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August 2, 2007

## MEMORANDUM

**TO:** Council Members

**FROM:** Lynn Palensky

**SUBJECT:** Program Amendment Preparations

### PURPOSE:

I will provide an update on staff preparations for the upcoming program amendment process in the areas of the Science-Policy Exchange and staff-led summaries. Brian Lipscomb will then give a brief update on the Columbia Basin Fish and Wildlife Authority's work in preparation for program amendments, and Peter Paquet will provide a brief update on the work of the Ad Hoc Group on Biological Objectives.

### BACKGROUND:

#### Staff-led summaries

At the July meeting, staff provided Council members with a "working list" of topics for summary analysis to help sharpen and inform issues for program amendments. We continue to gather information to assess the status of work related to each topic so that it will be useful as guidance to inform program amendments. Table 1, beginning on page three lists the topic areas and work status for each. The ISAB is taking the lead on some of the issues, and CBFWA, through its various committees and workshops, will also help sharpen issues. Staff will continue to work with Council members to refine this list to ensure that we are covering the appropriate issues.

#### Science-Policy Exchange

We continue to make progress on planning the science-policy exchange. An electronic "save the date" card went out this week and event information is posted on the website. The next steering committee meeting will be on August 9<sup>th</sup>. Issues on the agenda for the next meeting include a

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check in on format, speakers and working hypotheses; preparing and compiling relevant written material for attendees to reference as they wish ahead of the event; and finalizing the specifics of the mainstem session. Attached is the most current Program for the exchange, however, it is still *draft* and we welcome your comments.

**Table 1. Program Amendment -- topic area summary status**

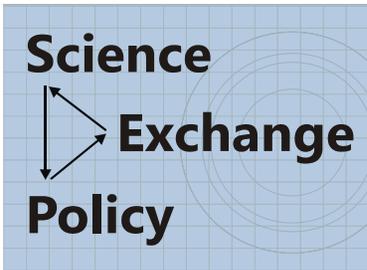
	<b>Amendment Topics</b>	<b>Status of issue(s) development (as of July meeting)</b>	<b>August Update</b>
1	Climate change	Climate change report complete.	None
2	Human population	ISAB Report complete and presented to the Council in Bonner's Ferry. Report to Council at the June meeting. Report found at: <a href="http://www.nwcouncil.org/library/isab/isab2007-3.htm">http://www.nwcouncil.org/library/isab/isab2007-3.htm</a>	None
3	Resident fish substitution, use of non-native species and invasives	ISAB working on report: invasive invertebrates (including mussels); At the July Council meeting, Stephen Phillips (PSMFC), Paul Heimowitz (USFWS) and Scott Smith (USGS) briefed the Council on aquatic invasive species, with an emphasis on zebra and quagga mussel efforts on prevention, early detection and rapid response plan.	None
4	Invasive species	Combine with Topic #3	None
5	Water quality and toxics	None	At the August Council meeting, the new EPA RA Elin Miller will brief the Council on EPA's current water quality strategy for the Columbia and Snake rivers with an emphasis on contaminant monitoring; also, Deb Marriott (LCREP) and her staff will brief the Council about their Lower Columbia River contaminant studies.
6	Artificial production (includes performance, O&M, purpose, captive brood)	The ISAB Supplementation Work Group briefed the Council in June on progress of their report that to describe the problem, definition and design for future research on supplementation to answer questions about fitness of hatchery fish. Report found at: <a href="http://www.nwcouncil.org/news/2007_06/2.pdf">http://www.nwcouncil.org/news/2007_06/2.pdf</a>	None
7	Monitoring and evaluation	Staff work would involve updating the monitoring plan to broaden and include components from BiOp if available. This would include additional information on Intensively Monitored Watersheds, tagging and high-level indicators. Staff continues to develop the habitat data component for use in the Status of the Resource Report.	None
8	Operation and Maintenance (O&M) for	Work is underway by the IEAB and wildlife managers on the topic of wildlife land O&M. There is a need to define	The IEAB is working on developing recommendations for the Council and those will likely be ready in September or

