Northwest Power and Conservation Council

November 2, 2006

MEMORANDUM

TO: Committee Members

FROM: Lynn Palensky and Peter Paquet

SUBJECT: Discussion of next steps with provincial objective setting

No Action Requested. This item will include: 1) a brief update on comments received on the Request for Comment on developing provincial objectives; and 2) an update on the progress of the basin-wide effort to review hatchery programs.

Comments on provincial objectives:
At the August meeting the Council released an issue paper on developing biological objectives for ecological provinces under the program and requested public comment on the approach and schedule. The comment deadline was October 31, 2006. We have received four comment letters and expect to see one more next week from the Pacific Northwest Utilities Conference Committee. The commenters include Bonneville, Columbia Basin Fish and Wildlife Authority (CBFWA), and Columbia River Inter-Tribal Fish Commission, and Public Power Council. We expect to have a more focused discussion of the comments at the December meeting.

Update on the progress of the hatchery review:
Peter Paquet will brief the Council on the work and progress of the Hatchery Scientific Review Group. You will also find attached the October 11, progress report from NOAA's consultants -- Jim Waldo's group -- on the overall hatchery review process. The consultants will also be working to integrate the managers into the process and provide some high-level training and background on the work. There are two meetings scheduled next week for this purpose: November 3rd with Oregon managers; and November 6th, with regional managers.

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Hatchery Scientific Review Group
Pacific Salmon Hatchery Reform

Columbia River Hatchery Reform

Progress Report

October 11, 2006

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Introduction

Who authorized this project?

In 2005, Congress directed that an independent review of hatchery programs be conducted in the Columbia River Basin to replicate the Puget Sound and coastal Washington hatchery reform project. The Columbia River Basin Hatchery Reform Project (HRP) will include a collaborative review of how harvest and hatcheries—particularly federally-funded hatcheries—are affecting the recovery of salmon and steelhead fisheries listed under the Endangered Species Act and identify opportunities for change that could provide sustainable harvest that is compatible with conservation goals.

What is the purpose of the Columbia River Hatchery Reform Project?

The Columbia Basin is home to the most extensive salmon and steelhead hatcheries in the world. The hatchery facilities function under obligations to serve interests across six western states and Canada. The Basin is home to approximately 300 populations of salmon and steelhead. Approximately 100 of these are naturally spawning populations. Each of the remaining 200 populations has a hatchery component. A scientifically sound and well coordinated approach to operating hatchery programs is needed to provide harvest opportunities that are consistent with conservation goals.

The purpose of this project is to develop a management approach that allows tribal, state and federal managers to effectively manage Columbia River Basin hatcheries to meet conservation and harvest goals consistent with their respective legal responsibilities. Managers must make a sequence of decisions that a) are based on broad policy agreements and, b) are supported by consistent technical and scientific information about hatcheries, habitat and harvest.

In April 2006, a Progress Report described the initial organizational steps taken by the independent Hatchery Scientific Review Group, the Technical Contractors, and the Facilitation Team to best help the hatchery managers meet their conservation and harvest goals. The report highlighted the critical importance of having the Columbia River Hatchery Reform Project incorporate information from and contribute to other, on-going initiatives in the Columbia River Basin.

Consultations with key basin leaders resulted in the following recommended approach. First, a Facilitation Team is helping with policy development for the HRP with assistance from a Steering Committee of key basin leaders, who in turn help coordinate with the other on-going initiatives. Second, a Technical Team supports the scientific review process and is developing decisions-making tools for managers that are based on performance. This team is working in consultation with the Columbia River Hatchery Scientific Review Group (HSRG). This progress report documents the momentum behind the Columbia River Hatchery Reform Project; briefly describes how the work is moving forward; provides an update on the Managing For Success[1] (MFS) tool described in the April Progress Report; and provides an overview of the results from the first pilot hatchery review of Washington's lower Columbia River production programs.

