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October 1, 2013

## MEMORANDUM

**TO:** Fish and Wildlife Committee members

**FROM:** Patty O'Toole, and Council Staff

**SUBJECT:** Fish and Wildlife Program Amendment discussion

- General information about Fish and Wildlife Program amendment recommendations and overview
- Summary of recommendations by topic

On September 17, recommendations to amend the 2009 Columbia River Basin Fish and Wildlife Program were due. Since then the staff has been busy organizing, posting and summarizing the recommendations. At the October Fish and Wildlife Committee meeting the staff proposes that we spend any available time Tuesday morning and again on Wednesday afternoon, reviewing and discussing the recommendations.

On September 20th the Council opened a public comment period on the recommendations per section 839b(h)(4)(B) of the Northwest Power Act. Comments may be submitted as a general comment or as a comment specific to a recommendation. The Council will receive comments through November 20, 2013. All of the recommendations and instructions for providing comments can be found on the Council's [website](#).

We are pleased to report that the amendment process for the Fish and Wildlife Program was well-received by the region. The Council received recommendations from 480 entities and individuals that address many aspects of the Program. The Council received recommendations from 11 state fish and wildlife agencies, other state agencies or state-supported agencies, 18 tribes or tribal organizations, and 10 federal agencies. In addition, the Council received recommendations from nine customer, utility, utility organizations or other user groups. Finally the Council received recommendations from more than 350 individuals.

At the October meeting the staff will review the scope and scale of the recommendations with the Committee. Please note, this is a brief, staff-prepared overview. All of the recommendations are not represented. Please refer to the actual recommendations for a more complete review.

The staff is not prepared to discuss program language or options for amending the program at this time. That will occur in future discussions after the public comment period has concluded.

The staff is also preparing more in-depth, comprehensive summaries of the recommendations by topic area. Based on available Fish and Wildlife Committee meeting time in October and again in November, the staff plans to review the more comprehensive summaries with the Committee. These summaries are not included in the briefing packet but will be sent to the Committee members as they are developed; so watch your email for these later this week.

## **Overview of Fish and Wildlife Program recommendations (draft 10/1/13)**

**\*Note this is a brief, preliminary staff overview of the recommendations. All recommendations are not represented here. For this overview, staff attempted to describe the basic scope and scale of the recommendations. Please refer to the actual recommendations for a more complete review.**

There was widespread support for the fish and wildlife program with recommendations generally ranging from a few entities saying the program is scaled and focused just about right at the moment, to many entities calling for substantial priority changes to the program in several areas. Many recommending entities and individuals discuss protected areas, with some advocating expansion of protected area designations to potential transmission corridors, and both wind and solar sites. Some parts of the program particularly mentioned in need of update and expansion are: biological objectives, non-native species control, toxics, predation, mainstem habitat and operations, wildlife operational loss assessments, passage of salmon and steelhead into blocked areas, artificial production of salmon, steelhead and lamprey, regional coordination, science review, biological opinions and accords and defining in-lieu. Some recommenders suggest the Council needs to ensure the program maintains a hydrosystem nexus and resist calls to expand the program.

### **Fish and Wildlife Program Framework**

Overall the Council did not receive many recommendations to change the fundamental fish and wildlife program *framework*. Several of the fish and wildlife agencies and tribes did, however, recommend that the program organization be restructured. Some entities recommend that the program be restructured geographically in order to ensure that mitigation is fairly implemented across the basin. They note that the geographic areas that were most impacted by the development of the hydrosystem should be prioritized for mitigation. Many entities also recommended that the program organization be updated to “better reflect and support adaptive management.” They recommend explicitly developing and tracking eight adaptive management steps. The recommendation is to ensure that the program has clear linkages from each objective to the various strategies and then to the specific projects.

In addition, the Council received recommendations from some entities to use an integrated life cycle approach to survival improvements. The program should consider the entire life cycle when evaluating the benefit of mitigation actions and the Council should support life cycle modeling.

### **Program Vision**

No significant changes are recommended. Several recommendations cite the vision as support for a particular recommendation.

## **Planning Assumptions**

Some agencies and tribes recommend that the Council address the in lieu provisions by clarifying and establishing a new in lieu policy. Others stress the need to not urge Bonneville funding in lieu of other authorized funding sources for mitigation measures. The Council also received recommendations to integrate climate change into the program planning considerations. Some of the fish and wildlife agencies and tribes recommend that the Council develop a strategic plan to address the potential impacts of climate change.

## **Scientific foundation/science principles**

Several entities recommend adopting the ISAB recommendations for revising the scientific principles. Some entities suggest that text should be added to the principles to convey that the Columbia River ecosystem includes upland, tributary, mainstem, estuary, plume, and near-shore ocean environment and that salmon and steelhead evolved over time to respond to the variation in their environment.

