

**NMFS GUIDANCE  
REGARDING THE BPA/NW COUNCIL  
COLUMBIA BASIN PROVINCIAL REVIEW SOLICITATIONS  
June 7, 2001**

**Offsite Mitigation Habitat Projects**

The provincial review process reflects the growing consensus on the importance of restoring ecological function to the rivers and streams of the Columbia Basin. The reviews build on a credible scientific foundation found in the Council's Columbia Basin Fish and Wildlife Program, the considerable expertise in the fish and wildlife agencies and tribes, and the scientific rigor of the ISRP review. The process plays an important role in salmon recovery that the FCRPS 2000 Biological Opinion is not intended to duplicate.

The FCRPS Biological Opinion calls for the development of specific strategies to meet survival requirements for the populations within each of the listed ESU's. Those strategies are to be described in the draft Annual Plan submitted to NMFS by the action agencies in September of 2003. At that point the strategies for meeting survival and recovery standards for particular populations are to incorporate a number of specific elements including: early action opportunities (see below); updated objectives and performance standards based upon Technical Recovery Team products; additional actions designed to improve survival based upon rigorous subbasin/watershed planning analysis; and critical monitoring/evaluation components. In the short term, the Provincial Review solicitations provide an opportunity to implement early action components while the overall strategies are developed and to fill critical data gaps for the completion of assessments and planning.

The habitat section of the Biological Opinion outlines an approach to habitat problems from an ESA perspective. The opinion seeks to build on and support the Council's fish and wildlife program in two primary ways:

- First, by emphasizing the need for ecological context in habitat initiatives. For the most part, the opinion expects this context to be produced by scientifically sound subbasin and watershed assessments and plans and related recovery plans. For that reason, the opinion calls on BPA to support the continued development and implementation of the Council's subbasin planning process. NMFS views this work as fundamental to the development and success of a long-term habitat program.
- Pending these assessments and plans, the opinion calls for specific initiatives to produce biological benefits in the short term (water solutions in priority subbasins), protect currently productive habitat (BPA habitat protection fund), test innovative mechanisms for habitat protection (water marketing demonstration project and leveraging for agricultural incentive programs), clear up important uncertainties (mainstem habitat program), and reestablish ecological function in the estuary.

Tributary habitat efforts in the biological opinion have the following objectives: a) increase tributary water flow to improve fish spawning, rearing and migration; b) comply with water quality standards, first in spawning and rearing areas, then in migratory corridors; c) address in-

stream obstructions and diversion that interfere with listed species, and d) protect and manage both riparian and upland habitat consistent with the needs of the species. NMFS designed the biological opinion to rely to a significant degree on the fish and wildlife program, and believes the provincial reviews could help coordinate efforts between the two initiatives. NMFS offers the following guidance in that vein.

Pending completion of sub-basin and watershed assessments and plans, the Reasonable and Prudent Alternative (RPA) in the biological opinion includes a series of actions to address tributary habitat issues. In particular, the provincial review process could facilitate implementation of this action, as follows:

- Action 149: The provincial review could identify actions that would lead to a three-year plan for funding projects that complement the evolving BOR program to improve stream flows and address passage and screening problems. The BOR program is expected ultimately to be at work in sixteen subbasins where density of water diversions, proximity of federal lands and presence of key watersheds make water diversion solutions a high priority. In its first year, the BOR program is targeted in the John Day, Methow and Lemhi subbasins.
- Action 150: The provincial review could identify opportunities to protect currently productive non-federal habitat at risk of degradation according to the criteria contained in the NMFS crediting paper (or joint NMFS/BPA criteria) as appropriate.
- Action 151: The provincial review could look for projects that could use transactional approaches to increase stream flows.
- Action 152: The provincial review could prioritize projects ready for implementation based on local agreements that can jointly satisfy CWA and ESA requirements as defined under this RPA item.
- Action 153: The provincial review could look for opportunities to leverage agricultural incentive programs to protect streamside habitat.
- Action 157: The provincial review could look for projects to improve and restore tributary habitat and mainstem habitat for CR chum salmon in the reach between The Dalles Dam and the mouth of the Columbia River.
- Action 160: The provincial review could identify opportunities to protect and restore estuarine habitat consistent with the criteria contained in the NMFS crediting paper (or the estuary plan developed through Action 159).

