Northwest **Power** and **Conservation** Council

April 5, 2016

MEMORANDUM

TO: **Fish and Wildlife Committee members**

FROM: **Staff**

SUBJECT: **Update on Emerging Priorities Implementation including annual BPA update**

BACKGROUND:

Presenter(s): Committee members, staff and BPA staff

Summary: Committee members, staff and Bonneville staff will share information concerning notable implementation developments regarding the emerging priorities of the 2014 Fish and Wildlife program.

Relevance: Ensuring the Council's emerging priorities are implemented effectively is a core function of the Fish and Wildlife committee members and division staff.

Background: The Council received recommendations for many new measures for inclusion into the 2014 Program. All measures are subject to the same legal obligation on the part of the federal agencies with responsibilities toward the Council's program under the Northwest Power Act. Some of the new measures recommended for inclusion in the 2014 Program expand existing work in new or additional directions; others represent new directions for the program.

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The Council is providing the following guidance to Bonneville, the other federal agencies, and the region in general as to which of these new measures are emerging priorities for implementation in the next five years. During the course of the next five years, the Council anticipates that Bonneville will take the necessary steps to integrate these priorities into the program and *will report annually to the Council on its progress*. The Council may adjust the following ordered program priorities:

1. Provide for funding long-term maintenance (Appendix P) of the assets that have been created by prior program investments
2. Implement adaptive management (including prioritized research on critical uncertainties) throughout the program by assessing the effectiveness of ongoing projects, developing program objectives when appropriate and taking into account the effects of climate change
3. Preserve program effectiveness by supporting: (1) expanded management of predators; (2) mapping and determining hotspots for toxic contaminants; and (3) aggressively addressing non-native and invasive species
4. Investigate blocked area mitigation options through reintroduction, passage and habitat improvement, and implement if warranted
5. Implement additional sturgeon and lamprey measures (passage and research)
6. Update the subbasin plans most in need of updates
7. Continue efforts to improve floodplain habitats

More Info: http://www.nwcouncil.org/fw/program/2014-12/Program

Attachment 1. HDR work plan and schedule associated with the hatchery assessment, as part of the asset management strategy (Phase 2 – condition assessment), for the O&M Strategic Plan.

HDR Project Plan

Project Understanding

The 2014 Columbia River Basin Fish and Wildlife program calls for providing funding for long-term maintenance of the assets that have been created by prior program investments. The hatchery condition assessment effort is the second phase in a four-phase process that has been initiated by the Council, the Operations & Maintenance Subcommittee, BPA staff and others to fulfill that directive. In order to effectively prioritize funding for maintenance of program assets, it is critical to identify what those assets are and the current condition. The hatchery condition assessment will assimilate this information into a concise report for each of the ten program-funded hatchery projects that are targeted for this effort. The assessment is intended to be basic, with just enough detail to inform the asset management strategy.

Project Approach

Accomplishing the objectives of the assessment will require several steps for each project as described below.

Collect Existing Data

The assessment is expected to be based largely on existing narratives and descriptive information that has already been developed by the program and the proponent organizations who operate the facilities. Our team will obtain these documents and create a dossier for each of the ten projects. Our secure document control/storage system will be employed to electronically organize and store the collected documents. Our system employs a standardized folder structure so that documents can be filed for convenient identification and retrieval. It allows the entire project team (including team members external to HDR) to have access to the collected information to facilitate discussion of project details as the overall picture of the project is assembled.

Populate Pre-Assessment Data Form

The pre-assessment data form for each project will be the starting point for collaboration with BPA staff, Council staff and facility managers/operators. The forms will be populated with as much of the collected existing data as possible prior to sending the forms to facility managers/operators for verification and filling in data gaps regarding the identification of major assets, descriptions of each facilities mission and details of operation. The completed forms returned from facility managers/operators will be the basis of discussion for the collaborative work sessions.

Collaborative Work Sessions

Collaborative work sessions will be held prior to site visits in order to review the completed pre-assessment data forms and obtain feedback from the stakeholders regarding the appropriate points of emphasis for the upcoming facility site visits. These sessions will provide our team with the proper context for making the most of the highly valuable and limited time available for facility site visits.

For the purposes of budgeting for this offer, it has been assumed that all collaborative work sessions will be conducted at the BPA offices in Portland. The sessions will be organized to group the projects that have common

proponent organizations, such as the three projects with the Nez Perce Tribe and the two projects with the Colville Confederated Tribes.