[1] **For more information about the MFS tool, please visit our website at www.HatheryReform.us**

Organizational Framework

Principles for Moving Forward

Fundamentally, the initiative is designed so that policy makers and funders have confidence that decisions correspond with priorities; that decisions are implemented; and that outcomes are assessed to guide future actions. It is based upon four principles:

1. Clear Objectives: explicit and meaningful articulation of the purpose for each production program.

2. Acceptance of the fact that there is risk from inaction as well as action. It is important to have confidence in moving forward, even in the face of some uncertainty.

3. Ability to regularly and methodically learn and adapt.

4. Development of good decision-support tools.

The HRP is pursuing a series of broad policy agreements among fisheries managers which will be built around a system of scientific and management information about hatcheries, habitat and harvest. Fundamental to the effort will be the decisions of the management authorities in the Basin about the objectives for each salmon and steelhead population and the intended goals of related hatchery programs.

Facilitation and Policy Development

The Facilitation Team, led by Jim Waldo, is helping with policy development for the HRP with the assistance of a Steering Committee of key Basin leaders. The Steering Committee, members of which include managers of hatchery programs in the Basin, will help coordinate with other on-going initiatives in the Basin. The Steering Committee ensures that the Columbia River HRP is an effective, collaborative process. The Steering Committee will also help transition the scientific group's recommendations into a performance-based management system that works as a conduit for the managers to implement reforms. Members of the Steering Committee include:

- Ed Bowles, Oregon Department of Fish and Wildlife
- Kat Brigham, Confederated Tribes of the Umatilla Indian Reservation*
- Claudeo Broncho, Shoshone-Bannock Tribes of Fort Hall
- Jody Calica, Confederated Tribes of Warm Springs
- Dan Diggs, US Fish and Wildlife Service
- Steve Huffaker, Idaho Department of Fish and Game
- Dave Johnson, Nez Perce Tribe*
- Rob Jones, NOAA Fisheries & Co-Chair of the BiOp Remand Harvest and Hatchery Work Group
- Jeff Koenings, Washington Department of Fish and Wildlife
- Guy Norman, WDFW & Co-Chair of the BiOp Remand Harvest and Hatchery Work Group
- Joe Peone, Confederated Tribes of the Colville
- Phillip Rigdon, Yakama Indian Nation

* Invited

What is the project intended to accomplish?

The Steering Committee adopted a strategic work plan that is outlined below.

Purpose:

The purpose of the Columbia River Hatchery Reform Project is to "help put in place a management approach which allows Tribal, State and Federal managers to effectively manage hatcheries to meet conservation and harvest goals consistent with their respective legal responsibilities." The project will not address legal issues or legal mitigation requirements.

The major objectives are to:

- Develop a strategy for managing hatcheries in ways to minimize risks to wild stocks and contribute to meeting conservation goals.
- Develop a strategy for production of sustainable harvest opportunities compatible with conservation goals.
- Develop an ongoing performance-based management system to inform decision making and demonstrate progress towards meeting goals.
- Establish investment priorities necessary to fund the first three objectives.

Major tasks initially include:

- To become informed by and coordinate with other on-going processes and related efforts in the Columbia Basin.
- To conduct a comprehensive review of Columbia River hatchery programs.
- To assist NOAA Fisheries with the Mitchell Act EIS.
- To build the tools necessary for a future performance-based management system.
- To develop options for new hatchery and harvest programs that will meet objectives 1 and 2.
- Develop the information and understanding necessary to support long-term investments.

How will this project interface with other on-going processes in the Basin?

A number of related decisions will be considered or made in other processes. such as US V. Oregon and the FCRPS BiOp Remand. The sequence of these decisions and timely communication with the other processes, within which the decisions will be made, is an important factor for the Steering Committee to consider. The Steering Committee members agreed that, although the project should add value to other on-going processes, it should not be overcome by or explicitly involved in their decision-making. The Facilitation Team is working with members to implement this plan.

The Facilitation Team and the Columbia River HSRG are working closely with other governmental and local parties to ensure that the needs of the decision-makers are incorporated into the project. This coordination includes working collaboratively with staff of the USFWS who are in the process of reviewing their hatchery programs on the Columbia, assisting the Corps of Engineers with the Managing for Success tool as they review their hatchery programs in the Willamette River, and working with NOAA Fisheries to develop alternatives for the Columbia River Mitchell Act Hatchery EIS and with the Northwest Power and Conservation

Council in the development of provincial objectives for the Columbia River Basin Fish and Wildlife Program. A schedule has been developed with the USFWS which allows the data sharing to be efficient and timely. Members of the HSRG will be asked to review the proposed approach at its November meeting.

