



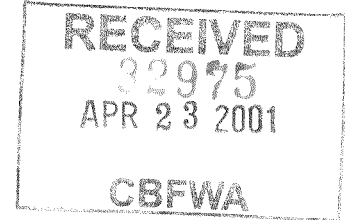
UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL MARINE FISHERIES SERVICE  
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PORTLAND, OREGON 97232-2737

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coord

F/NWR5

April 20, 2001

Sarah R. McNary  
Director for Fish and Wildlife  
Bonneville Power Administration  
PO Box 3621  
Portland, OR 97208-3621



*Sarah*  
Dear Ms. McNary:

Thank you for your letter of March 28, 2001, seeking additional National Marine Fisheries Service's (NMFS) views on High Priority Projects recommended by the Northwest Power Planning Council (NWPPC). I appreciate this opportunity to further coordinate our respective efforts under the Endangered Species Act and the Northwest Power Act as we implement the 2000 Federal Columbia River Power System (FCRPS) Biological Opinion.

Enclosure 1 is a brief project-by-project review describing the corresponding reasonable and prudent alternative (RPA) action items, whether NMFS considers the action a high priority, and whether benefits would be immediate or tangible. NMFS' concerns with some projects are also discussed.

You also requested a discussion "regarding the extent to which" projects fulfill actions called for under the FCRPS Biological Opinion, and any thoughts we may have on "how NMFS intends to assign credit to these and other relevant actions toward fulfillment of our obligations to meet the performance standards of the FCRPS BO." These two questions are closely related. NMFS has been developing a paper to provide guidance on how we will determine whether projects and actions will constitute off-site mitigation under the Biological Opinion. This is a work in progress. A copy of the current draft paper is enclosed (Enclosure 2).

The paper emphasizes, among other things, the technical obstacles to quantifying the biological value of individual, site-level actions. Simply stated, NMFS cannot make such determinations at this time for the reasons set out in the paper. Accordingly, we will only attempt to quantify the biological value of programs and actions implemented by the Action Agencies to the extent already described for the midpoint evaluations in 2005 and 2008. We can, however, give qualitative assessments of whether an action or project will be considered off-site mitigation to help meet the terms of the Biological Opinion. The paper describes the manner in which we will do so.

With respect to the project recommendations, most are likely to benefit listed species in the manner described in the enclosure. Generally speaking, projects that would result in acquisition



of currently productive non-Federal habitat, improved site-specific riparian management, removal of passage barriers, or restored stream flows, are consistent with the biological requirements of the species in question and constitute off-site mitigation under the Biological Opinion. We encourage Bonneville Power Administration (BPA) to proceed with implementation of the projects that will bring immediate and/or tangible benefits to listed salmon and steelhead. We also recognize that there remain a number of programmatic and project level needs to be addressed in FY 2001 that are not within the scope of the high priority project solicitation. As previously mentioned in our February 26, 2001, letter to Steve Wright, these actions are important and include the development of additional habitat activities, salmon and steelhead marking planning, safety net actions, research and monitoring, and assistance with forming and funding the Interior Columbia Basin Technical Recovery Team and its technical products.

We look forward to working with BPA and the other Action Agencies to review and refine the draft 1- and 5-year implementation plans. We will also participate with the NWPPC during its upcoming provincial reviews. We fully expect that between these efforts we will be able to assist you in developing a comprehensive approach to mitigating for the effects of the FCRPS on listed ESUs.

For additional information or questions regarding these recommendations, please contact Ric Ilgenfritz at 206-526-4646.

Sincerely,

A handwritten signature in black ink that reads "Brian J. Brown". The signature is written in a cursive style with a long horizontal line extending to the right.

Brian J. Brown  
Assistant Regional Administrator  
Hydro Program

Enclosures

cc: Larry Cassidy, NWPPC  
Brian Allee, CBFWA

ENCLOSURE 1

**National Marine Fisheries Service Comments on  
“High Priority” Proposals Recommended for BPA Funding  
by the Northwest Power Planning Council  
April 2001**

**Proposal 23036:** Evaluate live capture selective harvesting methods for commercial fisheries on the Columbia River  
**Funding Request:** \$384,285  
**Sponsor:** WDFW & ODFW  
**Province:** Lower Columbia and Columbia Gorge  
**Subbasin:** Columbia Mainstem  
**ESUs:** All Columbia River ESUs  
**RPA Action Item:** No. 164

**Comments:** This project corresponds directly to Action Item No. 164, the development and testing of selective fishing methods and gear. To the extent effective live-catch fishing gear and/or methods are developed and deployed, they provide the potential to harvest abundant species, particularly hatchery fish, while tangibly reducing impacts on listed fish.