Facility Site Visits

HDR technical experts will visit each of the sites to assess the condition of major assets. The individuals we have selected to perform the site visits have visited and assessed numerous hatchery facilities over many years. They understand how the various components of a hatchery facility contribute to accomplishing the overall mission of the facility. This understanding of how a hatchery works will foster meaningful discussions with the facility operators regarding which aspects of the facility should receive priority attention during the assessment. The general itinerary for each project will be conduct a pre-tour meeting with the facility manager and any other facility staff that the manager feels would have important insights regarding facility operation and condition. The amount of time required for each pre-tour meeting will depend on the number of satellite facilities associated with the project. Following the pre-tour meeting we will visit each of the sites associated with the project. Once the individual site visits have been completed, we will meet with the facility manager's team again to follow up on any clarifications of observations and additional remarks.

We have reviewed the physical locations of each site and developed an itinerary for each project that accounts for a logical sequence of visits to get the most out of the considerable travel that will be required.

Project Reports

Upon completion of the site visits for a given project, our team will incorporate the site visit observations into the information previously accumulated in the project's dossier. The completed body of data will then be migrated into the report format to generate the draft report for review by BPA. In accordance with the schedule outlined in the RFO, reports will be submitted in groups of two or three at four delivery dates over the contract duration. After a period for BPA review, the reports will be finalized.

Progress Presentations

We will present progress on the overall status of the data collection and facility assessment efforts at 90, 180, and 270 days from notice-to-proceed, with a final presentation at approximately day 290 of the contract.

Project Management

Organization. Communication. Documentation. These three elements are the key to successful project management, especially when multiple agencies and stakeholders are involved in various aspects of a project. Our proposed management structure efficiently aligns the team to provide a clear management and discipline structure as shown in the project team organization chart in the Project Team section of this proposal.

Kickoff Meeting

We will establish a working relationship with the BPA project staff by organizing a kickoff meeting. The goals of this meeting will be to understand the roles and responsibilities of each of the team members, commit to the project schedule, discuss the lines of communication and understand how the project elements get incorporated into the final reports. Other details essential to gathering and sharing project information will be addressed, such as document sharing and site visit timing. During the meeting team members will finalize their roles and responsibilities, identify points of contact, establish the communication protocol and agree on schedule milestones. The theme of the kickoff meeting will be that by working together we can achieve a timely and cost-effective completion of the project.

BPA Coordination

Regular communication between the project manager Mark Hassebrock and BPA's contracting officer's technical representative (COTR) promotes an up-to-date understanding of progress, expectations for success and issues affecting schedule. Beyond standard progress reporting, Mark will work closely with the COTR, moving the project forward, sharing the responsibilities of information dissemination and synthesis among the project team, and resolving issues following thoughtful discussion. As noted previously, formal presentations of project progress will be conducted at 90-day intervals.

Cost Control

HDR's accounting system provides project managers with accrued project costs on a weekly basis. Mark will utilize an earned alue approach to cost monitoring to make sure the rate of budget utilization lines up with the projected budget over time. Earned value monitoring provides the project manager with the ability to identify project cost issues early so that appropriate corrective measures can be applied.

Quality Control

HDR puts a high priority on quality of our documents. We maintain a robust formal quality program with standard procedures that are applied to all projects. We will develop a project specific quality management plan that will be utilized by our team for draft and final report submittals. Review time will be incorporated into our working schedule and budget from the beginning. The quality management plan will contain the following:

- Number and type of QA/QC activities
- Level of detail required during the QC review
- Names of QC reviewers
- Process for resolution of technical disagreement between parties
- Reference or supporting documents
- Budget
- Schedule
- QC review form to be used
- Format for recording QC review comments
- Handling and filing of QC review documents and comments at the completion of the QC review

Schedule

The project schedule on the following page is based on the schedule that was provided in the RFO, with an overall duration of 290 days. We have retained the RFO schedule assumptions of 10 days for the review of each group of draft reports and 10 days to finalize each group of reports following receipt of BPA comments. The RFO schedule indicates the ten total project reports will be generated in groups of two or three reports at a time. We have examined the proponent organizations and the physical locations associated with each project in order to allow the projects with common proponent organizations to be done at the same time. This will allow staff of those organizations to attend common collaborative work sessions and pre-tour meetings and it will minimize the travel time required for HDR staff to visit each of the sites involved. The projects have been grouped as indicated below.