Also one entity suggests adding two new principles to reflect 1) that salmonid fecundity (productivity) rates evolved over thousands of years in equilibrium with mortality rates that since have been substantially increased by human development, and 2) that interim measures are needed to boost rates of population productivity until ecosystem integrity and sustainable mortality schedules are restored.

## **Biological Objectives**

In general, many of the tribal and state fish and wildlife agencies and tribes along with NOAA are in favor of initiating a scientifically rigorous process to update and develop quantitative objectives that are linked, tracked and reported upon using HLIs. Until a process is successfully concluded for updating the objectives, these agencies, have provided revisions to existing biological objective language to provide specificity, inclusion of eulachon and lamprey, and removal of emphasis for 'above Bonneville Dam'. Further, most of these agencies are generally supportive of adding biological objectives that address the reintroduction of extirpated populations in non-blocked areas; clarifying and updating objectives for blocked areas; expanding anadromous goals to the subbasin and province levels; adding specific and measurable objectives for resident fish and wildlife; and including recovery criteria as minimum milestones for ESA-listed populations. There is general support by these agencies to modify biological objectives to provide explicit measurable objectives that will support the more general program goals in a manner consistent with the ISAB recommendation.

Recommendations from Bonneville customers focus on not having aspirational goals that lack scientific credibility and that go beyond the scope of the Northwest Power Act (e.g. current SARs goals).

## **Program Strategies:**

### **Fish Habitat Protection and Improvement**

Several of the agencies and tribes recommend that the following areas be incorporated into the Program habitat strategy: fully incorporate the estuary, plume, and near-shore ocean; reduce toxic contaminants; integrate climate change; implement predator control; prevent establishment

of aquatic invasive species; and provide reintroduction of anadromous fish into blocked areas. In addition, the Council received recommendations regarding habitat that pertain specifically to Pacific lamprey, white sturgeon, and eulachon. Many of the recommendations support the program's continued focus on habitat from an ecosystem perspective.

- **Strongholds**

Recommendations direct the Council to work with others to develop criteria to identify strongholds and to establish a system of strongholds in the Columbia River Basin. Another recommendation is to prioritize native fish strongholds where a reasonable chance of eradicating non-natives exists and to create genetic strongholds with adequate buffers to shield them from invasive species.

- **Protected Areas**

The Council received several hundred recommendations for amendments to the protected areas section of the program. The vast majority of them came from individuals supporting the existing protections and opposing reinstating the process for exemptions that was dropped from the program in 2000.

More substantive comments were received from fish and wildlife agencies, tribes and conservation organizations. Major issues raised include addition of bull trout critical habitat, expansion of protection to areas where barriers have been removed, and reinstating a process for exempting projects that provide an exceptional benefit to fish and wildlife.

- **Water transactions**

Recommenders support continuing the water transactions program, requiring all transactions use consistent criteria, adding flexibility for additional funding when unusual opportunities arise, and for the Council to establish a prioritization process to rank water acquisition opportunities in the context of climate change. One recommendation is to ensure adequate funding to evaluate the biological effectiveness of water transactions.

- **Toxics**

Many recommenders suggest the Council include in the program implementation section a requirement to implement actions to reduce toxic contaminants or their effects if those toxins are adversely affecting fish survival. Some recommenders suggest the location and types of known contaminants in the Columbia Basin be mapped, and a means of identifying contaminants of emerging concern be established. There are recommendations for the Action Agencies to investigate how anoxic conditions in the reservoirs may mobilize contaminants, particularly mercury. Also, there are recommendations for Bonneville to fund toxics-reduction efforts around the basin. One recommendation asked the Council to use the program to summarize the state of the science related to toxics and the effects on fish in a very far-reaching manner. Other recommendations oppose any expansion of the program into the realm of toxics.

- **Climate Change**

Many recommenders propose the Council incorporate flexibility in the program to deal with the impacts of climate change on restoration efforts. Recommenders think the program

should continue to focus on habitat work, but to also review existing work to assess how optimal and sustainable that work will prove to be as the climate changes. Particular attention should be paid to mid- to late-summer streamflows and temperatures and research should be directed toward various species that may be affected, including lamprey. Identifying, preserving, and if possible expanding the number and size of cool-water refugia was recommended to the Council. Some recommendations call for increased research on the effects of higher temperatures on run migration, timing, and spatial distribution as well as approaches to lowering those temperatures. Recommenders also suggested considering including within the program changes to reservoir operation and refill curves under altered precipitation. Also, runoff patterns should be included in the program.

