

BONNEVILLE POWER ADMINISTRATION
ADMINISTRATOR'S RECORD OF DECISION
WASHINGTON-ACTION AGENCY ESTUARY HABITAT
MEMORANDUM OF AGREEMENT

September 2009

TABLE OF CONTENTS

1.0 INTRODUCTION.....	1
2.0 BACKGROUND	1
2.1 What is the Columbia River Estuary?.....	1
2.2 Importance of the Estuary for All Listed Stocks	2
2.3 Estuary Habitat and the 2008 FCRPS BiOp	2
2.4 The March 6, 2009, hearing before Judge Redden.	4
2.5 Development of the Estuary Habitat MOA	4
3.0 THE ESTUARY HABITAT MOA COMMITMENTS.....	5
3.1 Overview.....	5
3.2 Biological Benefits and Project Criteria	6
3.3 Details Regarding BPA Added Funding for Estuary Habitat Actions.....	7
3.4 Details Regarding Corps Funding for Estuary Habitat Actions.....	8
3.5 Estuary RM&E Funding	9
3.6 General Provisions in Relation to all Projects	9
3.6.1 Council and Independent Science Review Panel (ISRP) Review....	10
3.6.2 Replacement Projects and Adaptive Management	11
3.6.3 BPA Inflation and Budget Matters.....	11
3.7 Affirming the BiOp and Other Provisions.....	12
3.7.1 Good Faith Implementation and Support	12
3.7.2 Changed Circumstances, Renegotiation/Modification, Dispute Resolution and Withdrawal.....	13
3.7.3 Miscellaneous Other Provisions.....	14
3.8 Changes Made to the Final MOA	14
3.9 Funding Commitments for BPA, and relationship to ratemaking	14
4.0 PUBLIC REVIEW & COMMENT.....	15
4.1 BPA Analysis of Comments	15

4.3.1	<i>Cowlitz Tribe Comments</i>	15
4.3.2	<i>CREST Comments</i>	16
4.3.3	<i>Comments regarding a proposed Liquefied Natural Gas (LNG) terminal</i>	16
4.4	Opportunities for Future Public Review of Site-Specific Project Implementation	17
5.0	WHY BPA HAS DECIDED TO ENTER INTO THIS AGREEMENT	17
5.1	The Agreement Helps BPA Fulfill its Mission.....	17
5.1.1	<i>The Estuary MOA Protects and Recovers Fish</i>	17
5.1.2	<i>The Estuary MOA supports an Adequate, Efficient, Economical, and Reliable Power Supply (AEERPS)</i>	18
5.2	The Estuary MOA Complies with and Supports BPA’s Legal Obligations..	18
5.2.1	<i>Endangered Species Act</i>	19
5.2.2	<i>Northwest Power Act</i>	19
5.2.4	<i>Clean Water Act</i>	21
5.2.5	<i>National Historic Preservation Act</i>	22
6.0	NATIONAL ENVIRONMENTAL POLICY ACT ANALYSIS	22
6.1	Fish and Wildlife Implementation Plan EIS and ROD	22
6.1.1	<i>Watershed Management and Wildlife Mitigation Program EISs</i> ...	24
6.1.2	<i>BPA’s Adoption of a Policy Direction from the FWIP EIS</i>	25
6.1.3	<i>Tiering From the FWIP EIS and ROD</i>	25
6.2	Environmental Analysis for the Estuary Habitat MOA.....	26
6.2.1	<i>Policy Level Evaluation</i>	27
6.2.2	<i>Project-Specific Evaluation</i>	29
6.2.3	<i>Consistency With The PA 2002</i>	30
6.3	Additional Environmental Review	31
7.0	CONCLUSION	33

BONNEVILLE POWER ADMINISTRATION

ADMINISTRATOR’S RECORD OF DECISION

WASHINGTON-ACTION AGENCY ESTUARY HABITAT MEMORANDUM OF AGREEMENT

1.0 INTRODUCTION

To improve fish habitat and fish survival in the Columbia River Estuary, and to advance fish recovery in the Columbia River Basin, the Bonneville Power Administration (BPA) has decided to enter into a long-term agreement with the State of Washington (Washington), the U.S. Army Corps of Engineers (Corps), and the U.S. Bureau of Reclamation (Reclamation) (collectively, “the Parties”). The agreement addresses actions to protect and enhance habitat in the Columbia River Estuary for the benefit of fish affected by the upstream federal dams of the Federal Columbia River Power System (FCRPS), with a focus on salmon and steelhead fish listed under the Endangered Species Act (ESA). This agreement results in dedicated funding for additional new work addressing Columbia River Estuary habitat over the next nine years, and is expected to result in measurable benefits for listed salmon and steelhead, as well as benefit the many other fish and wildlife species that rely on a healthy estuary.

The purpose of this Record of Decision (ROD) is to describe the backdrop that led to this Estuary Habitat Memorandum of Agreement (MOA), what the Agreement contains, and why BPA has decided to enter into it.¹ This ROD also describes how entering into this Estuary Habitat Agreement complies with the National Environmental Policy Act (NEPA).²

2.0 BACKGROUND

2.1 What is the Columbia River Estuary?

The Columbia River Estuary is the area in which the Columbia River and the Pacific Ocean intermix or influence each other. In its narrowest sense, the estuary is the area at the mouth of the Columbia as it meets the Pacific. In its broadest sense, the estuary includes all the tidally influenced areas of the Columbia River, which includes not only the mouth of the Columbia, and extending out into the ocean (the “plume”) but also reaching upriver and affecting some of the lower portions of Columbia River tributaries. For the purposes of this Agreement, the Parties defined the Columbia River Estuary to be the area from the mouth of the Columbia River, including the plume, upstream to the

¹ The term “Agreement” and “MOA” is used interchangeably throughout this Decision.

² 42 U.S.C. § 4321, *et seq.*

limit of tidal influence (including tidally influenced areas of tributaries) at Bonneville Dam at River Mile 146.³

2.2 Importance of the Estuary for All Listed Stocks

The Columbia River Estuary represents one of three areas of the major stages in the life cycle of salmon and steelhead. In freshwater tributaries, adults spawn and juveniles begin their lives. In the saltwater of the Pacific, juveniles grow to adults. The estuary is where juveniles undergo the physiological changes needed to transition to saltwater. In addition, habitat in the estuary can provide places for fish to continue to grow, and to avoid predators. The estuary has been degraded over time by a wide variety of actions associated with human development and related modification of habitat such as conversion of marsh and tidal habitats, diking, dredging, and pollution (direct discharges as well as runoff). The estuary has also been impacted by the FCRPS and other hydroelectric development in the Columbia River Basin through changes in the flow of water in the Columbia and through increases in total dissolved gas (through spilling). Because all salmon and steelhead in the Columbia River Basin must pass through the estuary during their lifecycles, protection of existing estuary habitat and restoration of degraded habitat to a healthy, properly functioning condition is very important, and can help offset the more direct impacts these fish experience as a result of migrating past the FCRPS dams.

2.3 Estuary Habitat and the 2008 FCRPS BiOp

The National Marine Fisheries Service (NMFS) issued a new Biological Opinion (BiOp) for the FCRPS on May 5, 2008 (2008 FCRPS BiOp). That BiOp was developed in consultation with the Corps, Reclamation and BPA (collectively, the “Action Agencies”). The 2008 FCRPS BiOp was also developed with the assistance of a wide variety of sovereign parties, known as the “remand collaboration” to reflect the collaboration directed by federal district court Judge Redden following his remand of the prior FCRPS BiOp.⁴

Prior to the 2008 FCRPS BiOp, the Action Agencies in consultation with the remand collaborative groups developed a Biological Assessment (BA) of their proposed actions as well as a comprehensive analysis of the effects of their actions on ESA-listed salmon

³ Section III.C.1, first bullet of Estuary Habitat MOA.

⁴ Judge Redden rejected both the 2000 and 2004 FCRPS BiOps as inadequate under the Endangered Species Act. See *National Wildlife Fed'n v. NMFS*, 254 F.Supp.2d 1196 (D.Or. 2003), and *National Wildlife Fed'n v. NMFS*, 524 F.3d 917 (9th Cir. 2008). In an October 2005 order remanding the 2004 BiOp (2005 WL 2488447), the court stated that “NOAA and the Action Agencies, Army Corps of Engineers, and Bureau of Reclamation shall collaborate with the sovereign entities, including the States of Idaho, Montana, Oregon, and Washington, and the Tribes who are parties or *amici* in this action (the Nez Perce, Umatilla, Yakima, Warm Springs, and Kootenai Tribes) to achieve the goals of:(a) Developing items to be included in the proposed action; and(b) Clarifying policy issues and reaching agreement or narrowing the areas of disagreement on scientific and technical information.”

and steelhead. The FCRPS BA and the FCRPS comprehensive analysis (FCRPS CA) were published by the Action Agencies in August of 2007.⁵

The Action Agencies' FCRPS BA identified the degradation of estuary habitat as a limiting factor affecting all evolutionarily significant units (ESUs) of listed salmon and steelhead impacted by the FCRPS, and noted that recent studies had suggested that protection and improvement of estuary habitat enhances fish survival.⁶

The Action Agencies had already been conducting mitigation efforts in the estuary for some time, but as a result of the BiOp remand process and the increased focus on the importance of the estuary, the Action Agencies proposed an expanded estuary habitat program. They developed an initial inventory of possible habitat projects during the remand collaboration, and identified specific habitat projects for implementation in the 2007-2009 period.⁷ BPA proposed to more than triple its then level of estuary project funding from about \$600,000 annually in the 2000 to 2006 period, to \$2.0 million annually in the 2007 to 2009 period, and then to expand it again with another \$1.5 million, to bring a total average annual commitment of \$3.5 million for estuary projects, including habitat projects.⁸

The types of actions BPA was already implementing as part of its estuary activities included:⁹

- Acquisition, protection, and restoration of off-channel habitat
- Restoration of tidal influence and improvement of hydrologic flushing
- Restoration of floodplain connectivity by removing or breaching dikes, or installing fish-friendly tide gates
- Removal of invasive plants and weeds, and replanting native vegetation
- Protection and restoration of emergent wetland and riparian forest habitats
- Restoration of channel structure and function
- Development and implementation of a piling and dike removal program

With the release of the 2008 FCRPS BiOp, the Action Agencies confirmed their commitments to the proposed actions identified in the FCRPS BA, and agreed to implement NMFS' reasonable and prudent alternatives (or RPA) actions.¹⁰

⁵ The BA and CA are available at www.salmonrecovery.gov at http://www.salmonrecovery.gov/Biological_Opinions/FCRPS/2008_biop/action.cfm.

⁶ FCRPS BA at 2-40.

⁷ *Id.*; see also FCRPS BA at Section B.2.2.3 (“Habitat Strategy 2—Improve Juvenile and Adult Fish Survival in Estuary Habitat.”).

⁸ FCRPS BA at 2-41.

⁹ FCRPS BA at 2-40.