Group A

- Nez Perce Tribal Hatchery (7 sites)
- Grande Ronde Supplementation (3 sites)
- Fall Chinook Acclimation Facilities (3 sites)

Group C

- Cle Elum Supplementation and Research Facility (4 sites)
- Kootenai River Native Fish Conservation Aquaculture (2 sites)

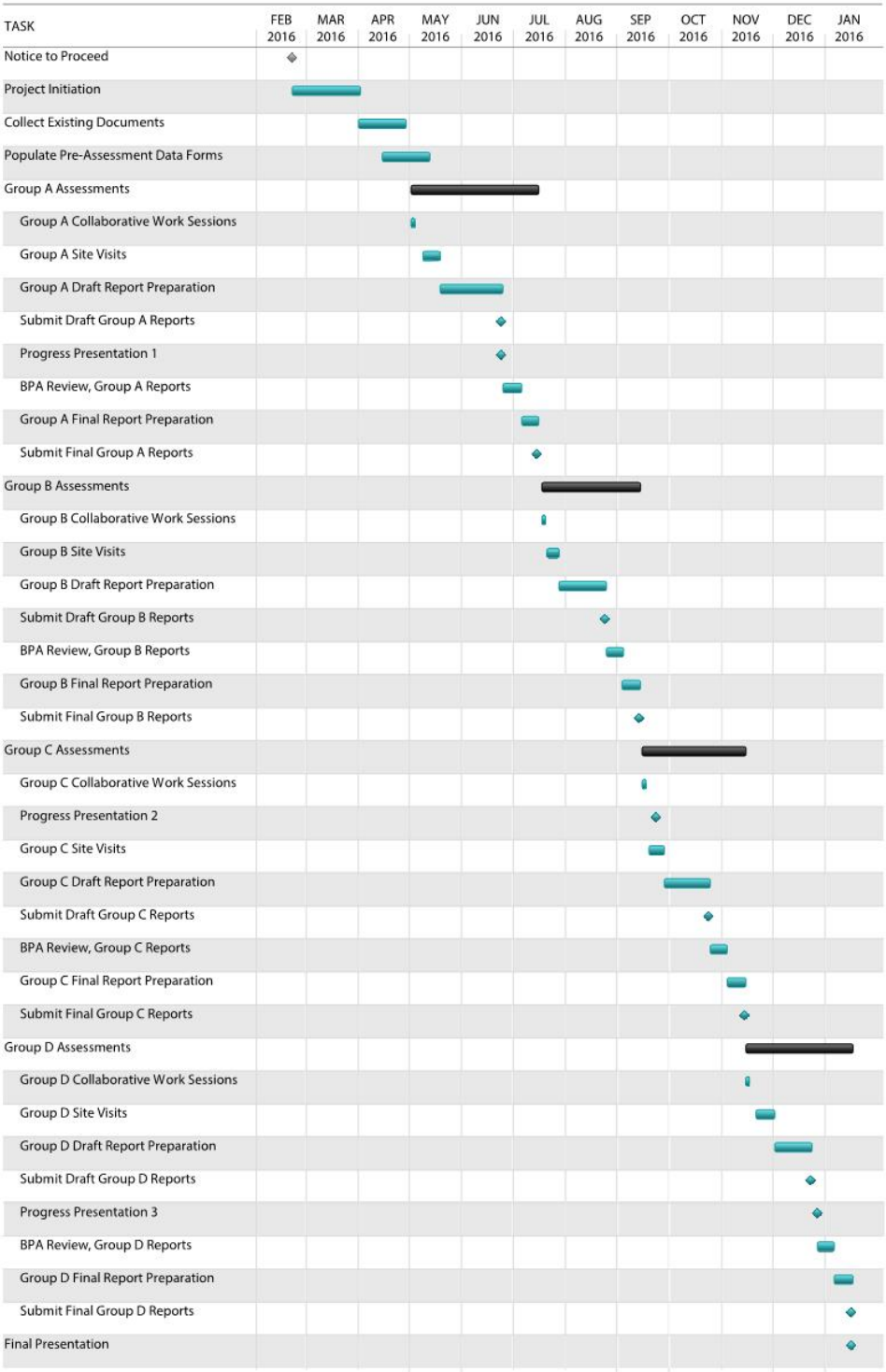
Group B

- Colville Hatchery (1 site)
- Chief Joseph Hatchery (5 sites)
- Hood River Production (2 sites)

Group D

- Umatilla Hatchery (10 sites)
- Snake River Sockeye Propagation (2 sites)

Proposed Project Schedule



Attachment 2. Update regarding emerging priority 2 (taking into account the effects of climate change) and emerging priority 3 (mapping and determining hotspots for toxic contaminants).

