DECISION DOCUMENT

Following the

NOVEMBER 2004 NOAA FISHERIES
REVISED BIOLOGICAL OPINION

on the

OPERATION of the

FEDERAL COLUMBIA RIVER POWER SYSTEM and
19 U.S. BUREAU OF RECLAMATION PROJECTS

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I. SUMMARY

Under section 7(a)(2) of the Endangered Species Act, federal agencies must "insure that any action authorized, funded, or carried out by such agency. . .is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of [critical] habitat of such species." 16 U.S.C. § 1536(a)(2). If a federal action may affect a listed species or critical habitat, the federal agency consults with the appropriate fish and wildlife agency, which will render an opinion as to whether the proposed action is likely to jeopardize the continued existence of the species or to adversely modify critical habitat.

On November 30, 2004, the National Marine Fisheries Service (NOAA Fisheries) issued a revised Biological Opinion under section 7(a)(2) of the Endangered Species Act in response to the District Court's Order dated June 2, 2003 in the case of *National Wildlife Federation v. NMFS.* NOAA Fisheries concluded in its revised Opinion (2004 BiOp) that the Updated Proposed Action (UPA) described by the consulting federal agencies—the Army Corps of Engineers, the Bureau of Reclamation, and the Bonneville Power Administration (collectively, the "Action Agencies")—is not likely to jeopardize twelve listed species or one proposed species of Columbia Basin salmonids, nor are the actions described in the UPA likely to destroy or adversely modify designated critical habitat for Snake River spring/summer chinook, Snake River Fall chinook, or Snake River sockeye salmon.[1]

The 2004 BiOp includes an Incidental Take Statement (ITS). The ITS includes reasonable and prudent measures and non-discretionary terms and conditions that NOAA Fisheries determined were appropriate to minimize the impact of incidental take associated with the UPA.

This decision document describes the Bonneville Power Administration's (BPA) determination to implement its activities under the UPA following issuance of the 2004 BiOp, and to implement the terms and conditions of the ITS. BPA's

[1] There are 12 listed and one proposed anadromous salmonid evolutionarily significant units (ESUs) addressed in the 2004 BiOp (hereinafter referred to as the 13 ESUs) under NOAA jurisdiction, and designated critical habitat for 3 ESUs. The 13 species are: Snake River (SR) spring/summer chinook salmon (*Oncorhynchus tshawytscha*); Snake River (SR) fall chinook salmon (*O. tshawytscha*); Upper Columbia River (UCR) spring chinook salmon (*O. tshawytscha*); Upper Willamette River (UWR) chinook salmon (*O. tshawytscha*); Lower Columbia River (LCR) chinook salmon (*O. tshawytscha*); Upper Columbia River (UCR) steelhead (*O. mykiss);* Middle Columbia River (MCR) steelhead (*O. mykiss)*; Upper Willamette River (UWR) steelhead (*O. mykiss);* Lower Columbia River (LCR) steelhead (*O. mykiss);* Columbia River (CR) chum salmon (*O. keta*); Snake River (SR) sockeye salmon (*O. nerka*); Lower Columbia River coho salmon (*O. kisutch*). Currently, there are final critical habitat designations for the following 3 ESUs: the Snake River sockeye; the Snake River spring/summer Chinook; and the Snake River fall Chinook.

determination is intended to comply with the requirement that federal agencies "determine whether and in what manner to proceed with the action in light of its section 7 obligation and the Service's biological opinion." 50 CFR § 402.15(a).

As detailed below, it is Bonneville's decision to, with the other Action Agencies, implement tributary and estuary habitat, predator control, and hatchery actions described in the UPA and the ITS, manage hydropower operations as described in both the UPA and ITS, and implement the research, monitoring, and evaluation actions described in the UPA and ITS. This decision document addresses BPA's responsibilities as a federal agency under the ESA. This decision document is consistent with and supplements BPA's past determinations to meet BPA's multiple responsibilities, including responsibilities under the Northwest Power Act for the protection, mitigation, and enhancement of fish and wildlife and the generation of power to provide an adequate, efficient, economical and reliable power supply, and BPA's support for protecting tribal treaty rights and interests, consistent with the federal government's trust responsibility to Columbia Basin Tribes.

II. BACKGROUND

The Action Agencies coordinate operation of the Federal Columbia River Power System (FCRPS).[2] The Federal Columbia River Transmission System Act designated the Bonneville Administrator "as the marketing agent for all electric power generated by Federal generating plants in the Pacific Northwest, constructed by . . . the Bureau of Reclamation or the United States Corps of Engineers. . . ." 16 U.S.C. § 838f. BPA has a duty to provide the Pacific Northwest with "an adequate, efficient, economical and reliable power supply," 16 U.S.C. § 839(2). BPA must set rates having regard to the recovery of its costs and "with a view to encouraging the widest possible diversified use of electric power at the lowest possible rates to consumers . . . ." 16 U.S.C. § 838g; *see also* 16 U.S.C. § 825s. Congress directed BPA to set its rates,16 U.S.C. §§ 825s, 838g, and fulfill its other Northwest Power Act mandates in a sound and businesslike manner. 16 U.S.C. § 839f(b).

The Northwest Power Act directs the Administrator to protect, mitigate, and enhance fish and wildlife affected by Columbia River basin federal hydroelectric projects from which BPA markets power, consistent with the fish and wildlife program developed by the Northwest Power and Conservation Council (Council). 16 U.S.C. § 839b(h)(10)(A). BPA undertakes significant offsite enhancement of

[2] The FCRPS projects that are included in the UPA and resulting 2004 BiOp are those that are hydrologically and operationally linked. They include: Dworshak, Lower Granite, Little Goose, Lower Monumental, and Ice Harbor dams, powerplants, and reservoirs in the Snake River basin; Albeni Falls, Hungry Horse, Libby, Grand Coulee, Banks Lake (features of the Columbia Basin Project), and Chief Joseph projects in the middle and upper Columbia River basin; and McNary, John Day, The Dalles, and Bonneville dams, powerplants, and reservoirs in the lower Columbia River Basin.

habitat for fish and wildlife and funds extensive hatchery activities and research programs under the Northwest Power Act as a part of an integrated program of activities for ESA-listed and non-listed species consistent with the Council's fish and wildlife program and the ESA. *See, e.g.*, Appendix C of the UPA.