**Proposal 23001:** Protect Bear Valley Wild Salmon, Steelhead, Bull Trout Spawning and Rearing Habitat  
**Funding Request:** \$320,000  
**Sponsor:** SBT & IDFG  
**Province:** Mountain Snake  
**Subbasin:** Salmon  
**ESUs:** (1) Snake River Sockeye, (2) Snake River Fall-Run Chinook, (3) Snake River Spring/Summer-Run Chinook, (4) Snake River Basin Steelhead  
**RPA Action Item:** No. 150

**Comments:** This collaborative effort permanently protects 73,000 acres from approximately 972 cow/calf pairs and will improve riparian and upland habitat, including productive meadow complexes. Bear Valley Creek supports headwater spawning and rearing of wild chinook salmon, steelhead trout, and bull trout. Closing other allotments in the area has been beneficial to riparian habitat. The benefits of this project should be tangible, if not immediate. The project should be incorporated into an overarching M&E strategy in order to determine whether a biological response has occurred after it has been implemented.

**Proposal 23002:** Ames Creek Restoration  
**Funding Request:** \$170,000  
**Sponsor:** USFS  
**Province:** Lower Columbia  
**Subbasin:** Willamette  
**ESUs:** (1) Upper Willamette River Steelhead, (2) Upper Willamette River Chinook  
**RPA Action Item:** Nos. 149, 183

**Comments:** This project will provide passage around an old mill dam, opening up four miles of spawning/rearing habitat to steelhead. Also, removal of a two-acre pond and restoring the stream will reduce temperatures in this 303(d)-listed tributary of the South Santiam River. This project appears to be time-sensitive. Its primary value would be serving as a tier-three M&E project under Action Item 183, given that it would immediately create access to previous blocked productive spawning and rearing habitat. Monitoring such changes would enable us to quantify the benefits associated with removing passage barriers to provide access to unseeded productive habitat.

**Proposal 23008:** Improve Stream Habitat by Reducing Discharge from Animal Feeding Operations in Salmon and Clearwater Basins  
**Funding Request:** \$1,100,000  
**Sponsor:** IOSC  
**Province:** Mountain Snake  
**Subbasin:** Salmon and Clearwater  
**ESUs:** (1) Snake River Sockeye, (2) Snake River Fall-Run Chinook, (3) Snake River Spring/Summer-Run Chinook, (4) Snake Steelhead  
**RPA Action Item:** N/A

**Comments:** This project would reduce runoff from animal feed lots. NMFS commented on this proposal based on the information provided in November 2000 using the criteria provided by BPA to determine if the project required "High Priority status" for funding in 2001. This proposal appeared likely to provide some benefit to Endangered Species Act (ESA)-listed fish species in the Salmon and Clearwater river basins by improving water quality. Projects like this would be expected to contribute to recovery efforts identified in the FCRPS Biological Opinion and the Basinwide Recovery Strategy. Several reviewers, including NMFS, concluded that this project fell short in providing adequate project description, leaving reviewers unable to predict improvement to fish habitat and population response. Without specific designs and locations of individual actions and adequate descriptions of the baseline habitat conditions, reviewers were not able to support this project as meeting the criteria for high priority funding.

The proposal might merit a higher priority if the component projects were more fully developed and if it was part of a scientifically- based, watershed- level plan with measurable biological objectives. The Basinwide Recovery Strategy identified a desire to integrate ESA and Clean Water Act (CWA) requirements and supports Total Maximum Daily Load (TMDL) development by the state. Generally, improving water quality for ESA-listed fish species by reducing animal waste entering streams benefits fish. But, the approach should be based on the demonstration that the actions that are funded will result in success compared to the other opportunities that are necessarily forgone. This proposal should be more fully developed as described above and re-considered during the Mountain Snake provincial review.