In addition, a meeting was held with the mid-Columbia utility managers to brief them on the HRP and the HSRG reviews that are underway. All hatcheries programs in the Basin will be reviewed by the Scientists including those managed by public and private utilities. Follow-up from this meeting will include a presentation on the Managing For Success tool and reviewing actions proposed b those entities.

Unlike the Puget Sound and coastal Washington Hatchery Reform Project, the Columbia review includes recommendations related to harvest. Thus, it is important to keep the communities dependent on the salmon resources informed of progress, of opportunities that exist, and of some changes that will have to occur in order to provide for sustainable fisheries over time. With this in mind, an initial meeting with a number of members from the fishing community was recently hosted by the Washington Department of Fish and Wildlife. The meeting provided an opportunity to brief participants on the project, the time frame for completing the reviews, and to discuss where their input will be valuable to the overall process. The Facilitation Team in particular will be looking for other opportunities to visit with interested parties throughout the two-year project.

Managers do have different perspectives on how the HRP can provide value and help them meet stated goals, particularly as they relate to other processes. We will continue to work with the managers to determine how to best accomplish this as the other processes move forward.

The Columbia River Hatchery Scientific Review Group

Who conducts the scientific reviews?

The technical and scientific work for the Project is led by Dr. Lars Mobrand. He is leading a team that supports the scientific review process and development of the analytical tools necessary to implement a performance-based system. The Technical Contractors will work in consultation with a Columbia River HSRG to review over 200 hatchery and 90 wild populations in the Basin.

In order to maintain consistency with the principles developed in Puget Sound and coastal Washington, the HSRG is comprised of some Scientists from that initial Hatchery Reform Project, and some Scientists with more experience in the Columbia Basin. Members include:

• Dr. Lars Mobrand, Chair	• John Barr, Unaffiliated Scientist
• Dr. Trevor Evelyn, Unaffiliated Scientist	• Tom Flagg, NOAA Fisheries
• Steve Smith, Unaffiliated Scientist	• Paul Seidel, WDFW
• Lee Blankenship, Unaffiliated Scientist	• Mike Delarm, NOAA Fisheries
• Dr. Dave Fast, YN	• Paul Kline, IDFG
• Dr. Jeff Gislason, BPA	• George Nandor, ODFW

• Dr. Don Campton, USFWS	• Dr. Peter Paquet, NWPCC

Because the Columbia River HRP is an independent review of hatchery and related harvest programs, the Scientists on the HSRG who work for a particular agency are responsible for evaluating the scientific merits and are not to represent agency policies. The members' biographies are available on the project's web site.

It is important to note that the independent Scientists' role is to provide information to the hatchery managers in order to allow policy-makers to make scientifically sound policy decisions. It is the managers' responsibility to consider the Scientists' recommendations and ultimately set policy.

The HSRG has laid out a schedule that will allow it to review the hatchery and wild populations in the Basin within a two year time frame. It has divided the Basin into 11 review regions, representing local watersheds. All hatchery populations will be reviewed in each region, including those that may be managed by public and private utilities. The Scientists are also developing a sophisticated tool to help with their analysis referred to as the "Managing for Success" (MFS) tool.

Prior to reviewing programs in a given region, the Technical Team gathers and verifies the data with the hatchery Program Managers. The information and current goals for a population used by the Scientists in the review are gathered from the co-managers, from previous studies and documents prepared by the co-managers such as Hatchery Genetic Management Plans (HGMPs), Recovery Plans, etc., and the ESA recovery goals for a particular population as established by the Technical Review Team (TRT) The HSRG then looks at the current program to determine if it is managed on a scientifically sound basis. It also considers whether or not the hatchery populations are affecting conservation goals for wild stocks. The HSRG may find a hatchery program is being properly managed, or find that reform is needed in order to meet conservation and/or harvest goals. The HSRG may also recommend that a program be terminated.