With regard to management of the FCRPS, the Northwest Power Act also requires BPA to "protect, mitigate, and enhance fish and wildlife, including related spawning grounds and habitat, affected by such projects . . . in a manner that provides equitable treatment for such fish and wildlife with the other purposes for which such system and facilities are managed and operated." 16 U.S.C. § 839b(h)(11)(A)(i). BPA provides equitable treatment on a system-wide basis primarily by implementing an integrated fish and wildlife program and relevant Biological Opinions.

Process Leading to the 2004 BiOp

The impacts of the FCRPS on listed salmonids have been the subject of on-going ESA consultation between the Action Agencies and NOAA Fisheries since the first listings in the Northwest in 1991. As a result of these consultations, NOAA has issued a series of biological opinions starting in 1993, followed by opinions issued in 1995 (supplemented in 1998 and 2000) and 2000.

In a biological opinion addressing the FCRPS issued on December 21, 2000 (2000 BiOp), NOAA Fisheries found that the hydrosystem action proposed by the Action Agencies was likely to jeopardize eight listed salmon and steelhead species and adversely modify their designated critical habitat. NOAA Fisheries recommended a reasonable and prudent alternative (RPA) to the proposed action, which the Action Agencies accepted and agreed to implement.[3]

The National Wildlife Federation and others challenged the adequacy of the 2000 BiOp in federal district court, *National Wildlife Federation v. NMFS*, CR 01-640-RE (D. Oregon, *filed* May 5. 2001). On May 7, 2003, the Court found the 2000 Biological Opinion legally invalid and on June 2, 2003, remanded it to NOAA Fisheries to issue an opinion consistent with the Court's holdings of May 7. In a separate order, the Court decided that the 2000 BiOp should remain in effect

[3] See BPA's "Decision Document Regarding Responsibilities under the Endangered Species Act, Clean Water Act, and Additional Laws Following the December Opinion on Operation of Major Projects of the Federal Columbia River Power System in 2001 and Future Years" signed August 8, 2001; Corps' "Record of Consultation and Statement of Decision on Effects to Listed Species from Operations of the Federal Columbia River Power System issued by the U.S. Fish and Wildlife Service on December 20, 2000 and Reinitiation of Consultation on Operation of the Federal Columbia River Power System, Including the Juvenile Fish Transportation Program, and 19 Bureau of Reclamation Projects in the Columbia Basin Biological Opinion issued by the National Marine Fisheries Service on December 21, 2000" signed May 16, 2001; and Reclamation's "Findings and Commitments Implementing December 2000 Biological Opinions for the Federal Columbia River Power System and Other Related Actions" signed August 6, 2001.

while NOAA Fisheries revised the biological opinion in response to the Court's concerns.

Consequently, NOAA Fisheries, in continued consultation with the Action Agencies, revised and updated its jeopardy analysis for the listed salmon and steelhead. NOAA took into account additional scientific information concerning survival benefits affiliated with actions developed since the 2000 BiOp was issued. For example, NOAA has now identified specific factors that limit survival of evolutionary significant units (ESUs) of the listed species in tributaries to the mainstem Columbia and Snake Rivers, and in the estuary. In addition, there is more recent information about the numbers and trends for returning adult fish than was available for the 2000 BiOp.

To reflect this new information and analysis, as well as to reflect the modifications to 2000 BiOp actions developed during implementation, the Action Agencies submitted the UPA as the basis for the new biological opinion. The UPA is a description of the activities the Action Agencies are taking and will take to contribute toward meeting applicable performance standards in order to ensure that the operation of the FCRPS is not likely to jeopardize the continued existence of the listed species, and to avoid adverse modification of designated critical habitat.

The UPA continues most of the uncompleted and on-going actions identified in the 2000 BiOp, as modified through the adaptive management process of the 2000 BiOp, see UPA at pp. 1-5. The Action Agencies developed the UPA to incorporate these modifications into a single document and add specificity to the proposed actions, which we believe is a significant improvement.

The Action Agencies and NOAA Fisheries developed the UPA and BiOp in an iterative fashion. Initially, NOAA Fisheries provided the Action Agencies with a preliminary working draft of its analysis of the effects of the FCRPS hydrosystem project operations. The operations analyzed were consistent with the hydrosystem RPA actions of the 2000 BiOp as modified through the Action Agencies' implementation plans and progress reports and NOAA's Findings Letters. At the same time, NOAA also provided to the Action Agencies a Guidance Memo entitled "Mitigating the Effects of FCRPS Operations." That memo helped the Action Agencies in their selection of mitigation actions needed to avoid jeopardy.

Based on NOAA's draft hydrosystem analysis and Guidance Memo, the Action Agencies prepared the August 30, 2004 *Final Draft Updated Proposed Action for the FCRPS Biological Opinion Remand* (Draft UPA). The Action Agencies provided that Draft UPA for NOAA to use as NOAA conducted its analysis for its Draft BiOp. Both the Draft UPA and Draft BiOp were posted on www.salmonrecovery.gov on September 8, 2004.

Comments were solicited and received on the Draft BiOp. Comments were also received on the Draft UPA. NOAA and Action Agency staff met to discuss the Draft BiOp and Draft UPA with state and Tribal technical and policy staff throughout the comment period. The written and oral comments submitted were considered by the Action Agencies as they finalized the UPA. The Action Agencies jointly prepared the *Response to Comments Received on the Final Draft Updated Proposed Action for the FCRPS Biological Opinion Remand* (posted January 3, 2005, see www.salmonrecovery.gov).

The Action Agencies provided a draft final UPA to NOAA in October 2004 for consideration as NOAA concluded its jeopardy and critical habitat analyses for the Final BiOp. The Final UPA was formally submitted to NOAA on November 24, 2004 and posted with the Final BiOp on www.salmonrecovery.gov on November 30, 2004.

