



October 2, 2006

Mr. Tom Karier, Chairman
Northwest Power and Conservation Council
851 S.W. Sixth Avenue, Suite 1100
Portland, Oregon 97204

Dear Chairman Karier:

The Lower Columbia River Estuary Partnership is writing to provide comment on the Northwest Power and Conservation Council's draft fish and wildlife estuary province funding recommendations to the Bonneville Power Administration for Fiscal Years 2007 through 2009 proposals. We appreciate the support of the Estuary Partnership work in the lower river acknowledged by the Council proposals. We ask that the funding levels be reconsidered for two primary reasons: the lower river and estuary contributes far more to the life sustenance of threatened and endangered species than once thought and it has not received the level of investment needed to repair the lower river to help sustain those species. We believe that the Council instituted a credible advisory process for review and selection of the many proposals received. We thank you for that process and hope its results will be used.

Council's proposed funding reductions for Estuary Partnership projects will significantly reduce the ability of the Ecosystem Monitoring Project to provide information on the physical and chemical properties of important salmonid habitats in the tidally-influenced freshwater portion of the Columbia River estuary (above Puget Island). The Council made a preliminary investment in Fiscal Year 2003 through 2005 to acquire this information by funding a pilot program to develop habitat monitoring protocols for assessing habitat condition and habitat restoration activities. This funding also supported the development of a toxics monitoring program that is increasing our understanding of the possible impacts of toxics on salmonid survival and recovery potential in the estuary. These programs have provided crucial information on the physical and chemical properties of salmonid habitats and have identified areas where toxics exposure to salmonids is greatest in the estuary. Without an increase in Council's recommended level of funding, we will be unable to support the continuation of these programs and Council's investment in the estuary will be jeopardized. Increasing the recommended level of funding will protect Council's initial investment, will continue sustained monitoring in the estuary, and provide critical information on what factors may be affecting the survival of salmonids in the estuary.

The success of the Habitat Restoration Program has been its on-the-ground projects. Reduction in funding levels will reduce the acres of habitat protected and restored. In the past three years, the BPA funding and the funds they have leveraged have resulted in over 4,500 acres of restored habitat. The Estuary Partnership Management Plan calls for 16,000 acres of restored habitat by 2010, a goal mirrored in the Bi-Op. We estimate that this will return only 50% of what has been lost since settlement. The proposed reduced funding will decrease on-the-ground results in protected habitat used by threatened and endangered species. In addition, the funds provided by BPA and those we have leveraged from other public sources, have allowed us to build a strategic network and prioritization plan that has increased project quantity and quality. This has allowed funds to be more effectively and efficiently invested giving more environmental results for the dollar and will continue to do so with future funds.

Importance of the Estuary to Salmonid Recovery

Over the last decade, science has advanced significantly in determining how and when the Columbia River estuary contributes to the population viability of listed salmon stocks in many ways. The diversity of habitats within the estuary increases the diversity of life history expression within and among salmon populations and the spatial structure of populations and evolutionary significant units. Where once conventional thought was that salmon are only present in the estuary during the outmigration period, research now concludes that juvenile salmon are known to be present year round in the lower river and estuary. While in the lower river, these estuarine habitats provide salmonids with a food-rich environment where they can undergo the physiological changes needed to make the transition from freshwater to saltwater habitats. Juvenile salmon have the opportunity for significant growth in the estuary and this growth is important as larger fish have a greater chance of survival than smaller fish. This in turn contributes to the overall productive potential of the entire Columbia River ecosystem. Understanding the quality and quantity of these habitats, and strategically working to restore them is paramount to salmon recovery. If recovery actions are based solely on production-based measures (hatcheries and net pens) they will reinforce uniformity of population response to a highly variable and stressful environment, a major contributor to salmon population decline.

Studies in the Columbia River estuary and throughout the Pacific Northwest have clearly shown that when we restore estuarine habitats salmon will use this restored habitat. Fish using these restored habitats will contribute to the returning adult population. The recent work in the Skagit River system is important since studies conducted in this river system have been able to link the quantity and quality of estuarine habitat used by the fry life history strategy to an increase in population viability and scientists have determined that recovery of populations in the Skagit depends primarily upon restoring estuarine habitats. In a system, such as the Columbia River Estuary, that is much larger and more complex than the Skagit, small scale investments in habitat restoration and ecosystem monitoring of the Columbia River estuary will not overcome the existing uncertainties and stressors that need to be addressed to implement a science driven ecosystem-based approach to restoration and recovery in the Lower Columbia River and estuary.