Climate Change – water temperature modeling update

Background

The first action addresses development of an analytical tool for "taking into account the effects of climate change." On December 15, 2015, the Council sent a letter to the Northwestern Division-Corps of Engineers (the Corps), with copies to the three mid-Columbia PUDs and Washington Department of Ecology, encouraging the Corps to expeditiously complete water temperature modeling for the Hanford Reach of the mainstem Columbia River. We also asked the Corps to collaborate with the mid-Columbia PUDs to integrate their individual water temperature models into a Columbia-Snake river system model by early 2017. Finally, we asked the Corps to keep the Council apprised of progress on this temperature modeling effort.

Current Status

For the mid-Columbia River above McNary Dam, water temperature modeling is largely completed for the Grand Coulee, Chief Joseph, Wells and Rocky Reach reservoirs. Temperature model development is currently underway by Grant County PUD in the Wanapum and Priest Rapids reservoirs and is expected to be completed in 2016. However, model development is incomplete for the Rock Island reservoir and for the Hanford Reach. Since the FERC license for Chelan County PUD's Rock Island hydroelectric project is in effect until 2028, water temperature modeling for Rock Island has not begun and will likely not occur until the FERC re-licensing process gets underway.

Corps of Engineers' Response

The Corps responded to the Council's letter on March 14, 2016 (attached). In the letter, the Corps explained that much of its water temperature modeling effort to date has been focused in the Clearwater and lower Snake rivers due to the temperature control releases from the Corps' Dworshak Dam. The Corps indicated it is coordinating with the mid-Columbia PUDs and Bureau of Reclamation with respect to their modeling efforts in the mid-Columbia reach. However, the Corps has not initiated water temperature modeling for the Hanford Reach.

The Corps is also collaborating with the Bureau of Reclamation and Bonneville Power Administration to develop a work plan to analyze various climate change scenarios and datasets later in 2016 and 2017. As part of that effort, the Corps is in process of preparing a project management plan, or scope of work, to develop an inventory of existing water temperature models in each of the reaches from Grand Coulee Dam to Bonneville Dam, and review the current capability of these existing models to assess water quality impacts. The project management plan will outline the necessary steps to link the individual water temperature models into a Columbia-Snake river system model application, including such information as project goals and objectives, a schedule, funding needs, roles and responsibilities, and how the Corps will collaborate with the three mid-Columbia PUDs and the

Bureau to obtain the various water temperature models and related data. Although the project management plan is not yet completed, the Corps indicated it expects to have it finished in the spring of 2016. It would be useful to have the Corps staff report at a future Council meeting on its progress in this modeling effort when it has completed the project management plan.

Corps cost-share funding to aggressively address non-native and invasive species

Council staff has been leading regional coordination efforts on two other activities identified in the Council's 2014 Fish and Wildlife Program as high priority actions, both of which were approved and directed by Council in 2015 to be implemented in the near term. The first ongoing effort is providing regional coordination among the 4 Northwest state aquatic invasive species (AIS) coordinators, Pacific States Marine Fisheries Commission (PSMFC), Pacific Northwest Economic Region (PNWER) and the Corps of Engineers to get the $4 million of cost-shared watercraft inspection funds appropriated in FY 2016 to the Corps under Section 1039 of 2014 WRRDA bill dispersed to the states and "on the ground" as expeditiously as possible. Toward that end, staff has been holding monthly conference call meetings, prepared meeting notes and agendas, as well as coordinating more frequent meetings between PSMFC, PNWER, the Corps and Council staff. The most recent conference call among all the parties occurred on March 31st to review, discuss and answer questions from the state AIS coordinators concerning the details of the Corps' Implementation Guidance about providing these federal funds to the states (attached).

The next step in this process is that work will be needed by regional parties to collaboratively prepare a general Letter Report to justify releasing federal funds to the Northwest states. A meeting will be scheduled in late April among all the parties to review and discuss a draft outline and information needed to include in the Letter Report. Each of the states (as well as PSMFC and PNWER) has the necessary AIS inspection station information and boater data needed for inclusion in this Letter Report, so it is expected that all that information will be readily compiled and prepared. Once the Letter Report is completed by regional parties, it will then be submitted to Corps Headquarters in Washington DC for review and approval before federal funds will flow to the states. It is expected that matching funds will be allocated through a central fiscal agent, most likely PSMFC. Thus, once a memorandum of agreement is developed among the states with PSMFC, then the Corps' funds will be dispersed to the states. Completion of these efforts will result in a greatly enhanced watercraft inspection network within the Columbia River Basin for the four NW states.