**Proposal 23010:** Restoration of Anadromous Fish Access to Hawley Creek  
**Funding Request:** \$2,159,000  
**Sponsor:** IOSC  
**Province:** Mountain Snake  
**Subbasin:** Salmon  
**ESUs:** (1) Snake River Sockeye, (2) Snake River Fall-Run Chinook, (3) Snake River Spring/Summer-Run Chinook, (4) Snake River Basin Steelhead  
**RPA Action Item:** N/A

**Comments:** This project would reconnect a headwater tributary to the Lemhi River, likely providing benefits to ESA-listed fish species in the Salmon River basin. Projects like this would be expected to contribute to recovery efforts identified in the FCRPS Biological Opinion and the Basinwide Recovery Strategy. NMFS reviewers concluded that this project fell short of highest priority status for 2001 because project planning design and description are not yet complete. Reviewers did not find assurances that water gains or savings would be permanently protected in-stream from future appropriation. Hawley Creek is upstream of the area covered by recent legislation that would protect flows in the lower Lemhi River. NMFS is concerned that restored or improved flows will not make it downstream to where they will be protected under the Lemhi agreement.

Without the justification of this alternative over other actions, such as land acquisition, and the legal assurance that adequate instream flows would be protected, reviewers were not able to adequately assess feasibility or expected benefits. The proposal would merit a higher priority if it were part of a scientifically-based, watershed- level plan with measurable biological objectives. In order to be considered off-site mitigation, the project should be reconfigured to respond to the concerns stated here. Then it could be reconsidered as part of the Mountain Snake provincial review.

**Proposal 23011:** Reconnect Little Morgan Creek to the Mainstem Pahsimeroi River  
**Funding Request:** \$1,100,000  
**Sponsor:** IOSC  
**Province:** Mountain Snake  
**Subbasin:** Salmon  
**ESUs:** (1) Snake River Sockeye, (2) Snake River Fall-Run Chinook,  
(3) Snake River Spring/Summer-Run Chinook; (4) Snake River Basin  
Steelhead  
**RPA Action Item:** N/A

**Comments:** The proposal appeared likely to provide benefit to ESA-listed fish species in the Salmon River basin by reconnecting a lower tributary to the Pahsimeroi River. Projects like this are expected to contribute to recovery efforts identified in the FCRPS Biological Opinion and the Basinwide Recovery Strategy. NMFS reviewers concluded that this project fell short of highest priority status for 2001 because project planning design and description are not yet complete. Reviewers were unable to analyze what work will actually occur on the ground and whether gains from that work will adequately and consistently provide connectivity. Moreover, reviewers have not found assurances that water savings will be permanently protected instream. The proposal would deserve higher priority if it were part of a scientifically-based, watershed-level assessment. It should be reconsidered in the context of the Mountain Snake provincial review.

**Proposal 23012:** Arrowleaf land purchase, Methow Valley.  
**Funding Request:** \$ 2,500,000  
**Sponsor:** TPL & WDFW  
**Province:** Columbia Cascade  
**Sub-basin:** Methow  
**ESUs:** (1) Upper Columbia River Spring-Run Chinook, (2) Upper  
Columbia River Steelhead  
**RPA Action Item:** No. 150

**Comments:** This project would permanently protect currently productive habitat in a critical area. Very little of this sort of floodplain habitat remains in the Methow. Chinook spawning occurs in the immediate area and upstream. Acquiring the Arrowhead Property would tangibly benefit two listed ESUs. The project is time-sensitive and features an enormous cost share (\$13.5 million). The project applicant has described the urgency of securing this land now. On the basis of the permanence of protecting currently productive non-Federal habitat for two endangered ESUs, this project rates as a very high priority.

**Proposal 23032:** Reconnect Lochsa River tributaries (Squaw to Pappoose) by Culvert Replacement.  
**Funding Request:** \$420,000  
**Sponsor:** NPTFWP  
**Province:** Mountain Snake  
**Sub-basin:** Clearwater  
**ESUs:** (1) Snake River Fall-Run Chinook, (2) Snake River Basin Steelhead  
**RPA Action Item:** No. 149

**Comments:** This project would replace or remove several culverts that have barred passage to productive spawning habitat. Removing passage barriers is a high priority. The project would benefit listed salmonids immediately and tangibly. In addition, it could provide data necessary to quantify the benefits of removing passage barriers. We understand that BPA has some concerns regarding the “in lieu” status of this project.