The priorities found within the Lower Columbia River Subbasin Plan recognize this ecosystem based approach to salmon recovery and these priorities properly emerged during the local and OSPIT prioritization. The draft recommendations that emerged from Council dramatically diverged from this ecosystem based approach, instead choosing to reinforce the reliance on production-based measures.

The success and recovery of salmonids in the lower Columbia River and estuary, both improving the understanding of the impacts of toxics on juveniles during out-migration and the restoration of estuarine habitats, serve as an indicator of the conditions for other focal species highlighted in the Subbasin plan and managed with the larger fish and wildlife concerns of the Council.

Habitat Restoration Program – (Project Number 2003-011-00)

The success of the Habitat Restoration Program in the past three years has resulted in over 4,500 acres of protected habitat for threatened and endangered species. The partnership created through this effort and the strategic prioritization developed as part of the first three years of funding has resulted in a significant increase in the number of capable project sponsors, the number of potential projects, and the effectiveness of each individual project. With each round of solicitations, we have turned away projects due to limited funding. The work to be accomplished under this proposal will continue to deliver on-the-ground restoration and a coordinated, ecosystem-based habitat restoration program, guided by an adaptive

management framework and focused on increasing the survival of juvenile salmonids. At the reduced funding level the program will be weakened, with a decrease in either on-the-ground project funding or the development of tools to improve project significant, efficiency, and effectiveness.

Due largely to the investment from the Bonneville Power Administration, the Estuary Partnership has succeeded in leveraging additional funding for restoration: two years of funding through the Environmental Protection Agency Targeted Watersheds Program, and three years of funding for habitat restoration in the lower-river and estuary through NOAA's Community-based Habitat Restoration Program. In total, the three-year award from Bonneville has leveraged over \$1.4 million dollars towards habitat restoration in the lower Columbia River and estuary. This has permitted the funding of more projects, and allowed our program to expand by supporting restoration projects that benefit multiple marine species and emphasizing community involvement.

There are a number of important management programs that identify protection and restoration of the lower Columbia River as vital in rebuilding the productivity of salmon and steelhead runs throughout the Columbia River Basin. Full implementation of this proposal will contribute to the development of a fundamental body of knowledge and restoration actions that directly support these regional efforts.

The measures found in the Lower Columbia River Subbasin are currently being implemented by the Habitat Restoration Program. Those measures include:

1. Measure 1: Restore tidal swamp and marsh habitat in the estuary and tidal freshwater portion of the Lower Columbia River.
2. Measure 4: Restore connectedness between river and floodplain
3. Measure 5: Protect and restore riparian and wetland habitat condition and function.
4. Measure 9: Implement mitigation and enhancement measures to provide access to productive spawning and rearing habitat.

The Estuary Partnership's Habitat Restoration Program and the effectiveness monitoring associated with its restoration projects is addressing critical uncertainties identified in Council's *Columbia River Basin Research Plan*. Those uncertainties include:

1. What is the significance to fish survival, production, and life-history diversities of habitat degradation or restoration in the estuary as compared with impacts to other habitats in the basin? How does this partitioning of effects vary among species and life-history types?
2. What are the highest priority estuarine habitat types and ecological functions for protection and restoration (e.g., what are most important habitats in the estuary for restoring and maintaining life-history diversities of subyearling Chinook and chum salmon, and how effective were past projects in restoring nursery/feeding areas)?

Within Council's document 2006-4, *Draft Guidance for Developing Monitoring and Evaluation as a Program Element of the Fish and Wildlife Program* lists the key management questions related to the estuary that the habitat restoration program focuses on. Those include:

1. Is there a functioning adaptive management process in place to design, collect, analyze, disseminate, and evaluate data to inform decision-makers?
2. Quantitatively, to what extent are we avoiding further loss to existing shallow water wetland habitat and restoring degraded habitats, in particular for listed salmonids?
3. Is the off-site mitigation program of habitat restoration in the Columbia River Estuary improving habitat conditions for listed salmonids?