### **Nonnative and Invasive Species**

The Council received many recommendations concerning non-native and invasive species. Generally the recommendations fall into two or three categories. Overwhelmingly, many agencies and tribes recommend that the Council play a leadership role in coordinating the issue on a basinwide level. They recommend that the Council be a leader in developing strategies and partnerships in the basin. Many recommend that the Council ask for regular reports from and work closely with the 100<sup>th</sup> Meridian Columbia Basin Team.

In addition, several agencies and tribes recommend that Council direct Bonneville to support activities that prevent introductions and establishment of invasive species and that address the adverse effects of invasive, non-native species on native populations. Some recommend that the Council direct Bonneville to support monitoring of invasive species and research innovative control /eradication methods and the effects of invasive species on fish and wildlife program restoration efforts.

The Council also received recommendations to expand the requirement of conducting environmental risk assessments to locations where management of non-native invasive fish overlaps with native fish conservation and endangered species listings.

### **Artificial Production/Hatchery Scientific Review Group (HSRG)/Harvest**

Some recommendations propose incorporating the HSRG into the program, while others oppose doing so and advise the use of NOAA-approved Hatchery Genetic Management Plans. In developing biological objectives, several recommenders propose including hatchery-specific production and returns, as well as harvest. Support for supplementation, reintroduction, and alternative fisheries was widespread, though some recommending entities ask the Council to be more cautious about the use of hatcheries. Some recommendations supported the status quo or more funding for coded wire tags. Some recommenders also maintain the Council require hatchery programs to demonstrate no conflict with conservation principles and ask the Council to support selective-harvest techniques that reduce the impact on ESA-listed stocks. Some recommendations encourage the Council to support efforts that may lead to new or increased efforts aimed at artificial production of lamprey, sturgeon, fresh water mussels, etc.

### **Wildlife**

Many recommenders suggest the Council support existing wildlife settlement agreements, continue with the Wildlife Advisory Forum; ensure Bonneville properly funds operation and

maintenance activities; and assess wildlife losses resulting from the operation of the hydrosystem. Some tribes recommend that wildlife mitigation is an appropriate substitute for anadromous fish blocked by the construction of dams. Bonneville recommends that the program retire the use of habitat units, and rely on acres instead. Other recommendations direct the Council to develop a “scaled” framework to adequately address wildlife habitat improvement needs, grown operations and maintenance needs and monitoring and evaluation needs for wildlife mitigation properties. Many fish and wildlife agencies and tribes call on the Council to define and fund operational loss assessments and secondary loss assessments.

### **Blocked Areas Mitigation /Resident fish substitution**

Several recommendations from tribes called for a renewed approach to mitigation for anadromous fish in what the current program refers to as “blocked areas” or where anadromous fish access was blocked by hydropower dams (such as Grand Coulee Dam, Chief Joseph Dam). Included in the recommendations are changes to program language about reintroduction of anadromous fish into currently blocked areas, changes to the policy of “substituting resident fish or wildlife programs for the lost anadromous fish, and changes for resident fish and wildlife mitigation. Some of the recommendations call for the “resident fish substitution” policy to be re-named to “Anadromous Fish Substitution Policy”.

Many of the agencies and tribes recommended that the Council should work with the managers to provide a clearer definition of the goals, objectives, and methodology for addressing anadromous fish losses through substitution actions.

Several recommendations from agencies and tribes propose strong support for fish passage and reintroduction in the blocked areas, in some cases using a phased approach. Areas of particular note are the Columbia River above the Chief Joseph and Grand Coulee dams and the upper Willamette river tributaries.

### **Resident Fish**

Generally, entities recommend that the existing language in the program be maintained and implemented. Bonneville recommends that the program support the processes needed for them to make final decisions in the resident fish artificial production facilities currently in the proposal or planning stages.

Many of the fish and wildlife agencies and tribes recommend that the Program address the threat of non native species as resident fish mitigation. They recommend that the Council support and Bonneville fund efforts to address primary limiting factors affecting resident fish including non-native species eradication and suppression. In addition they recommend that Bonneville fund the agencies and tribes to develop a methodology and complete resident fish loss assessments and suggest having framework in place for resident fish losses by 2015. Some are recommending that the Council direct Bonneville to fund perpetual land protection that includes conservation easements, land purchases and other long-term measures to combat climate change impacts on resident fish. Some also recommend that the Council continue to maintain and implement existing program language regarding settlement agreements, crediting and long-term operation and maintenance funding.

The Council also received recommendations to support resident fish projects in the Columbia Basin Fish Accords and that the program should provide for passage of bull trout at Albeni Falls Dam and should identify and implement conservation measures to reduce the likelihood of harm to bull trout prior to the construction of fish passage at the dam.