In parallel with these activities, at the request of the states and Tribes participating in the litigation, NOAA Fisheries undertook a collaborative process to discuss technical issues as well as the analytical framework for reaching determinations about jeopardy. NOAA participated in nineteen facilitated sessions with state and Tribal representatives and other interested parties during the winter and spring of 2004. BPA and the other Action Agencies participated in most of these sessions. Topics included: hydrosystem operations and actions including effects; dam passage; the estuary; intrinsic potential of habitat; hatcheries; population trends; and the analytical framework for ESA jeopardy determinations.

The Action Agencies drafted the UPA to respond to concerns expressed by the court in National Wildlife Federation v. National Marine Fisheries Service (now NOAA Fisheries), 254 F. Supp.2nd 1196 (2003) and Supplemental Order July 3, 2003. Reviewing the 2000 BiOp, the Court found that the government had improperly relied on future federal actions by others that had not completed consultation, and future non-federal actions that were not reasonably certain to occur. In addition, the Court determined that NOAA had construed the action area too narrowly. The Court remanded the 2000 BiOp to NOAA Fisheries to revise the BiOp consistent with the Court's opinion.

In response to the Court's concern, the UPA relies only upon commitments by the Action Agencies. It does not rely on commitments by others. As a result, NOAA's analysis in the 2004 BiOp does not rely upon federal actions by others that have not undergone section 7 consultation, or non-federal actions not "reasonably certain to occur." Nor does it rely on activities by state, Tribal or local governments.[4]

[4] NOAA determined that state, Tribal, and local governments have not developed plans or initiatives in a sufficiently comprehensive manner to be considered "reasonably certain to occur." *See* 2004 BiOp at section 7.2.

The Action Agencies have addressed the Court's concern about the action area by including, in addition to the area included in the 2000 BiOp definition of action area: (1) The subbasins that are the focus of the Action Agency proposed tributary habitat actions (Methow, Wenatchee, and Entiat subbasins); (2) areas directly and indirectly affected by Reclamation's conservation measures in the Upper Salmon, Little Salmon, Lemhi, Upper John Day, North Fork John Day, and Middle Fork John Day subbasins; (3) BPA's conservation measures in the Okanogan subbasin; (4) Redfish, Alturas, and Pettit lakes and the tributaries that connect them to the Snake River, due to the activities associated with the safety-net hatchery programs for Snake River sockeye salmon; (5) Lower South Fork Clearwater River and Lower Selway River downstream to the confluence with the North Fork Clearwater River, due to the activities associated with the Nez Perce Tribal Hatchery for Snake River fall Chinook salmon and (6) all areas directly or indirectly affected by the 19 Reclamation projects.

BPA believes this expanded action area, which now includes areas that are directly or indirectly affected by the Action Agency proposed mitigation actions, complies with the definition of "action area" as specified in 50 CFR 402.02. BPA notes that NOAA Fisheries identified an additional area as part of the action area in the final biological opinion, as "[a]ll additional tributary spawning areas which are accessible to listed adult salmon or steelhead that are affected by the UPA" relating to marine derived nutrients. *See* BiOp at p. 5-3. BPA will discuss this addition with NOAA Fisheries and consider it as we implement the UPA.

III. MEETING ESA RESPONSIBILITIES

A. The UPA to Avoid Jeopardy & Adverse Modification of Critical Habitat

Over the years the Action Agencies have built up a comprehensive program of diverse actions to help improve the survival of salmon and steelhead. Since the agencies began implementing the actions described in the 2000 BiOp, each has expanded and further refined its respective fish and wildlife program to focus on the needs of ESA-listed salmon and steelhead. A general summary of these actions included in the UPA can be found at pages 2-5 of that document. BPA intends to implement the hydrosystem, habitat, predator control, and hatchery actions described in the UPA over the next ten years to meet the performance standards and performance measures identified in the 2004 BiOp. BPA, together with the other Action Agencies, will use an adaptive management framework based on performance standards derived from NOAA Fisheries' analysis of expected juvenile and adult fish survivals through the hydrosystem and estimated benefits of non-hydro actions. Additional details about BPA's actions follow.

Hydrosystem Actions

BPA will work with the other Action Agencies to coordinate operations to meet our statutory requirements for fish and wildlife protection, mitigation and

enhancement, power marketing and stability of the Federal transmission system. BPA also will work with the other Action Agencies to coordinate prioritization of hydrosystem configuration actions. BPA will utilize power sales revenues to cover the power share of the debt service for configuration changes and assessment of their effectiveness. This includes repayment to the Treasury of the power share of the costs of measures such as Removable Spillway Weirs (RSWs) initially funded by federal taxpayer appropriations. This also includes funding for research, monitoring, and evaluation of juvenile fish and adult passage improvements.

BPA supports implementation of the existing summer spill program as outlined in the UPA (see Table 4, page 50). BPA also supports the adaptive management framework outlined in Section II of the UPA and adopted in the BiOp. This framework allows for modification of actions over time in response to new information gleaned through research, monitoring, and evaluation. The adaptive management framework also includes an annual performance approach for modifying hydrosystem operations as long as juvenile survival objectives can be met or exceeded. If modifications to summer spill are proposed in the future, BPA will use this framework in consultation with regional parties.

Adjustments or interruptions to hydrosystem operations for fish passage may occur due to unforeseeable power system, flood control, or other emergencies. BPA does not lightly declare power system emergencies, and views interruptions or adjustments of fish operations as a last resort to maintain an adequate, efficient, economical and reliable power supply. Following, and to the extent feasible during, a power system emergency BPA will work with the Corps, Reclamation, and regional parties to continue to meet biological performance standards.

Predator Control

BPA will continue to implement the Northern Pikeminnow Management Program. BPA will incorporate a "heavy up" conducted initially on a one-time basis in 2004, which expands the monetary rewards made available as incentives to fishermen to provide increases in both catch and exploitation.

BPA will also continue research on the impact of smallmouth bass predation on juvenile salmonids. Our goal is to complete the required environmental analysis of potential management alternatives by the end of 2007, to have a smallmouth bass management plan in place by 2008 and to begin implementation of it as soon as feasible thereafter.

