



LOWER COLUMBIA FISH RECOVERY BOARD

2013 BOARD

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Jeff Breckel  
Executive Director

September 12, 2013

Bill Bradbury, Chairman  
Northwest Power and Conservation Council  
851 SW Sixth Avenue, Suite 1100  
Portland, Oregon 97204

Dear Mr. Bradbury:

The Lower Columbia Fish Recovery Board (LCFRB) appreciates the opportunity to provide our comments and recommendations for consideration as part of the Council's Fish and Wildlife Program (F&W program) amendment process.

The LCFRB was established in 1998 by Washington statute to oversee and coordinate salmon recovery efforts in the Lower Columbia region of the state, which extends from the White Salmon River to the mouth of the Columbia River. It is comprised of local elected officials, citizens, and representatives of the state legislature, Cowlitz Indian Tribe, hydro facility operators, and the environmental community. Over the past 15 years, the LCFRB has worked closely with federal, state, tribal, and local interests to develop and implement the Lower Columbia River Salmon and Steelhead ESA Recovery Plan<sup>1</sup> (recovery plan), Council subbasin plans, and state watershed management plans. It has also worked with our partners to plan, fund, and implement over 194 habitat protection and restoration projects with a total value of over \$51.1 million.

Over the past five years, implementation of the Council's Fish and Wildlife Program has been largely driven by the Federal Columbia River Power System Biological Opinion (BiOp) and Columbia Basin Fish Accords (Accords). In the Lower Columbia, this has focused on rebuilding Lower Columbia Chum salmon populations and restoring estuary habitat primarily to improve survival of upper Basin salmon populations. Both initiatives have made significant contributions to recovery efforts, but much remains to be done to fully mitigate the impact of the Columbia hydropower system on Lower Columbia salmon and steelhead populations and to recognize the potential value of the Lower Columbia to basin-wide mitigation and enhancement efforts.

The comments and recommendations we offer are intended to strengthen the Council's participation in Lower Columbia salmon recovery efforts. They are consistent with the goals, strategies, and measures of the recovery plan and the Council's mandate to protect, mitigate, and enhance all fish and wildlife affected by the Columbia hydropower system. In summary, we are recommending that the Council's F&W program:

- Adopt biological objectives for Lower Columbia salmon and steelhead populations;

<sup>1</sup> *ESA Recovery Plan for Lower Columbia River Coho Salmon, Lower Columbia River Chinook Salmon, Columbia River Chum Salmon, and Lower Columbia River Steelhead*, NOAA, June 2013

- Place greater emphasis on protection, mitigation, and enhancement of Lower Columbia salmon and steelhead populations, including the restoration of Lower Columbia tributary habitat;
- Integrate the NOAA approved recovery plan and enhance coordination with other Lower Columbia recovery efforts;
- Provide for Council participation in and support of Lower Columbia monitoring and adaptive Management efforts;
- Support hatchery mitigation and conservation programs and associated monitoring;
- Give greater recognition to the need to protect, mitigate and enhance eulachon populations; and
- Provide for a better understanding of fish utilization of, and hydrosystem impacts on the estuary, plume and nearshore ocean environments.

### **Biological Objectives**

Current F&W program salmon and steelhead biological objectives focus on populations above Bonneville Dam, and are silent on specific biological objectives for Lower Columbia populations. Specifically, the F&W program (page 11) calls for an increase in total salmon and steelhead populations above Bonneville Dam to an average of 5 million fish annually by 2025. It also calls for a halt in the declining trends in Columbia Basin salmon and steelhead populations, especially those that originate above Bonneville Dam.

### ***Recommendations:***

- Add a biological objective calling for an increase in the total adult run for listed Lower Columbia salmon and steelhead to achieve 75 percent of recovery goals by 2025.
- Revise the biological objectives to call for a halt in the declining trends for all Columbia Basin salmon and steelhead populations.

### **Protection, Mitigation, and Enhancement of Lower Columbia Salmon and Steelhead Populations**

It is widely accepted that the federal Columbia Basin hydropower system has and continues to have a significant impact on the Lower Columbia estuary and the viability of Columbia Basin salmon and steelhead, including ESA-listed Lower Columbia Chinook, Coho, Chum, and Steelhead. Altered flow patterns and disruption of sediment transport have dramatically affected critical habitat forming processes, nutrient cycles, and predation patterns. While recent efforts under the BiOp have helped to restore habitat conditions and offset adverse impacts in the estuary, the continued operation of the hydropower system will necessarily prevent full mitigation of its impacts. In such instances, the Council's F&W program recognizes that off-site mitigation is appropriate. In fact, this approach has been employed by the BiOp to support the recovery of Lower Columbia Chum. We believe that this off-site mitigation approach should also apply to Lower Columbia Chinook, Coho, and Steelhead, specifically to the restoration of tributary habitat for these populations.

