



PACIFIC STATES MARINE FISHERIES COMMISSION

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Dear Chair Bradbury;

Attached for the Council's consideration are the Pacific State Marine Fisheries Commission's (PSMFC) comments and suggestions on the draft Columbia River Basin Fish and Wildlife Program. Established by Congress in 1947, PSMFC is an interstate compact agency that helps resource agencies and the fishing industry sustainably manage Pacific Ocean resources in a five-state region. Member states include California, Oregon, Washington, Idaho, and Alaska. PSMFC's primary goal is to promote and support policies and actions to conserve, develop, and manage fishery resources in California, Oregon, Washington, Idaho and Alaska. We accomplish this through coordinating research activities, monitoring fishing activities, and facilitating a wide variety of other fishery related projects. We work to collect data and maintain databases on salmon, steelhead, and other marine fish for fishery managers and the fishing industry. PSMFC is specifically charged with coordinating several regional data projects in the current Council program, including StreamNet, the Columbia Basin PIT Tag Information System (PTAGIS), and the Regional Mark Information System (RMIS). The Commission also manages other Bonneville Power Administration (BPA) contracts that implement the Council's Program, specifically including the Fish Passage Center, Northern Pikeminnow predator control project, invasive species project, protected areas maps and database, and the Habitat Evaluation Procedures (HEP) program. The Commission respectfully submits the following comments and suggestions on the draft Fish and Wildlife program.

General Comments: The Plan establishes a vision, goals and objectives for the basin, and identifies strategies for achieving these targets. There are four nested geographic levels within which these targets are set. Goals, objectives, and the indicators used to evaluate them are listed in Appendix D. The Council further defined high level indicators (HLIs) in Appendix E that will be used to monitor status and trends. While this is an effective organizational model, the Council may have inadvertently missed the necessary role of system-wide data and coordination infrastructure projects like StreamNet, RMIS, PTAGIS, and others in meeting objectives. As evidenced by many recent data management failures in unrelated fields, it is essential to plan and budget for adequate data management and database development in complex projects. The Plan would be strengthened if the Council would explicitly recognize where the data for these indicators will come from, and how regional efforts will be coordinated to assure that data is consistent, quality checked, and available in a timely fashion. Specifying how the indicators and the metric data required to derive them will ultimately be secured and made available for public access would also improve the plan. Prioritizing

necessary investments in the infrastructure needed to support indicators and metrics should significantly increase the chance of success.

PSMFC suggests that the Council modify Section Three IV. D (Adaptive Management) so that it is more specific. For example, including an endorsement of the use of both the StreamNet and Pacific Northwest Aquatic Monitoring Partnership (PNAMP) forums for development of the technical issues and tools necessary for coordinated data management would be useful. The Council could also extend endorsement of this forum approach to include wildlife and habitat data. We recommend that the Council consider endorsing an expanded Coordinated Assessment (CA) Project type effort (to be coordinated by organizations such as StreamNet, PNAMP, and the Wildlife Advisory Committee) as the region's specified process for collaboratively developing data standards and sharing processes to support ESA and Fish and Wildlife Program reporting needs.


PSMFC recommends that the data management and adaptive management sections of this amendment be modified to better define decision-making, reporting, and the underlying data and data systems that will need to be managed for implementation of the program. The Council framework is well thought out, but measurable objectives and reporting requirements will be needed to learn from this adaptive management plan. Further, we recommend that specific goals and objectives for coordination and data management be added to the Appendices to reflect the importance of supporting data flow to the adaptive management process.

PSMFC recommends that the Council specify that all tagged anadromous fish releases and subsequent recoveries be reported to the appropriate regional databases. Data for coded wire tagged fish, including all associated and non-associated release groups of hatchery origin fish, should be reported to the Regional Mark Information System (RMIS). Data for PIT tagged fish and subsequent detections should be reported to the PIT Tag Information system (PTAGIS) database. Support for this requirement will help to ensure that these data will be available on-line for research and monitoring reports, and preserved for future analysis. Additional strengthening of the program would be provided if the coordination requirements for the *PIT Tag Forecaster* (<http://www.ptagis.org/services/forecaster>) were more clearly defined by the Council.

