

Ocean and Plume Science and Management Forum (REVISED)

October 24th, 2013

Northwest Power and Conservation Council Office

Large Conference Room

851 SW Sixth Avenue, Portland 97204

Participants: Chair Phil Rockefeller (NPCC), Patty O'Toole (NPCC), Jim Ruff (NPCC), Dan Rawding (WDFW), Stacy Horton (NPCC-WA), Jeff Allen (NPCC-ID), Kerry Berg (NPCC- MT), Raquel Crosier (NPCC-WA); please see list of participants (Attachment).

9:00- 9:30am

Welcome and introductions – *Phil Rockefeller, NW Power and Conservation Council*

Phil introduced himself as the Washington Council Member to the NW Power and Conservation Council and as the appointed Chair of the Ocean Forum. He thanked everyone for their participation and reiterated that their expertise was important to the success of this Forum. He asked for short introductions from each of the Forum members; name, employer and expertise in ocean science and/or Columbia River fisheries management.

- Doug Olsen (USFWS) is managing the federal fish hatcheries in CRB.
- Liz Gaar (NMFS) is the West Coast Region policy advisor in Protected Resources for NMFS.
- Catherine Corbett (LCREP) is chief scientist at LCREP; estuary is nexus between fresh water habitat and ocean.
- Ben Zelinsky (BPA) was lead for ocean projects at BPA and is interested in ocean issues.
- Dan Rawding (WDFW) is Columbia River project lead for WDFW. Wants to better integrate some of mgt decisions in freshwater with some of ocean/plume RME.
- Rich Carmichael (ODFW) is interested in how ocean/plume RME information could be used in freshwater salmon and steelhead harvest and hatchery management.
- Lynne Krasnow (NMFS) is assisting Liz Gaar; interested in linking ocean information with FCRPS BiOp implementation in next five years.
- Marc Trudel (DFO) does research on marine ecology of salmon; wants to better understand what type of information and research the salmon managers need from ocean scientists.
- Steve Marx (Pew) works on ocean issues, such as forage fish issues, and the linkages to salmon management.
- Kurt Fresh (NWFSC) is the manager for ocean ecology group at the Science Center and agrees with Marc Trudel's comments.
- Bo Downen is with the Public Power Council and is interested in tracking progress of the Ocean Forum.

Patty added that some participants were not able to make it to the first meeting but have committed to being members of the Ocean Forum, including Dave Fast of the Yakama Nation Fisheries and Lawrence Schwabe of the Grande Ronde Tribes. She suggested that if members

had additional recommendations for participants, they were welcome to refer those to her. Marc Trudel suggested that participants submit a short biography and that those be distributed to the group to help them become more familiar with one another. The group agreed that this would be helpful. Council staff will collect, compile and distribute everyone's bios to the group.

Review Forum charter and expectations for the Forum – Patty O'Toole

Patty distributed and discussed the signed Charter for the Forum, including the objectives and scope of Forum activities. The Charter, which was passed by the Council in August, requires that we have a Chair and a Vice Chair, so we will need to appoint a Vice Chair. It also requires that we keep a record of the meetings. Objectives identified for the Forum include: a) identify key data needs; b) identify the critical uncertainties that must be addressed to answer management questions; c) provide opportunities for information sharing; and d) identify management applications. The signed Charter will be posted on the Ocean Forum page of Council's web site.

9:30-9:40am

Fish and Wildlife Program Amendment Process – Patty O'Toole and Phil Rockefeller

Phil discussed the Council's F&W Program Amendment process and explained briefly the connection between that process and the Ocean Forum. He explained that the Council has received hundreds of recommendations to amend the Program and is currently welcoming comments on recommendations received. Phil then explained some of the recommendations received that pertain specifically to the Plume and Nearshore Ocean. Forum discussions may lead some participants to reconsider Program recommendations and submit comments on recommendations before the Nov. 20th deadline. The following is a brief summary of some of the recommendations we received related to the plume and nearshore ocean environment.