¹⁰ BPA confirmed its commitments via its August 12, 2008 Record of Decision, see http://www.bpa.gov/corporate/pubs/RODS/2008/BPA_ROD_to_Implement_2008_FCRPS_BiOp_RPA.pdf

2.4 The March 6, 2009, hearing before Judge Redden.

The 2008 FCRPS BiOp and the measures to be taken to implement it by the Action Agencies have been challenged in federal court as inadequate by plaintiff environmental organizations, the State of Oregon, and the Nez Perce Tribe.¹¹ Following extensive briefing, Judge James Redden of the Oregon District Court set a hearing regarding this newest BiOp for March 6, 2009. Prior to the hearing, the Judge sent letters to the litigation parties, identifying certain questions he expected the parties to address at the hearing.¹² Several of those questions indicated the Judge was concerned about the adequacy of efforts to improve estuary conditions.¹³

At the March 6 hearing, the parties briefed the court on the questions raised, including an extensive discussion on the nature of estuary activities. In the end, Judge Redden indicated that the BiOp was “very close,” but he thought that habitat activities, particularly in the estuary, remained an issue for the court in terms of whether or not the actions and their related improvements were “reasonably certain to occur.”¹⁴

2.5 Development of the Estuary Habitat MOA

The Action Agencies have many governmental and non-governmental partners to conduct estuary habitat work with, including the State of Washington. The Action Agencies were already engaged in negotiations with Washington about a possible long-term agreement, similar to the 2008 Columbia Basin Fish Accords, which was expected to include targeted estuary habitat projects. The Action Agencies believed that to address the court’s concerns quickly, it would be best to work from on-going negotiations, rather than initiate a new dialogue with additional partners.

The Action Agencies approached Washington about prioritizing their on-going negotiations to first address estuary habitat alone, in a “mini” MOA. Washington was amenable to the approach, and so a refocused negotiation to develop a long-term estuary habitat MOA was initiated. The result was the proposed Estuary Habitat MOA published for public comment on April 3, 2009, including a list of proposed projects and their associated benefits for listed species in the estuary (Attachments 1 and 2 to the MOA).

¹¹ *National Wildlife Fed’n et al. v. National Marine Fisheries Service*, No. 01-640-DE (D.Or).

¹² The letters were issued by the court on February 18, and February 25, 2009.

¹³ In his February 18 letter, Judge Redden raised several questions about the Estuary Habitat Analysis, including the amount of funding, whether the actions could be characterized as reasonably certain to occur (see Section B). The Judge also sought information about the use of the Estuary Recovery Module, and whether it was the best available science and could be relied on to address impacts. In his February 25 letter, the Judge raised further questions about whether the Estuary Action Plan was adequate and relied on the best available science.

¹⁴ Transcript of Hearing at 196, *National Wildlife Fed’n et al v. NMFS*, No. 01-CV-640-RE (D.Or. March 6, 2009).

3.0 THE ESTUARY HABITAT MOA COMMITMENTS

3.1 Overview

With the Estuary Habitat MOA, BPA and the Corps are committing to fund the State of Washington to implement projects that will improve habitat in the estuary for ESA-listed fish. Washington has identified 21 potential projects for implementation and estimated the survival benefits for ESA-listed species expected from the projects (see Attachment 2 to the MOA). The benefits initially identified in the MOA will be refined by the expert technical regional group organized in accordance with the 2008 FCRPS BiOp.¹⁵

BPA is committing to an increase in funding for estuary habitat actions of \$1.8 million per year for nine years (federal fiscal year 2010 through federal fiscal year 2018). This \$1.8 million annual increase is in addition to BPA's current commitments to the estuary (BPA funding for estuary habitat overall will go from \$3.5 million per year under BPA's implementation of work under the Council's Fish and Wildlife Program to \$5.3 million per year). The increased BPA funding will provide Washington the resources to sponsor and develop estuary habitat projects under the Corp's special estuary habitat authority, section 536 of the Water Resources Development Act of 2000.¹⁶ The Corps is correspondingly seeking appropriations to increase its estuary habitat efforts. BPA will contract with the Washington Department of Fish and Wildlife (WDFW), and WDFW will sponsor or coordinate the projects with the Lower Columbia River Fish Recovery Board (LCFRB),¹⁷ the Lower River Columbia River Estuary Partnership (LCREP),¹⁸ and other partners as needed.

In order to provide for this habitat ramp up over the existing 2008 FCRPS BiOp commitments, the Corps has agreed to fund some of BPA's research, monitoring and evaluation (RM&E) efforts, enabling BPA to target its funding to habitat improvement instead. This "RM&E shift" will not reduce the RM&E efforts for the estuary; rather, the Corps rather than BPA will provide funding and oversight of certain RM&E activities.

Taken together, BPA and the Corps will increase the combined habitat commitments in the estuary by a total of \$4.5 million annually¹⁹ nearly doubling their existing habitat commitments, and retaining stable funding for RM&E activities in the estuary, as

¹⁵ See Reasonable and Prudent Alternative (RPA) number 37 of the 2008 FCRPS BiOp.

¹⁶ Section 536 is reprinted at Attachment 4 of the MOA.

¹⁷ The LCFRB was created by Washington to participate in the development and implementation of a regional fish recovery plan, particularly habitat recovery measures, among other things. The 15-member Board is comprised of representatives from the Washington legislature, city and county governments, the Cowlitz Tribe, private property owners, hydro-project operators, the environmental community, and concerned citizens. See <http://www.lcfrb.gen.wa.us/board.htm>.

¹⁸ LCREP is a non-profit organization that works in Oregon and Washington "to protect and restore the nationally significant lower Columbia River estuary with on-the-ground improvements and education and information programs." See <http://www.lcrep.org/about.htm#who>. BPA has existing contracts with LCREP for estuary habitat work.

¹⁹ The Corps' commitments are dependent on Congressional appropriations. Congress has historically been supportive of the Corps' efforts.

depicted in the table below (this table does not reflect the 2.5 percent annual inflation adjustment for BPA funding):²⁰

	Pre-Estuary MOA			With this Estuary MOA			
Annual Planning Budgets (\$ million)							
	Habitat	RM&E	Estuary Total	Habitat	RM&E	Estuary Total	Increased Habitat Funding
BPA	3.5			5.3			1.8
Corps	2.0			4.7			2.7
BPA & Corps Combined		6.6			6.6		
Sub-Total	5.5	6.6	12.1	10.0	6.6	16.6	4.5
Nine-Year Total (\$ million)							
BPA & Corps Combined	49.5	59.4	108.9	90.0	59.4	149.4	40.5

3.2 Biological Benefits and Project Criteria

As mentioned in the overview above, the projects undertaken in the MOA support the identified biological (survival) benefits for ESA-listed salmon and steelhead in the estuary. As a part of the collaborative process used to develop the 2008 FCRPS BiOp, the Action Agencies in consultation with the collaborative working groups developed a methodology for estimating the benefits of habitat projects proposed for the estuary. To estimate survival benefits, each federal project was linked to a recommended recovery action in NMFS' draft *Columbia River Estuary Recovery Plan Module*, and then evaluated in terms of the project's certainty of success, potential benefits, and contribution to implementation of the recovery action.

This methodology was based on actions to mitigate for limiting factors that adversely affect salmon and steelhead survival. The paper *Estimated Benefits of Federal Agency Habitat Projects in the Lower Columbia River and Estuary* was prepared by PC Trask and Associates in 2007 (hereafter *Trask et al. paper*), and adopted as part of the Action Agencies FCRPS comprehensive analysis (see Appendix D of the FCRPS CA, August 2007).

For the Estuary Habitat MOA, WDFW with the assistance of PC Trask and Associates analyzed the estimated salmon and steelhead survival benefits in accordance with the *Trask et al. paper*, and provided preliminary estimates of anticipated survival benefits (by ocean and stream type juvenile outmigrants²¹) for each project, see Attachment 2 to the

²⁰ See Section III.B. of the MOA.

²¹ Ocean-type salmonids (smaller subyearling fish) and stream-type salmonids (somewhat larger yearling fish), experience different impacts in the estuary because of the different amounts of time they spend in the

MOA. The estimated benefits will be further refined by the expert technical workgroup formed as part of the implementing measures of the 2008 FCRPS BiOp. Under reasonable and prudent alternative (RPA) number 37 (“Estuary habitat Implementation 2010-2018—Achieving Habitat Quality and Survival Improvement Targets”), the Action Agencies have convened an expert regional technical group to use the habitat metrics to determine the estimated change in survival resulting from all estuary habitat projects, including those agreed to under this MOA.

3.3 Details Regarding BPA Added Funding for Estuary Habitat Actions

Priority given to projects associated with the Corps estuary habitat program

BPA will target the additional funds committed pursuant to this MOA to estuary habitat projects developed under the Corps’ authorities, in particular under Section 536 of the Water Resources Development Act (WRDA) of 2000 authority (Section 536 authority or program). Although the MOA focus is on estuary habitat projects developed under the 536 authority, the Parties also recognize other estuary habitat needs that could be addressed, including the need for funding to provide operation and maintenance of facilities developed for the estuary habitat projects. For example, certain estuary habitat structural needs may have costs associated with operation and maintenance to sustain the habitat quality improvements. The Parties agreed to meet and discuss these needs and any potential liability exposure prior to final project approval.²² The funding could also be used for other estuary habitat projects developed under authorities other than the Corps’ 536 program authority. Thus, the Parties agreed that the increased BPA funds (\$1.8 million) would be directed to Washington for (in order of priority):

- Non-federal cost share for Corps projects under the Estuary Habitat MOA
- Operation and maintenance costs for Corps projects under the Estuary Habitat MOA
- Additional estuary habitat projects²³

Planning and development needs

Estuary habitat projects can require extensive planning and development to ensure effectiveness and support by local interests. At the same time, the Parties require some assurance that funding will be targeted to on-the-ground efforts and expected benefits to fish. As a result, the Parties agreed that no more than 20 percent of the BPA funds will be available for transaction costs, meaning no less than 80 percent of funds should be available for on-the-ground actions.²⁴ In addition to this general standard, the Parties also recognized that initiation of actions under this MOA (e.g., initial planning and related steps) will constitute a significant phase of initial MOA implementation. As a result,

estuary and plume environments. Estimates of survival benefits are therefore differentiated for the two types. See FCRPS BA, Attachment B.2.2 at B.2.2-14.

²² See Section III.D.5.

²³ Section III.C.2.

²⁴ Section III.C.2., third bullet.

