

DRAFT 3/17/15

Ocean and Plume Science and Management Forum

March 4, 2015

Northwest Power and Conservation Council

Final Notes from the Conference Call and GoTo Meeting

Participants: Phil Rockefeller (WA Council member), Patty O'Toole (NPCC staff), Jim Ruff (NPCC staff), Erik Merrill (NPCC staff), Nancy Leonard (NPCC staff), Jeff Allen (NPCC-ID staff), Stacy Horton (NPCC-WA staff), Karl Weist (NPCC - OR), Kerry Berg (NPCC-MT), Dan Rawding (WDFW), Doug Olson (USFWS), Rich Carmichael (ODFW), Anne Creason (BPA), Marc Trudell (DFO), Lynne Krasnow (NMFS), Kurt Fresh (NWFSC), Brian Burke (NWFSC), Curt Roegner (NOAA ??), Bill Peterson (NWFSC), Shane Scott (PPC), Catherine Corbett (LCREP), Cynthia Studabaker (COE), Doug Hatch (CRITFC), Peter Galbreath (CRITFC), Bob Laserrell (CRITFC), Elizabeth Gaar (NOAA), Bill Rudolf, Barry Espensen

ISAB: Greg Ruggerone, Bob Naiman, Kate Myers, Alec Maule, Chris Woods,

Welcome and Introductions

Chair Rockefeller welcomed everyone to the meeting and led a round of introductions. This is the fourth meeting of the Ocean and Plume Science and Management Forum (Ocean Forum), an advisory committee to the Council. The last meeting occurred on November 18, 2014. Chair Rockefeller asked if there were any changes to the agenda. There were none. The Chair then asked if everyone had reviewed the notes from the last forum meeting and if there were any changes. After a moment to review, the Chair and the Forum members approved the notes from November 18, 2014. Kurt Fresh noted that he can provide an update of the warm water "blob" at a future meeting if the forum is interested.

Presentation of ISAB Report

Members of the Independent Scientific Advisory Board (ISAB) gave the forum members a presentation titled: *Density Dependence Impacts on Fish Management and Restoration Programs in the Columbia Basin: Evidence in the Ocean.*

Chair Rockefeller noted from the presentation that the ocean is not unlimited in terms of resources and are salmon are subject to density dependence in the ocean. Kate Myers responded that indeed salmon are clustered or clumped in habitats. She stated there is some strong evidence that pink salmon are competing with steelhead for resources and that density dependence is present. Kurt Fresh (NOAA Science Center) noted that there is pretty strong evidence that growth rates of salmon are variable based on food supply and that anything than compromises growth is an issue. He further noted that density dependence can occur in smaller scales too.

Kurt Fresh noted that studying density dependence in the ocean could be expensive and asked when do we know enough to take action? He noted that the use of terminology like "may impact" is not very strong. Should we be using more definitive language? Is there some certainty? Bob Naiman (ISAB member) agreed with Kurt and is a proponent of speaking strongly on this issue. Greg Ruggerone (ISAB) noted that this issue is similar to climate change in some ways. Some areas have strong evidence,

DRAFT 3/17/15

some areas less. Dan Rawding (WDFW) remarked that if 28 of 30 populations are showing signs of density dependence, there is evidence to support the conclusion.

Lynne Krasnow asked if there are particular take-aways to share with the Estuary Regional Technical Group (ERTG). Kate Myers (ISAB member) suggested that the Ocean Forum or other group could take this report and give specific recommendations to the ERTG but that it would take some time and effort to get to specific estuary recommendations.

After the break the ocean forum members continued the discussion. Kurt and other forum members wondered if the ocean forum should meet further with the ISAB to discuss the report and recommendations specific to the ocean and estuary. Jim Ruff (Council staff and ISAB ex-officio) will look into options for this.

Discussion of draft work products

The staff reviewed documents distributed prior to the meeting and discussion began with the report framework outline. Concern was raised that the outline could spur another significant synthesis report as looks very comprehensive. Lynne Krasnow noted that it might take more time and effort than we have available. Rich Carmichael (ODFW) suggested that to do something useful may require this level of information. It may not be effective to complete a short version. Kurt Fresh (NOAA Science Center) noted that they have an annual report that contains some of the necessary information and that keeping the scope short and sweet seems like a good idea.

The forum members continued the discussion and felt that the Forum can continue to work on the outline, and drop in much of the current information found in the version of the management question narrative revised by Marc Trudel (DFO). Rich Carmichael suggested that some areas that may need more attention including a synthesis of management actions and associated benefits and risks. The group agreed that report be based on *existing* information. It was noted that for specific sections of the report - such as how the plume is influenced by flow or the considerations for hatchery fish we may need to ask specific people or groups to help out but until we get to these pieces, its hard to know who to ask.

Some of the potential issues such as changing river flow and hatchery practices are difficult issues to address . Kurt Fresh reminded the group that change can be a several step process and we should not shy away from new ideas, even if unpopular. Many years from now these ideas might now seem so extreme.

Rich Carmichael noted that a very important output of the report is to identify critical uncertainties and information gaps.

The forum members reiterated that the focus of the effort should be the plume, the ocean and the estuary. The estuary has a strong nexus to the work of the Council and the group. All of these spatial units should be included. Management issues such as predation in the estuary should be included.

DRAFT 3/17/15

Catherine Corbett (LCREP) noted that the group needs to consider how toxics and the delayed mortality from exposure to toxic contaminant may impact survival in the estuary.

Cynthia Studabaker (Corps of Engineers) noted that they have developed conceptual models/drivers to help in work like this. She will provide examples for the forum. It may help to see relationships between the physical, chemical and biological environments and understand the key drivers or mechanisms of change.

Rich Carmichael (ODFW) envisions these relationship descriptions/models would fit in the introduction.

Catherine Corbett offered to help with writing specifically on the estuary pieces.

The group agreed that many of the pieces we need for the report exist, the report just needs better organization and some filling of a few important gaps. This effort does not need to be exhaustive or take too long to complete.

The group agreed that Dan Rawding and Rich Carmichael will work together to revise the outline. Then Kurt Fresh and Marc Trudel will review and revise. Once this is complete, Kurt, Jim and Patty will get together and work to populate the outline with information and produce a draft of the report with the management narratives included.

Rich Carmichael noted that he will only be around to June as he will be retiring. He would like to see as much progress made on this as possible by then. Doug Olson (USFWS) will help to review, but does not have a lot of time to work on the products. He stated a concern that hatchery fish will be a scapegoat and reminded the forum that hatcheries are a mitigation tool while habitat quality and quantity are improved. Lynne Krasnow noted that while she is very focused on the biological opinion now, she will help out where she can.

Forum Charter

Chair Rockefeller noted that the current charter expires in May and asked if the group agrees that it should be renewed.

Wrap-up and Next Steps

Next steps:

Cynthia Studabaker will provide examples of conceptual models they have used.

Dan Rawding and Rich Carmichael will revised the framework outline.

Kurt Fresh and Marc Trudel agreed to take a look at the outline when Dan and Rich are done and provide some comments.

DRAFT 3/17/15

Jim Ruff, Patty O'Toole and Kurt Fresh will then work as a writing team to prepare a more complete draft for the next forum meeting.

The next forum meeting will be scheduled for April if the work products are completed.

The meeting was adjourned by Chair Rockefeller at 12:30 pm.