Suggested Editorial Changes: The Program provides a very good framework for adaptive management. PSMFC recommends that the Council consider the following suggestions, which we believe would further strengthen the Plan;

The Program Coordination section (page 120) would be strengthened if it specifically identified the Council's role in ensuring facilitation between the agencies and tribes to address these issues.

The hatchery indicators (2nd bullet on page 76) it may be helpful to identify specific metrics/indicators for hatcheries. These indicators could explicitly recognize the current CA effort, which is collaboratively developing these indicators for the region. The same level of detail and linkage to the CA metrics and indicators could be provided for wild fish (page 82), where CA has already developed Data Exchange Standards (DES) for the initial data.

Appendix D (page 157) Goals and Objectives. Within the appendix are 20 goals and numerous objectives and strategies. The Indicator link throughout the appendix: ([Abundance of Fish and Wildlife](#) ) takes the reader to the Council website. The data and reports used to derive these indicators would be strengthened if they were explicitly prioritized for funding in the program. In addition, systems for reporting HLI data, including regionally coordinated data standards, data sharing across agency boundaries, maintenance and location of secure data repositories, and the like would benefit from Council endorsement.

The current system of HLI reporting (page 167), much of which is under development, is an admirable effort, but will not be possible without regionally prioritized data management improvements, such as the CA project. In many cases regional standards and definitions still need to be developed for the actual population metrics and indicators that would allow comparisons geographically and temporally. The Council could direct a process to more clearly define many of these indicators, and then further prioritize additional regional data coordination efforts, with the goal of each to be populating the Council's own HLI and subbasin dashboard reporting systems. Currently these reporting mechanisms often involve laborious culling of numerous reports and contacting of individuals across the region. Data management systems could be mandated to direct regional monitoring efforts towards the HLIs that the Council has selected, in a consistent form developed collaboratively by the Region's biologists. This requires regional collaboration and data management infrastructure such as StreamNet, PTAGIS, and RMIS.

Northern Pikeminnow predator control project

PSMFC supports the recommendations regarding continued implementation and possible expansion of the Northern Pikeminnow Management Program (NPMP) (page 48 and 49). Evaluations conducted in the early 80s indicated that if predatory size Northern Pikeminnow were exploited at a 10-20% rate the resulting restricting of the population could reduce predation on juvenile salmonids by as much as 50%. Since 1991 the NPMP has been successful in meeting the exploitation rate goal in 19 of 23 years. To maintain the effectiveness of the program we recommend continued annual evaluation of the exploitation rates and the resultant reductions in predation. Further, we recommend the Council support continued evaluation and implementation of adjustments to the Sport Reward and Dam Angling portions of the NPMP that will ensure targeted removals of Pikeminnow are sufficient to meet program goals. These periodic adjustments may include expansion of the Dam Angling program to other mainstem dams and potential increases in the values paid for Pikeminnow caught in the tiered Sport Reward Fishery Program.

Protected areas maps and database

The Council's protected areas database and mapping system is maintained by PSMFC and StreamNet. The addition of this technical detail to F (starting on page 169) would be welcomed. In addition, specific direction to PSMFC as technical lead for the protected areas database could be added on page 175 for clarity. The Council's commitment to supporting maintenance and, as needed, modification, of this database would help clarify future direction of this program.

Habitat Evaluation Procedures (HEP)

The existing HEP methodology and habitat units (HUs) are endorsed in the draft as the preferred accounting methodology for measurement of wildlife habitat mitigation (page 72). Settlements with effected parties are also encouraged to complete settlement and long term agreements to ensure mitigation and provide for monitoring and evaluation. The use of HEP and the resolution of crediting, operational losses, and related issues remains an area in need of clarification, and the recommendation to utilize the Wildlife Advisory Committee is a wise one. The Commission recommends that the Council ask the Committee to consider and make recommendations on the potential future use of HEP well in advance of the close of the current contract (April, 2015). Program direction to complete the transfer and maintenance of the HEP program data records, and provisions for ensuring long term accessibility of all HEP reports, data, and other information, would be a useful addition to the program.