BPA agreed to target \$250,000 each year for the first two years of MOA implementation for planning.²⁵

3.4 Details Regarding Corps Funding for Estuary Habitat Actions

Corps Estuary Habitat programs and local sponsorship needs

The Corps has two existing authorities to address estuary habitat needs—Section 536 of WRDA 2000 and section 204 of the WRDA of 1992 (Beneficial Use of Dredge Material, under which the Corps can create estuary habitat from dredge material resulting from activities necessary to maintain federal navigation channels). Under both programs, Congress requires the Corps to obtain non-Federal matching funds from cost-share sponsors. The 536 program requires non-Federal sponsors to contribute a 35% cost-share to the Corps' 65% share of the total cost to plan and construct projects. In addition, the feasibility study that is necessary to formulate projects under the Corps' 536 program is cost-shared equally (50%/50%) between the Corps and the non-Federal sponsor. In the 204 program, the Corps contributes 75% of incremental costs and the non-Federal sponsor is required to pay the remaining 25% of incremental costs necessary to develop a project.²⁶

Under this MOA, BPA and the Corps intend that BPA's additional funding be provided to Washington (through WDFW) to support the non-Federal cost share portion of the Corps' estuary projects. Although BPA funds are federal in that they are ratepayer generated dollars deposited in (and withdrawn from) the BPA Fund in the U.S. Treasury, Congress has provided the Corps the authority to accept BPA funds without limitations in circumstances such as these where the BPA funding is in connection with the protection, mitigation and enhancement of fish and wildlife in relation to Corps projects.²⁷

BPA is committing to increase funding by \$1.8 million annually for Corps estuary habitat projects, sponsored by Washington; the Corps is proposing to increase its estuary habitat commitment by seeking a \$2.7 million increase in federal appropriations to match the BPA increase. Because Corps funds are subject to annual appropriations, the Corps through its Northwestern Division will request and work to obtain appropriations to fund the agency's commitments under this Estuary Habitat MOA. The Corps will keep the other Parties apprised of its efforts, and the other Parties have agreed to support the Corps' efforts as appropriate. BPA will provide the \$1.8 million commitment under this MOA even if the increased appropriations are not immediately secured, provided the Corps continues to use best efforts to obtain the necessary funding.²⁸

²⁵ Section III.C.2., fourth bullet.

²⁶ See Section III.C.3.

²⁷ See section 1146 of the Water Resources Development Act of 1986, P.L. 99-662, 100 Stat. 4253, codified at 33 U.S.C. section 2286.

²⁸ Estuary Habitat MOA, footnote 8.

Contingency

Washington provided a preliminary list of projects to be developed and implemented under this MOA.²⁹ The Parties assume that from this list, sufficient viable estuary habitat projects that utilize all the funds contemplated under this Estuary Habitat MOA will be developed. Nonetheless, some projects may not proceed as a consequence of landowner negotiation issues or other matters beyond the control of project sponsors. In recognition of this, the MOA includes a contingency allowing BPA and the Corps to seek additional project sponsors should Washington be unable to utilize the available MOA funds for two consecutive years.³⁰

3.5 Estuary RM&E Funding

This Estuary Habitat MOA provides for increased funding to estuary habitat projects in part because of an agreement between BPA and the Corps regarding estuary RM&E funding. Together, the Corps and BPA currently provide approximately \$6.6 million annually for RM&E activities in the estuary in support of the 2008 FCRPS BiOp.³¹ Under this MOA, that RM&E funding commitment remains the same, but the implementing agency will change. The Corps agreed to fund and implement up to \$1.3 million annually of the RM&E projects which BPA had otherwise committed to implement. BPA can thus shift that \$1.3 million to estuary habitat work instead. The Corps expects to fund the RM&E activities through its Columbia River Fish Mitigation project (CRFM) starting in fiscal year 2010.³²

BPA and the Corps agreed that the Corps would specifically be responsible for the “Historic Habitat Food Web Linkages” (work performed by NOAA and others) and “Ecology of Juvenile Salmon in Tidal Freshwater in the Vicinity of the Sandy River Delta” (work performed by the Pacific Northwest National Laboratory) RM&E projects. Although the Corps will be contracting for these efforts, any changes in scope will be coordinated and mutually agreed between BPA and the Corps.

3.6 General Provisions in Relation to all Projects

Under the terms of the MOA, the Parties agreed to certain general provisions for all the projects. First, all the projects funded will be consistent with the Northwest Power and Conservation Council’s (Council) Fish and Wildlife Program, compliant with the science and other review processes of the Pacific Northwest Electric Power Planning and Conservation Act (Northwest Power Act),³³ BPA’s *in lieu* policy, and data management

²⁹ A draft list was published with the MOA released for public comment on April 3. An updated and refined list was provided with the revised *Estimated biological benefits of estuary projects* posted on www.salmonrecovery.gov on May 1, 2009, which became the revised Attachment 2 for the final MOA.

³⁰ Section III.C.5.

³¹ See 2008 FCRPS BiOp, RM&E Strategy 4—“Estuary Habitat and Ocean Research, Monitoring, and Evaluation” (RPA Nos. 58-61).

³² See Section III.C.4 of the MOA.

³³ 16 U.S.C. § 839 *et seq.*

protocols adopted by the Action Agencies.³⁴ Washington will update progress annually via BPA's PISCES or other appropriate databases, and remain in substantive compliance with applicable implementing contract terms.³⁵

In addition Washington will:³⁶

- Cooperate with the Corps and BPA to estimate habitat and survival benefits from the projects to listed salmon and steelhead based on key limiting factors and determined using the process and method specified in RPA 37 of the FCRPS BiOp; and
- Prior to implementation, bring projects through the regional technical group process prescribed in RPA 37 to confirm projected benefits.

These commitments ensure that Washington's efforts under this MOA are well coordinated with the processes identified in the FCRPS BiOp for estimating and documenting anticipated biological benefits to listed salmon and steelhead. The Parties further agreed that if there are differences between the results of the expert panel process described in RPA 37 and Washington's estimate of benefits, the Parties will reconcile any differences and document the final benefits through technical collaboration.³⁷ BPA believes that such differences are unlikely, however, because Washington's refined list of projects and benefits released on May 1³⁸ were developed with the assistance of Trask, lead author of the original methodology in the *Trask et al. paper*.

3.6.1 Council and Independent Science Review Panel (ISRP) Review.

Throughout these negotiations, the Parties recognized the importance of a commitment to track the Northwest Power Act processes for review of projects to implement the Council's Program, including review by the ISRP.³⁹ As a result, the Agreement expressly acknowledges the continuing role of the ISRP and Council in review of projects.⁴⁰ Through efforts related to the 2008 Columbia Basin Fish Accords, the Council, BPA and the Accord parties developed guidelines for ISRP review that relate to long-term funding commitments of the Accords. The Parties to this Estuary Habitat MOA will apply these same guidelines for ISRP review of Estuary Habitat MOA projects.

The Parties also discussed the timing of the Council and ISRP review processes that would be most effective relative to the Corps' Section 536 processes. The Parties agreed that early review, for example during the feasibility study phase of a project and prior to signing a project partnering agreement (PPA), would be better for project development. A flow chart of the process is provided in Attachment 4 of the MOA. If this approach

³⁴ Section III.D.1.

³⁵ *Id.*

³⁶ Section III.D.2.

³⁷ *Id.*

³⁸ See www.salmonrecovery.gov.

³⁹ 16 U.S.C. § 839b(h)(10)(D).

⁴⁰ Section III.E of the MOA.

proves unworkable relative to timing necessary for project review for Corps funding, the Parties can propose another approach for ISRP review, including a potential programmatic approach.

3.6.2 Replacement Projects and Adaptive Management⁴¹

The Parties recognize that as projects proceed a number of factors may prevent implementation of projects as originally conceived. To maintain the substantive biological benefits committed to, if a project anticipated under this Estuary Habitat MOA cannot be implemented or completed as expected, the Parties will negotiate a replacement project in consultation with the LCFRB, LCREP, NMFS and other estuary action partners. The replacement project will be subject to the terms and conditions of the MOA, and will be the same or similar to the project it replaces in terms of target species, limiting factors addressed, mitigation approach, geographic and/or subbasin, and biological benefits provided. The replacement project should also have the same or similar planning budget, less any expenses incurred for the original project.

In addition to replacement projects, the Parties also agree to work together on an adaptive management basis, consistent with the FCRPS BA and the collaborative framework of the 2008 FCRPS BiOp. This adaptive management includes at least an annual meeting to review implementation of the MOA, as well as the ability to programmatically adjust the project portfolio based on new information or changed circumstances. For example, if during MOA implementation, new information or changed circumstances indicate that the habitat focus of the MOA is no longer the most effective strategy for meeting ESU needs in the estuary, as mutually agreed the Parties can shift the BPA commitments in the MOA to a different programmatic approach. Moreover, as part of the comprehensive evaluations of the FCRPS BiOp in 2013 and 2016, the Parties have committed to reviewing accomplishments pursuant to this MOA and to determine whether additional work is needed to achieve ESU survival benefits of six and nine percent (for stream type and ocean-type Chinook, respectively) as identified in the BiOp.

3.6.3 BPA Inflation and Budget Matters.⁴²

BPA will provide an annual inflation adjustment of 2.5 percent per project in the MOA beginning in fiscal year 2011. This is similar to BPA's commitment to the 2008 Columbia Basin Fish Accord parties.

The Parties recognize that, historically, there is difference between BPA's planned expenditures for implementing projects as part of its direct program for fish and wildlife, and the actual spending (what BPA is invoiced for) of approximately seven percent on average. BPA will plan to fund 100 percent of the planning budget agreed to in the MOA (\$1.8 million to Washington), but if actual spending averages 93% in the aggregate BPA remains in compliance with its commitments under the MOA. If spending is under 93

⁴¹ Section III.F and Section III.G.

⁴² Section III.H.

percent in any one year, BPA, the Corps and Washington will meet to discuss possible actions to remove impediments to achieving full implementation.

One of the most complicated aspects of managing long-term project implementation relates to over- or under-spending on a planned budget. Carrying over funds from year-to-year creates problems because it means that the work planned and designed to address biological benefits is not being implemented in the expected timeframe. Carrying over funds can also result in a financial and implementation “bow wave,” where work that is not performed according to schedule is progressively delayed until it is finally set to be completed cumulatively all at the same time. This can create unacceptable financial pressures for BPA as well as logistical challenges for the implementing entity. As result, the Parties have agreed to a general framework for managing project implementation and planning budgets.

As agreed, Washington may request an adjustment of the project budget (through requests for transfers, reschedules, or preschedules) for any individual project so long as the MOA level annual planning budget does not exceed 120 percent of the original annual planning budget after adjustment for inflation. In addition, in certain circumstances, the 120 percent cap can be adjusted for projects involving the acquisition of interests in land or waters from willing sellers, to accommodate the uncertainties associated with negotiations over property rights.

In this section of the MOA (Section III.H), the Parties also document how the costs of environmental and other regulatory reviews will be allocated. In general, the costs will be taken out of the planning budget for the individual project.

3.7 Affirming the BiOp and Other Provisions

Washington has long been a supporter of the “all-H” approach to addressing the impacts of the FCRPS on listed species, and the State has been a specific advocate for the 2008 FCRPS BiOp. As such Washington reaffirmed its position that the FCRPS and Upper Snake BiOps satisfy ESA needs.⁴³ In part IV of the MOA, the Parties sought to further address how the MOA should be considered in on-going FCRPS litigation, reiterated existing commitments for good-faith collaboration in the implementation of the projects, and addressed how outcomes of litigation could affect implementation of the MOA. The Parties also identified mechanisms for dispute resolution.