NMFS does not urge that the provincial review necessarily limit itself to actions that implement the biological opinion. Outside the biological opinion, there may be other potentially productive habitat measures. In selecting such projects, NMFS echoes much of the advice emerging from the ISRP and the Council program's scientific foundation. That is, NMFS suggests that priority be given to proposals that:

- are based on at least a watershed assessment, and that identify and provide rationale for measurable benefits to specific salmonid life stages in a spatially explicit manner;
- protect and restore land and water habitat in ways that permanently address underlying ecosystem processes, reconnect isolated habitats or improve connections between habitats; and
- 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.

### **Off-Site Mitigation Harvest and Hatchery Projects**

The Hatchery component of the biological opinion has three primary areas of focus: (1) reform of existing hatcheries with the goal of minimizing potential adverse effects of such hatcheries on listed fish and potentially contributing to their conservation and recovery; (2) use of safety net hatchery projects to prevent extinction of populations of the most at-risk wild fish; and (3) development and implementation of monitoring and evaluation programs, including a marking strategy, that will enable NMFS and others to reduce critical uncertainties about the performance (distribution, timing and/or reproductive success) of hatchery fish in the wild.

The harvest component of the biological opinion emphasizes the development, testing, and deployment of selective fishing methods and gears; development of terminal fisheries; and development/improvement of fishery management tools, particularly as may be required to implement selective fisheries.

NMFS encourages that the proposals for funding artificial propagation and harvest-related activities be configured consistent with the actions called for by the RPA. All proposals relating to harvest or existing hatchery programs should identify whether and how they contribute to off-site mitigation as defined in the biological opinion, e.g., by accelerating the pace of reforms, increasing the margin of safety of artificial production proposals, or reducing fishery impacts on listed fish. Proposals justified as implementing offsite mitigation actions in the FCRPS Opinion must complement, not displace actions required elsewhere of hatchery owner/operators or fishery managers

1. Hatchery Genetic and Management Plans (HGMPs) - Action 169. Using the general menu of reform measures summarized in the FCRPS Opinion (beginning on page 9-154), proposals to develop NMFS-approved HGMPs for existing or new facilities are encouraged. As noted in the FCRPS Opinion, approved HGMPs are intended (among other things) to:

- identify specific hatchery reforms at existing facilities in the province that would reduce the deleterious effects of hatchery fish on listed fish within or outside the Province;

- identify new artificial production projects designed to conserve listed fish and/or potentially aid in their recovery;
  - identify needed R,M,&E. For example, the need to collect and analyze biological information, e.g., genetic samples, to delineate population structure to inform the further development of HGMPs (identifying the population structure in a subbasin is a critical step in devising recovery strategies that may be particularly pertinent to strategies that involve artificial propagation).
2. Safety-Net Program – Action 175. Projects to implement (in coordination with the Safety Net Coordinator) the four-step planning process described for the safety-net program for the initial candidate populations identified in the FCRPS Opinion, or alternative candidate populations (with supporting rationale why they should be candidate populations.
3. Implementation of artificial production reforms - Actions 170-173
- Projects designed actually to implement reforms identified in approved HGMPs;
  - Projects to accelerate or expand reforms already identified in other processes (e.g., Section 7 hatchery consultations) to increase their effectiveness at protecting listed fish.
4. R, M&E -
- Studies to determine the reproductive success of hatchery fish relative to wild fish (Action 182).
  - Studies to determine the temporal and spatial distribution of hatchery fish spawning in the wild (Action 174-4).
  - Studies to evaluate the effect of selective fisheries on spawning success of listed fish, e.g., studies to estimate immediate and delayed mortalities of fish released from live-catch fishing gear (Action 167).
5. Hatchery Effectiveness Monitoring
- Projects designed to study, monitor, and/or evaluate the effectiveness of hatchery reforms and better inform future reforms. Initial efforts should focus on assessing ecological and genetic effects of hatchery production in local basins (see page 9-171 of biological opinion for a menu of actions). Ultimately, this information will be used to help improve and guide future hatchery reform measures (Action 184).
6. Selective fishing/fisheries
- Proposals to develop or improve selective fishing methods or gears, evaluate their feasibility in particular times or locations, or creating opportunities to apply such

methods or opportunities, including but not limited to terminal fisheries (Action 164).

- Proposals to improve fishery management decisions, including the development of new or improved pre-season and in-season assessment tools (e.g., models), particularly as needed to implement selective fishery regimes (Actions 165 and 166).

For additional information and complete discussion on the Reasonable and Prudent Alternative Action Items referenced above, please consult the FCRPS 2000 Biological Opinion. The Opinion can be accessed on the NMFS Hydro web site at <http://www.nwr.noaa.gov/1hydrop/hydroweb/fedrec.htm>