“The Council received recommendations during our Program Amendment Process to acknowledge the importance of the plume and nearshore ocean as critical habitat in the lifecycle of anadromous fish. Various entities recommended the Program support ongoing research and monitoring in order to understand; the effects of ocean and plume conditions on anadromous fish, limits to restoration potential in the CRB due to variability in ocean conditions, and to predict future conditions. Some specific research supported in recommendations included; the collection of data needed to optimize forecasts of adult returns, research on forage fish habitat needs and food-web impacts in the estuary and nearshore ocean, experiments on variable release times to measure stock specific growth in the ocean vs freshwater. Broad support was expressed for the Council to continue to sponsor an ocean and plume forum to enhance collaboration and information sharing between scientists and managers. And The Council did also receive one recommendation to limit inclusion of measures in the ocean and plume.”

9:40-10:30am

Management Questions – Patty O'Toole and Phil Rockefeller

Phil and Patty reminded the group that a set of draft management questions were distributed to all Forum Members prior to the meeting. Patty explained that, as a starting point for discussion, Nancy Leonard from the Council pulled out some of the relevant management questions from the 2009 F&W Program. She explained that these management questions are not explicitly identified in the 2009 Program but instead are implied management questions. Patty requested the group's input on revisions to the management questions below.

- A. What ecosystem functions need *protection, restoration, enhancement or reconnection* within the estuary and ocean plume due to impacts from actions within the Columbia River mainstem?

Protect and enhance ecosystem functions in the Columbia River estuary and near-shore ocean discharge plume to mitigate for hydrosystem impacts. (F&W Program, p 13)

- B. What is the relationship between estuary ecology and near-shore plume characteristics and how are these impacted by hydrosystem flow regulation?

Increase the understanding of the relationship between estuary ecology and near-shore plume characteristics and the productivity, abundance, and diversity of salmon and steelhead populations as impacted by hydrosystem flow regulation. (F&W Program, p 38, 32, 13)

- C. What are the near ocean/ plume effects on population status towards improving, protecting, and mitigating anadromous focal species?

(Fish Tagging Forum management question, modified slightly to better fit F&W Program mandate)

- D. What is the impact of in-river and ocean harvest on stock composition, stock-specific abundance, escapement, catch, and age distribution?

The Council recommends the following practices in harvest management and encourages the region's fish and wildlife managers to adopt them: (i) Monitor in-river and ocean fisheries and routinely estimate stock composition and stock-specific abundance, escapement, catch, and age distribution. (F&W Program, page 20)

- E. What is the survival rate of salmon and steelhead in the lower Columbia River, estuary, and marine environment?

"The Council supports strategies that protect, enhance, and restore critical habitat and spawning and rearing grounds in the estuary and lower Columbia River. Such strategies include continued evaluation of salmon and steelhead migration and survival rates in the lower Columbia River, the estuary, and the marine environment." (F&W Program, p 32)

- F. How can the Council distinguish ocean effects on salmonids from other effects in freshwater?

"The Council supports M&E actions which recognize and take into account the effects of ocean-related mortality from that caused in the freshwater part of the salmonid life cycle." (F&W Program, p 31.)

Discussion of Management Questions:

The group discussed the Ocean Forum's scope and seemed to be in agreement that the group's focus should be on the plume and nearshore ocean, and while there are certainly linkages to the estuary and ocean, those should be considered outside of the scope of the Forum. The group discussed the limitations of the F&WL Program under the Northwest Power Act and how that plays into the scope of this group and the research priorities that the group will formulate.

The conversation led to both human and naturally-caused impacts on plume conditions as well as the need for information on independent effects, synergistic effects and cumulative effects. Members also differentiated between indirect environmental factors limiting salmonid survival and direct factors such as the size of fish and time of release. Everyone decided that since there was a logical hierarchy to the management questions, they should be re-formatted as a series of questions that begin broadly and become more specific. They also discussed the need to consider that there may be thresholds for management changes.

During this discussion the group produced the beginning of a revised set of management questions, included below:

Purpose: Identify the interaction and effects between/ of ocean (nearshore, plume) conditions and river management on Columbia River anadromous fish survival and use this information to evaluate and adjust inland actions.