3.7.1 Good Faith Implementation and Support⁴⁴

All the Parties have agreed to good faith implementation—that they will work together, in partnership, to implement the mutual commitments in the MOA. The Parties recognize that there may be disagreements as implementation proceeds, and so have developed processes for communication and coordination necessary to address problems as they arise. These include best efforts to consult prior to taking any action that could

⁴³ Section II of the Estuary Habitat MOA.

⁴⁴ Section IV.B.

reasonably be interpreted as inconsistent with any part of the MOA, and to take action to redress any point(s) of concern.

3.7.2 *Changed Circumstances, Renegotiation/Modification, Dispute Resolution and Withdrawal*⁴⁵

Consistent with a collaborative approach, the MOA provides for informal dispute resolution—including voluntary mediation—should disputes arise during implementation.⁴⁶ The general commitment is to preserve the MOA, and to negotiate mutual resolutions or modifications as needed to resolve disputes.

The Parties have agreed that, in some cases, a party may withdraw from the MOA. Upon withdrawal, the party would no longer be subject to the commitments in the agreement. BPA has agreed, however, that should it withdraw, it will maintain the funding, as mutually determined by BPA with the other Action Agencies, necessary for FCRPS BiOp implementation.⁴⁷

The Parties identified the option of withdrawal for the following circumstances: material non-compliance with the MOA which cannot be resolved by dispute resolution; material effects relating to BiOp litigation; a “force majeure” affecting a party’s performance;⁴⁸ or in the event one party withdraws for other reasons. In addition, the Parties may, by mutual agreement, consider negotiation or withdrawal for changed circumstances other than those enumerated in the MOA.

The provision regarding material effects relating to BiOp litigation signals the importance to all Parties that the BiOps are upheld in any subsequent litigation. From BPA’s perspective, this is of critical necessity for MOA implementation. BPA may choose to discontinue its financial commitment to the MOA if, as a result of BiOp litigation, BPA is obligated to undertake additional actions that are financially material.

Under the terms of the MOA then, if a court subsequently rules against the FCRPS BiOp or Upper Snake BiOp (directly or through a resulting amended BiOp, whether mediated or not) additional actions that are either financially material to an Action Agency, or that materially constrain the Corps or Reclamation from meeting FCRPS purposes,⁴⁹ the Parties must meet to review those actions, and determine an appropriate response. If renegotiation is not successful, withdrawal is allowed.

⁴⁵ Section IV.C.

⁴⁶ Section IV.D.

⁴⁷ Section IV.C.7.

⁴⁸ Section IV.I.2.

⁴⁹ The Parties discussed, but ultimately decided not to define “material.” As a result, what is “material” will be determined in the specific context and circumstances in which it may arise.

3.7.3 Miscellaneous Other Provisions

The Parties acknowledge and agree that that all activities undertaken pursuant to the MOA must be in compliance with all applicable laws and regulations,⁵⁰ such as the National Environmental Policy Act and the ESA. In addition, the Parties specifically recognize that actions of the Corps are subject to the availability of appropriated funds from Congress.⁵¹ The term of the MOA is a little over nine years—through fiscal year 2018 (from date of signature through midnight on September 30, 2018).⁵² The Parties have also included a provision to clarify the relationship between the MOA and the individual implementing contracts that are expected to be issued.⁵³

3.8 Changes Made to the Final MOA

Following the release of the negotiated MOA for public review, no substantive modifications were made to the text of the MOA, but Attachments 1 and 2 were modified. Attachments 1 and 2 provide the project lists and estimated survival benefits of those projects. When the MOA was released, Attachment 2 provided a narrative description of targeted projects and a qualitative assessment of the expected benefits to listed fish. Following the release of the MOA, the Parties continued to work on the list of projects, and also refined the estimated project benefits based on the methodology adopted for the FCRPS BiOp. A revised benefits table (and updated project list) using the BiOp methodology was posted to the salmonrecovery.gov website on May 1, 2009. The Parties continued to refine the project list with the most up-to-date information, which resulted in the addition of some projects and the deletion of others. Thus, with the final MOA, both Attachments 1 and 2 were updated.

3.9 Funding Commitments for BPA, and relationship to ratemaking

BPA is committing \$1.8 million per year for nine years, and a 2.5 percent inflation adjustment beginning in fiscal year 2011 that would be added to the budget annually, for a total commitment of approximately \$17.9 million over the term of the MOA. Of that \$1.8 million annual figure, however, \$1.3 million annually is at no net cost to BPA's Fish and Wildlife Program because of the Corps' commitment to fund \$1.3 million annually of the estuary RM&E commitments that BPA was expecting to fund. The Corps will instead fund this work through the Corps' CRFM project, at a total cost of approximately \$11.7 million over the nine year term.⁵⁴ Thus the *net* cost to BPA for its Fish and Wildlife Program is approximately \$6.2 million, including adjustments for inflation, over the nine year period (\$17.9 million minus \$11.7 million). The Parties were sensitive to

⁵⁰ Section V.C.

⁵¹ Section V.I.3.

⁵² Section V.A.

⁵³ Section V.B.

⁵⁴ The CRFM is funded through appropriations from Congress, although BPA must repay to the Treasury the power share of those costs (BPA ratepayers are obligated to repay the power costs of construction and operation of the FCRPS, and the CRFM is one of the programs repaid). As a result, BPA does have costs related to any CRFM expenditures, but they are systemwide costs to BPA as part of power rates, they are not taken out of BPA's direct Fish and Wildlife Program budget.

not increasing BPA's Fish and Wildlife Program costs overall if possible, and to cooperate to reach such an outcome.⁵⁵

BPA has begun implementing some of the MOA commitments already. BPA began funding Washington in July 2009 to support project planning (issuing a contract for \$250,000). This enabled Washington to prepare for project implementation as soon as the new fiscal year begins on October 1, and to take advantage of partnering funds made available prior to that time. BPA expects to be able to fund commitments in this MOA out of its existing Fish and Wildlife Program budgets for the fiscal years 2010 and 2011. After fiscal year 2011, BPA expects to include its costs of implementing the Estuary Habitat MOA as part of its revenue requirements in its wholesale power rates.

4.0 PUBLIC REVIEW & COMMENT

After negotiations among the Parties, the proposed MOA was announced through a press release, and it was posted on the government's salmon recovery website, www.salmonrecovery.gov. BPA sought public comment on the proposal to enter into the MOA as negotiated from April 3 through May 4, 2009. BPA also sent notice to the BPA Journal mailing list (approximately 3500 members) and posted an update to the Journal website at <http://www.bpa.gov/corporate/pubs/Journal/09jl/>.

BPA received nine letters or e-mail comments in response to its request for comments. Comments were received from individuals (many of whom indicated their affiliation with local groups), the Columbia River Estuary Study Taskforce and the Cowlitz Tribe. Comments can be viewed at the BPA website: <http://www.bpa.gov/applications/publiccomments/closedcommentlisting.aspx>. Following the close of the comment period, BPA reviewed all of the comments, sorted them by general theme or concern, and consulted with the other Parties about them as necessary. All comments were considered by BPA in its decision whether to commit to the Estuary Habitat MOA.

4.1 BPA Analysis of Comments

4.3.1 Cowlitz Tribe Comments

In a letter to the Action Agencies, the Cowlitz Indian Tribe stated that:

We do not have any objections to the intent of the Draft MOA, or the restoration actions proposed therein. . .but. . .oppose the final signing and acceptance of any MOA until the Cowlitz Indian Tribe is adequately consulted with, and obtains appropriate status as signatory party to any MOA in the region of the Lower Columbia River Estuary.⁵⁶

⁵⁵ See last bullet of Section III.C.2. BPA hopes that program efficiencies and the expiration of fish and wildlife projects that have completed their objectives will make room for this funding, but BPA will increase its Fish and Wildlife Program budget as needed to meet this Estuary Habitat MOA commitment.

⁵⁶ William Iyall, Chairman, Cowlitz Indian Tribe, to Action Agencies (April 27, 2009).

The Tribe expressed great disappointment with the Action Agencies for the failure to consult, contact, or invite the Tribe to the table while the Estuary Habitat MOA was negotiated, noting its tribal interests in the area and its record of habitat restoration work and interaction with others in estuary work.

The Estuary Habitat MOA was negotiated directly with Washington, as Washington has long been a sponsor through the Council's Fish and Wildlife Program of projects in the area, while the Cowlitz Tribe has not engaged in the Council's Program as directly. Nonetheless, BPA recognizes that the Tribe has significant interests in the habitat projects for the estuary, and brings knowledge and expertise to the development of such projects. Following receipt of the Tribe's letter, BPA and Corps staff met with tribal staff on May 18, 2009. This was followed by a government-to-government meeting held on June 30, 2009, which resulted in BPA and the Cowlitz Tribe agreeing to continue discussions, and to explore the possibilities for future coordination and collaboration in estuary work. Another meeting was held on July 23, 2009, between BPA fish and wildlife staff and tribal representatives to further discussions. As a result of the latest meeting, BPA is engaging with the Tribe to develop a memorandum of understanding to describe further coordination on estuary habitat work.

4.3.2 CREST Comments⁵⁷

The Columbia River Estuary Study Taskforce (CREST) filed comments in support of the Estuary Habitat MOA, although they encouraged speedy implementation and the use of partners like CREST in addition to WDFW. Specifically, CREST asked that the MOA umbrella contract (to address planning costs) be enlarged to allow local entities such as CREST to conduct the local project development and community outreach. While this MOA is between the Action Agencies and Washington, Washington has agreed to sponsor or coordinate the projects. This means that WDFW will need to engage local entities like CREST to assist it, and WDFW will be free to subcontract its funding under the MOA to whatever entities it may desire to assist it.

CREST also commented about individual projects proposed, and projects that CREST believes should be added. This information has been passed on to Washington, which can consider it as it implements the MOA.

4.3.3 Comments regarding a proposed Liquefied Natural Gas (LNG) terminal

Many of the individual commenters⁵⁸ were in favor of the Estuary Habitat MOA, but raised concerns about how funding for estuary projects with this MOA intersected with efforts to construct a LNG facility in the area, asking whether or not the projects would effectively assist the private entity proposing the LNG mitigate its impacts with ratepayer

⁵⁷ Letter from Micah Russell, Director, Columbia River Estuary Study Task Force to BPA, May 4, 2009.

⁵⁸ Individual comments were received by e-mail from: Frans Eykel (2); Paula Carson; Charlene Daimito; Gayle Kiser/Landowners and Citizens for a Safe Community; Gloria G. MacKenzie/Willapa Hills Audubon Society, Darrell Whipple/Friends of Fox Creek, Rainer Oregon; and Vonda Kay Brock.

funding. Others commenters detailed their opposition to siting an LNG facility in the area.