**Proposal 23045:** Gourley Creek Dam Fish Ladder  
**Funding Request:** \$200,119  
**Sponsor:** City of Scappoose, OR  
**Province:** Lower Columbia  
**Subbasin:** Willamette  
**ESUs:** (1) Lower Columbia River Chinook, (2) Lower Columbia River Steelhead  
**RPA Action Item:** No. 183

**Comments:** This project would open up about four miles of high quality habitat for ESA-listed salmonids above an existing artificial fish barrier. Its primary value would be serving as a tier-three M&E project under Action Item 183, given that it would immediately create access to previous blocked productive spawning and rearing habitat.

**Proposal 23046:** Walla Walla Flow Improvement.  
**Funding Request:** \$580,000  
**Sponsor:** WWCCD  
**Province:** Columbia Plateau  
**Subbasin:** Walla Walla  
**ESUs:** (1) Middle Columbia River Steelhead  
**RPA Action Item:** Nos. 149 and 183

**Comments:** This project would directly restore instream flows to dewatered streams in the Walla Walla subbasin. The applicant indicates that many willing landowners have expressed interest in participating. Restoring instream flows is a high priority action, and Washington State has a trust water rights program that would ensure such flows are protected in-stream. However,

NMFS concludes more information is needed because project planning, participation, and description are not yet complete. Reviewers were unable to analyze what work will actually occur on the ground. In addition, to realize the full benefits of the action it should be linked to a tier-three M&E study. Project sponsors indicate such information is available. If this is the case, the project may be appropriate for implementation at this time. Otherwise, it should be further developed and reconsidered during the provincial review process.

**Proposal 23047:** Acquire Tucannon Water Rights.  
**Funding Request:** \$120,000  
**Sponsor:** WWT  
**Province:** Columbia Plateau  
**Sub-basin:** Tucannon  
**ESUs:** (1) Snake River Fall-Run Chinook, (2) Snake River Spring/Summer-Run Chinook, (3) Snake River Basin Steelhead  
**RPA Action Item:** N/A

**Comments:** This project would restore instream flows to portions of the Tucannon subbasin. However, it is not clear which portions of the subbasin would benefit from the action. Restoring instream flows is a high priority action, and Washington State has a trust water rights program that would ensure such flows are protected instream. NMFS concludes that this project fell short of highest priority status for 2001 because project planning design and description are not yet complete. Reviewers were unable to analyze what work will actually occur on the ground and whether gains from that work will adequately and consistently provide connectivity above other alternatives. It should be reconsidered in the context of the Columbia Plateau provincial review.

**Proposal 23048:** Install Fish Screens to Protect ESA-Listed Steelhead and Bull Trout in the Walla Walla Basin.  
**Funding Request:** \$ 461,000  
**Sponsor:** WWCCD  
**Province:** Columbia Plateau  
**Sub-basin:** Walla Walla  
**ESUs:** (1) Middle Columbia River Steelhead  
**RPA Actin Item:** No. 149, 183

**Comments:** This project would install screens on artificial passage barriers in the Walla Walla sub-basin. While it is unfortunate that the proposal does not address the water use associated with the diversion, the applicant indicates that most of the diversions slated for treatment are pumped. It is reasonable to assume that such diversions are operated in a reasonably efficient manner. NMFS considers fish screens to be a high priority action. A tier three M&E study associated with this project could quantify the benefit of such screens in terms of numbers of



juvenile salmonids protected from diversions. This would be extremely important strengthening our general understanding of factors contributing to juvenile mortality.

**Proposal 23053:** Wagner Ranch acquisition.  
**Funding Request:** \$2,658,774  
**Sponsor:** CTWSRO  
**Province:** Columbia Plateau  
**Sub-basin:** John Day  
**ESUs:** (1) Middle Columbia River Steelhead  
**RPA Action Item:** No. 150

**Comments:** This project would result in the acquisition of currently productive, high quality habitat in the John Day sub-basin. The Ranch is one of the last remaining pieces to be acquired for contiguous protection of riparian habitat along the lower mainstem John Day River. Meets “High Priority” project criteria required in the Council’s program (ESA screen, not “in lieu”, and all planning, permitting, etc. in place for 10/01/01 implementation). Furthermore, this project is a “time-limited” opportunity and a “one-time” only funding commitment with immediate “on the ground” tangible biological benefits.

Other criteria that the project meets are: the project is largely self-sustaining after project completion, the project has measurable/quantitative biological objectives resulting in ‘species’ survival benefits, provides connectivity, and improves conditions in a 303d, water quality-limited stream.