There will be a number of workshops to show the managers how the MFS tool works prior to the reviews. The Scientists will tour the hatchery facilities in the area, deliberate on a set of options that could help the managers meet their harvest and conservation goals, and informally present their recommendations to the managers. The Scientists will not address legal issues during their reviews. After discussions with the managers, the Scientists will develop a set of formal recommendations that will include consideration of the managers' comments. Once the 11 regional reviews are completed, the HSRG will "roll up" the results in the entire Columbia River Basin to determine if additional reforms are needed in order to meet conservation goals, and harvest goals that are consistent with those conservation requirements. The final HSRG report will be forwarded to Congress and be made available to governments, interested parties and the public.

Hatchery Regional Review Schedule

This two-year project is on a very fast track in order to allow other very complex processes underway in the Basin to benefit from the outcomes of the scientific work. It will be very important to maintain communications with these other processes, as well as to collaborate with the action agencies and to stay apprised of their goals and concerns.

The Project Team has modified the schedule for the regional scientific reviews on the Columbia River a number of times. It has shifted based in part on other processes as well as information we have gleaned from the managers and funding agencies in the Basin. Currently, the regional reviews are scheduled as set forth below. The schedule is also maintained on the project's web site.

July 2006	Lower Columbia, Washington
September 2006	Columbia Estuary, Washington
November 2006	Lower Columbia – Sandy and Columbia Estuary, Oregon
January 2007	Columbia Gorge, Washington and Mitchell Act Programs in Region 7
April 2007	Columbia Gorge, Oregon
May 2007	Willamette
June 2007	Columbia Cascade
August 2007	Columbia Plateau, Oregon
October 2007	Columbia Plateau, Washington
January 2008	Mountain Snake – Clearwater/Mountain Snake – Salmon
March 2008	Blue Mountain

What did we learn from the initial Pilot Review?

The HSRG conducted its first regional review in the Lower Columbia on the Washington side of the river (regions 1 and 2) in July, 2006. It was a "pilot review" and was designed to help guide how the remaining reviews will be conducted. There were 40 salmonid and steelhead populations (hatchery and wild) in this region. While it is clearly premature to reach any conclusions, a few observations based on this pilot review are noteworthy. First, it appears that there is significant potential to reduce risks and increase benefits programmatically, by resizing hatchery programs and improving broodstock management (composition of hatchery and natural fish in the hatchery and on the spawning grounds), and operationally, by upgrading aging facilities to meet state and federal environmental requirements and accommodate best culture practices. Second, since hatchery origin fish can support higher exploitation rates than wild populations, the ability to harvest hatchery fish at a higher rate than wild will both reduce the potential adverse effects of too many hatchery fish on the spawning grounds and increase the value of the hatchery production to fisheries. Finally, it is also abundantly clear that improvements in quality and quantity of habitat will both increase benefits and reduce risks associated with hatchery programs. Improvements of habitat in the lower Columbia is particularly important to allow recovery of listed stocks, while at the same time supporting harvest through large hatchery programs.

During the last day and a half of the review, the HSRG shared their comments with the managers and received feedback on recommendations to better meet conservation and harvest goals in this region. Based on the review, the HSRG developed a number of observations on the programs in this region that were shared with the managers.

Overall Observations from this initial regional review are:

1. Focusing on these 40 programs only (i.e. before looking at possible constraints presented by other populations), it is possible to achieve conservation and maintain harvest levels by modifying the programs to become either properly

integrated or segregated management techniques[2] . However, costs may be a factor.

2. If programs are altered, they could contribute substantially to attaining Viability of Salmonid Populations (VSP) criteria (i.e. abundance, productivity, spatial structure, diversity) related to recovery of the ESUs. In some cases, hatchery and harvest options are insufficient to meet VSP criteria because of habitat limitations, or constraints of existing harvest regimes under the Pacific Salmon Treaty.

3. Reintroduction programs must be carefully planned and executed (i.e. incorporate clear goals, assumptions, monitoring). The availability of the MFS tool (which incorporates planning, actions and outcomes) will greatly aid these important efforts.