BPA will participate in Caspian tern management actions to redistribute terns from the Columbia River estuary to reduce predation of juvenile salmonids. These actions will be done in a manner consistent with the selected alternative after completion of the Record of Decision for the Final Environmental Impact

Statement (EIS) on Caspian tern management being conducted by the U.S. Fish and Wildlife Service (USFWS), the Corps and NOAA Fisheries. These agencies anticipate completion of the EIS in February, 2005. BPA will cooperate with the Corps (lead agency for implementation of the Caspian Tern Management Program) and other relevant agencies to develop an implementation plan for the selected alternative by spring 2005. Implementation of the selected alternative may begin in 2005 and could begin producing results as early as 2006. BPA will implement actions consistent with the plan and assist the Corps in meeting the performance measures identified for the Caspian Tern Management Program in the 2004 BiOp.

The Corps and BPA do not anticipate any additional adverse impacts to listed salmonids in the Columbia River estuary from the actions taken to maintain or decrease the available Caspian tern nesting habitat at East Sand Island. The agencies are therefore not planning further consultation with NOAA Fisheries to authorize additional incidental take for this portion of the action. The Corps, in concert with the USFWS and NOAA Fisheries, will evaluate potential effects on listed species at other locations and consult as appropriate with NOAA Fisheries or USFWS. BPA will participate in any such consultations as appropriate depending on the nature of our participation in the action.

BPA and the Corps will continue to fund the research in the Columbia River estuary begun in 1997 to assess the impacts of avian predators on the survival of juvenile salmonids. As the agencies implement the proposed Caspian tern management action, this research will measure the effects of tern redistribution on colony size, annual level of reproductive success and annual consumption levels of juvenile salmonids by Caspian terns remaining on East Sand Island. The Action Agencies seek to validate the assumption that there is a linear relationship between the number of terns nesting on East Sand Island and the number of juvenile salmonids consumed. The Corps and BPA will monitor the effect of the predation management program on annual predation rates and the resulting changes in annual juvenile salmonid survival rates across affected ESUs. In addition, the Corps and BPA will continue and expand research efforts to evaluate whether or not other avian predators nesting on East Sand Island are compensating for the decrease in juvenile salmonid consumption caused by the redistribution of Caspian terns.

BPA and the Corps will fund research on the impacts of double-crested cormorant predation on juvenile salmon and steelhead in the Columbia River estuary. The objective is to facilitate future reduction and redistribution of this population of double-crested cormorants to further reduce predation on juvenile salmonids.

Tributary Habitat Protection and Improvement

BPA will work with Reclamation to fund actions to protect and improve tributary habitat focused particularly in the Wenatchee, Entiat and Methow subbasins for the benefit of Upper Columbia River spring Chinook and steelhead. The UPA sets out performance measures for these actions with metrics for specific types of actions and 3 and 6-year standards for achievement. Selected actions will address identified factors currently limiting the productivity of these areas for listed spring Chinook and steelhead. Actions include increasing water quantity on non-Federal lands through leasing or acquisition of instream flows, replacing headgates, and supporting streamflow and instream water transaction programs. BPA will continue to fund measures to address irrigation entrainment (retrofitting screens) and improvement of channel morphology for fish passage. BPA will also continue to protect and enhance riparian habitat by funding the acquisition of easements or other protective interests in lands, riparian treatment and fencing, and streambank stabilization projects.

BPA will also implement actions to improve tributary habitat conditions for Upper Columbia River steelhead in the Okanogan subbasin as a conservation measure. Specifically, BPA will implement riparian habitat protections intended to increase overall survival for Upper Columbia steelhead during their spawning and rearing life stages. BPA will work with regional interests and the Council to identify and implement appropriate conservation easements, leases, land acquisitions, and/or riparian buffer projects.

Estuary Habitat Actions

BPA and the Corps (lead agency in the estuary) will fund and implement actions to protect and restore estuary habitat for salmon and steelhead. Although projects identified in the UPA are targeted primarily for the benefit of Snake River fall Chinook, BPA and the Corps anticipate that these projects will provide benefits to all listed ESUs, especially those with an ocean-type life history. Project actions are being implemented at Crims Island, the Sandy River, Germany Creek, Fort Columbia Wetland, the Grays River Project, and the Chinook River. These actions are scheduled to be completed by 2010. Additional projects will be identified based on research and regional coordination.

Hatchery Actions

BPA will continue its funding of the Snake River Sockeye Safety-Net Program to prevent the extinction of this ESU. This includes funding for the Redfish Lake Sockeye Captive Broodstock Program, and additional research on genetic analysis, and habitat and limological needs. In addition, in order to enhance the survival and recovery of Snake River Sockeye, BPA will fund the construction and operation of new hatchery facilities in Oregon at Oxbow Hatchery near

Bonneville Dam. This is proposed to produce up to 150,000 additional smolts annually for release into Idaho's Sawtooth Valley sockeye salmon production areas. The objective is to jumpstart the production areas with adults returning from smolt releases. Implementation of this action is contingent upon approval of the increased production by the parties in the *US v. Oregon* process.

BPA will continue to fund ongoing safety-net programs as long as they continue to reduce extinction risk. This includes funding for:

- Mid-Columbia steelhead programs at the Umatilla Hatchery and the Yakima River steelhead kelt reconditioning program
- Hood River steelhead program for Lower Columbia steelhead
- For Snake River spring/summer Chinook, the captive broodstock program for the Tucannon and Grande Ronde Rivers, the captive rearing program for the Salmon River, and the Johnson Creek supplementation program.
- The program to re-introduce Columbia River chum salmon into Duncan Creek

The Safety-Net Artificial Propagation Program (SNAPP) planning process, intended to identify any additional Snake River populations requiring a safety-net program, has completed its objectives. The populations identified by SNAPP as being at severe risk of extinction have a safety-net or conservation hatchery program in place already to reduce that risk. Should the need arise in the future to reinstitute the SNAPP planning process, BPA would participate as appropriate.