The project also fulfills more than one criteria above, provides for cost-sharing with other entities, is part of a collaborative effort with other entities or has a synergistic effect with, is recommended by an action plan derived from science-based assessment, is approved by tribal and/or state authority with F&W management authority. In addition, the project proposal details a baseline monitoring program as well as intended techniques to monitor project effects.

**Proposal 23054:** Forrest Ranch Acquisition.  
**Funding Request:** \$4,184,185  
**Sponsor:** CTWSRO  
**Province:** Columbia Plateau  
**Sub-basin:** John Day  
**ESUs:** (1) Middle Columbia River Steelhead  
**RPA Action Item:** No. 150

**Comments:** Meets “High Priority” project criteria required in the Council’s program (ESA screen, not “in lieu”, and all planning, permitting in place for 10/01/01 implementation).

Furthermore, this project is a “time-limited” opportunity and a “one-time” only funding commitment with immediate “on the ground” tangible biological benefits.

Other criteria that the project meets are: the project is largely self-sustaining after project completion, the project has measurable/quantitative biological objectives resulting in ‘species’ survival benefits, provides connectivity, and improves conditions in a 303d, water quality-limited stream.

The project also fulfills more than one criterion above, provides for cost-sharing with other entities, is part of a collaborative effort with other entities or has a synergistic effect with, is recommended by an action plan derived from science-based assessment, and is approved by Tribal and/or state authority with F&W management authority. In addition, the project proposal details a baseline monitoring program as well as intended techniques to monitor project effects.

Meets BO objectives – the project protects existing high quality habitat, restores degraded habitat to properly functioning conditions, improves water quality of 303d listed streams, and provides habitat “connectivity”.

**Proposal 23056:** Farmers Irrigation District Mainstem Hood River Fish Screen Project  
**Funding Request:** \$500,000  
**Sponsor:** CTWSRO  
**Province:** Columbia Plateau  
**Sub-basin:** Hood River  
**ESUs:** (1) Lower Columbia River Steelhead  
**RPA Action Item:** No. 149

**Comments:** Although the Farmer’s Irrigation District (FID) is pursuing a screen technology that does not meet the February 1995 NMFS Juvenile Fish Screen Criteria, it has committed to installing an acceptable screen for protection of juvenile salmonids. The FID has been pursuing acceptance of this alternative screen design (non-conventional design) by working with NMFS engineering staff and following the November 1994 NMFS Experimental Fish Guidance Devices Positions Statement. The FID work plan consists of two parallel tracks for selection of the type of screen. The project schedule is such that on or about May 31, 2001 a decision shall be made as to which type of screen to install. The FID has agreed that if the horizontal plate screen that is currently in development is not acceptable to NMFS, a conventional screen technology (one that meets the NMFS screen criteria) shall be selected. The result of this activity will be that juvenile salmonids will be safely screened from the 100-cfs diversion of flow and returned safely back to the Hood River. NMFS considers fish screening a high priority action. Implementation for this season is time-sensitive.

**Proposal 23073:** Purchase Perpetual Conservation Easement on Holliday Ranch and Crown Ranch Riparian Corridors and Uplands.  
**Funding Request:** \$481,000  
**Sponsor:** ODFW  
**Province:** Columbia Plateau  
**Sub-basin:** John Day  
**ESUs:** (1) Middle Columbia River Steelhead  
**RPA Action Item:** No. 150

**Comments:** This project proposes to purchase and then sell perpetual conservation easements on both properties to the Natural Resources Conservation Service of the Department of Agriculture. NMFS understands that this was a time-limited opportunity, which has expired. Additionally the cost indicated was for riparian fencing only and not the property acquisition. The full cost is about \$2.3 million. NMFS interest in this project would be limited to the riparian portion only. Given the timeliness issues, cost estimate differences, and acquisition complexity, if this project is still viable, it should be considered in the Columbia Plateau Provincial review.

**Proposal 23094:** Acquire 27,000 Acres of Camp Creek Ranch at Zumwalt Prairie.  
**Funding Request:** \$2,000,000  
**Sponsor:** TNC  
**Province:** Blue Mountain  
**Sub-basin:** Imnaha  
**ESUs:** (1) Snake River Fall-run Chinook; (2) Snake River Spring/Summer-run Chinook; (3) Snake River Basin Steelhead  
**RPA Action Item:** No. 150

**Comments:** Meets “High Priority” project criteria required in the Council’s program (ESA screen, not “in lieu”, and all planning, permitting in place for 10/01/01 implementation). Furthermore, this project is a “time-limited” opportunity and a “one-time” only funding commitment with immediate “on the ground” tangible biological benefits.