### **Research/Monitoring/Evaluation /Data Management/Reporting**

The recommendations received generally support providing clear linkages between the program biological objectives, monitoring conducted, data managed for sharing, and using indicators to report about the program. Related to this improvement, there is direction to reorganize, restructure the guidance under these program sections so that they are more clearly defined. There are also recommendations to modify the content of these sections by specifying priorities, incorporating recommendations from Council forums/workgroups, and addressing monitoring gaps (e.g. eulachon) and reporting needs. There is support to incorporate as appropriate the draft council guidance for monitoring and research, and one entity specifically highlight the matrix balancing risk-effort. Similarly, there is support to incorporate the draft council guidance for information management, evaluation and reporting, the ISAB recommendations, and Bonneville data-management framework.

Some recommend better integrating monitoring projects, splitting research from monitoring, prioritizing projects that address multiple questions and produce scalable results, inventory existing projects to understand what monitoring they are conducting where and when, and to build off of existing monitoring efforts. There is support to increase funding of intensively monitored watersheds and to fund monitoring needed to inform models such as the lifecycle model that can explain population level response. There are recommendations to improve hatchery effectiveness monitoring by providing more guidance, such as minimum indicators to report, establishing non-hatchery watersheds, and implementing CHREET. Several entities provide critical research uncertainties to be included as part of the program (e.g., acidification, invasive species, toxics, white sturgeon, eulachon, estuary action effectiveness, effects energy sources, and effects of the hydrosystem on marine attributes). There is a recommendation to have research projects be better defined with specific end dates. Also there is support to have a regular solicitation of research projects to replace those that sunset and to facilitate addressing critical uncertainties.

The Council received recommendations focused on improving the Council's reporting about program progress and effectiveness to inform adaptive management of the program. This includes support for Bonneville funding of Council level reporting. Recommendation to incorporate HLIs into the program, develop HLIs that represent all program objectives, develop HLIs for resident fish, pacific lamprey, eulachon, wildlife, and the lower Columbia River; using CA indicators to report, and to align indicators with existing HLIs used by Bonneville and other agencies in the basin such as by using performance metrics from the FCRPS BiOp and Accords. Suggest including data from the Willamette (e.g. Minto Adult Collection facility) and to develop province level HLIs to link to Province level objectives. Some examples of what could be reported are provided, such as what data to graph.

To achieve a more streamlined approach to sharing data needed for program reporting, many recommendations support fully funding the coordinated assessment for data sharing of salmon



and steelhead indicators (and data), and support expanding this effort to include resident fish and wildlife. Recommendations also specify the need to fund state and tribal data management needs for information required by program and regional reporting. Some remark the need for data sharing agreements to insure the information is properly used. Some recommend that the Council rely on products developed and services provided by PNAMP and StreamNet to assist with data sharing and for informing Council reporting needs. Other entities suggest that their 'report card' could link to and inform Council HLIs. There is support for Bonneville to fund Council level reporting (or reporting by the Council) annually on basinwide objectives, and annually/periodically on program actions and effectiveness to inform adaptive management.

Some recommendations suggest a forum, or forums, could be established to reach regional agreement on priority questions, highest priorities for ecosystem health, status and trend of fish and wildlife, and recommendation of specific data types. This could facilitate identifying priority indicators, data sharing, conducting needed evaluation to inform Program reporting, identification and prioritization of research uncertainties. A forum could also bring database projects together to facilitate coordination. In some situations the Council could make formal requests to existing forums (e.g. PNAMP) to conduct some of the work and to provide recommendations to the Council.

Some caution that the Council must remember that although standardization is appealing, a one-size-fits-all approach doesn't always work. That instead the Council should focus on problem areas. Some caution about using fish marking and suggestion to only mark fish when needed to provide information to measure program progress. Others suggest that there is need to reduce the cost of RME and to determine how much is needed (e.g. how much more HEP is needed). Other suggest using an independent approach for compliance monitoring, implementing CHAP, continuing CHaMP for 3three years, and continuing to track status and trends of terrestrial vegetation / land use / land cover as recommended by the ISAB. Others suggest the Council should monitor and report on economic benefits of fish activities including hatchery fish for harvest. Some recommend discontinuing monitoringmethods.org.

## **Plume and Near-shore Ocean**

Many recommendations were received that call for more integration of the Columbia River plume and near-shore ocean throughout the program. The recommendations call for slight modifications to the current strategies and also included a set of measures for implementation. The recommendations stress the importance of basic monitoring. Many recommendations of the fish and wildlife agencies and tribes support amendments that would increase the understanding the role of the ocean as it relates to Pacific lamprey and eulachon. Broad support was expressed from many entities for the Council to support a collaborative ocean related forum of scientists and managers.