1. How have ecosystem (freshwater, plume, estuary, nearshore) functions and processes been altered? Types of functions include; habitat characteristics (physical, biological and chemical) food web, predator-prey relationships, ocean acidification/hypoxia, temperature.
2. What has caused these changes/why are they occurring? (natural, man-made, short/long term)?
3. What has been the effect of these changes?
4. What ecosystem functions need protection, restoration, enhancement or reconnection within the estuary and ocean plume due to impacts from actions within the Columbia river mainstem? (*protect and enhance ecosystem functions in the Columbia River estuary and nearshore ocean discharge plume and mitigate for hydrosystem impacts.* (F&W Program, p13)
5. What actions can be taken to address these?

Break

10:45- 11:45am

Review and discuss the list of critical uncertainties – Patty O’Toole

Patty explained that during the Ocean and Plume Workshop last February, the group developed a list of critical uncertainties. She explained that the goal for the rest of the day is to work through those critical uncertainties and evaluate their fit with the management questions and discuss how they might be prioritized. She suggested that the Forum may want to consider finalizing the management questions before getting into the task of prioritizing uncertainties and that the idea for this agenda item is to identify which of the key uncertainties have already been addressed with RME, and where there may be gaps that have not been addressed.

Rich suggested the group should first identify how ocean and plume information is being used right now by salmon managers. Phil suggested the salmon managers could assist the Forum in answering that question at an upcoming Forum meeting. Doug pointed out that we will need to have something specific for managers to react to at the meeting. Catherine suggested the ocean/plume scientists should also be prepared to address how their research could be utilized by the managers in CRB as a two-way exchange of information. Dan wants to know: what will be the final work product from the Forum? Will it be a written report to the Council? If so, the sequenced list of management questions could serve as an outline. Lynne noted the FCRPS BiOp

includes a section on re-scoping the estuary and plume activities, including several broad objectives (see BiOp section 3.2.4.2 on p. 324), including the use of ocean indicators by managers and the need for life cycle modeling information. Therefore, how could these specific management questions help scope future RME efforts under the BiOp? Catherine suggested that the ocean researchers could be included to present their research results as part of the next biannual LCREP estuary science conference, which is scheduled for May 2014 in Astoria. Liz stated that NMFS is working on a recovery plan for four listed interior SR species now, which will include an ocean module. A draft recovery plan is scheduled to be released in January 2014, including key information and RME needs for the ocean. Marc will look into the DFO process for scientists to share info and advice to managers; it could assist the Forum in its discussions. Ben said that the Forum has an opportunity to lay out a sequenced path to address management questions related to the ocean and plume.

Out of this conversation came an agreement that before they could rank the critical uncertainties they first needed to finalize the management questions, then link uncertainties with the appropriate management question. The group also discussed some additional questions to consider when ranking critical uncertainties; such as What are the priority management questions? Which questions are methods, which are testable hypotheses, and which are broader foundation questions? How answerable are each of the uncertainties?

11:45am-12:05pm

Next Steps – *Phil Rockefeller, Chair*

Phil asked the Forum Members make closing remarks. Then, the group took some time to develop a list of next steps:

1. *Next meeting:* The Forums next meeting will be via phone in early December 2013. Phil suggested holding quarterly meetings during the Fish & Wildlife Program Amendment process.
2. *Management Questions:* A subgroup (Dan Rawding, Rich Carmichael, Kurt Fresh, Jim Ruff) will meet on November 27 to revise the management questions document. They will get a revised draft to Patty shortly thereafter and she will then distribute the document to the rest of the Forum Members for comments. The Forum will review this revised list of management questions at the next meeting in December 2013.
3. *Ocean Workshop:* Patty O’Toole, Catherine Corbett and Kurt Fresh will work together to organize an Ocean Science Workshop for the second day of the May 2014 LCREP Estuary Science Conference.
4. *Housekeeping:* Council Staff will send out draft meeting minutes, the draft management questions developed during today’s meeting, and the management implications presented at the February 2013 workshop. . They will also send a reminder to Forum Members to submit a short biography and any recommendations for additional Forum Members.

Northwest Power and Conservation Council

Ocean and Plume Science and Management Forum
Meeting #1, October 24, 2013

Attendees:

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Unavailable for this meeting, but Forum member:

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