Other criteria that the project meets are: the project is largely self-sustaining after project completion, the project has measurable/quantitative biological objectives resulting in ‘species’ survival benefits, provides connectivity, and improves conditions in a 303d, water quality-limited stream.

The project also fulfills more than one criterion above, provides for cost-sharing with other entities, is part of a collaborative effort with other entities or has a synergistic effect with, is recommended by an action plan derived from science-based assessment, and is approved by Tribal and/or state authority with F&W management authority. In addition, the project proposal details a baseline monitoring program as well as intended techniques to monitor project effects.

**Proposal 23007:** Conservation Easement, Baker Ranch, East Fork Salmon River.  
**Funding Request:** \$1,415,000  
**Sponsor:** IOSC  
**Province:** Mountain Snake  
**Sub-basin:** Salmon  
**ESUs** (1) Snake River Sockeye, (2) Snake River Fall-Run Chinook, (3) Snake River Spring/Summer-Run Chinook, (4) Snake River Basin Steelhead  
**RPA Action Item:** No. 149

**Comments:** This project would increase stream flows and protect riparian habitat in the East Fork of the Salmon River. The East Fork supports spawning and rearing for chinook and steelhead and is in the Upper Salmon subbasin. Some major portion of the prospectively saved 70 cfs will remain in the stream because of the relatively large volume of water and the geographic limits on downstream diversion by junior users. There are physical geographic limits on the ability of downstream irrigators to use the water. While NMFS would prefer that the “saved” water be protected in-stream by appropriate changes in Idaho water law transferring priority date with the water right, the project’s merit are sufficient to proceed. The reduced diversion for irrigation will also reduce loss of migrating juveniles to ditches. The reduction in grazing will restore and protect riparian and upland habitat and the conservation easement will prevent sub-development. The easement would save money that would otherwise be used to consolidate and screen diversions, build access roads and bridges, provide flood control, and long term O&M. It appears that the owner is willing to sell the permanent easement, making this a time-limited opportunity as well.

## NMFS Guidance: Giving Credit for Off-Site Mitigation

### Introduction

NMFS' 2000 Biological Opinion on operation of the Federal Columbia River Power System (FCRPS) contains a reasonable and prudent alternative (RPA) that allows the Action Agencies to avoid jeopardizing the continued existence of eight evolutionarily significant units (ESU) of salmon and steelhead in the Columbia basin. The RPA includes the following elements:

- Measures to minimize take of fish migrating through the FCRPS;
- Measures to mitigate outside the FCRPS for take that is unavoidable within;
- Checkpoints in years 3, 5, and 8 to determine whether the Action Agencies are taking the necessary measures; and
- Checkpoints in years 5 and 8 to determine whether these measures, together with measures taken elsewhere in the basin, are reversing the decline of the listed ESUs.

This paper provides guidance on the second element, generally referred to as "off-site mitigation." The opinion identifies several actions that can be taken immediately to provide off-site mitigation, and calls for future assessments and plans to more fully develop the complete program of off-site mitigation for each ESU.

The Action Agencies are expected to mitigate for the impacts of their actions (maintenance and operation of the FCRPS) to the extent necessary to ensure the survival of the listed ESUs, with an adequate potential for recovery. It will take many years to achieve full mitigation, and it is not possible to determine at this time the exact suite of actions that will mitigate for the impacts of the FCRPS, or the incremental value of any one project or group of projects. In the interim, the Action Agencies have asked NMFS for guidance on what actions will be "credited" against their obligation to provide off-site mitigation.

NMFS cautions that it is technically difficult to quantify the biological benefit of an individual isolated action. Individual actions can best be evaluated in the context of a comprehensive program that includes subbasin and watershed assessments, recovery plans, and systematic monitoring and evaluation. Most credit, at this time, must necessarily be qualitative.

### What constitutes off-site mitigation?

In general, to qualify as off-site mitigation, an action must carry an expectation of biological benefit for one of the one of the eight ESUs addressed by the RPA. (Such benefits may be indirect, such as those expected from recovery planning or from monitoring.) The expected

benefit must arise from actions other than those taken to achieve mandatory hydro system improvements. Off-site mitigation must secure benefits beyond those that are the ESA responsibility of other entities outside the scope of the FCRPS biological opinion.