The Action Agencies' *Implementation Plan for the Updated Proposed Action*, and the *ESA Consultation on Federal Columbia River Power System Operations 2004 Biological Opinion*, specifically support the habitat restoration efforts that were developed within the Estuary Partnership restoration program established under RPA 160 of the 2000 Biological Opinion. The UPA states, "The Corps and BPA will protect, enhance, and restore shallow water and wetland habitats along and adjacent to the mainstem Columbia River below Bonneville Dam and tidal wetlands." The UPA states "Development of any future projects in the estuary will be coordinated with NOAA Fisheries and other interested parties such as the Lower Columbia River Estuary Partnership and the Council. Near- and long-term Estuary/Plume UPA actions that this proposal addresses include:

- Describe the present status of the estuary ecosystem in terms of habitat conditions, habitat connectivity, and fauna relative to pre-European settlement conditions (Lower Columbia River Estuary Partnership, 2003; Bottom et al., 2005).

Near- and long-term Estuary Uncertainties Research UPA actions that this proposal addresses include:

- Determine the highest priority habitat types for restoration in the lower Columbia River and estuary.

The lower Columbia River and estuary is the one place in the entire system where habitat improvements will positively affect salmonids basin wide. As described above, studies have clearly shown that when we restore estuarine habitats salmon will use this restored habitat and that these fish will contribute to the returning adult population.

Ecosystem Monitoring Project (Project No. 2003-007-00)

The Ecosystem Monitoring Project is listed by BPA (June 2006) as a project that meets Endangered Species Act (ESA) implementation priorities and is carrying out the Updated Proposed Action (UPA) and 2004 Bi-Op. This project also is identified as likely to address BPA's component of the habitat, hatchery and research, monitoring and evaluation responsibilities under the new Federal Columbia River Power System (FCRPS) Proposed Action (PA) (Letter to Rhonda Whiting, 2006). We appreciate BPA's recognition of our project and expect to continue addressing ESA concerns in the Columbia River estuary through our proposed FY07-09 work.

The recommended funding level of \$411,000 per year for the Ecosystem Monitoring project to implement the habitat, water quality, and salmonid monitoring components of its project is 35% less than the project's current allocation of \$625,000 and the three year total of \$1,233,000 is 78% less than what was originally proposed. The Ecosystem Monitoring Project is critical to advancing the understanding about factors in the estuary that affect the survival of salmonids, which is a critical uncertainty identified for the estuary in the Columbia River Basin Research Plan (Research Plan) (NPCC 2006-3). The Research Plan recognizes the need to evaluate toxic contaminants by the Fish and Wildlife Program through a toxics monitoring and research program (NPCC 2006-3). The Lower Columbia River Subbasin plan's Management Plan Supplement, expresses the need to address toxics in Strategy 3 (Strategy 3: Address Toxic Contaminants) and emphasizes in a key physical objective the need in the Columbia River estuary to "continue to reduce, monitor, and understand contaminant sources in the lower Columbia River" (NPCC 2004).

Monitoring is essential for assessing trends and determining the type and scope of management actions. Without this component, we are unable to gage the effectiveness of management actions which call for contaminant reductions from point and non-point sources. Without quantitative feedback from monitoring, it is difficult to sustain management actions which are directed to contain contaminant

deliveries to the Columbia River and its tributaries. Reducing funding at this junction would truncate progress and jeopardize the Council's past investment in the Ecosystem Monitoring Project. Monitoring is long term and requires a sustained commitment. Not only do we ask the Council to protect recent investments, but cutting funding at this point would reduce investments by current partners (Battelle, USGS, NOAA, & UW) and inhibit our ability to leverage additional resources and bring other partners to the funding table. The Estuary Partnership is working very hard with EPA and other federal entities to increase their investments in monitoring over the next three years in the Columbia River Basin. There has been significant investment in monitoring above Bonneville Dam by the Council and others and we believe it is time for these entities to increase investments in monitoring in the estuary.

The ISRP Retrospective states, "a more thorough assessment and increased attention in regional research, monitoring, and evaluation (RME) plans are needed for the main stem Columbia River between Puget Island (upper estuary) and Bonneville Dam" (ISRP 2005-14). This portion of the estuary is highly complex; however little is known about salmonid habitat use or the characteristics of these habitats. Currently, the Ecosystem Monitoring Project is providing this assessment information through our habitat, water quality and salmonid data and each of our project partners are working with the Pacific Northwest Aquatic Monitoring Project's estuary subgroup and with the Estuary and Oceanic Subgroup to ensure the estuary is included in regional RME plans and will coordinate with existing monitoring programs whose sampling occurs mainly in the lower estuary (Rivermile 0-46).