BPA will also continue to fund the Snake River fall Chinook component of the Nez Perce Tribal Hatchery program as long it has benefits for this ESU. BPA will fund design and construction of modifications of the Lower Granite Dam adult trap and collection facility to provide additional natural-origin fall Chinook broodstock for hatchery programs and other benefits for the Snake River fall Chinook ESU. BPA and the Corps will work with NOAA Fisheries to determine each agency's appropriate share of the annual operations and maintenance costs for the adult trap, with cost-sharing from other agencies as appropriate, beginning in 2005.

BPA will also continue to fund the Hatchery Genetic Management Plan (HGMP) development process through completion of the final phase III HGMPs. HGMPs are aimed at identifying hatchery reforms that will reduce the impacts of hatcheries on listed stocks. Once hatchery reforms have been identified, we anticipate many will be integrated into NOAA's recovery planning process and the Council's Fish and Wildlife Program.

Research, Monitoring and Evaluation

BPA will continue to fund research, monitoring and evaluation (RM&E) that will help assess and optimize the UPA actions. BPA will continue to coordinate its RM&E program funding with the Corps and Reclamation, the Council, and other regional federal, state, and tribal entities. RM&E actions include on going status monitoring of the hydro corridor, tributary and estuary pilot projects; action effectiveness research for the hydrosystem and habitat actions; and critical uncertainties research.

As a part of this commitment, BPA and the Corps will continue to conduct RM&E to provide information on juvenile fish transportation and delayed mortality. The Corps (with power-share repayment to the Treasury from BPA) will research the effect of transport on juvenile fall Chinook. Baseline research on existing conditions is planned for 2005-2007, with a comprehensive evaluation of transportation versus in-river migration to follow. The comprehensive study will be implemented once RSWs or other surface passage technology is installed at the Snake River collector dams. The comprehensive study requires an initial determination of related life history attributes influencing transportation success and passage timing through the FCRPS.

Adaptive Management Framework

In the final UPA, the Action Agencies propose to continue an adaptive management framework developed in the 1995 BiOp and continued under implementation of the 2000 BiOp. This framework is built on performance standards and accountability, and is based on the best available scientific information. The Action Agencies will continue to undertake a comprehensive monitoring program to assess the effectiveness of actions taken under the UPA.

The overarching performance standard for the operation of the FCRPS is juvenile and adult survival through the hydrosystem. The Action Agencies have largely achieved or exceeded the adult performance standards set out in the 2000 FCRPS BiOp and will continue to monitor adult passage and periodically assess survival to ensure that adult survival remains high. Juvenile passage survival continues to improve. The Action Agencies believe that the total system survival performance standard (i.e., considering survival of both transported and non-transported juveniles) is the most appropriate measure for ESUs that have a combined management strategy of transportation and in-river migration. In-river survival is the preferred measurement of performance where transportation is not available or effective as a management tool.

Each non-hydro action in the UPA also contains performance measures to ensure accountability for performance and ultimately allow for evaluation of biological performance. The Action Agencies intend to monitor performance and

report the results in annual progress reports and in comprehensive performance evaluations for 2007 and 2010.

To support this adaptive management framework, the Action Agencies will jointly prepare periodic implementation plans that identify the various actions with specific implementation details to achieve the ESU-specific life-stage targets proposed in the final UPA. As was done under the 2000 BiOp, the Action Agencies will prepare annual progress reports on their implementation efforts. In the progress reports the Action Agencies' will track their progress in meeting the programmatic performance measures of the UPA. The annual progress reports will include reports of adult fish abundance and trends for listed ESUs (or their surrogates). The progress reports will inform the Action Agencies if any implementation adjustments are needed to ensure that performance is on course to meet the relevant performance standards. Any adjustments will be reflected in subsequent implementation plans.

As described above, the Action Agencies will also prepare comprehensive programmatic evaluations of progress for 2007 and 2010. The Action Agencies will use these evaluations to determine whether overall course changes are needed to achieve the survival improvements identified in the 2004 BiOp. Any major course changes would be discussed with NOAA Fisheries and the regional salmon managers and would be documented in subsequent implementation plans.

B. Meeting Other ESA Responsibilities

NOAA completed the remanded Biological Opinion in accordance with Judge Redden's May 7, 2003 order and the subsequent extension of the deadline, and NOAA has found that the UPA does not jeopardize the continued existence of any listed species, or adversely modify any designated critical habitat within the action area. BPA concurs with this conclusion.

The U.S. Fish and Wildlife Service issued a Biological Opinion in 2000 regarding Kootenai River white sturgeon and bull trout (USFWS 2000 BiOp). Subsequent to the release of the USFWS 2000 BiOp, in September of 2001 the USFWS designated critical habitat for the Kootenai River white sturgeon. BPA and the Corps reinitiated consultation on the portion of the USFWS 2000 BiOp that addressed the effects of the operation of Libby Dam on the sturgeon's designated critical habitat. That supplemental consultation is also addressing additional new scientific information pertaining to the sturgeon and the effects of the Corps' operation of Libby Dam. Additionally, in September 2004, the USFWS issued its final critical habitat designation for bull trout in the FCRPS action area. This final designation of critical habitat will be addressed in the supplemental consultation with the USFWS as well. BPA believes the actions contained in the UPA are consistent with the implementation of the actions in the USFWS 2000 BiOp and the on-going consultation.

Response to Conservation Recommendations

Section 7(a)(1) of the ESA requires that federal agencies, in consultation with and with the assistance of the relevant federal fish and wildlife agency, utilize their authorities in furtherance of the purposes of the Act by carrying out programs for the conservation of listed species. In its 2004 BiOp, NOAA made two conservation recommendations to the Actions Agencies (section 9):

Subbasin Planning Infrastructure—NOAA Fisheries recommended that the Action Agencies continue to facilitate the existing subbasin planning infrastructure "to ensure that subbasin plans are implemented effectively and efficiently and are updated and modified at three-year intervals using the best available scientific information." *See* 2004 BiOp p.9-1. The Northwest Power and Conservation Council is responsible for directing the subbasin planning process, which is a part of the Council's 2000 Fish and Wildlife Program. BPA provided over $15 million to fund subbasin plan development. The Council has begun to amend subbasin plans into its Fish and Wildlife Program. Whether the subbasin plan infrastructure is to continue, and whether the plans will be updated and modified at three-year intervals is part of a broader regional discussion the Council has initiated to address implementation of the subbasin plans. BPA is participating in that discussion and will continue to do so. Subbasin planning infrastructure may also be considered part of the broader effort to address regional recovery planning that is not exclusively related to FCRPS mitigation. As a result, at this point, it is not certain whether or at what level BPA support for this conservation recommendation will be requested, but BPA will continue to cooperate with the Council as it integrates subbasin plans into the Fish and Wildlife Program.