The off-site mitigation approach is also justified as a strategy for mitigating the impact of the hydropower system on Coho populations throughout the Columbia Basin. Coho were once widely distributed and abundant throughout the Basin. Today, in part due to the Columbia hydropower system, native Coho populations above Bonneville Dam are extinct. Recovery of the extant Lower Columbia Coho population would help to mitigate for the hydropower system impacts on the upper Basin Coho populations.

*Recommendations:*

- Amend the F&W program and associated implementation measures to provide for restoration of Lower Columbia tributary habitat as an appropriate off site mitigation strategy for the estuary impacts on Lower Columbia Chinook, Coho, Chum and Steelhead.
- Amend the F&W program and associated implementation measures to provide for restoration of Lower Columbia tributary habitat as an appropriate mitigation strategy for the impact of the Columbia hydropower system on Coho populations across the Basin.

**Program Integration with the Endangered Species Act (ESA)**

The Lower Columbia Salmon Recovery and Fish & Wildlife Subbasin Plan published by the LCFRB in 2004 was adopted by NOAA in 2006 as an interim ESA recovery plan and by the Council in 2005 as the subbasin plan for 8 lower Columbia subbasins. The plan was updated in 2010 and incorporated into the broader Lower Columbia ESU plan adopted by NOAA in July 2013. These plans provide the framework of goals, strategies, measures, and actions guiding recovery efforts throughout the Lower Columbia. In addition, the LCFRB has a developed habitat restoration strategy based on the recovery plan, including site specific restoration assessments for several lower Columbia subbasins.

Rather than expending time and resources updating subbasin plans, the Council should incorporate the recovery plan, including implementation plans into the Basin-wide and subbasin management plans and multi-year action plans. Doing so will help to ensure that implementation of the habitat, hatchery, harvest, and hydro elements of the Council's F&W program is consistent with and complements ESA recovery efforts. Greater consultation and cooperation with the LCFRB and Lower Columbia recovery partners would also help to better leverage resources and improve effectiveness of implementation actions. This consultation and cooperation extend to monitoring and public outreach efforts.

*Recommendations:*

- Incorporate the Lower Columbia recovery plan, including associated implementation strategies and plans in Basin-wide and subbasin management plans and multi-year action plans.
- Include provisions in the F&W program calling for closer consultation and cooperation with the LCFRB and other Lower Columbia recovery partners in implementing the F&W program, monitoring and reporting progress, and conducting public outreach.

**Monitoring and Adaptive Management**

Monitoring and adaptive management processes are key elements of both the Council's F&W program and the Lower Columbia recovery plan. These monitoring activities are critical to the ability to track implementation efforts, assess progress, inform the public, and adjust strategies and measures as necessary to better address recovery objectives and achieve goals. However, implementing effective monitoring programs is technically challenging and resource intensive. Fish and habitat monitoring is conducted by multiple entities, using differing methods to answer differing management questions. The LCFRB is working with federal and state agencies, local governments, and the Cowlitz Indian Tribe to draw upon and, where possible adapt, existing monitoring resources and programs to address monitoring needs in the Lower Columbia. Progress has been made but much

remains to be done to achieve an effective and efficient monitoring program, particularly in the areas of action effectiveness monitoring and status and trends monitoring for fish and their habitat. Council participation and leadership in developing the tools and methods and providing the resources needed to support both Basin-wide and local monitoring and adaptive management efforts would further both Council and ESA interests by leveraging resources, promoting consistency in methods and reporting, and enabling broader data sharing.

*Recommendations:*

- Provide for leadership and support of coordinated Basin-wide and local monitoring and adaptive management efforts.
- Provide for the active participation in and support of Lower Columbia monitoring initiatives, particularly those dealing with action effectiveness and fish and habitat status and trends.

**Artificial Production**

While hatchery programs can confound efforts to recover natural origin salmon and steelhead populations, they support fisheries that are socially, culturally, and economically important to the region. In order to sustain viable fisheries, the Lower Columbia recovery plan calls for the continued operation of hatcheries in a manner consistent with and supportive of recovery efforts. The plan relies in large part on the implementation of the Hatchery Scientific Review Group (HSRG) recommendations to help ensure hatchery programs are consistent with and supportive of recovery efforts. The Washington Department of Fish and Wildlife (WDFW) adopted a policy that calls for the use of the HSRG recommendations to guide the management of hatcheries in the Washington portion of the Columbia Basin. The Council should adopt similar Basin-wide language in F&W program and should provide for the support of efforts to implement hatchery measures consistent with recovery goals.

Effectiveness monitoring is key to ensuring that hatchery programs are meeting their conservation or recovery goals while at the same time providing for sustainable fisheries. Such monitoring should provide the following basic indicators 1) the number of juveniles released by life stage and 2) the components of total adult hatchery production, including the number of hatchery adults returning to the hatchery, spawning in rivers, and caught in fisheries. The F&W program should, at a minimum, include and provide funding for monitoring of these basic indicators.