Data management Section

The draft language may not fully capture the complexity of data management in the basin. Progress is being made on developing regional standards for data security, data sharing, and public access to information. The document could focus on prioritizing current efforts in order to increase the likelihood that these will produce the desired outcome, if given enough support and time. We suggest the Council consider the following language for this section (page 102);

Principles

- All monitoring and research data collected under the program must be readily accessible in regionally consistent formats to all interested parties in a timely manner, and it should be preserved beyond the longevity of the individual project.
- The Region should work collaboratively through established forums to continue to refine metrics, indicators, and methods which can be used consistently to measure the effects of the program throughout the basin. High level indicators should be developed for resident fish and for habitat.

General measures

- Bonneville should ensure that data collected is secured in approved environmental data repositories. Repositories should be listed on Monitoring Methods.org, and they must be maintained and searchable beyond the longevity of the project. Historical continuity must be maintained through the StreamNet library and on line StreamNet data store for projects where organizations cannot maintain their own repositories.

- Regional coordination efforts to bring the disparate projects and research and monitoring entities together will be critical. Efforts should focus on developing common metrics and indicators that allow and encourage sharing of data across the region. This includes reasonable quality assurance standards and data sharing agreements in place to protect both data providers and users from possible misuse of data. Efforts such as the Coordinated Assessments project, regionally aligning data associated with broad categories of information (fish abundance, productivity, genetic diversity, geographic distribution, habitat conditions) should be expanded.
- The key to effective data management will be to first identify and define more precisely the specific need or target for results (i.e. high level indicators, population status assessments, recovery goals), by bringing the various managers and researchers together to define the metrics and indicators which they jointly agree best measure progress, culminating in collaborative data management and sharing through regional forums such as StreamNet and PNAMP.
- Public accessibility, searchability, and usability of data should be a primary program focus. Information for the broad categories should be aggregated on centralized websites or managed through interactive linkages to multiple websites where the user experience is the focus. Single, centralized websites may be appropriate for key data types, such as population assessments for listed stocks. Data users should be able to find all relevant metadata, including references, data dictionaries, and data descriptions, linked clearly to the data collected on the appropriate website.
- Bonneville should ensure that all information about anadromous fish is summarized by specific life-cycle stage and made accessible from a single gateway location, with links to relevant repositories and websites. In order for such user-focused improvements to be workable, continued regional investment in data management, database development, data sharing and related projects will be essential. Applications and websites that provide access to the abundance of data collected will require substantial back end development and maintenance in order to work effectively and remain up to date.

Reporting Section

We suggest the Council consider the following modifications to this section (page 102);

Principles

Information acquired under the program will be organized, summarized, and made available to the public through the use of the StreamNet library, StreamNet Data Store, PNAMP, and other regional forums.

General measures


The Council, with the assistance of fish and wildlife managers and others, will develop regionally organized programs and priorities that coordinate the flow of information to inform selected high level indicators that assess the health of the region's fish and wildlife populations. With the help of fish and wildlife managers and regional

coordination bodies, the Council will periodically review and update the high-level indicators report to communicate accomplishments to Congress, the region's governors, legislators, and citizens of the Northwest. When the Council completes its work on biological objectives, it will update its high-level indicators to ensure they are consistent with these objectives. The Council will also encourage coordination of research and monitoring efforts, including the development of common data exchange standards that will inform these indicators as a regional priority.

Wildlife crediting forum. We suggest the Council consider the following (page 182);

Prior to the end of the current HEP contract, the forum should make a recommendation to the Council on the future use of HEP, to include recommendations on the future use of a HEP ledger as a crediting tool, future potential use of HEP protocols as part of a long term monitoring program, and the safe transition of past HEP data and reports to a secure repository where it should remain publicly accessible.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Randy Fisher', with a large, stylized initial 'R'.

Randy Fisher

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