The projects of the Estuary Habitat MOA are not linked to or intended to address the potential impacts of an LNG facility. That proposed facility is being evaluated by entities other than BPA under various federal and state statutes. If the LNG facility is approved and developed, mitigation that may be required could include habitat projects similar to those funded under this MOA. The projects funded under this MOA, however, are only intended as offsite mitigation for the impacts of the construction and operation of the FCRPS on listed fish, not those of the LNG facility. In other words, mitigation for the LNG facility would have to be additive to the mitigation actions in this Estuary Habitat MOA.

4.4 Opportunities for Future Public Review of Site-Specific Project Implementation

As the Parties begin implementing the projects committed to in this MOA, BPA, the Corps, and/or the project sponsor may also engage in further public involvement activities for site-specific actions. The degree of public involvement will be commensurate with the relative environmental impacts of, and public interest in, the site specific action. BPA and/or Washington will make diligent efforts to discover potentially interested and affected parties, and will solicit public information when appropriate. Interested and affected parties may include nearby landowners or other individuals, interest groups, tribes, and city, county, state, federal and regional agencies. Options to inform the public about site-specific actions include mailings, public notices, public meetings and workshops, notification in local papers and BPA's monthly newsletter, postings on the internet and radio advertisements, and one-on-one meetings. BPA will document site-specific public involvement as part of the validation process (described further in the NEPA section, Section 6, below).

5.0 WHY BPA HAS DECIDED TO ENTER INTO THIS AGREEMENT

5.1 The Agreement Helps BPA Fulfill its Mission

BPA's mission includes providing mitigation of the FCRPS' impacts on fish and wildlife and providing an adequate, efficient, economical and reliable power supply.⁵⁹ Although not mutually exclusive, achieving this mission requires BPA to balance the competing interests and requirements for emission-free and economically valuable hydropower produced by the FCRPS, and for the protection and recovery of the fish and wildlife affected by that hydropower production.

5.1.1 The Estuary MOA Protects and Recovers Fish

As discussed at the beginning of this decision, the Columbia River Estuary provides habitat for all salmon and steelhead species, and is one of the areas supporting a key life

⁵⁹ See "BPA Mission," part of BPA's strategic direction for 2008-2014, published in July 2007, and available at http://www.bpa.gov/corporate/about_BPA/Strategy.cfm.

stage for juveniles transitioning from a freshwater to a saltwater environment. By funding actions to protect and restore the habitats of the estuary that support salmon and steelhead, BPA's participation in the Estuary Habitat MOA will help protect and recover these species, as well as the many other fish and wildlife species that use the estuary. The Estuary Habitat MOA helps BPA meet its mission of mitigating for the impacts of the FCRPS on fish and wildlife species of the Basin. In addition, the Estuary Habitat MOA facilitates the Action Agencies' FCRPS BiOp commitments to attain specific survival benefits for listed species in the estuary.

5.1.2 The Estuary MOA supports an Adequate, Efficient, Economical, and Reliable Power Supply (AEERPS):

BPA provides for an AEERPS, one of the purposes of the Northwest Power Act,⁶⁰ in multiple ways. BPA seeks to keep rates as low as possible given sound business principles, and to manage the power aspects of the FCRPS to meet reliability standards and the other purposes of the system.

BPA's decision to enter into the Estuary Habitat MOA is consistent with these purposes. As described in Section 3.8, above, BPA's estimate is that implementing this Estuary Habitat MOA will be a net cost to BPA under the Council's Fish and Wildlife Program of about \$6.2 million total over the nine year term (the total commitment of \$17.9 million including an inflation adjustment, less \$11.7 million in previously anticipated RM&E costs that will be paid by the Corps under this MOA).

While \$6.2 million is not an insignificant amount, it is not expected to greatly affect wholesale power rates. Moreover, this MOA commitment provides considerable value for BPA ratepayers. First, these investments benefit all 13 listed ESUs, as all 13 ESUs pass through the estuary on their way to and from the ocean, so the habitat work provides comprehensive biological benefits in support of the FCRPS BiOp. Second, BPA's funding will be used to leverage funds (as the local-cost share) through the Corps' estuary habitat programs, funded through appropriations. Thus, BPA ratepayer investments exceed the value BPA ratepayers alone invest. Third, by providing a long-term commitment to Washington for these projects, BPA provides certainty regarding implementation of this aspect of its Fish and Wildlife Program, which helps BPA manage its financial risks.

5.2 The Estuary MOA Complies with and Supports BPA's Legal Obligations

BPA's authority and ability to enter into this MOA is provided by federal statutes. Since BPA's inception, Congress has afforded the BPA Administrator broad discretion to enter into "such contracts, agreements and arrangements . . . upon such terms and conditions and in such manner as he may deem necessary" to fulfill BPA's statutory purposes.⁶¹ This includes the express authority to make payments from the Bonneville Fund to

⁶⁰ 16 U.S.C. § 839(2).

⁶¹ 16 U.S.C. § 832a(f).

implement BPA's legal responsibilities under the Northwest Power Act and the ESA.⁶² BPA is imbued with considerable flexibility and discretion when entering into arrangements such as this MOA, provided that BPA uses that flexibility and discretion to fulfill one or more of its statutory responsibilities. In this section, BPA describes how the Estuary Habitat MOA is both consistent with and helps BPA fulfill its federal obligations.

5.2.1 Endangered Species Act

The Estuary Habitat MOA makes commitments of BPA funding intended to benefit ESA-listed and non-listed fish, and will help BPA meet its commitments in support of the 2008 FCRPS BiOp. All actions contained in the MOA are expected to benefit listed salmon and steelhead of the Basin. Implementation of specific projects will undergo additional environmental compliance, including consultation with NMFS and the United States Fish and Wildlife Service under the ESA as appropriate, and will assure that all actions to be implemented with BPA funding will further the goals of the ESA.

5.2.2 Northwest Power Act

Under section 4(h)(10)(A) of the Northwest Power Act, BPA must use the Bonneville Fund and BPA's other authorities to protect, mitigate, and enhance fish and wildlife to the extent affected by the development and operation of the FCRPS in a manner consistent with the Council's Fish and Wildlife Program, the Council's Power Plan, and the purposes of the Act.⁶³ In this section, BPA explains how its decision to enter into the Estuary Habitat MOA meets these standards and other elements of the Act.

Consistency with the Council's Fish & Wildlife Program:

The Council's Fish and Wildlife Program provides a framework for all of the projects proposed for BPA's funding under these agreements. All the projects are intended to provide biological benefits addressing limiting factors for fish species identified in the Council's Program, including sub-basin plans, that will directly help to fulfill Council Program strategies specific to the estuary, including:

- Habitat restoration work to reconnect ecosystem functions such as removal or lowering of dikes and levees that block access to habitat or installation of fish-friendly tide gates, protection or restoration of riparian areas and off-channel habitat, and removal of pile dikes.⁶⁴

As such, BPA believes all the projects under this MOA are consistent with the Council's Program. In any case, the Council and ISRP review will help confirm this or provide input for appropriate adjustments.

⁶² 16 U.S.C. § 838i(b) and § 838i(b)(12).

⁶³ 16 U.S.C. § 839b(h)(10)(A).

⁶⁴ Council Program 2009, Section V.A (Estuary Strategies), first bullet.

Compliance with the In lieu Provision of the Northwest Power Act

Under section 4(h)(10)(A) of the Northwest Power Act, Congress expressly limited BPA's authority to provide protection, mitigation, and enhancement in the "in lieu" provision, which states:

Expenditures of the Administrator pursuant to this paragraph shall be in addition to, not in lieu of, other expenditures authorized or required from other entities under other agreements or provisions of law.⁶⁵

As explained by the House of Representative's Interior Committee, "other fisheries efforts outside this Act . . . are expected to continue and to be funded separately."⁶⁶

Thus, if another entity is authorized or required under other agreements or provisions of law to undertake an activity, BPA cannot fund the activity under the authority of section 4(h)(10)(A) unless BPA's funding is in addition to, not in lieu of that other entity's funding. The *in lieu* provision helps ensure that BPA's funding for fish and wildlife protection, mitigation and enhancement under section 4(h)(10)(A) is additive to on-going and future mitigation conducted by others, and is not simply supplanting other efforts outside of the Northwest Power Act.

Under the terms of the MOA, projects to be implemented must meet BPA's *in lieu* policy. That policy was most recently updated with BPA's 2007-2009 fish and wildlife funding decision, in which BPA provided express ratings and a ratings key for all projects proposed for BPA funding during that period.⁶⁷ BPA will review estuary habitat proposals for any *in lieu* issues as they are further refined, and work with Washington to resolve any such issues prior to implementation should any issues emerge.

The Agreements Support Equitable Treatment for Fish and Wildlife

The Northwest Power Act requires that BPA exercise its FCRPS management responsibilities "in a manner that provides equitable treatment for . . . fish and wildlife with the other purposes for which such system and facilities are managed and operated."⁶⁸ The Council describes equitable treatment as "meet[ing] the needs of salmon with a level of certainty comparable to that accorded the other operational purposes."⁶⁹ Historically, BPA and the other Action Agencies have provided equitable treatment on a system-wide basis by operating the FCRPS consistent with the operational guidelines in the Council's Fish and Wildlife Program and relevant Biological

⁶⁵ 16 U.S.C. § 839b(h)(10)(A).

⁶⁶ H.R. Rep. No. 976, 96th Cong., 2d Sess., pt. 2, at 45. See also 126 Cong. Rec. H9846 (daily ed. Sept. 29, 1980) (Rep. Lujan: section 4(h)(10)(A) would "insure that the program will not call for measures already being implemented to protect, mitigate, and enhance fish and wildlife").

⁶⁷ Letter from Greg Delwiche, VP Environment, Fish and Wildlife/BPA to Dr. Karier, Chair, Northwest Power and Conservation Council, February 9, 2007, and *in lieu* table attachment. Available at: <http://www.efw.bpa.gov/IntegratedFWP/policyframework.aspx>.

⁶⁸ 16 U.S.C. § 839b(h)(11)(A)(i).

⁶⁹ Council Program 1992, Vol. II. p. 9.

Opinions.⁷⁰ The Estuary Habitat MOA supports and expands on BPA’s commitments in the FCRPS BiOp. Overall, the Estuary Habitat MOA in combination with the FCRPS BiOp and the 2008 Columbia Basin Fish Accords provides a higher level of financial and operational certainty for fish, further solidifying BPA’s efforts to manage the FCRPS equitably for both fish and power.

Consistency with the Council’s Power Plan

In its most recent Power Plan the Council recommended that “Bonneville should continue to fulfill its obligations for fish and wildlife.”⁷¹ As the Council noted in describing this recommendation:

These obligations will be determined in a manner consistent with the requirements of the Northwest Power Act and the Council’s Columbia River Basin Fish and Wildlife Program, and are not affected by the recommended changes in Bonneville’s role [referring to recommended changes in Bonneville’s role regarding the regional power supply].⁷²

As previously discussed, BPA’s decision to enter into the Estuary Habitat MOA demonstrates its continuing efforts to meet its obligations to address the impacts to fish from the construction and operation of the FCRPS in a manner consistent with the Council’s Program. As such, BPA’s decision is consistent with the Council’s specific fish and wildlife recommendation to Bonneville in the Council’s Power Plan.