The 2000 FCRPS Biological Opinion and the Federal Caucus Basinwide Salmon Recovery Strategy provide guidance on how to determine whether a project or program constitutes off-site mitigation:

1. Does it meet the definition of off-site mitigation, as described above and detailed in Section 9.3 of the Biological Opinion?
2. Does it correspond to an action item prescribed in section 9.6.2, 9.6.3, 9.6.4, or 9.6.5 of the Biological Opinion?

If the answer to either question is no, the proposed action is not off-site mitigation. If the answer is yes, the project or program may be off-site mitigation. If such actions fall within the categories – and meet the criteria – listed below, then they qualify as off-site mitigation and are likely to contribute to meeting the Action Agencies’ obligations under the Biological Opinion.

With this in mind, NMFS offers guidance for several categories of action:

***Programmatic actions:*** This is the most straightforward category for determining whether actions qualify as off-site mitigation under the Biological Opinion. Programmatic actions are clearly prescribed throughout the RPA in Section 9.6 of the Opinion, and the performance standards for programmatic actions will be measured simply in terms of compliance at the 3-, 5- and 8-year check-ins. NMFS will also provide guidance on the appropriateness and adequacy of programmatic actions in the letters of finding it releases in response to annual implementation plans. Examples of programmatic actions include the basinwide monitoring and evaluation program, the basinwide hatchery fish marking program, the recovery planning actions, the hatchery and genetic management planning process, and the subbasin assessment and planning process for habitat.

***Habitat Actions:*** NMFS will continue to emphasize the importance of establishing ecological context for habitat initiatives on a basinwide scale through scientifically sound subbasin and watershed assessments and plans and related recovery plans. Accordingly, the opinion calls on the Action Agencies to support the continued development and implementation of the Northwest Power Planning Council’s subbasin planning process and the NMFS-led recovery planning process. This work is fundamental to the development and success of a long-term recovery program.

The opinion also calls for specific initiatives to produce biological benefits in the short term (water solutions in priority subbasins), to protect currently productive habitat (BPA habitat protection fund), to test innovative mechanisms for habitat protection (water marketing

demonstration project and leveraging for agricultural incentive programs), to clear up important uncertainties (mainstem habitat program), and to reestablish ecological function in the estuary.

Within this framework, projects should contribute to meeting physical performance standards that will be established in the Action Agencies' first five-year plan. Examples listed in Section 9.2.3 of the opinion include instream flows, amount and timing of sediment input, riparian conditions that determine water and habitat quality, and access to productive habitat.

Beyond the specifics of the Biological Opinion, NMFS encourages that priority be given to projects that meet the following criteria:

- Projects that are based on at least a watershed assessment and provide a rationale for measurable benefits in one or more specific life stages in a spatially explicit manner;
- Projects that protect or restore land and water habitat in ways that permanently address the underlying ecological processes, reconnect isolated habitats, or improve connections between habitats; and
- Projects that include, as appropriate, monitoring and evaluation consistent with the principles outlined in Section 9.6.5.3 of the Biological Opinion, and Research, Monitoring and Evaluation RPA Actions 183 and 184.

Once physical performance standards are defined in the Action Agencies' implementation plans, it should become easier to evaluate whether a habitat project will qualify as off-site mitigation and help fulfill the biological requirements defined in the habitat section of the Biological Opinion. In the meantime, the criteria listed above constitute NMFS guidance on how best to make such determinations. Biological performance standards for habitat are not expected to be defined in the near term beyond what is set forth in Section 9.2.2 of the opinion. Progress toward meeting these standards will be measured in the 5- and 8-year evaluations.

**Hatchery Actions:** Like habitat actions, one of NMFS' highest priorities for hatchery actions is to complete the hatchery and genetic management planning described in action item 169 of the RPA, because these planning functions are key to identifying and prioritizing off-site mitigation opportunities in the hatchery arena. There are two other programmatic hatchery actions, including the basinwide marking strategy described in action item 174, and the safety net risk assessment process described in action item 175, that are similarly urgent. All three are necessary precursors to being able to determine the appropriateness and benefits of project-level hatchery actions in the future. Once these programs are underway, NMFS will encourage projects to implement approved HGMPs, as described in items 170-173, and 176-79.