Snake River Sockeye Salmon--NOAA Fisheries recommends that the Action Agencies develop a second artificial propagation facility (in addition to the Oxbow Hatchery smolt program) designed to produce up to 150,000 smolts and suggests that the Action Agencies assess the feasibility of developing the Sawtooth Hatchery as the second facility. At this point, the concept is in an early stage of development by NOAA Fisheries, and is too uncertain for BPA to determine whether it will be able to support such a proposal. The Sawtooth Hatchery is a Lower Snake River Compensation Plan facility operated by Idaho Department of Fish and Game (IDFG). As a result, this discretionary conservation recommendation should be considered by the Stanley Basin Sockeye Technical Oversight Committee (SBSTOC), a technical forum for implementation of the Snake River sockeye safety-net program, with representation from IDFG, Shoshone-Bannock Tribes, NOAA Fisheries, BPA, and other agencies. Any option for additional smolt production will need the approval of the parties in *U.S. v. Oregon,* and would need to proceed through established fish and wildlife funding processes.

Proposed Critical Habitat

On December 14, 2004, NOAA published a proposal to designate critical habitat for 13 ESUs of Pacific salmon and steelhead. Some portions of the proposed critical habitat occur within the action area of this biological opinion.

BPA reviewed the proposal and considered whether a conference on proposed critical habitat would be appropriate per 50 C.F.R. § 402.10. BPA concludes that the obligation to conference on the proposed critical habitat has not been triggered. This determination is based upon several factors, including the following:

> (1) The proposed operation and configuration of federal projects as described in the UPA includes operations and improvements at the four lower Columbia projects, plus certain offsite improvements, such as predator control and enhancement of estuary habitat that benefit all 12 listed species and the one species proposed for listing.
>
> (2) NOAA concluded that the UPA avoids jeopardy to all of these species.
>
> (3) NOAA conducted an environmental baseline, and a listing approach analysis concerning the destruction or adverse modification of designated critical habitat. NOAA found that the UPA avoids the destruction or adverse modification of critical habitat for 3 Snake River ESUs under both analyses. The two essential elements that NOAA evaluated were juvenile passage and shallow water habitat in the estuary. Available information suggests that the UPA's effect on the recently proposed critical habitat would be similar to the effects of the UPA on the designated critical habitat for the 3 Snake River ESUs and thus will similarly avoid destruction or adverse modification of proposed critical habitat.
>
> (4) NOAA's 2004 BiOp supports the conclusion that the UPA will benefit (or not destroy) essential features of the proposed critical habitat.[5]

[5] Some of the pertinent references in the 2004 BiOp follow: water quality critical habitat essential features are not likely to be affected the proposed action, and the functioning of critical habitat for the adult migration corridor features is not expected to degrade (page 6-61). When proposed estuary actions have been implemented, there is no negative effect of the proposed action on juvenile rearing habitat in the estuary (pages 6-62, 6-63). Since the 2000 BiOp, the Action Agencies have implemented and will continue to implement a number of tributary habitat projects, which will continue to provide benefits over time (page 6-63). Reclamation's continuation of a tributary habitat technical assistance program has Medium potential to improve spawning and rearing habitat for these three subbasins (Appendix B). Juvenile migration corridor critical habitat is not likely to be negatively impacted by the proposed action as indicated by the in-river survival rates (Tables 6.9 and 6.10). Reduction of avian predation in the estuary and fish predation within the FCRPS will improve safe passage through the juvenile migration corridor, resulting in a net improvement in functioning of juvenile migration corridor critical habitat (page 6-77).

(5) The 2004 BiOp allows for adjustments to implementation to address new information and developments. BPA and the other Action Agencies can use the implementation process to make adjustments, consistent with guidance by NOAA, on the proposed designations of critical habitat.

(6) The proposed regulations reflect that NOAA is considering excluding the FCRPS mainstem areas directly affected by the operation of the federal dams - i.e. reservoir pools, tailrace areas, and navigational locks - from the proposed critical habitat because these areas are already under effective management through implementation of NOAA's biological opinions.

Considering the many habitat improvement actions the Action Agencies are undertaking, and that the adverse impacts of the UPA on the proposed critical habitat should be similar to the "effects of the action" considered in this remanded Biological Opinion, BPA reasons the UPA will not "adversely modify" the December 14, 2004 proposed critical habitat for the 13 ESUs of Pacific Salmon and Steelhead. BPA will however, consider the need to reinitiate section 7 consultation as required under the regulations, see 50 C.F.R. Section 402.16(d), once the proposed critical habitat designations are finalized.

Reinitiation of Consultation

Consultation will be reinitiated with NOAA Fisheries if the amount of take specified in the incidental take statement is exceeded or is expected to be exceeded; if new information reveals effects of the action that may affect listed species in a way not previously considered; if the action is modified in a way that causes an effect on listed species that was not previously considered; or if a new species is listed or critical habitat is designated that may be affected by the action. 50 C.F.R. § 402.16.

The 2004 BiOp states that, in considering whether to recommend changes in implementation of the BiOp, supplemental consultation or reinitiation of consultation, NOAA will consider whether performance standards are met. 2004 BiOp at p. 12-1. If performance standards are not met, BPA will, consistent with the UPA's adaptive management framework and the BiOp, consider the reasons for not meeting performance standards and will provide responsive changes through implementation of the BiOp, supplemental consultation, or reinitiation of consultation.