The Council also received recommendations that the program should not be expanded to extend to measures in the ocean, beyond the Columbia River estuary and that measures promoting ocean-based studies should be excluded from the program as beyond congressionally imposed geographic boundaries and beyond Bonneville's limited funding authority.

## **Columbia River Estuary**

The Council received recommendations that the program should address the ISAB recommendations for developing an estuary plan that meshes to the mainstem plan and ocean strategies. Also the program should address the uncertainty regarding the effectiveness of estuarine restoration projects and different types of habitat and whether they contribute to increased juvenile survival and hence increased adult returns. Bonneville recommends that with respect to estuary habitat, the program should acknowledge the strategies, priorities, and benefits identified in the Columbia Estuary Ecosystem Restoration Program (CEERP).

The recommendations also include a call for incorporating water quality improvements and toxic contaminants reductions into the program, to expand and sustain regional monitoring of toxics and to implement actions to clean up, reduce or eliminate toxic contaminants.

## **Mainstem**

With regard to the fish and wildlife program's mainstem plan, a number of federal agencies, tribes, and the Bonneville customers recommend that the Council continue to recognize the reservoir management, spill and passage measures and performance standards in the FCRPS Biological Opinions as the program's baseline mainstem measures and objectives. Montana and the Kootenai Tribe of Idaho recommend adjustments in operations at Libby Dam, and Montana also at Hungry Horse, to improve conditions for sturgeon and other fish in and below the reservoirs, adjustments they believe are consistent with the flexibility in the bull trout, Libby Dam and salmon and steelhead biological opinions. The Spokane Tribe recommends that the Council continue to include in the Program the altered operations at Grand Coulee that the Tribe considers important to improve conditions for fish in Lake Roosevelt and then work for their implementation. Washington recommends continued adherence to the Vernita Bar operations that benefit fall Chinook in the Hanford Reach. Oregon, the Nez Perce Tribe, the Pacific Fishery Management Council and a number of environmental and fishing groups and individuals recommend implementation of increased spill as an experiment (the proposal out of the CSS studies) if the dissolved gas waivers can be revised. And a number of the environmental groups recommend the Council completely de-link its program from the Biological Opinion measures and pursue additional flow and passage actions, including operating John Day and other lower Columbia reservoirs at minimum operating pool. A set of these groups along with the Nez Perce Tribe support an evaluation of the removal of the four dams in the lower Snake River.

More broadly and generally, a number of the agencies, tribes, environmental and fishing groups, and individuals recommend, in part out of the Columbia River Treaty review, that the Council's mainstem plan incorporate an explicit ecosystem function focus and assist in restoring more natural floodplain functions, hydrograph and habitat all along the mainstem through the estuary and plume, taking advantage of any potential for improved fish habitat that may come from a modernized treaty. These recommendations are led by the Columbia River Inter-Tribal Fish Commission with an extensive recommendation for revisiting flood risk management, including reduced reliance on reservoir operations allowing for different management of peak flows, with increased flood risk management options such as moving structures out of the floodplains, reclaiming lost floodplains and, where locally necessary, constructing and/or modifying levees. The USGS added a recommendation to develop a sediment budget for the lower river.

Many of the state and federal agencies and tribes included in their recommendations a set of broad topics relevant to many parts of the program but with a distinct mainstem element. This includes recommendations regarding lamprey (mainstem passage, operations, hydrosystem performance standards); sturgeon (passage and hydrosystem operations effects); eulachon (assessing hydrosystem impacts and potential improvements); expanded and updated bird/fish/mammal predation provisions; increased regard for the plume/estuary/near-shore environment and flow effects; climate change (review and adapt hydrosystem operations to flow changes); passage of anadromous fish above blockages (Grand Coulee and Chief Joseph in the mainstem, with quite specific provisions from the Spokane and the Coeur d'Alene Tribes); and toxic contaminants (recognize connection to hydrosystem and assess problems and potential improvements in the mainstem, led by an extensive recommendation from CRITFC). The many miscellaneous recommendations for the mainstem include, among others, a number of revisions to update the program's mainstem language from NOAA Fisheries; recommendations from the Yakama Nation for best practices to prevent or reduce biological harm from PCB leaks at mainstem dams and from lower river dredging; continue recognition and updating of the performance standards and mainstem spill and bypass provisions of the Mid-Columbia HCPs, from Chelan PUD; and recommendations from the U.S. Fish and Wildlife Service to benefit mainstem habitat for fall Chinook in the Snake River and for the use of drones for monitoring in big river habitat such as in the Snake.