**Harvest Actions:** The Biological Opinion does not assume specific additional harvest actions (i.e., harvest reductions), but instead identifies the potential for additional survival benefits if the selectivity of fisheries could be increased. A number of specific programmatic activities

intended to develop, deploy, and enable selective fisheries are identified in the Biological Opinion as off-site mitigation. Biological credit will depend on the extent to which the selective fisheries are actually implemented, and how effective they are at reducing harvest mortality.

**Research, Monitoring & Evaluation:** Ultimately, NMFS' ability to determine appropriate credit in the long term is dependent upon development and implementation of a strong monitoring and evaluation program. This is key to the success of the Biological Opinion and the Basinwide Salmon Recovery Strategy. The Basinwide Recovery Strategy identifies several categories of activities that have a high likelihood of benefiting listed salmon runs. However, at this time it is not possible to quantify with certainty the particular mix of actions necessary for the recovery of specific populations within each of the listed ESUs in the Columbia Basin. The Biological Opinion provides a blueprint for developing and implementing ESU-specific strategies for meeting survival and recovery objectives. That basic blueprint calls for the Action Agencies to apply the best information that is currently available or that can be compiled in a relatively short period of time, and to incorporate a strong research, monitoring, and evaluation program. The research, monitoring, and evaluation program has several important objectives: to confirm that actions are resulting in the changes in survival necessary for appropriate populations comprising each of the listed ESUs, to improve the knowledge base for defining essential recovery actions, and to monitor the status and response of listed populations.

NMFS will therefore strongly encourage research, monitoring, and evaluation as appropriate project proposals of any type. Proposals should include appropriate monitoring and evaluation of the project, consistent with the general principles outlined in section 9.6.5.3 of the FCRPS Biological Opinion, and Research, Monitoring and Evaluation RPA Actions 182, 183 and 184. Sponsors should provide details of the experimental design they will implement to assess the effects of the proposed actions and a budget for this evaluation. Monitoring designs should assess both physical or habitat responses to the action and an appropriate measure of fish population response to habitat changes. In addition, monitoring designs should identify control sites, characterize the planned replication, and briefly describe the data collection protocols. NMFS scientists, in collaboration with other regional scientists, will develop guidelines for such monitoring designs to assist in this effort.

### **Setting Priorities among Multiple Actions**

When policy makers are considering multiple projects consistent with the Biological Opinion, NMFS believes such projects should be prioritized relative to their estimated potential benefits. Given the breadth of work contemplated under the Biological Opinion, and the possibility that resources could be limited in any given year, NMFS suggests a rough hierarchy for prioritizing off-site mitigation projects. The first tier of prioritizing should include the programmatic, planning, and monitoring actions that are necessary precursors to implementing and evaluating site-specific actions in the future. The second tier should be biological potential; those actions should be implemented in order of potential biological value, starting with the highest value first. The third and final tier applies in situations where the available resources may not be sufficient to



fund all pending projects at a given time. In these instances, NMFS believes the set of projects to be funded should be that which provides, in the aggregate, the highest biological value with the resources available, while taking into account the need for improvements in all the ESUs addressed in the RPA.

### **Checkpoints**

The Action Agencies must develop rolling five-year plans that show how they will implement the RPA. In addition, they must submit annual plans that detail the activities they will take to meet the terms of the opinion each year. NMFS will review the annual plans every fall and render a finding on their adequacy.

NMFS will also conduct three formal evaluations of progress toward implementing the RPA. The RPA calls for several new programs to reduce take with the potential to improve productivity of listed populations in the basin, and to otherwise reduce biological uncertainties. These programs in many cases are broad in scope, and will require significant time and resources to implement. The RPA also prescribes a series of management actions – some individually defined, and others defined by categories – which have the potential to produce a positive biological response among certain, listed ESUs. In 2003, NMFS will conduct a formal evaluation of Action Agencies' efforts to establish the programs and execute the actions. NMFS will not analyze changes in habitat or species' status during the 2003 evaluation, because it will be too soon for actions to show physical and biological responses.

In 2005 and 2008, NMFS will evaluate habitat changes and the biological performance of the eight ESUs. NMFS will be attempting to determine whether the entire suite of actions prescribed by the Biological Opinion has, in connection with other actions taken during the same period, resulted in a positive biological response among listed ESUs. These evaluations will provide the primary means of determining whether – and to what extent – biological “credit” has accrued to the species as a result of implementing the Biological Opinion.