The water quality and salmonid sampling occurring as a part of the Ecosystem Monitoring Project is providing information on the spatial and temporal distribution of a myriad of toxics in the Columbia River estuary and integrating the results of our water column and sediment sampling with our salmonid sampling to determine how these toxics are impacting salmonid growth, survival and reproduction. This monitoring is another critical uncertainty called for in the Columbia River Basin Research Plan (NPCC 2006-3) and results from the past three years are showing that toxic substances are ubiquitous throughout the estuary and specific contaminants such as flame retardants (polybrominated diphenyl ethers), are present at elevated levels in Lower Columbia River juvenile Fall Chinook. Armed with this information, the Council should be not decrease, but increase funding for this effort, so that the Ecosystem Monitoring Project can continue sampling efforts to include other year classes and life history types. This information will aid future salmonid recovery planning efforts.

Moreover, the Research Plan recognizes the threat invasive and nonnative species pose to native ecosystems and the Ecosystem Monitoring Project is providing information on the extent of aquatic and terrestrial invasive species in tidally-influenced wetlands in the estuary. On the ground field surveys have occurred for two years and to determine inter-annual variability in species composition, two sites that had been sampled during the first season, were re-sampled. This information can be used to determine how areas infested with invasive and nonnative species are changing from year to year. This information can then be used to halt the expansion of existing introduced species called for as a strategy component in the Lower Columbia River Subbasin plan's Management Plan Supplement under Strategy 4 (Strategy 4: Slow the Introduction of Non-native Species) (NPCC 2004).

Planned work for FY07-09 will continue the on-the-ground field surveys to provide additional information on the current distribution and abundance of invasive and nonnative species in the Columbia River estuary. This work will be integrated with salmonid prey surveys, which can begin to determine how food webs may be altered by invasive and nonnative species. Based on the habitat and water quality monitoring results from our first three years of monitoring, the Ecosystem Monitoring Project's key partners, including NOAA Fisheries, USGS, University of Washington, and Pacific Northwest National

Laboratory, will integrate the habitat, water quality, and salmonid monitoring components at each site to improve the understanding of how salmonids utilize tidally influenced wetlands in the freshwater tidal reaches of the Columbia River (Rivermile 46 to Bonneville Dam). Additionally during FY07-09, The Ecosystem Monitoring Project's main focus area will be in the tidally-influenced freshwater portion of the Columbia River estuary. Based on data from NOAA fisheries assessment of key West coast estuaries, juvenile salmonids in the lower Columbia River Estuary ranked highest in tissue residues of PCBs. Therefore, the lower estuary warrants attention, based not only on ISRP's recommendation, but also on results from NOAA, which show that juvenile salmonids exposed to different toxics is highest in this area. We believe there are large uncertainties surrounding the upper estuary too and hope the Council will amend their funding recommendations and provide the necessary resources to complete an upper estuary assessment. It will be through this work that the region can finally begin to understand the physical and chemical properties of estuarine habitats and what role the estuary can and does play in salmon recovery.

Ensuring a Fidelity to the Process

The Subbasin planning process instituted by the Council sought to identify priority restoration and protection strategies for habitat and fish and wildlife populations within Columbia River system using an inclusive collaborative and science based process. The Council suggested in its Subbasin process that these plans would guide the future implementation of the Council's Columbia River Basin Fish and Wildlife Program. The FY 07-09 proposal solicitation is Council's first opportunity to use the Subbasin Plans for this purpose.

The Subbasin Plans articulates restoration needs of their respective watersheds with many focal species and management actions outlined. To prioritize the actions of the Lower Columbia and estuary Subbasin Plan, Council developed the Supplement to the Mainstem Lower Columbia River and Columbia River Estuary Subbasin Plan. This work included extensive scientific data to support its conclusions and broad, collaborative involvement of many partners. The prioritization process identified the following strategies for the lower Columbia River and Estuary.

