparation of an environmental assessment on the siting and construction of central, satellite, and trapping facilities for supplementing anadromous fish populations in the Yakima and Klickitat River basins (Yakima-Klickitat Production Project Environmental Assessment and Finding of No Significant Impact, DOE/EA-0392), BPA proceeded to issue a draft YFP EIS (DEIS) in October 1992 (DOE/EIS-0169). In May 1995, BPA issued a Revised DEIS that responded to comments on the DEIS through an expanded impacts analysis, improved information on species interactions, and a narrowed range of alternatives, among other changes. BPA issued the Final EIS in January 1996, adding an alternative acclimation site (section 2.3.4), clarifying water rights issues and discussion of irrigation water availability (section 4.1.1.1), adding more information on recreation impacts (section 4.1.9.1), and clarifying agency roles and responsibilities (section 2.2.3.5). Appendix A of the Final EIS also contained all comments made on the Revised DEIS, and responses to them. Additional comments were received on the Final EIS. These have been reviewed and the comments and responses to them are attached to this Record of Decision. As the Administrator of BPA, I have relied upon this information to make my decision.

Concurrent related actions that could have a bearing on the implementation of this decision include the National Marine Fisheries Service (NMFS) Proposed Recovery Plan for Snake River Salmon (and the final version of the Recovery Plan), results of BPA's Endangered Species Act Section 7 consultation with NMFS regarding proposed operation of Cle Elum Hatchery, any amendments to the NMFS Biological Opinion for 1995 to 1998 Hatchery Operations in the Columbia River Basin related to the operation of the Cle Elum Hatchery, and the March 1995 NMFS Biological Opinion on the operation of the

Federal Columbia River Power System. Any of these could affect the funding or timing of this project, or could impose additional conditions on its operation.

Alternatives Considered. In addition to Alternative 2, the following alternatives were considered in reaching this decision. Each alternative is evaluated in detail in the EIS.

- No Action - BPA would not fund testing of supplementation in the Yakima River Basin. Passage improvements, water enhancements, and the coho and fall chinook programs under CRFMP would continue.
- Alternative 1 would be identical to Alternative 2, except that the coho feasibility study would not be undertaken. Alternative 1 would consequently cost approximately \$500,000 less per year than Alternative 2.

Chapter 2 of the EIS describes each alternative in detail, as well as alternatives eliminated from further consideration.

Decision Factors

The factors I considered in making the decisions on whether to fund the project, and, if so, which alternative to select, are as follows:

- The ability of the alternative to:
 - evaluate the effectiveness of supplementation techniques;
 - increase natural production of anadromous fish in the Yakima River Basin while maintaining the long-term genetic fitness of anadromous fish in the Yakima River Basin and improving harvest opportunities;
- The alternative's consistency with the Council's CRBFWP;
- The economic factors relative to the alternative; and
- The environmental impacts of the alternative on the following resources: water quality and quantity; fisheries, vegetation, and wildlife (including threatened and endangered species); socioeconomics; recreation resources; cultural resources; and resource management. Chapter 4 of the Final EIS discusses the impacts of the alternatives on these resources.

Decisions. I have decided to proceed with Alternative 2, because it best meets the need and purposes stated in the Final EIS.