5.2.4 Clean Water Act

Actions implemented under the Estuary Habitat MOA will provide additional support toward achieving state water quality standards. For example, under the MOA, BPA will support actions that will help to improve water quality in the estuary, including culvert replacement, tidegate removal, riparian habitat protection and enhancement, and reconnection of side channels and floodplains, to name some. These actions support BPA’s commitments to protecting and enhancing the physical and biological integrity of water quality within the Basin.

Some projects that BPA funds may result in temporary or short-term impacts to water quality as a function of in-water work. As discussed in more detail in the NEPA section

⁷⁰ See, e.g., BPA, System Operation Review Environmental Impact Statement Record of Decision, page 14 (Feb. 21, 1997) (selecting an FCRPS operating strategy in which “[c]onflicts between power and fish are resolved in favor of the fish, providing equitable treatment of fish and wildlife with the other purposes for which the FCRPS is operated”); BPA, Fish and Wildlife Implementation Plan Environmental Impact Statement, pages 2-33 to 2-36 (Apr. 2003) (summarizing how BPA provides equitable treatment in FCRPS management); FCRPS Action Agencies, Biological Assessment for Effects of FCRPS and Mainstem Effects of Other Tributary Actions on Anadromous Salmonid Species Listed under the ESA, pages 1-9 to 1-15 (Aug. 2007) (describing the FCRPS’ overhaul—structural and operations changes for fish since 1994).

⁷¹ The Fifth Northwest Electric Power and Conservation Plan, Document 2005-7 (May 2005), Action Plan, Action BPA-4 at page 23. Available at: <http://www.nwppc.org/energy/powerplan/plan/Default.htm>

⁷² *Id.*

below, evaluations and permits necessary to protect water quality will be secured as a requirement of the environmental clearance necessary for site-specific projects.

5.2.5 National Historic Preservation Act

Pursuant to the National Historic Preservation Act (NHPA), BPA supports a program (the FCRPS Cultural Resources Program) for addressing power-related impacts of the FCRPS on historic and cultural resources of the Columbia River Basin. The program provides direct funding from BPA to the Corps and Reclamation for the power share of operations and maintenance of the FCRPS. Nothing in this Estuary Habitat MOA is intended to alter or affect that program or its associated funding. In addition, as described below in the NEPA section, as projects are implemented pursuant to this MOA, BPA will consider and address the effects of the actions on cultural and other historic resources pursuant to the NHPA.

6.0 NATIONAL ENVIRONMENTAL POLICY ACT ANALYSIS

Pursuant to NEPA,⁷³ BPA has assessed the potential for environmental effects related to entering into the Estuary Habitat MOA. Because the MOA involves commitments related to BPA's fish and wildlife mitigation and recovery efforts, BPA has reviewed its Fish and Wildlife Implementation Plan Environmental Impact Statement (FWIP EIS) (DOE/EIS 0312, April 2003), and the Fish and Wildlife Implementation Plan ROD (FWIP ROD, October 31, 2003) to determine if BPA's participation in the Estuary Habitat MOA falls within the scope of the FWIP EIS and ROD. As discussed in more detail below, BPA has determined that the decision to enter into the Estuary Habitat MOA is adequately covered within the scope of the FWIP EIS and the Preferred Alternative (PA 2002) Policy Direction that was adopted by BPA in the FWIP ROD, and that entering into this MOA would not result in significantly different environmental effects from those examined in the FWIP EIS.

BPA therefore has decided to tier this NEPA ROD for the Estuary Habitat MOA to the FWIP EIS and ROD. Additional project-specific NEPA documentation is not expected to be necessary for the projects proposed in this Estuary Habitat MOA, unless, as a result of the validation process described below, additional environmental review becomes necessary.

6.1 Fish and Wildlife Implementation Plan EIS and ROD

BPA developed the FWIP EIS and ROD in response to fish and wildlife administration issues that were identified in the 1995 Business Plan EIS (Business Plan EIS, DOE/EIS-0183, June 1995, and Business Plan ROD, August 15, 1995).⁷⁴ The underlying need for

⁷³ 42 U.S.C. § 4321, *et seq.*

⁷⁴ In the Business Plan EIS and ROD, BPA adopted a market-driven approach to guide its overall business practices. In accordance with this approach, BPA fully participates in the competitive market for power transmission, and energy services, and uses success in the market to ensure the financial strength necessary

the FWIP EIS was to establish a comprehensive and consistent policy to guide the implementation and funding of BPA's fish and wildlife mitigation and recovery⁷⁵ efforts under existing statutes and policies. The FWIP EIS is intended to support a number of decisions related to fish and wildlife mitigation and recovery necessary to comply with BPA's responsibilities, including decisions by BPA related to funding fish and wildlife mitigation and recovery efforts; funding BPA's share of the Council's Fish and Wildlife Program; funding capital improvements at FCRPS projects related to fish; funding fish and wildlife RM&E; and funding cultural resources mitigation (FWIP EIS, Section 1.4.2).

The FWIP EIS recognizes that achieving regional consensus on a solution for addressing fish and wildlife mitigation and recovery is extremely difficult at best. The EIS discusses the factors contributing to this circumstance, including uncertainty and disagreement regarding the science in support of mitigation and recovery; competing demands for resources; and differences regarding the value and priority of various resources throughout the region (FWIP EIS, Section 1.1). The EIS also describes how various regional policies have created conflicting priorities for fish and wildlife mitigation and recovery efforts (FWIP EIS, Section 2.3.2.3). These conflicting priorities are based in part on differing views and uncertainty concerning the science underlying these efforts. Nonetheless, the EIS recognizes BPA's need to move forward with a policy for fish and wildlife mitigation and recovery so that the agency can proceed with funding and implementation of a comprehensive mitigation program (FWIP EIS, Section 1.2).

To help BPA develop such a policy, the FWIP EIS considered a wide range of potential Policy Direction alternatives for BPA's fish and wildlife mitigation and recovery policy. Five basic alternatives were identified and evaluated in the Draft FWIP EIS: Natural Focus, Weak Stock Focus, Sustainable Use Focus, Strong Stock Focus, and Commerce Focus. These five basic Policy Direction alternatives span the full range of reasonably foreseeable directions for fish and wildlife policy, ranging from policies perceived as favoring the natural environment to those that may be perceived as favoring the economic and social environments. In addition, the EIS includes a Status Quo alternative that serves as a baseline against which all alternatives can be compared. Developed from within the range of the five basic Policy Direction alternatives, the Final FWIP EIS also includes a preferred alternative, the Preferred Alternative Policy Direction (PA 2002).

The FWIP EIS assesses the environmental consequences on the natural, economic, and social environments of adopting a variety of policy directions. By design, the analysis in the FWIP EIS is a policy-level evaluation, and thus is more qualitative than quantitative. The analysis is based on relatively predictable relationships between changes to the environment (air, land, and water) and the consequences for fish, wildlife, and humans

to fulfill its numerous and varied mandates and obligations. BPA also operates in a manner that is more cost-conscious, customer-focused, and results-oriented. As part of its market-driven approach, BPA decided to work towards "reinventing" its fish and wildlife program to emphasize better results, effectiveness, and efficiency.

⁷⁵ BPA uses the phrase "mitigation and recovery" to address its responsibilities to fish and wildlife under the Northwest Power Act ("mitigation"), the ESA ("recovery"), and other laws.

(FWIP EIS, Section 5.3.1.2). The analysis in the FWIP EIS compares the potential environmental impacts for the possible range of implementing actions for fish and wildlife mitigation and recovery under each Policy Direction with the Status Quo. By considering the numerous potential fish and wildlife actions in the region, the FWIP EIS provides a cumulative assessment of potential environmental impacts from BPA's funding and implementation of these actions.

The FWIP EIS also collects and sorts the many and varied proposed and on-going actions for fish and wildlife mitigation and recovery in the region (FWIP EIS, Volume III). These actions, referred to as Sample Implementation Actions (SIAs), are organized in the FWIP EIS in SIA tables for each Policy Direction alternative. These SIAs are representative of the types of actions that are consistent with the various alternatives.

6.1.1 Watershed Management and Wildlife Mitigation Program EISs

The FWIP EIS incorporates by reference BPA's Watershed Management Program EIS (DOE/EIS-0265, July 1997) and Wildlife Mitigation Program EIS (DOE/EIS-0246, March 1997). These two programmatic EISs were the result of an examination by BPA in the mid-1990s of the environmental consequences of its routine fish and wildlife program activities, including implementation of projects to carry out the Council's Fish and Wildlife Program. The Watershed Management Program EIS provided a comprehensive analysis of different program alternatives for addressing BPA's watershed management projects, including riparian restoration and other vegetation management techniques; in-channel modifications and fish habitat improvement structures; various land management techniques; and other watershed conservation and rehabilitation actions. In the Watershed Management Program ROD (August 1997), BPA decided to implement a program to support this wide range of potential actions intended to benefit fisheries, fish habitat, and aquatic ecosystems in the region.

Similarly, BPA's Wildlife Mitigation Program EIS provided a comprehensive analysis of different program alternatives for addressing BPA's wildlife mitigation projects, including land acquisitions and management; habitat restoration and improvements; installation of watering devices and riparian fencing; and other conservation actions. In the Wildlife Mitigation Program ROD (June 1997), BPA decided to implement a program to support this wide range of potential wildlife mitigation actions.

In these programmatic EISs and their associated RODs, BPA adopted a set of prescriptions to standardize project planning and implementation. In accordance with these prescriptions, BPA completed a NEPA document called a Supplement Analysis (SA) for each site-specific action under the appropriate programmatic EIS. In each SA, BPA considered the environmental consequence of a proposed activity and made a determination concerning whether the activity was generally consistent with the programmatic EIS. By adopting the prescriptions, BPA was able to implement its numerous watershed and wildlife projects with greater efficiency and consistency.

In approximately ten years, BPA prepared over 340 SAs under the Watershed Management and Wildlife Mitigation Program EISs. Each of these documents confirmed that the environmental consequences for routine fish and wildlife mitigation activities are predictable and that, although there can be short term adverse effects from these activities, they continue to have net positive and increasingly beneficial impacts to fish and wildlife across the basin. The SA process provided legally required environmental analysis while simultaneously expediting direct on-the-ground benefits to fish and wildlife and saving ratepayers' funds.

6.1.2 BPA's Adoption of a Policy Direction from the FWIP EIS

Through the FWIP ROD, BPA adopted the Preferred Alternative 2002 (PA 2002) as its policy direction for funding and implementing its fish and wildlife obligations. PA 2002 focuses on enhancing fish and wildlife habitat, modifying hydroelectric power operations and structures, and reforming hatcheries to both increase populations of listed fish stocks and provide long-term harvest opportunities (FWIP EIS, Section 3A). PA 2002 is essentially a blend of the Weak Stock and Sustainable Use alternative policy directions that were identified in the FWIP EIS. The Weak Stock Alternative emphasizes *human intervention to support recovery* of weak fish stocks and wildlife populations that are listed or proposed for listing under the ESA or that have other legal protections. The Sustainable Use Alternative emphasizes *human intervention as part of a goal to rebuild and maintain* sustainable fish and wildlife populations to promote expanded harvest and recreation opportunities.