*Recommendations:*

- Adopt language that calls for the use of the HSRG recommendations to guide the management of hatcheries in the Columbia Basin.
- Support implementation of hatchery measures and reforms consistent with recovery plan.
- Adopt and support funding for hatchery effectiveness monitoring providing the following basic indicators 1) the number of juveniles released by life stage and 2) the components of total adult hatchery production, including the number of hatchery adults returning to the hatchery, spawning in rivers, and caught in fisheries.

### **Eulachon and White Sturgeon**

Eulachon and white sturgeon are significant Lower Columbia fish species. Eulachon is not currently addressed in the Council F&W. This species was listed as threatened under ESA in 2012. Substantial changes in flows, sediment delivery, and the lower river food web resulting from the operation of the hydropower system have affected eulachon survival, productivity, and recovery potential. The F&W program should adopt biological objectives for eulachon and provide for eulachon life cycle research, status monitoring, assessment of habitat needs and conditions, and restoration measures.

#### *Recommendation:*

- Adopt biological objectives for eulachon and provide for eulachon life cycle research, status monitoring, assessment of habitat needs and conditions and restoration measures.

The Lower Columbia River and Oregon Coast White Sturgeon Conservation Plan (ODFW, August 2011) finds that the Lower Columbia white sturgeon population is not at risk; however, limiting factors and threats do exist that could compromise its long term health. The most significant factors affecting this white sturgeon population include pinniped predation below Bonneville Dam and the effects of flow variations due to the federal hydropower operations on spawning success. The plan also notes that alteration of flow patterns reduces habitat quality and quantity and can alter migration patterns.

#### *Recommendation:*

- Support efforts to assess and reduce pinniped predation on Lower Columbia white sturgeon.
- Support efforts to assess and mitigate for the effects of altered flow patterns on Lower Columbia white sturgeon spawning success, migration patterns, and the quantity and quality of needed habitat.

### **Estuary, Plume, and Near Ocean Environments**

The Columbia hydropower system has changed the natural hydrograph as well as sediment and nutrient transport processes affecting habitat conditions and food web dynamics in the estuary, plume, and near ocean environments. The ability to manage for or mitigate these impacts is hindered by a general lack of adequate information on how salmon and steelhead use these habitats, their residence times, key habitat needs and locations, quality and quantity of existing habitat, the movement of fish between rearing habitats, and the importance of habitat connectivity and spatial distribution.

#### *Recommendation:*

- The F&W program should call for and fund a collaborative effort involving resource managers and scientists to 1) the identify key management questions related to fish utilization of the estuary, plume, and near ocean environments, 2) assess what research and monitoring has been done that addresses these questions, 3) prioritize and conduct additional research and monitoring needed to fill key information gaps, and 4) formulate management recommendations.

### **Predator Control**

Avian, pinniped and other piscivorous predation in the Lower Columbia is a significant limiting factor for ESA-listed salmon and steelhead throughout the Columbia Basin. Operation of the Columbia hydrosystem has

To: Chairman Bradbury, NPCC  
Re: Comments for the Review of the F & W Program  
9/11/2013, Page 6

created habitats and conditions more favorable for these predators resulting in an increase in their number and range within the lower river. Current control efforts have helped to reduce predation on salmon and steelhead but impacts remain significant.

*Recommendations:*

- Continue to fund the baseline piscivorous control program and expand efforts to assess, manage and reduce non-native fish species that compete with and/or prey on salmon and steelhead in the Lower Columbia.
- Adopt and fund avian predator control plans developed through the USACE and other processes.
- Fund federal, tribal and state agencies to assess, manage, and reduce pinniped predation on salmon, steelhead, sturgeon, and lamprey.

**Management of Invasive Species**

Invasive non-native aquatic species can threaten the F&W program's restoration efforts through competition, predation, and habitat and food web modifications. To help prevent the further degradation of ecosystem function and protect habitat and salmon recovery investments, federal hydropower system assets, and water delivery infrastructure from the potential impacts of invasive species, such as infectious salmon anemia virus, zebra and quagga mussels, giant reed, and Eurasian milfoil, the F&W program should support funding for both control and the prevention of invasive species infestations and support regional invasive species prevent programs, such as that coordinated by the Pacific States Marine Fisheries Commission.

*Recommendations:*

- Support funding for both control and prevention of invasive species infestations.
- Participate and support regional invasive species prevent programs, such as that coordinated by the Pacific States Marine Fisheries Commission.

Thank you for the opportunity to provide recommendations for the amendment of the Council's F&W program. We look forward to working with the Council to implement a successful and efficient program to protect, mitigate, and enhance all fish and wildlife affected by the Columbia hydropower system. Please contact Jeff Breckel, the LCFRB Executive Director, at 360 425-1553 if you have questions or wish to discuss or comments and recommendations further.

Sincerely,



Tom Linde, Chairman

Cc: Bill Iyall, Chairman, Cowlitz Indian Tribe  
Tom Karier, NPCC Councilmember for Washington State  
Guy Norman, WA Department of Fish and Wildlife  
Phil Rockefeller, NPCC Council member Washington State