1. Decision to Construct Facilities - The following facilities would be built: a central hatchery facility at Cle Elum for holding upper Yakima spring chinook adults, spawning, incubating eggs, and early and extended rearing of young fish; three sites with six raceways each for acclimation and release of spring chinook smolts. The acclimation sites would be located at Clark Flat, Easton (Gravel Pond siting option), and Jack Creek. Figure 1 shows the locations of the project facility sites.
2. Decision to Implement Spring Chinook Supplementation by Adaptive Management - A critical feature of this proposed project is its policy of adaptive management, which specifies an ongoing, iterative approach to planning for the project in order to protect the basin's fishery resources from unforeseen, adverse project impacts. The effects of management actions would be monitored and evaluated; programs, procedures, and facilities may all be modified in response to these findings. Full detailed plans for supplementing the stocks would be continuously developed and revised, using the scientific method and information gained from the previous year's activities. The details of the spring chinook supplementation program are described in section 2.3 of the Final EIS.
3. Decision to Implement Monitoring and Evaluation - The Planning Status Report lays out an integrated multi-level monitoring program for supplementing upper Yakima spring chinook. It addresses several kinds of monitoring: quality-control, product specification, research, risk containment, and stock status. Fish would be monitored for health, morphology (size and shape), behavior, and survival. The monitoring plan would be revised and expanded as part of the adaptive management process. A more detailed description of the monitoring and evaluation program can be found in section 2.3.3 of the Final EIS.
4. Coho Study - Project managers would seek to determine the feasibility of re-establishing a naturally spawning coho population and a significant fall fishery for coho within the Yakima River Basin, while keeping adverse ecological impacts within acceptable limits. The few naturally spawning coho salmon presently in the Yakima River Basin are likely the result of hatchery outplantings. The YIN is now managing a program of annually acclimating and releasing 700,000 coho pre-smolts transferred into the Basin under the CRFMP, to supply a terminal fishery for Tribal and other fishers. The fish being acclimated and released under this program would be monitored for their survival through various life stages and for the rates of predation on juvenile fall chinook. This information would be used by the Policy Group to determine whether and how a coho reintroduction program could be developed using the adaptive management process. No new facilities would be needed for the coho feasibility study, beyond the low-tech acclimation facilities being used for the existing Tribal coho program, and existing trapping and monitoring facilities at Prosser Dam. A description of the coho study can be found in section 2.4 of the Final EIS.

Rationale for Decisions. I have selected Alternative 2 because this alternative has a good potential for increasing knowledge about supplementation, while increasing the number of upper Yakima spring chinook returning to the Basin. Under Alternative 2, anadromous fish populations should also increase more quickly, and harvest opportunities should be increased. The alternative is consistent with the Council's CRBFWP. While it is the most costly of the three alternatives evaluated in the EIS, it would provide potentially invaluable information regarding the use of supplementation in the Yakima River Basin.

Having considered the environmental impacts described in detail in Chapter 4 of the Final EIS and the Response to Comments Appendix, I find the benefits of Alternative 2 outweigh the potential adverse environmental impacts on fisheries, surface and ground water, endangered species, and other resources.

- The highest potential impact (positive and negative) from Alternative 1 would be on the Yakima Basin's fishery resources. However, it could negatively affect existing resident fish populations through genetic and ecological interactions. Project managers will use the adaptive management process to learn from and continually adapt their actions to prevent or correct problems.
- Surface water quality could be moderately affected by erosion during construction of the facilities, but this will be a short-term impact. Water quantity impacts would be low, as water used for the project would be returned to the source immediately after use. BPA has applied for water rights through the Washington Department of Ecology (WDOE), and will use water rights granted according to the permits issued. BPA will not use eminent domain to acquire water rights for this project. A potential for conflict over future water availability exists if more fish return to the Basin as a result of this project and/or other fish mitigation efforts. BPA has little or no control over the resolution of water availability issues. Those are the jurisdiction of other state and federal entities.
- Groundwater would be used for the Cle Elum hatchery year-round, and at the three acclimation sites from January to May. Such water would be discharged, not back to groundwater, but to nearby streams or rivers. Groundwater pumping is not expected to affect other nearby wells adversely. Floodplains and wetlands that could not be totally avoided may be filled. However, sites would be designed to minimize impacts, and wetland losses mitigated by replacement wetlands.
- About 8 hectares (20 acres) of wildlife habitat would be permanently affected, temporarily or possibly permanently displacing wildlife. A wildlife mitigation plan is

being developed. Few impacts are expected on the listed threatened or endangered species in the vicinity of the project site: bald eagles wintering at the Clark Flat site could be disturbed by increased human activity, and spotted owls rearing near the Jack Creek site could be disturbed by construction noise. Consultation with the USFWS has been completed on ways to minimize impacts on these species, and USFWS concurred with BPA's determination that there would be no adverse effects on these species.