The PA 2002 Policy Direction incorporates both BPA's mitigation obligations and ESA obligations. Sample Implementation Actions (SIA) for PA 2002 can be found in the SIA tables for the Weak Stock Focus and Sustainable Use Focus alternatives (FWIP EIS, Volume III). PA 2002 reflects regional fish and wildlife policy guidance and considers extensive public input. It is also consistent with the fish and wildlife component in BPA's earlier Business Plan decision.

6.1.3 Tiering From the FWIP EIS and ROD

As previously mentioned, the FWIP EIS was intended to support a number of decisions related to BPA's funding and implementation of fish and wildlife mitigation and recovery efforts (FWIP EIS, Section 1.4.2). In adopting the PA 2002, BPA demonstrated a commitment to support subsequent decisions involving the funding and implementation of fish and wildlife mitigation and recovery efforts that specifically support the PA 2002. The FWIP EIS and ROD document a strategy for making subsequent fish and wildlife policy decisions (FWIP EIS, Section 1.4.1 and Figure 1-6; FWIP ROD, Figure 1, p. 15). This strategy connects program or site-specific projects (once their details and impacts are known) to the policy-level analysis in the EIS (FWIP EIS, Section 3.4.3). For each subsequent decision as appropriate, BPA reviews the FWIP EIS and ROD to determine if the proposed action is adequately covered within the scope of the PA 2002 evaluated in the EIS and adopted in the ROD. If the action is found to be within the scope of this alternative, the Administrator may make his decision for the proposed action under the

FWIP EIS and ROD. This approach to decision making allows the BPA Administrator to implement decisions concerning fish and wildlife mitigation and recovery actions in a timely, comprehensive manner (FWIP ROD, page 13).

Using this tiering approach, in February 2007 BPA prepared a NEPA ROD⁷⁶ tiered to the FWIP EIS and ROD for its Fiscal Year 2007-2009 Fish and Wildlife Project Implementation Decision (07-09 F&W Decision). This tiered ROD addressed BPA's decision to implement certain new and on-going fish and wildlife projects for fiscal years 2007 through 2009. The projects included in the 07-09 F&W Decision were designed to help meet BPA's responsibilities to protect, mitigate and enhance fish and wildlife affected by the development and operation of the Columbia River Basin hydroelectric dams from which BPA markets power. In the tiered NEPA ROD, BPA found that the majority of the projects included in the 07-09 F&W Decision were routine actions requiring no further NEPA documentation, but that would be subject to a "validation" process. Through this process, BPA committed to reviewing each project to ensure all applicable tribal, local, state, and federal laws and regulations in addition to NEPA have been addressed prior to implementation. For non-routine projects, BPA committed to prepare additional NEPA documentation as appropriate.

BPA also used this tiering approach in evaluating the environmental effects of entering into the 2008 Columbia Basin Fish Accords.⁷⁷ BPA found that many of the new projects to be implemented under the Accords were routine requiring no further NEPA documentation, but that BPA would continue to use the validation process to ensure other applicable environmental reviews and permitting were addressed. For the non-routine projects, such as new hatchery facilities, BPA committed to prepare additional NEPA documentation as appropriate.

6.2 Environmental Analysis for the Estuary Habitat MOA

BPA's decision to enter into the Estuary Habitat MOA will provide BPA funding and implementation commitments for actions and resource objectives to support the protection and recovery of ESA-listed salmon and steelhead as well as other anadromous and resident fish within the Columbia River Basin through estuary habitat protection, mitigation, and enhancement. Activities funded under the Estuary Habitat MOA are all "new" in the sense that they are additive to any estuary habitat projects that BPA had planned to undertake prior to this MOA. The NEPA analysis in this Record of Decision is intended to address the environmental effects of these projects.

⁷⁶ BPA's NEPA ROD is available at: http://www.bpa.gov/corporate/pubs/RODS/2007/FY07-09_FW_Record_of_Decision_Final.pdf.

⁷⁷ BPA issued two separate Administrator's/NEPA RODs, one in May of 2008 for the Accords with the Warm Springs, Umatilla, Yakama Tribes and the Columbia River-Intertribal Fish Commission, the Colville Tribes, and the States of Idaho and Montana, and another ROD in November of 2008 for the Accord with the Shoshone-Bannock Tribes. See <http://www.bpa.gov/corporate/pubs/RODS/2008/> for copies of these RODs.

BPA has considered its decision both at a policy level and at the project-specific level. At the policy level, a review of the FWIP EIS shows that the general environmental impacts that could occur as a result of entering into the Estuary Habitat MOA are adequately covered by this EIS. At the project-level, a review of the FWIP EIS shows that potential environmental effects associated with the types of projects to be funded under the MOA would not be significantly different from those described in the EIS. In addition, the types of projects to be funded under the MOA are consistent with and thus within the scope of the PA 2002 that was adopted in the FWIP ROD. A further discussion of these evaluations follows.

6.2.1 Policy Level Evaluation

Chapter 5 of the FWIP EIS describes potential impacts of fish and wildlife actions that could occur as a result of each of the Policy Directions considered in the EIS. Overall environmental impacts associated with each Policy Direction are discussed in Section 5.3 of the FWIP EIS. Environmental impacts associated with PA 2002 – the Policy Direction ultimately adopted by BPA in the FWIP ROD – are identified in Section 3A.3 of the FWIP EIS.

Under the Estuary Habitat MOA, BPA will fund the implementation of individual estuary habitat projects alone or in combination with the Corps, the State of Washington, and other habitat implementation partners. These projects will result in short and long-term benefits to fish and wildlife by increasing estuary habitat values within the Columbia River Basin and increasing and sustaining fish populations. Individual projects will range in size from fractions of an acre to several hundred acres or more. These actions may also have associated temporary effects that are not the primary objective of the action but that occur nonetheless. Although impacts at individual sites are likely to be minor, particularly for smaller projects, from the standpoint of cumulative effect of projects developed under the MOA, impacts would occur over hundreds of acres. Cumulative effects were considered in Chapter 5 of the FWIP EIS, and cumulative effects more specific to the PA 2002 were considered in Section 3A of the FWIP EIS.

Impacts from projects developed under the Estuary Habitat MOA could add to past, present, and future negative impacts of other human activities in the region. For example, reduction in timber production as a consequence of habitat acquisition and protection could negatively affect economies that are currently affected as a consequence of reductions in available timber. Mitigation projects may also reduce the availability of grazing lands in the region. Prescribed burning at mitigation lands might add to existing or future regional air quality problems. The extent to which projects could create or aggravate negative existing effects on any given resource, they will be mitigated for as described in general terms in the FWIP EIS. Adherence to applicable federal, state and local laws, and regulations and coordination with appropriate federal and state agencies, tribes and private landowners will be required for all projects.

Overall, the projects in the Estuary Habitat MOA provide net benefits to water quality, fish and wildlife habitat, and other natural resources such as soils and vegetation. These

resources would be positively affected through projects involving streamflow generation, sediment transport, large woody debris recruitment, and temperature regulation. These projects would be expected to result in net benefits for both listed and non-listed fish and other aquatic species in the region.

Although there are uncertainties surrounding the science of fish mitigation and recovery, the expected increase in biological benefits resulting from this MOA indicates that the MOA will enhance fish restoration efforts in the region. Cumulative benefits to fish are anticipated to include improved spawning habitat, improved access to all habitats through the modification or removal of migration obstructions, and the provision of more properly functioning habitat for both listed and non-listed fish and other aquatic species. These types of net benefits from fish projects were recognized in the FWIP EIS (see Sections 3A.3, 5.2, and 5.3).

Overall benefits to wildlife would occur as a result of implementing this Estuary Habitat MOA. The process of acquiring and managing lands will protect existing habitat values and ensure habitat availability for fish and wildlife species in the future. Human populations would also benefit from lands acquired as part of future actions under the MOA, as opportunities for recreation are maintained (e.g., wildlife viewing) and aesthetic values are preserved. Potential negative impacts to human populations relating to removal of land from commodity production would affect only a small portion of the lands available for those uses within the Columbia River Basin. Land acquisition may in some instances provide additional protections for cultural resources. Vegetation management techniques would help to control invasive species that are currently limiting vegetation diversity. The reestablishment of native plant species would benefit fish and wildlife, as well as traditional Native American cultural uses.

Both anadromous and resident fish have great cultural significance to Native American Indian peoples. Salmon are a major food source and trading commodity for most Columbia Basin tribes. Tribal harvest, especially for anadromous fish, has been substantially reduced from historic levels. Most of the upriver anadromous fishing opportunities no longer exist. Tribal fish harvest would improve as the naturally-spawning and hatchery-produced fish populations increase (FWIP EIS Section 3A.3.3). In the long-term, entering into the Estuary Habitat MOA would be expected to result in these same beneficial effects. The MOA provides for habitat protection and enhancement activities for weak stocks/populations, benefiting listed species, as well as other plant and animal species that are important to tribal health, spirituality, and tradition.

Ratepayers would fund BPA's share of the costs related to implementation of this MOA. Levels of funding for the Fish and Wildlife Program and uncertainties surrounding fish and wildlife mitigation requirements (e.g. court-related actions related to the FCRPS BiOp) continue to be a major concern for many regional entities. The economic effects associated with these types of projects are described in Section 3A.3.2 of the FWIP EIS. As discussed in Section 3.9 of this Record of Decision (above) BPA expects to provide a

total of \$6.2 million dollars over nine years in direct support of the projects committed to in the MOA.

In the *Comprehensive Analysis of the Federal Columbia River Power System and Mainstem Effects of Upper Snake and Other Tributary Actions* (August 2007),⁷⁸ the Action Agencies recognize that climate change could pose an additional threat to the survival and recovery of ESA listed salmon and steelhead in the Columbia River Basin. To a significant extent, the 2008 FCRPS BiOp RPAs already address potential impacts of climate change in provisions for dry year strategies, predator management, and habitat protection and improvements.

In addition, under the adaptive management approach of the 2008 FCRPS BiOp, the Action Agencies will continue to monitor and assess potential climate change impacts on hydrological and fish conditions and provide a mechanism to implement additional actions if appropriate. Entering into the Estuary Habitat MOA, which provides additional measures for the benefit of fish, will further provide support for populations in the face of impacts of climate change, particularly through efforts to open up additional habitat and stream access, to provide for water flows and riparian habitat enhancement. Entering into the MOA would not be expected to have negative implications related to climate change. If anything, the projects under the MOA would likely have beneficial effects concerning climate change, as these estuary projects will provide riparian and other habitat enhancement and greater shade cover.