## **Predation**

Currently, the topic of predation is primarily addressed in the mainstem chapter of the program. The Council received many recommendations regarding predation. Several of the fish and wildlife agencies and tribes recommended that the Council continue to convene specific topic forums, and that the topic of predation should continue to be addressed. As you may recall, the Council sponsored a Science-Policy Exchange on predation in 2012. The Council received recommendations that call on the program to initiate focused efforts on reducing and where possible, eliminating predation impacts from avian, piscivorous and marine mammals that have demonstrated impacts to salmon restoration and recovery.

Grant County PUD recommends: that the Council fully endorse and advocate for the removal of the Caspian tern colonies on Goose Island (Potholes Reservoir) and Crescent Island, as outlined in the inland Avian Predation Management Plan.

The Colville Tribe recommends that the program continue to support implementation of projects under the 2008 CCT accord which includes working to review, evaluate, develop and implement strategies to reduce on-native piscivorous predation on native fishes, including salmon and redband trout, and white sturgeon.

Many of the fish and wildlife agencies and tribes support efforts to assess and reduce pinniped predation on lower Columbia white sturgeon, as well as on listed salmon and steelhead. They recommend that the Council support and Bonneville fund federal, tribal and state agencies to assess manage and reduce pinniped predation on salmon, steelhead, sturgeon, and lamprey. They also recommend support for determining predation on adult and juvenile lamprey during mainstem passage migration and for managing marine mammals to reduce predation of white

sturgeon downstream of Bonneville Dam. Also, they recommend that the program should strive to measure the effects of predation and express them in common terms such as salmon adult equivalents to facilitate comparison and evaluation against other limiting factors. Predator evaluations should include salmon adult equivalent metrics in their reports.

Many of the agencies and tribes also recommend that the Predator Control Program's dam angling effort by contracted fishers be expanded in all tailraces where elevated northern pikeminnow predation rates are known to occur. They also direct that the Council should adopt into the program, and Bonneville and the action agencies should fund, the management plans that have been developed through USACE and other processes for piscivorous avian species in the Columbia River Basin and estuary. Incorporate any management plans that have been developed for double-crested cormorants, Caspian terns, and other avian species in the mid-Columbia River area and prioritize actions for implementation.

### **Subbasins/Subbasin plans**

Many of the agencies and tribes and recovery boards recommend incorporating ESA recovery plans, including implementation plans, into basin-wide and subbasin management plans and multi-year action plans. Many ESA recovery plans for salmon and steelhead are now complete. Those recovery plans used the 2004-05 subbasin plans and this cycle should continue, so the subbasin plans should now incorporate the final ESA recovery plans." They also recommend that the Council implement the ISAB's recommendations for landscape and subbasin planning, including the need to actively encourage and support a mid-scale planning process that supports and utilizes existing partnerships and organizations. This could be done at the province-level, which is geographically similar to NOAA's recovery domains.

The agencies and tribes recommend updating the subbasin management plans by 2014 to explicitly incorporate final recovery plans and the Tribal Pacific Lamprey Restoration Plan. For additional recovery plans completed after 2014, the Council will accept recommendations to incorporate those plans in the appropriate subbasin plans. Because of the importance of subbasin plans, progress towards implementation of these plans should be reported on periodically. This could be as simple as documenting which measures are currently funded and those which have not been funded. They also recommend expanding anadromous goals to the subbasin and province levels and adding specific and measurable objectives for resident fish and wildlife to support high level indicators. The Council also received recommendations in support of funding new projects to meet subbasin plan objectives.

Complete subbasin plan updates were only recommended in areas that had drastic change, such as the White Salmon River subbasin due to the removal of Condit Dam. Where updates would be needed, entities stated that subbasin planning guidance and stakeholder participation would be crucial, as it was in the original subbasin planning process.

### **Implementation Provisions**

- **Measures/Action Plan**

Many entities recommended that elements of the recovery plans be incorporated into the program. Recovery plan implementation plans should be adopted as multi-year action plans, and limiting factors identified in the plans should be addressed as priority actions funded through the

fish and wildlife program. Many recommended that the Council work with fish and wildlife managers to periodically review the implementation of the fish and wildlife program measures and report annually to the region on what has and has not been implemented. Some agencies provided a list of high priority measures from recovery plans and other planning documents that they wish to see incorporated in the program, and others gave species-specific measures they would like to see implemented.

Some entities called for implementation plans to be built from subbasin plans. Limiting factors identified in the subbasin plans should inform future projects. In fact, some subbasins have readied projects to address limiting factors, but need the program funding to begin their work. Some regional managers recommended that the Council work with the action agencies and local managers to create long-term implementation plans to recover target species to levels that would not only meet ESA requirements, but mandates of the Northwest Power Act.