In the course of BPA consultations with the NMFS under section 7 of the Endangered Species Act, NMFS sent BPA a draft letter indicating that it agrees that the YFP is not likely to adversely affect listed Snake River salmon. The draft letter is part of the administrative record, and BPA is proceeding with preliminary work on the YFP in the absence of NMFS's final decision. BPA will not issue construction contracts until after NMFS issues its final letter. Should the final letter vary substantively from the draft, BPA will review its decision to proceed with the YFP and issue an amended Record of Decision, if necessary.

- Impacts on recreation and visual resources would be moderate. The resident trout fishery could be affected either positively (increased prey base) or negatively (increased inter-species competition). Near the Jack Creek site, part of a snowmobiling trail would be eliminated through regular plowing; alternative trails are planned. Interpretive facilities planned at the Cle Elum site would provide additional recreational resources. Little to no impacts would occur for cultural resources. Resources found at Jack Creek would be mitigated through avoidance, if possible; or otherwise treated under consultation in accordance with the National Historic Preservation Act.
- Construction would affect resources management in riparian and protected shoreline areas that cannot be avoided. BPA would consult with the managing agencies regarding ways to minimize this impact. Prime farmland would not be adversely affected. Finally, vegetation, air resources, noise, and socioeconomic impacts are anticipated to be low to negligible.

Alternative 1 would undertake the same actions as Alternative 2, except for the coho feasibility study. Environmental impacts would differ only slightly between the two alternatives, and the existing coho release program would likely continue whether the feasibility study were included in the YFP Project or not. While it would be less costly, Alternative 1 would offer no opportunities to study the feasibility of future coho supplementation.

The No Action alternative is the environmentally preferred action. It would have the fewest environmental impacts because (with no construction) it would not disturb soils,

vegetation, wildlife, or cultural resources, nor would it use the materials required for construction under the action alternatives. I have not selected this alternative because it would not contribute toward evaluating the effectiveness of supplementation techniques, and it would not be consistent with the Council's CRBFWP. It does not address the immediate concern regarding the continuing and increasing decline in anadromous fish populations. I have selected Alternative 2 because, while it has greater environmental risks and would cost more than the No Action alternative, it also has the potential for much greater environmental benefits.

Mitigation. Mitigation actions are an integral part of Alternative 2, and must be funded and carried out along with supplementation actions. All practicable means to avoid or minimize harm from implementation of Alternative 2 have been adopted and are summarized below. Monitoring and evaluation of the spring chinook supplementation actions are essential to increase knowledge of supplementation, allow continuous feedback to project management, and minimize any actions that may have negative consequences for the existing stocks. Environmental impacts predicted from implementation of these decisions have the potential to be significant if not adequately mitigated. In the event that funding is unavailable for spring chinook monitoring and evaluation under alternative 2, further environmental review would be required.

A Mitigation Action Plan is being prepared; it will contain all mitigation measures addressed in the FEIS for Alternative 2. These include the following:

- Water withdrawals from the Yakima River for the Cle Elum hatchery will be reduced during periods of river flow less than 9.8 cubic meters per second (350 cubic feet per second).
- Surface water withdrawals will generally be nonconsumptive; water will be returned to the source after use.
- Project managers will treat runoff from access roads and other impervious surfaces to protect surface or groundwater quality.
- New construction will not alter floodplain or floodway characteristics or channel flow capacity.

- The loss of riparian wetlands at all sites will be avoided if possible. If this is not possible, replacement riparian wetlands will be established.
- To avoid impacts on wetlands at acclimation sites, delineations will be completed before final facility design, siting, construction, and operation.
- Disturbance of wetlands and buffers from construction activities will be avoided whenever possible. If disturbance can not be avoided, the area of disturbance will be minimized to the extent practicable. Disturbed wetlands will be restored to their previous condition wherever practicable.
- The project managers will define or identify objectives for management of the key non-target species of fish before the project is implemented, so that an effective monitoring plan can be developed and implemented.
- The possible introduction of non-indigenous strains of pathogenic organisms will be minimized by stringent inspection and quarantine procedures.