In sum, while there could be some short-term localized impacts from projects developed under the Estuary Habitat MOA, the MOA will result in net benefits to fish populations and habitat, water quality, as well as to other natural resources. These impacts and benefits were recognized and considered in the FWIP EIS. The program-level environmental impacts that could occur as a result of entering into the MOA are adequately covered by the FWIP EIS.

6.2.2. Project-Specific Evaluation

Through experience completing SAs and other NEPA documentation for fish and wildlife projects over the last ten years, BPA has developed a clear understanding of the adverse environmental consequences associated with individual fish-related mitigation and recovery projects. These associated effects were also identified and evaluated in the FWIP EIS. Section 5.2 of the FWIP EIS provides a comprehensive discussion of potential environmental impacts that can result from implementation of project-specific fish and wildlife actions. This discussion addresses the four primary categories of fish and wildlife projects, otherwise known as the “Four Hs”: hydro operations, habitat, hatcheries, and harvest. Specific impacts associated with fish and wildlife projects under each of these categories are discussed and analyzed in detail in Section 5.2.3 of the EIS, and also covered in a more general sense in Section 5.2.2 of the EIS.

⁷⁸ http://www.salmonrecovery.gov/Biological_Opinions/FCRPS/BA-CA/CA/CA-Final.pdf

As discussed in the FWIP EIS, some adverse environmental impacts associated with individual fish projects are unavoidable (i.e., cannot be fully mitigated). The impacts, however, are often temporary and short-term. Soils are typically disturbed during the implementation phases of most projects that result in sediment input to surface waters during project construction. Ground disturbing activities also have the potential to impact cultural and/or historic resources. In many cases it is not possible to avoid vegetation removal as part of project implementation. Fish and wildlife can be disturbed by noise and human activity in the vicinity of a project. Some loss of local revenue and the local tax base can occur as a consequence of land acquisition or retirement of a commercial use of the land (e.g., retiring a grazing lease). Access restrictions and impacts to recreation can also occur as a consequence of efforts to protect sensitive habitats or implement projects. BPA's experience has shown that federal, state, and local regulatory requirements are effective in addressing any adverse site-specific effects and minimizing them through best management practices, restrictions, and mitigation measures.

6.2.3 Consistency With The PA 2002

Entering into the Estuary Habitat MOA and funding the associated projects is consistent with the PA 2002 Policy Direction that has been adopted by BPA in the FWIP ROD for several reasons.

First, the focus of the PA 2002 is to protect weak stocks of fish and achieve biological performance standards, while sustaining overall populations of fish (both listed and non-listed) and wildlife for their economic and cultural value.⁷⁹ The PA 2002 includes enhancing fish and wildlife habitat as one of its methods.

The main purpose of the projects included in the Estuary Habitat MOA is to aid in protection and recovery of listed fish species and restoration and maintenance of sustainable populations of fish in the Columbia River Basin. This will be accomplished through a variety of habitat actions, including riparian enhancements, habitat restoration (side channel and floodplain connectivity), modification or removal of dredge spoils, and the acquisition and permanent protection of key habitat. The MOA is intended to address legal mandates for the FCRPS under the ESA, the Northwest Power Act, and the Clean Water Act; provide greater certainty and stability in the funding and implementation of projects for the benefit of fish and wildlife in the estuary; and foster a cooperative and partnership-like relationship in implementation of the mutual commitments in the MOA. The MOA projects are consistent with the fish-related actions that were identified as SIAs for the PA 2002 in the FWIP EIS.

Second, the PA 2002 includes measures to address naturally-spawning native anadromous fish and hatchery-produced native anadromous fish, recognizing that more fish is an improvement over the status quo. PA 2002 also supports projects to enhance habitat for anadromous fish in order to increase production and maintenance of harvestable levels of anadromous fish, as well as protecting and enhancing critical habitat

⁷⁹ FWIP EIS Section 3A.

for listed anadromous fish. The MOA projects and activities are consistent with the anadromous fish measures included in the PA 2002.

Third, the PA 2002 adopted erosion and sedimentation reduction throughout the Columbia River Basin as part of a more active land use and water management strategy. It gives priority to improving water quality and habitat for ESA-listed stocks of fish. The PA 2002 states that habitat protection and enhancement efforts would use a watershed or ecosystem approach – i.e., a more comprehensive look at a subbasin and its biological needs (FWIP EIS pg 3A-11). The PA 2002 addresses instream water quantity and the amount of stream/river habitat, realizing that more is better, by reducing or avoiding adverse effects of water withdrawals and increasing instream water quantity. Water habitat benefits are targeted in the projects under the MOA. These projects also will support the PA 2002 water habitat goals for sedimentation by enhancing and managing riparian and stream bank habitats, and will support temperature and dissolved oxygen goals through actions reducing water temperature in tributary waters to the Columbia River. These actions are consistent with the approach to addressing water quality under the PA 2002.

Finally, the projects of the Estuary Habitat MOA have been designed to be consistent with the Council's Fish and Wildlife Program (including sub-basin plans), as amended; the Northwest Power Act's science and other review processes; applicable ESA recovery plans; and applicable data management protocols adopted by the Action Agencies. Based on current information, BPA believes that the Estuary Habitat MOA and the projects identified for implementation are consistent with the Council's Fish and Wildlife Program. This approach is consistent with the PA 2002's goals of developing and implementing mechanisms for carrying out the BPA's fish obligations with the government and people of the region.

In sum, the Estuary Habitat MOA and the projects to be funded under it are consistent with the PA 2002 Policy Direction analyzed in the FWIP EIS and adopted by BPA through the FWIP ROD. The objectives of the MOA are consistent with the purposes and goals of the PA 2002. In addition, the types of projects included in the MOA are similar to those that were considered as typical projects under the PA 2002. Finally, the MOA and the projects to be funded generally reflect the SIAs for the PA 2002.

6.3 Additional Environmental Review

While this NEPA analysis addresses the policy decision to enter into the Estuary Habitat MOA, there may be a need for site-specific NEPA analyses for certain projects before they can be implemented. In addition, BPA recognizes that other environmental review efforts will be needed to implement many of the projects under the MOA, particularly in regards to regulatory compliance and permitting needs. All activities undertaken pursuant to the MOA must be in compliance with all applicable federal, state, local, and tribal laws and regulations. For example, the ESA requires federal agencies to minimize or avoid adverse impacts to threatened or endangered plant, fish, and wildlife species. In accordance with the Clean Air Act (CAA), project managers conducting prescribed burns

are required to coordinate with state officials to ensure that impacts on air quality would be minimal and within state-defined limits. The Clean Water Act regulates discharges into surface waters including adjacent wetlands. The NHPA requires federal agencies to take into account the effects of their undertakings on historic properties including cultural resources. In addition, there are a myriad of state and local regulations for protecting sensitive resources that apply to fish and wildlife project actions that may be undertaken by non-federal project proponents. For projects on reservation lands, tribal laws and regulations that parallel many federal, state and local laws and ordinances, will also apply.

Most of the projects in the Estuary Habitat MOA involve routine land acquisition, watershed management, and other mitigation actions. Because these routine projects have predictable environmental effects that have already been analyzed in the FWIP EIS, the Watershed Management Program EIS, and/or the Wildlife Mitigation Program EIS, these routine projects will require no further NEPA documentation from BPA beyond this Record of Decision prior to implementation. Nonetheless, these projects will be required to go through a validation process. BPA will review each project to ensure all applicable tribal, local, state, and federal laws and regulations in addition to NEPA have been addressed prior to implementation.

BPA staff will document compliance with these and other applicable laws and regulations as part of the contract management process. Results of the validation process will be tracked and accessed through PISCES, a web-enabled software application that assists BPA and its fish and wildlife program participants with managing projects throughout the Columbia River Basin. These results will also be made available to the public on an on-going basis throughout the implementation of the Estuary Habitat MOA as new information about environmental compliance actions becomes available. BPA staff will work with the MOA signatories to ensure that all applicable requirements have been met and are appropriately documented. The best management practices, restrictions, and mitigation measures imposed through regulatory processes will ensure that any project-specific adverse effects to water quality, habitat access, habitat elements, channel conditions and dynamics, flows, and watershed conditions will be brief, minor, and timed to occur at times that are least impacting.

In addition to these routine projects, there are two types of projects that if they are proposed will require additional NEPA analyses beyond this decision document and the validation processes prior to implementation. The first type includes projects that will always require additional NEPA analysis prior to implementation because: (1) they are required to go through the Council's 3-Step Review Process (such as new artificial production facilities, or other large-scale capital-intensive projects); or (2) they involve substantial modification to an on-going artificial production program (such as, expansion of the program to include a new species). At this point, none of the projects in the Estuary Habitat MOA meet either criterion. In the event a project is replaced and the new project meets either of these two criteria, BPA would conduct a separate NEPA analysis.

The second type of project requiring additional NEPA analysis would include projects for which complicating factors emerge as the project develops, thus necessitating additional NEPA analysis. BPA may determine during the validation process or otherwise that there are complicating factors that make this decision document an inappropriate basis for providing NEPA analysis and documentation for a given project and therefore additional NEPA analysis will be completed. Complicating factors may include controversy over effects on resources, special regulatory requirements (federal, state or local), the participation of other federal agencies (where environmental review methodologies may differ), unprecedented actions (with accompanying uncertainty in impacts), or extraordinary environmental circumstances. For such projects, BPA will determine the appropriate strategy to comply with NEPA on a case by case basis.

7.0 CONCLUSION

I have decided to sign the Estuary Habitat MOA. This action, which is a final action under 16 U.S.C. § 839f(e)(5), is based on the foregoing background and analysis. As reflected in that analysis, the Estuary Habitat MOA will help mitigate the impacts of the FCRPS on fish species, particularly salmon and steelhead listed under the ESA with projects that are expected to produce significant and measurable biological benefits. The Estuary Habitat MOA will provide greater certainty and stability to mitigation funding commitments by BPA which helps BPA manage its financial risks. The Estuary Habitat MOA supports the productive, collaborative approach with the State of Washington and its partners in the estuary that has already developed over the last several years.

Risks to BPA of signing the Estuary Habitat MOA are adequately mitigated by the collaborative commitments in the MOA, the support for the 2008 FCRPS BiOp and the requirement for good faith implementation; by the commitments to regulatory and other review processes for project implementation, and for negotiation of replacement projects as needed; and, in the worst case, by the ability to withdraw from the MOA.

Based on a review of the FWIP EIS and ROD, BPA has determined that entering into the Estuary Habitat MOA falls within the scope of the PA 2002 alternative evaluated in the FWIP EIS and adopted in that ROD. This decision is a direct application of the PA 2002, and is not expected to result in significantly different environmental impacts from those examined in the FWIP EIS, and will assist BPA in accomplishing the goals related to the PA 2002 alternative that are identified in the FWIP ROD. Therefore, the decision to implement the Estuary Habitat MOA is tiered to the FWIP ROD.

Issued in Portland, Oregon, this 15 day of September, 2009.

/s/Stephen J. Wright

Stephen J. Wright

Administrator and Chief Executive Officer