4. Current "integrated" programs are not properly integrated.

5. Segregated programs require identification of hatchery fish so that contributions to natural populations in excess of 5 percent will be avoided.

6. Recent management decisions have attempted to convert "segregated" programs to "integrated" programs. Timely and effective transition is one of the principle management challenges in this area.

7. Integrated programs must be able to identify both natural and hatchery origin fish when they return to the spawning grounds or hatchery.

8. Effective means are needed to remove excess hatchery fish from the spawning grounds (e.g. effective weirs, racks, and selective harvest).

9. Natural stocks cannot sustain the same level of harvest as hatchery stocks. Therefore, current harvest production cannot be maintained at recommended PNI and meet harvest objectives without a differential harvest rate for hatchery fish.

In general, the pilot review was quite successful. The Scientists worked through the programs with teams of two, each assigned to certain populations. The full group then met to review the recommendations of the teams.

The Scientists recommended, in some cases, that the managers develop a two-step broodstock integration strategy to achieve harvest objectives on a broad scale, while meeting the conservation or recovery needs at the watershed level.

The need for habitat has been recognized as being critical to the recovery of endangered fish populations. It is also important to have scientifically defensible hatchery programs and to ensure predictable and sustainable fisheries in the long-term. The initial

[2] For more information regarding properly integrated or segregated hatchery programs, please visit our web site at www.HatcheryReform.us Under the HSRG Document Library scroll down to Technical Discussion Papers.

analysis and potential options for the hatchery programs in this region made that need quite evident.

A great deal was learned from the HSRG's pilot review. The tools developed by the Technical Contractors needed some corrections in order to allow the Scientists to develop recommendations. Managers will need to be briefed on how to use the tools prior to participating in reviews in their regions. Visiting the hatcheries in the region prior to reviewing the programs is essential to familiarize the Scientists with facility limitations and/or opportunities. Finally, developing options for the Hatchery EIS alternatives was time consuming. The alternatives can be produced more effectively by the Technical Contractors rather than through the HSRG's regional review process.

Continuing to Build the Managing for Success Tool

One of the primary focuses of the Technical Contractor's work during the initial phases of this project is to enhance the tools used to assemble, analyze and review data and information. Harvest, habitat, hydro, and hatchery actions don't affect salmon populations independently. The effect of a specific hatchery program, for example, will be different under different habitat conditions. It is therefore necessary to track assumptions for all "H's" simultaneously.

The All H Analyzer (AHA) tool is used in this process to keep track of these assumptions and to predict the effects on conservation and fisheries as any of them change. Populations are not independent, they interact, genetically and ecologically in the environment they share. The Managing for Success (MFS) tool is designed to help managers, decision-makers, and the public keep track of assumptions across "H's" and among populations throughout the region. The MFS tool includes a database that captures data, assumptions and analytical results of different scenarios, and it includes a set of tools for managing and exploring this database. One of the tools in the MFS system is the "roll-up", which allows the user to view the cumulative effects of all H's on all populations and then from this big picture view, explore underlying details ("drill down" capability).

These tools are evolving through use in the HSRG review process and through feedback from managers, decision makers, and the public. The MFS is not a new, or additional, information system, rather it is a suite of tools that adds value to existing data. It is non-proprietary, and accessible without cost. The system is currently being expanded to meet a broad variety of needs. The current work plan calls for the MFS system to be able to generate the fisheries analysis portion of the Mitchell Act DEIS by the end of the year.

The MFS prototype is a web-based system that focuses on three key areas: plans (to meet goals), actions, and outcomes. First, it provides managers with planning tools to develop and display goals and specific objectives for hatcheries, habitat, harvest, and hydro. Second, managers can describe and track progress of actions intended to achieve goals, including who is doing what work and who is paying for it. Finally, the MFS data system allows managers to report progress towards goals and specific objectives for all H activities as they monitor actual outcomes and results over time. Together, these three functions allow managers to adapt their practices and implement modifications as they learn what effect their actions had on individual populations.