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	land and habitat ( <i>hatcheries would be covered primarily in the artificial production piece</i> )	program operation and maintenance activities, determine what activities are appropriate for program funding and also looking at alternative ways to fund long-term commitments.	October.
9	Lamprey and sturgeon	Technical forum on Lamprey tentatively scheduled for late August. The Council should look to this group to summarize issues and look at creative funding sources. Sturgeon: The Council should also look to the managers to assist with identifying issues related to the very different sturgeon populations.	Lamprey Technical Work Group meeting scheduled for August 7.
10	Tagging	Technical Report on Tagging Technologies is now complete. Staff will use this to prepare for the ISAB's review in September.	The ISAB began working on report in July.
11	Mid-level biological objectives	An Ad hoc group is working to describe the potential use and benefit of developing biological objectives at a province or ESU scale, and how those objectives might be expressed.	Next meeting scheduled for August 9th. The group has meetings scheduled through November.
12	Subbasin planning	John Shurts spoke with Council members at the June meeting regarding an approach for treatment of subbasin plans in the amendment process. That being, focus on defining a <i>process</i> for future use of and updating plans rather than amending existing plans.	None
13	Implementation provisions	Issues include: 1) report deadlines, 2) project selection 3) provincial review, 4) funding priorities, 5) coordination with other regional programs, 6) project management, 7) governors report, 8) land and water, 9) ISRP, 10) ISAB, ISRP and ISAB admin and membership, and 10) reporting accomplishments.	<ul style="list-style-type: none"> <li>• Mark Fritsch will brief the Council again in August on current proposal for the next fish and wildlife project solicitation process.</li> <li>• The Evaluation of the Columbia Basin Water Transaction Program is currently underway and will be summarized to the Council in September or October.</li> </ul>
14	Data Management		Data framework and budget will be presented to Council in September or October.



**September 12 - 13, 2007**

Northwest Power and Conservation Council  
Portland State University, School of Business  
Auditorium Room 190  
1111 Broadway, Portland, Oregon

### Wednesday

#### **Session 1: Habitat**

8:00 - 8:20: Welcome and Overview

8:30 - Noon

- Intensively Monitored Watersheds
- Habitat Strategies
- Nutrient Enhancement

#### **Session 2: Mainstem**

1:15 - 5:30

- Snake River Fall Chinook Life History Diversity
- Mainstem Passage Survival Rates

### Thursday

#### **Session 3: Estuary**

8:00 - Noon

- Survival estimates comparison of lower river and above Bonneville Dam
- Life History Diversity
- Energy flow
- All ESUs are represented in the Estuary

#### **Session 4: Ocean**

1:15 - 5:00

- Coastal and Ocean Ecosystem
- NE Pacific Basin — tagging data

## **Opening remarks and Welcome- Chair Tom Karier**

### **Overview of the S/P Exchange – Rick Williams**

**8:05-8:20**

- Exchange overview and logistics
- Common threads for session: climate change and increase in human population

## **I. Habitat Session**

**September 12,**

**8:20 a.m. to noon**

Intro– Rick Williams (10 minutes)

This session's three focal areas are:

- Intensively Monitored Watersheds
- Habitat Strategies
- Nutrient Enhancement

### **Intensively Monitored Watersheds:** (Bob Bilby and Pete Bisson) 70 min

What is known now about IMW's, what we need to research, and what we need to monitor. Can we get closer to being able to link habitat actions to species population response?

Discussion

Break

### **Habitat Strategies:** (Susan Hanna and Peter Paquet) 70 min

What strategies are most effective in the face of increased human population growth and climate change? How can we prioritize actions and best habitats for protection and restoration (quantity, quality and connectivity)? Importance of strongholds and refugia.

Discussion

### **Nutrient Enhancement:** Overview by Bob Bilby. (Possible speakers: Scott Hinch, Bruce Ward, Sue Ireland, Matt Mesa) 55 min

- Where enhancement projects are occurring
- Effectiveness
- Loss of ocean-derived nutrients affects habitat quality
- Reservoir sinks extracting nutrients.

Discussion

Lunch 12:00 – 1:15 p.m.