Some entities reminded the Council of the measures submitted for the 2009 program amendment and asked the Council to consider those as specific program measures to be implemented by 2018 through the updated program. Many expressed interest in multi-year action plans as called for in the 2009 program and would like to see those come to fruition.

- **Project review process/Step review**

Many entities recommend streamlining ISRP review and some advocate that the Council, action agencies, and managers should jointly develop a new review process for well-established and accord projects. Some recommend that the Council direct the ISRP to focus its comments to the science elements of projects and that only new projects or expanded project proposals should be reviewed by the ISRP in the future. Recommendations from Bonneville suggest the program should acknowledge and support Bonneville's emerging approach for habitat restoration project selection.

Some entities call for opportunities for the Council to create and implement a review process for non-accord agencies to propose new projects for areas above Chief Joseph and Grand Coulee dams. Recommendations were received that suggest the Council should establish a methodology to prioritize potential projects and reach agreement on the projects of highest priority prior to recommending them to Bonneville. Some recommenders suggest the Council develop a prioritization process for projects to ensure the highest priority projects are addressed before lower priority work.

- **Regional Coordination**

Many recommenders urge the Council to take a leadership role in convening coordination meeting and to continue with science-policy workshops and similar activities. The void created by the disbanding of CBFWA was frequently cited.

- **Independent Scientific Review**

Many recommenders are calling for a collaborative multi-party discussion about how the independent science review function can best serve the needs of the program - particularly with the bulk of the work under the program having been reviewed more than once. Recommenders suggest new projects be given closer scrutiny than existing projects, and that the Council advise

the ISRP to focus on the science, not policy, elements of proposed projects (see Project review process).

- **Funding Priorities**

Recommenders (Bonneville, Bonneville customers, and some accord parties) suggested that the Council continue with the same general scope and scale of the program, with emphasis on implementing the current biological opinions and accords. These recommendations argue that the program is at its fiscal, management and legal capacity.

Others, such as the Spokane Tribe, Coeur d'Alene tribe, and the Upper Columbia United Tribes) are recommending that the Council address additional mitigation needs, particularly in areas where anadromous salmonids have been blocked by dams, for example in habitat above Grand Coulee Dam. These recommendations promote additional focus in this area including support for studies to investigate science based feasibility of upstream and downstream passage options for anadromous species, mitigation for lost anadromous fish, mitigation for impacts on resident fish, wildlife mitigation operational losses, operations and maintenance, and monitoring and evaluation.

Also, the Council received other recommendations that directly and indirectly recommend that the program address other issues as well, including (but not limited to) toxic contaminants, operational and secondary losses for wildlife, transmission line impacts, wildlife monitoring and evaluation, invasive species protection, predation, and mitigation for lamprey, sturgeon and eulachon.

Some of the recommendations direct the Council to allocate at least 45 percent of program funding to areas above Chief Joseph and Grand Coulee dams and other blocked areas, citing a top-down approach, prioritizing headwaters habitats, while providing adequate funding for the area above Wells Dam in order to close the largest ESA gap for recovery.

Several recommendations direct the Council to maintain their role in providing Bonneville direction in regard to adequate funding levels, while other recommendations call for there to be an agreement between the Council and Bonneville on the overall fish and wildlife budget. Also some recommendations call for the budget to be allocated into broad funding categories such as RM&E, wildlife, anadromous, resident fish, etc.

## **Overarching or Other Topics:**

### **Role of the Council**

Some of the fish and wildlife agencies and tribes recognized the evolving role of the Council and challenges in recent years but encourage the Council to remain engaged in ensuring full implementation and funding of the program, and report to the region on the implementation and effectiveness of the program and recommendations.

Almost universal among recommendations from fish and wildlife agencies and tribes was a desire to have the Council, through the program, serve as the a policy issue workgroup convener,

coordinator of forums and symposiums, and even a definer of concepts that are important, but have remained poorly defined for many years. The program is also widely viewed as the right place to memorialize scientific principles, a sense of the long history and pre-existing conditions of fish and wildlife in the Columbia Basin as well as the long-term future vision and shorter term goals and objectives for fish and wildlife as well as research priorities and expectations for information sharing. Many in the region see the program as the right place to meld ESA recovery planning with wider fish and wildlife mitigation and restoration goals. Several recommenders suggest the program should endorse the status quo of existing activities, while several others recommend the program boldly describe the ultimate vision of a healthy ecosystem, sustainable populations of fish and wildlife and reestablishment of extirpated species into all parts of their former ranges. Many recommendations were received stating the program, and the Council, should call for opportunities for new project selection and funding for the new projects.