All phases of artificial propagation, fish transfers, and supplementation procedures will follow the fish health policy documented in *Policies and Procedures for Columbia Basin Anadromous Salmonid Hatcheries* (Integrated Hatchery Operations Team, 1994). Minimal use of surface water, rigorous sanitation, and use of disinfection procedures combined with optimum husbandry, isolation and quarantine practices, and a diagnostic and therapeutic program will be incorporated into the project operations.

- Wildlife mitigation for the net loss of riparian and other wildlife habitat at the acclimation sites will be developed and implemented in consultation with WDFW and YIN personnel.
- BPA will complete consultation with the NMFS and USFWS under Section 7 of the ESA before making irrevocable commitments of resources to the project.
- In the spring, before construction at the Jack Creek site, surveys for nesting spotted owls will be conducted. If owls are nesting within 0.8 km (0.5 mi.) of the sites, formal consultation with USFWS will be initiated.
- As necessary, the acclimation sites will be resurveyed for special status species before construction and/or a biologist will be on site to monitor construction of the facilities.
- Site clearing will be minimized to reduce the potential for air quality impacts during construction due to dust and vehicle exhaust.
- The visual impacts from the sites will be mitigated by minimizing ground and plant disturbance during construction, and providing vegetative screening around the facilities.
- Plans for minimizing impacts on recreational resources at the Jack Creek site will be developed with the landowners.

- Prehistoric lithic materials will be avoided in siting the acclimation facilities. If avoidance is not possible, the Tribe and State Historic Preservation Officer will be consulted under the National Historic Preservation Act.
- The project managers will develop and implement a recycling policy.
- Chemicals applied in project facilities will be handled, applied, and disposed of in accordance with Federal Drug Administration, Environmental Protection Agency, and WDOE regulations.
- Where possible, an attempt will be made to locate facilities out of the 60-meter (200-foot) State shoreline area of the Yakima and North Fork Teanaway Rivers. If locations within the shoreline area can not be avoided, BPA will consult with the appropriate state and local agencies to determine the best placement of the structure. In shoreline areas, disturbed land will be restored as closely as possible to pre-project contours and replanted with native and local species. Erosion control measures will be implemented within the 60-m (200 ft.) shoreline area.
- Construction equipment exhausts will meet applicable regulatory requirements. Any fugitive dust caused by construction will be mitigated by water sprinkling, as necessary.
- The new snow park will be plowed near Jack Creek to provide access for snowmobiling along the North Fork Teanaway Road in winter. The project will also arrange for the road to be plowed from Lick Creek to Jack Creek.

The Mitigation Action Plan will be distributed to those requesting a copy, by calling BPA's toll-free request line (see below). It will be available along with this Record of Decision. To the extent applicable, the Mitigation Action Plan will include a monitoring and enforcement program.

Public Availability. Copies of the YFP FEIS and the YFP EIS Summary, as well as additional copies of this ROD, are available to all interested and affected persons and agencies from BPA's Public Involvement Office, P.O. Box 12999, Portland, OR 97212. Copies of these documents may also be obtained by using BPA's nationwide toll-free request line, 1-800-622-4520.

Conclusion. Alternative 2 is the best course of action to meet the need and purposes of this project. While I have selected Alternative 2, other entities influence the speed, timing, and funding levels of both the spring chinook supplementation action and the coho feasibility study. As individual proposals needed to implement these actions are

defined, they must be submitted to the Council's project prioritization process, which may affect funding. With Council concurrence on funding levels, construction of facilities for the supplementation action is expected to begin in May 1996, and to be completed in 1997.

Issued in Portland, Oregon on March 13, 1996.

/s/ Randall W. Hardy
Administrator and Chief
Executive Officer