**II. Mainstem Session:**  
**September 12<sup>th</sup>, 2007**  
**1:15 p.m. - 5:30 p.m.**

**Introduction:**

Rick Williams (10 minutes)

**Overview:** Tom Poe?

**A. Snake River Fall Chinook Life History Diversity (2 hours)**

Speakers: Billy Connor (w/Ken Tiffan, Bill Muir), Battelle NW and a representative from FPAC

- Focus on the most recent science information on life history diversity (not river operations) of this ESU, particularly the yearling life history (over-wintering behavior):
- Here is what we know, finding and/or studying now; and what is the context and importance of this life history to the overall health and productivity of the ESU?
- New science should guide how these fish are reared and managed
- FPAC rep on the management implications of science information

**Discussion issues:**

- Smaller fish appear to be over-wintering in mainstem reservoirs. Should we change the current management of the hydrosystem for these fish? If so, how?
- What are the research and monitoring priorities and key uncertainties that need to be addressed?
- What are the management implications and actions that may be needed, including:
  - Transport operations
  - River operations, including those affecting water temperature
  - System configuration changes, i.e., are new temperature control facilities needed? If so, at which projects?
  - Hatchery practices and density dependence issue

Break

**B. Mainstem Passage Survival Rates (2 hours)**

**Overview:**

Rick Williams (5 minutes)

Speakers: John Williams, Steve Smith, Chris Peery, USGS? and FPAC representative

**Focus:** Current juvenile and adult salmon survival rates through the hydrosystem  
Start with a graphic (by species) of each dam's current juvenile and adult survival rates.

Presentation and summarization of following types of survival information:

1. Acoustic, radio tag and PIT-tag juvenile fish survival estimates, i.e., dam, reach and SARs
2. Recent PIT-tag adult conversion estimates as an analog to radio tag survival rates

3. Reach survival comparisons
4. What is the new science on post-FCRPS pre-spawning mortality?
5. SARs: Provide historical record (back to 1960's) of escapement, ocean conditions and sequence of mainstem dam development to provide context and background for adult returns of Spring Chinook, Steelhead, fall Chinook and Summer Chinook

**Discussion issues:**

- What are the historic and current survival rates at each dam?
- Which dams are currently meeting proposed hydro performance standards and which aren't? How much more survival improvement can we expect and how much more will it cost?
- Have we reached a point of diminishing returns?
- If not, how should we change the system configuration of the hydrosystem to improve juvenile and adult survival rates?

What more do we need to know and where?

### **III. Estuary Session**

Sept 13<sup>th</sup>, 2007

8:00 am - noon

#### **Introduction:**

Speaker: Rick Williams (10 min)

Set context: Big picture for hydro system, research needs, climate change, and human population

#### **Estuary Overview:**

Speaker: Colin Levings (15 min)

Historical overview of hydrographs and plume structure, habitat loss, gain of over water structures.

Four focal areas: Speaker: Dan Bottom, Scott McEwan, and Colin Levings (65 minutes)

#### **1. Survival through the estuary is lower than generally thought**

- Compare tagging estimates for yearling and sub yearling Spring Chinook and maybe Steelhead for 2005, 2006 and some for 2007 (by September). Focus on the observation of causes of mortality.

#### **2. Life history diversity is an important attribute to achieve and sustain**

- Predation (avian and fish), life history diversity, hatchery practices, habitat and relationship between population stability and life history diversity.

#### **3. Energy flow to salmon is through tidal marshes**

- Energy flow to aquatic species comes from emergent vegetation -- producing vegetative debris. Estuarine tidal marsh areas have been severely reduced.
- Discussion (short)

Break

#### **4. All ESU's for salmon use estuarine habitat as refuge**

- Information to date is derived from the lower 30 or so miles of the river and the additional 100 river miles up to Bonneville needs to be assessed to demonstrate usage.

#### **5. Current restoration activities**

- Context with the historical perspective and the most beneficial (and realistic) restoration activities for the future.

#### **6. Recap:**

- Summarize uncertainties, and identify policy implications

Discussion

Lunch 12:00 – 1:15 p.m.

**IV. Ocean Conditions Session**September 13<sup>th</sup>, 2007

1:00 pm - 5:00 pm

**Introduction:**

Rick Williams (10 min)

Introduction on the importance of the ocean in our management actions.

**Coastal/Ocean Ecosystem: (90 minutes)**

Speakers: Ed Casias and Bill Pearcy

- Ocean-entry timing
- Plume Research – changed hydrograph
- Ocean productivity and variability (monitoring of the California current) and the hydrosystem affects it (including predator relationships)
- Climate Change and life history

Discussion

Break

**NE Pacific Basin (focus on tagging data): (90 minutes)**

Speakers: Kate Meyers and John Ferguson and Nate Mantua?

- Distribution and migration: coded wire tag data and genetics (DNA) different stocks and ESUs
- POST System data
- Review of comprehensive tagging strategies (new technologies; technologies appropriate for ocean; and application to management)

Discussion

Wrap-up and next steps (Rick Williams) 5 minutes