In the Columbia Basin, the MFS data system is being further developed from the initial prototype to a fully functional web-based decision support system. This system will be specifically designed to inform management towards an effective and coordinated use of all strategies (habitat, harvest, hatcheries, and hydro) to meet conservation and harvest goals. It will consist of a set of modules that support planning, action implementation, and outcome tracking for the All H strategic elements. It will also contain current status and goals for each fish stock. Goals will be identified at two time frames: short- and long-term. Goals for each term will be provided by the co-managers and will likely change based on stock importance, funding availability, and other management concerns. These efforts are being coordinated with on-going regional data management efforts such as the Northwest Environmental Data Network (NED)

The desired outcome of a MFS system is for managers to be able to:

- Identify and communicate current status and goals for conservation and harvest for each stock.
- Develop and implement a management system that allows for future planning.
- Inform their decisions, predict the value of taking certain actions, track actions and implementation measures, and aid in evaluating results.
- Establish an effective adaptive management decision-making process by allowing incorporation of new information and science on a real-time basis.

NEPA Technical Support

The fisheries portion of the Mitchell Act NEPA process is supported by this project through the following work elements: detailed refinement of the alternatives, assembly of baseline information about all salmon and steelhead populations in the Columbia Basin in sufficient detail for the final work element, assessment of expected impacts on conservation and harvest under the different NEPA alternatives.

The gathering of baseline data will be conducted in two steps. First the Technical Contractors assemble information in existing planning documents and accessible databases. Then this information will be reviewed and updated by the co-managers in each region. A critical part of this review is to document data sources and identify uncertainties.

Information collected and analyses performed will rely heavily on the MFS tools and database. This will not only improve efficiency and consistency of the analyses, but it will also make it possible to update results quickly if/when new information becomes available or additional alternatives are included. This latter point is important since the preferred alternative brought forward in the EIS may be different from any of the initial ones.

Communications

The project web site is now available for public access. The web site (www.Hatchery Reform.US) will serve as the central communication hub and information repository for the data developed by the HSRG as well as the policy team. The site offers the latest technical papers

prepared by the Columbia River HSRG and the Puget Sound and coastal Washington HSRG. It contains the technical tools, progress reports, HSRG biographies, and other information.

The web site has a secure site that allows the Scientists to interact via the web as they carry out their work on enhancing the tools and preparing recommendations for hatchery and harvest reform for salmon and steelhead populations in the Basin.

Summary and Next Steps

The goal of the Columbia River Hatchery Reform Project is to build upon and foster the other on-going initiatives in the Columbia River Basin while helping managers begin to assemble more concrete information about harvest and hatcheries. This Project will involve significant consultation with basin leaders and Scientists in the days and months ahead.

The Columbia River Hatchery Reform Steering Committee has already provided assistance in helping the Facilitation Team understand where and how the Hatchery Reform Project can best interact with these other processes and provide value. Their policy and strategic advice is one of the keys to ensuring this project is successful. In addition to reviewing programs, the Steering Committee encouraged the Project Team to help them communicate the hatchery changes and reform measures that are underway and what benefits these actions will have. The Communications Strategy developed by the Project Team, will ensure that occurs. The project web site, which is now up and running, will also help ensure that broader audiences have access to the information developed through this project.

The HSRG's initial pilot review was successful because it provided solutions for the managers to implement reforms, while serving as a "test" to help us determine if the overall approach to the review process would work. Glitches in the process were fixed, and the HSRG is anxious to begin reviewing the remaining regions over the next two years.

The tools used by the Scientists to make reform recommendations have been greatly enhanced and are working as intended – to help the managers make informed decisions about the management of salmon and steelhead populations in the Columbia Basin. Over the next several months, the Technical Contractors will be developing the harvest component of MFS.

Finally, the Project Team has established its web site and will be working over the next period of time to implement a communications plan with the Tribal, State and Federal managers. A communications flow diagram is attached which describes how the HSRG and the Steering Committee will interact with others in the Basin.

For questions or comments, please contact:

Jim Waldo (253 620-6541) or Bj Mirk (253-620-6422), Gordon Thomas Honeywell. .

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For more information about the Columbia River Hatchery Reform project, please visit our website at *www.HatcheryReform.US*.

Attachment 1 - Discussion of next steps with provincial objective setting

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