This 2004 BiOp covers the ongoing operations and maintenance of 14 FCRPS dams, including monitoring and evaluation requirements. BPA also implements many habitat actions consistent with the Habitat Improvement Program (HIP) BiOp issued in 2003. Other mitigation actions may require additional consultation. For example, BPA will fund a suite of habitat actions, some of which may cause short-term adverse effects to listed salmon or steelhead. BPA

(and the other Action Agencies, if appropriate) will consult with NOAA Fisheries to supplement the 2004 BiOp to authorize any additional incidental take that may result from the implementation of the non-hydro mitigation actions referenced in the UPA. If any of the circumstances listed in 50 CFR § 402.16 arise, BPA will supplement or reinitiate consultation, as appropriate.

In connection with implementation of the 2000 BiOp, the Action Agencies have consulted on many actions for the duration of that BiOp and have expanded and further refined their conservation programs to focus on ESA-listed species. Many of these actions can continue to provide benefits in future years after replacement of the 2000 BiOp. Recognizing the value of continuing these ongoing benefits, the UPA includes the Action Agencies' proposal to retain and continue protection and maintenance of these actions. *See* UPA p. 65.

The actions undertaken pursuant to this UPA will also continue to benefit listed fish well beyond the term of this new BiOp (2014). Whenever the Action Agencies reinitiate consultation on the operation of the FCRPS, the agencies will consider whether to retain and continue protection and maintenance of these actions. If during a subsequent reconsultation, NOAA and the Action Agencies agree it is important to carry these actions forward, then the Action Agencies will include such renewed commitments as a part of their new proposed action for evaluation in a supplemental or new BiOp. The benefits of these actions would help to close any difference in survival or "gap" between the then existing proposed operations and points of reference, such as the 2004 BiOp's reference operation.

Relationship to Salmon Recovery

The Section 7 consultation process is aimed at ensuring federal actions avoid jeopardy and the adverse modification of critical habitat. In addition, section 4(f) of the ESA focuses on recovery and directs NOAA Fisheries to develop and implement recovery plans for the ESUs addressed in the 2004 BiOp (as well as all other listed ESUs in their jurisdiction). BPA agrees with NOAA Fisheries that recovery plans will have a greater likelihood of success if developed in partnership with other stakeholders, including those that have the responsibility and authority to implement recovery actions, see 2004 BiOp at page 2-5.

Currently there are promising regional efforts to develop recovery plans. As noted above, subbasin plans have been produced under the auspices of the Council with BPA funding, and BPA expects the subbasin plans will assist NOAA with recovery planning. In addition, the State of Washington has recently delivered to NOAA Fisheries its proposed draft recovery plan for the Lower Columbia and estuary and continues its efforts to develop other recovery plans within the state. BPA intends to work with NOAA Fisheries and the other Action Agencies to assist in the Council's subbasin planning, the State of Washington

recovery planning groups as well as other regional groups as they are identified as they develop assessments, strategies, and actions.

BPA's efforts under the UPA are just a part of the actions we take to support salmon and steelhead recovery in the Columbia Basin. BPA's implementation of the integrated fish and wildlife program includes a wide range of measures in the areas of habitat, hatchery, hydrosystem operations, research, monitoring and evaluation and regional coordination. These efforts provide benefits for listed as well as non-listed species and are an important part of the efforts by all interests in the region to support recovery of salmon.

IV. CONSISTENCY WITH OTHER FEDERAL LAWS & RESPONSIBILITIES

BPA's determination respecting the 2004 BiOp complements BPA's decisions over time to meet its multiple responsibilities. This section notes how implementation of the BiOp complements some of those responsibilities.

Response to Essential Fish Habitat Recommendations

In the 2004 BiOp, pursuant to the Magnuson-Stevens Fishery Conservation and Management Act, NOAA makes conservation recommendations to avoid, mitigate, or otherwise offset the adverse effects of the UPA on essential fish habitat (EFH), including such habitat for chinook and coho salmon, English sole, starry flounder, northern anchovy, and Pacific sardine, see section 11.0. NOAA Fisheries recommended that both the UPA and the terms and conditions in Section 10.0 of the BiOp be adopted as EFH conservation measures.

As discussed in detail in this document, BPA intends to implement the UPA and the Section 10.0 terms and conditions, and BPA is thus following the EFH conservation recommendations made by NOAA Fisheries.

Water Quality/Clean Water Act

In developing the UPA the Action Agencies considered the respective ecological objectives of the ESA and the Clean Water Act (CWA). In many instances, actions implemented to attain water quality standards (e.g., reducing Total Dissolved Gas and water temperature) will also benefit ESA-listed species. In 2003 the Corps, with the assistance of Reclamation and BPA, completed a comprehensive water quality plan that is part of the UPA (Appendix A). Subject to availability of funds and Congressional directives, the Action Agencies are prepared to participate in implementing the water quality plan and undertaking practical alternatives to meet Total Maximum Daily Load (TMDL) goals. The Action Agencies will attempt to harmonize federal dam operations to be consistent with ESA requirements, determined by NOAA Fisheries and USFWS, and state and Tribal water quality standards. For the purposes of the actions called for in the BiOp, federal dams are not required to obtain National Pollutant

Discharge Elimination System permits under Section 402 of the CWA, and their operation is not subject to CWA Section 401 (water quality certifications). Nevertheless, the Action Agencies will continue to operate their projects to the extent practicable to achieve state and Tribal water quality standards.

BPA also benefits water quality through its habitat improvement actions. For example, the HIP BiOp will be used to implement many of the offsite habitat improvement actions of the UPA. The authorized activities include: stream channel, floodplain, and instream monitoring devices, acquisition of water rights, stream bank protection actions, riparian and wetland creation and restoration actions, livestock impact reductions to waterways, soil erosion control projects, irrigation and water delivery management projects, and bridge, road, and culvert replacement or improvement projects.