Columbia River Toxics Mapping Work Group update

Another ongoing regional coordination effort by Council staff has been to lead and coordinate the Columbia River Toxics Mapping Work Group. This action was adopted into the 2014 F&WL Program on p. 56 and was identified by the Council in 2015 as the high priority action for implementation concerning toxic contaminants. The Council directed EPA's Columbia River Toxics Working Group to identify a small work group to "assess and map high priority toxic contaminant hot spots in the Columbia River Basin." The Council assigned Jim Ruff to lead and coordinate this contaminant mapping effort. This work group has met five times since November 2015 and has made progress by identifying 12 different contaminant groupings

designed to help the group focus the creation of maps of the Columbia River Basin showing contaminants of concern. In addition, the work group has identified available sources of federal and 4-state agencies' toxic contaminant data for use in the mapping effort. The work group has also developed and reviewed a prototype map of the occurrence of a single legacy pesticide in the Columbia Basin using the Council's mapping tool, as well as begun discussing potential threshold levels (or criteria) for each of the various toxic contaminant groups for mapping purposes.

All of this information is posted and accessible in the Council's drop box. However, in preparing the prototype map, it became clear to the work group that the major effort in developing the map entailed building a comprehensive data base for the pesticide, e.g., the collection, filtering and processing of data into a useable data base, and not the mapping of the data. Thus, to complete this mapping effort, a statement of work needs to be developed for a contractor to compile and develop useable data bases for each of the contaminant groups. Toward that end, at its last meeting on April 1st, the work group decided a small, technical working group of several members having pesticide expertise would work with EPA staff to compile, filter and develop a useable data base for one current use pesticide. That small group effort should provide a good estimate of the amount of time required to develop a single, useable data base and will report back to the full work group at its next meeting in mid-May.

Once Jim Ruff leaves the Council at the end of April, it is uncertain whether another work group member or a Council staff member will assume the leadership and coordination role of this Council-directed work activity.

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14 Mar 2016

Phil Rockefeller
Chair, Northwest Power and Conservation Council
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Dear Mr. Rockefeller:

Thank you for your letter dated December 15, 2015. We understand the Council's concerns regarding climate change and how that might change conditions in the Columbia River Basin and implicate system operations to meet authorized project purposes. Below is a summary of the U.S. Army Corps of Engineers (Corps) activities to date and some of the modeling efforts in which the Corps is currently involved with respect to climate change and river temperatures within the Columbia River Basin.

The Corps has developed water temperature modeling capability in the Clearwater and lower Snake Rivers, in response to the NOAA Fisheries 2008 FCRPS Biological Opinion and 2014 supplement. This modeling assists in real-time decision making for Dworshak Dam operations as they relate to water temperature in the lower Snake River. Much of the Corps' efforts over the past several years has been focused on maintaining and improving our capability to effectively model these reaches to aid in salmon and steelhead survival. The Water Quality staff within the Corps' Reservoir Control Center has been coordinating with the Mid-Columbia PUDs and the U.S. Bureau of Reclamation (Reclamation) with respect to their modeling efforts in the mid-Columbia reach.

In addition, the Corps, Reclamation, and the Bonneville Power Administration (BPA), are developing a work plan to analyze climate change scenarios and datasets in 2016 and 2017. As part of this effort, the Corps is developing a scope of work to develop an inventory of existing models in the reaches from Grand Coulee Dam to Bonneville Dam, and review the current capability of these existing models to assess water quality impacts that may result from the operation of Corps dams and reservoirs. We expect to have this assessment complete in spring 2016.

We look forward to working with the Council as water temperature modeling efforts are developed. We are available to provide the Council with periodic updates during normal

recurring sessions or by request. If you have any questions, please contact Julie Ammann, Chief, Reservoir Control Center, at 503-808-3945.

Sincerely,

STEVEN B. BARTON, P.E.
Chief, Columbia Basin Water Management Division

CONTAMINANT GROUPINGS *This is a listing in alphabetical order (for now) of contaminant groupings designed to help the mapping group focus the creation of maps of the Columbia River Basin showing contaminants of concern.*
Combustion & Petroleum By-Products (including PAHs)
Consumer Product Constituents - including but not limited to: antimicrobials, bisphenols, phthalates, organic solvents (degreasers, coatings, dry cleaning chemicals, paint, etc.)
Current Use Pesticides - including but not limited to: pyrethroids, neonicitinoids, organophosphates
Cyanotoxins (of particular concern for harmful algal blooms [HABs])
Flame Retardants and Industrial Intermediates (including PBDEs)
Highly Fluorinated Chemicals (including PFOAs)
Legacy Pesticides (including DDTs and other organochlorines)
Metals (major and trace elements) - inlcuding but not limited to: lead, arsenic, copper
Mercury (total and methylmercury)
PCBs (polychlorinated biphenyls)
Pharmaceuticals (including hormones)
VOCs (volatile organic compounds)