### **Species-Specific Recommendations**

In addition to many references to salmon and steelhead, recommenders also have specific suggestions about protecting and enhancing Pacific lamprey, white sturgeon, eulachon, and fresh water mussels.

### **Willamette Subbasin**

Recommendations from the Confederated Tribes of the Grand Ronde, Oregon Department of Fish and Wildlife, Bonneville, NOAA Fisheries and the U.S. Fish and Wildlife Service all propose incorporating additional planning and legal documents into the Council program. Both the Biological Opinions from the U.S. Fish and Wildlife Service and NOAA Fisheries on the operation of the Willamette projects and the Upper Willamette Recovery Plan received recommendation for incorporation into the program. Detailed measures from those plans were also recommended for inclusion into the Council's program by ODFW and the Confederated Tribes of Grand Ronde. Funding figured prominently in recommendations from ODFW and the Confederated Tribes of Grand Ronde for completion of biological opinion measures and the operations and maintenance of passage and other structural improvements in the Willamette system.

### **Long-term Agreements/Accords**

Some accord parties and Bonneville called for continued or more recognition of accords in the program.

### **Science - Policy Forums – Other Forums**

Many of the agencies and tribes propose that the science-policy forums continue and that the topics of climate change, toxics, and eulachon be addressed. Many recommenders encourage the Council to continue convening other topic-specific forums. They recommend specific topics include monitoring and evaluation, research, wildlife mitigation into the future, prevention of zebra and quagga mussels, habitat restoration, long term maintenance of assets and infrastructure, non-native species, coordinated assessments species (see regional coordination).

### **Long Term O&M/Contingency Plans**

Most of the recommendations concerning long term operations and maintenance are from the fish and wildlife agencies and tribes and recommend the Council ensure adequate long term

O&M funding is available for fish screens, hatcheries, wildlife area management plans, and other capital improvements as well as resident fish and anadromous fish programs. Most entities feel that O&M budgets have become stagnant and are not be adequate. They recommend that a Council-sponsored forum could be used to address this topic.

In some cases the recommendations specifically describe the significant infrastructure investments made to date and recommend that BonnevilleA and the Council work with the fish and wildlife agencies and tribes to create a process for capital refurbishment over the next ten years.

Recommendations were also received noting that in order to protect the federal Columbia River Power System assets, the Council's fish and wildlife program should direct Bonneville to provide proportionate funding for prevention activities that are known to be effective at stopping the invasion and spread of zebra and quagga mussels, and invasive aquatic plants such as Eurasian milfoil and flowering rush. Funding should be equally provided through the program and operations and maintenance budgets from power operations within Bonneville. These activities include, but are not limited to, inspection and decontamination of boats moored in infested waters and then transported on our roadways in the region.

The Council also received recommendations that the Council should use its Wildlife Advisory Committee to convene the wildlife managers and Bonneville to develop protocols for assessing operational impacts including the operation, maintenance and management of transmission lines.

### **ESA/BiOp/Recovery Plans**

Many recommenders direct the Council include into the program all or substantial parts of the relevant biological opinions such including the FCRPS BiOp, both USFS and NOAA Willamette BiOps, the Libby dam sturgeon BiOp, the USFWS Bull Trout BiOp and the NOAA BiOp regarding the U.S. v Oregon harvest agreements. Several recommenders suggest recovery plans be included in the program, potentially as updates to subbasin plans. Some recommendations suggest the 2009 program 'got it about right' concerning the BiOps, other suggest the Council needs to include much more detail than the 2009 program had regarding BiOp schedules, actions, VSP criteria, habitat work and hydro operations.

### **Columbia River Treaty**

Recommendations were received to take into account benefits to salmon and steelhead that may be possible from an updated treaty, including the potential for changes due to explicit consideration of ecosystem functions and/or revised flood risk management goals and options. Others recommend altered operations at Libby and Hungry Horse dams focused on the reservoir elevations and the timing of refill derived from the treaty review studies. Recommendations were also received to amend basinwide strategies to include floodplain reconnections designed to achieve enhanced ecosystem function, and deferring water supply allocations changes until after the 5 million salmon and steelhead goal and resident fish goals in the program are achieved. Recommenders propose flood risk should reduce reliance on reservoir storage, address management of peak flows, and increase flood risk management options by moving structures out of the flood plains, reclaiming lost flood plains to enhance 'ecosystem-based function' and flood risk management and, where necessary, constructing and/or modifying levees.



**Energy Siting Fish and Wildlife Assessments (Renewable Energy Integration)**

Some recommenders propose the Council embark on an assessment of potential wind, solar, and transmission sites to determine which of those sites have the greatest risk to wildlife, particularly sage grouse.