Tribal Treaty & Trust Obligations

Federal agencies, including BPA, share the Government's trust responsibility to Indian tribes, to protect Tribal interests reserved in treaties or guaranteed through other federal laws. To consider impacts upon Tribes, NOAA Fisheries and the Action Agencies discussed the draft BiOp and draft UPA with Federally recognized Tribes in the Columbia River Basin, and considered recommendations for revisions.

BPA takes Tribal concerns into account as it acts to meet its multiple responsibilities under its enabling statutes and applicable law. Examples include meeting regularly with Tribal representatives, managing FCRPS projects consistent with treaties and executive orders, implementing the 2004 BiOp, supporting recovery efforts consistent with ESA responsibilities, and protecting or mitigating impacts to cultural resources. These efforts further BPA's provision of equitable treatment to fish and wildlife consistent with the purposes of the Northwest Power Act.

National Environmental Policy Act (NEPA)

BPA's environmental analysis of the effects of implementing its activities described in the UPA is provided by several existing programmatic NEPA analyses. The System Operation Review Environmental Impact Statement (EIS)(1995) (DOE/EIS-0170) and its record of decision (ROD) (1997) address the operation of the FCRPS. The Programmatic Wildlife Mitigation Program EIS and ROD (1997) (DOE/EIS-0246) and Programmatic Watershed Management Program EIS and ROD (1997) (DOE/EIS-0265) analyze the environmental effects of off-site mitigation projects and activities. BPA's recently completed Fish and Wildlife Implementation Plan EIS and ROD (2003) (DOE/EIS-0312) is a cumulative effects analysis of the policy choices available to BPA for managing its fish and wildlife responsibilities in the Pacific Northwest region, including its fish and wildlife mitigation and recovery efforts. Under this EIS, BPA adopted a

policy direction that protects weak stocks of fish and achieves performance standards and biological objectives—including those set forth in NOAA's biological opinions and the Integrated Program—while sustaining overall populations of fish and wildlife. The focus of this adopted policy direction is enhancing fish and wildlife habitat, modifying hydro operations and structures, and supporting hatchery reform to both increase populations of listed fish stocks and provide long-term harvest opportunities.

BPA will rely on these existing NEPA analyses to implement on-going hydrosystem and offsite actions proposed in the UPA, and any new actions proposed in the UPA. For new actions that are within the scope of these existing NEPA documents, BPA will determine whether the environmental effects of the actions are adequately covered by the existing NEPA documents and no further NEPA documentation is necessary, or whether it will prepare additional NEPA documentation such as a tiered ROD or Supplement Analysis. To the extent that the UPA proposes actions that are not covered by BPA's existing NEPA analyses, BPA will conduct additional environmental analyses as appropriate. In preparing our NEPA analyses, BPA also integrates other applicable environmental laws.

Northwest Power Act

The Northwest Power Act directs BPA to use its Bonneville Fund and authorities to protect, mitigate, and enhance fish and wildlife affected by the development and operation of the FCRPS, in a manner consistent with the Council's Power Plan and Fish and Wildlife program, and while providing an adequate, efficient, economical, and reliable power supply. BPA's decision to implement the UPA is one of the actions taken under this requirement. BPA intends to continue integrating its ESA compliance activities with the Council's program and processes and taking the program into consideration at each relevant decision point (such as this). In addition, the Northwest Power Act requires that Bonneville exercise its responsibilities for hydropower operations consistent with the purposes of the Act in a manner that provides equitable treatment for fish and wildlife with the other purposes for which the FCRPS is managed and operated. As detailed in Chapter 2 of the Fish and Wildlife Implementation Plan EIS referenced above, BPA fulfills this mandate on a system-wide basis. BPA will continue providing equitable treatment on a system-wide basis by using the UPA to help offset the unavoidable impacts of on-going operations of the FCRPS, and through its ongoing efforts under the Council's program to implement the multi-species, long-term protection and recovery strategy.

V. DECISION

Based on the analysis and findings in the 2004 BiOp, taking into consideration public and Tribal comments received on the UPA, and considering the information and analysis contained in this document, it is my decision that BPA

will implement the UPA with the other Action Agencies and comply with the measures in the 2004 BiOp Incidental Take Statement.

This decision requires a significant commitment of resources from the region's ratepayers, including repayment to the Treasury for configuration changes such as RSWs, extensive support for research, monitoring, and evaluation of the system and off-site measures, and new actions within our already extensive off-site mitigation program. These actions, taken together will meet BPA's responsibilities under the ESA to avoid jeopardy to the species that are the subject of this consultation, and will not destroy or adversely modify their critical habitat. These actions also further BPA's commitment to meet its responsibilities under the Northwest Power Act to provide equitable treatment to fish and wildlife and to protect species while ensuring an adequate, efficient, economical and reliable power supply for the region.

BPA will also cooperate with the necessary additional parties to evaluate the conservation recommendations regarding additional Snake River sockeye and subbasin planning infrastructure, and provide support for any resulting measures recommended through the BPA/Council project review process, subject to available funding within BPA's integrated Fish and Wildlife Program. BPA will continue to coordinate with states and Tribes to consider their advice and recommendations about how to improve conditions for fish and wildlife. BPA will also continue to meet and consult with Tribes to consider and respond to impacts of implementation of the UPA and BiOp upon Tribes and Tribal interests. Implementation of all of BPA's actions under the UPA will be coordinated with states, Tribes, and the Council as practicable within timelines needed to make decisions.

BPA believes that this UPA is an improvement over the 2000 BiOp's RPA. With this UPA, we are more focused in our efforts, directing work towards those areas where ESUs need the most help and our actions can do the most good. We have accelerated our efforts in configuration changes, especially in an expedited program to install fish bypass facilities such as RSWs at all eight of the mainstem Snake River and Columbia River dams which will improve juvenile fish passage while being more cost-effective. We are committing to an important feedback loop, continuously monitoring and evaluating our on-the-ground actions to confirm they are doing what we expect them to do to benefit fish, and adjusting if they are not. We believe salmon and steelhead will do better with these efforts, and we look forward to continuing our work with the region to implement these important protection and recovery efforts.

Dated this 7 day of January, 2005

Stephen J. Wright
Administrator
Bonneville Power Administration