- Strategy 1: Reduce Effects of the Columbia River Hydrosystem
- Strategy 2: Protect and Restore Habitat
- Strategy 3: Address Toxic Contaminants
- Strategy 4: Slow the Introduction of Non-native Species
- Strategy 5: Reduce Predation on Focal Species
- Supporting Strategy: Manage Uncertainty

In its proposal solicitation procedures, the Council state "(B)uilding on the local input that was captured in the subbasin plans adopted over the last year, the Council now seeks the input and advice from local groups throughout the Columbia basin on what proposals are of highest priority to begin implementing each subbasin plan over this three-year period. The Council stressed that it desired local groups throughout the basin to review the fish and wildlife proposals that represent the highest priorities of the subbasin plan for the next three years." The local groups were instructed to review the proposals against the subbasin plan adopted by the Council. The Lower Columbia Subbasin Plans and the attendant management supplement established the standards or "criteria" that local groups need to use to prioritize the proposals. Local groups in both Washington and Oregon used these Plans to focus their prioritization

As a bi-state province, estuary proposals received a review from delegations from both Oregon and

Washington. During the Oregon process thirteen proposals were reviewed. Project number 200300700, Lower Columbia River and Estuary Ecosystem Monitoring ranked number 2. This project was specifically designed to address many of the uncertainties related to Strategies 2, 3, and 4. Project number 200301100 Columbia River Estuary Habitat Restoration was ranked number three and was specifically designed to address, at a significant and sustained level the needs of Strategy 2. Within the Washington review process, project number 200301100 Columbia River Estuary Habitat Restoration was ranked first. Project number 200300700, and the Lower Columbia River and Estuary Ecosystem Monitoring was ranked fourth. These two projects also were ranked as fundable by the ISRP

During the Oregon review process, project number 199306000, the Select Areas Fish Enhancement project, ranked ninth out of thirteen. The Oregon review team determined that while the Select Area Fishers Project is a worthwhile project, it provides no benefit to the estuary and that the province budget could not support a production-based supplementation program that would consumes half of the Estuary Province's allocation. The Washington review process recommended that since the Select Area Fish Enhancement project provided no benefit to the estuary that it should be included as mainstem system-wide priority.

The Council recommendations award half of the estuary budget to the Select Areas Fish Enhancement project although it ranked ninth and was determined to have no benefit to the estuary. We acknowledge that the Subbasin Plans and the local prioritization process is advisory, and that Council considers many things when making its funding recommendations to Bonneville. We ask Council reconsider the proportion of funds being awarded this project. An adjustment would place funding of this project more inline with its value to the estuary and would maintain integrity of the review process and the hours and good faith invested in it my many partners.

Summary

We encourage the Council to amend their draft funding recommendations to increase the amount of funding for the Ecosystem Monitoring Project and the Habitat Restoration Program. The Habitat Restoration investment is expected to directly fund and leverage the protection and restoration of as much as 5,000 acres of habitat essential for the recovery of ESA listed species in the Estuary. Investment in the monitoring program will continue to provide much needed information on the physical and chemical properties of the estuary and a better understanding of how these properties relate to salmon recovery. This funding decrease will hinder our ability to provide key monitoring information for the Columbia River estuary, which will in turn, delay the collection of data that can help the region better understand what role the estuary can play in salmon recovery. The Ecosystem Monitoring Project is providing much needed information in the tidally-influenced freshwater portion of the Columbia River estuary and that an increase in Council's funding recommendation will help provide "a more thorough assessment of this area" called for in the ISRP Retrospective (ISRP 2005-14). The Estuary Partnership hopes the Council will support a previous BPA Provincial Budget Recommendation that recognized "budget allocations should be driven by prioritized biological objectives rather than historical spending" and that there needs to be "flexibility to reprogram funding between different provinces based on prioritized biological objectives." (Letter to Rhonda Whiting, 2006). The Estuary Partnership's Habitat Restoration Program and Ecosystem Monitoring Project are providing important and measurable results that implement the Fish and Wildlife Program.

Beyond the biological objectives that both these projects provide, the Estuary Partnership has leveraged Council and Bonneville funds to bring more resources into the area for these projects. We will continue to leverage funds and we particularly want to enhance the dollars brought to the monitoring program.

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EPA has recently stepped up its role in Columbia River toxics and we are working with them on that effort. We will be working to ensure that their commitment – financial and technical — is expanded in the next few years.

The estuary is a critical factor in recovering threatened and endangered species; the needs are many and costly. We fully appreciate the decisions before the Council. We believe that the projects proposed in this response will give you strong environmental return on your investments, will continue to bring more partners to the table, and will advance recovery of species. Reducing funds at this juncture, with partnerships in place and on-the-ground work realizing results, would significantly hamper the momentum that has been lacking in the estuary until recently.

We would be very happy to provide any additional information or answer any questions you may have. Thank you for the opportunity to provide comment.

Sincerely yours,



Debrah Marriott
Executive Director

REFERENCES

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