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

February 7, 2017

MEMORANDUM

TO: Council members

FROM: Mark Fritsch, project implementation manager
Nancy Leonard, ecosystem monitoring and evaluation manager
Leslie Bach, senior program manager

SUBJECT: Briefing and discussion on ISEMP, CHaMP, and Bonneville's Action Effectiveness Monitoring.

BACKGROUND:

Presenter: Council staff

Summary: Council discussion regarding:

- Review of the Program's approach and tools used to assess habitat action effectiveness in the tributaries and to guide habitat actions implementation. The review should inform the Council about gaps and provide information about options for improvements to better inform the Program's strategies and on-the-ground implementation of habitat actions.
- Assessment of how the three projects contribute to improving the Program's habitat strategies and measures, and on-the-ground habitat action implementation. The three projects consist of: Integrated Status and Effectiveness Monitoring Program (ISEMP), Columbia Habitat Monitoring Program (CHaMP), and BPA's Action Effectiveness Monitoring (AEM) project. See attachment 1 for project summaries.

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Relevance: Implementation of the Council's 2013 Conditions and recommendations ensuring a cost-effective approach to tributary habitat research, monitoring and evaluation for informing effectiveness of program measures, project action effectiveness and status of focal species.

Budgetary/Economic Impacts:

i. Project #2016-001-00, *BPA Project Action Effectiveness Monitoring (AEM) Programmatic*,
   - Project start date: 2016
     - Total cost to date $2,121,107 (FY 2016 – 2017)
     - FY16 Contract Amount: $1,074,955
     - FY17 SOY Budget: $1,046,152

ii. Project #2003-017-00, *Integrated Status and Effectiveness Monitoring Program (ISEMP)*,
   - Project start date: 2003
     - Total cost to date $54,596,153 (FY 2004 -2017)
     - FY16 Contract Amount: $4,888,761
     - FY17 SOY Budget: $3,695,731

iii. Project #2011-006-00, *Columbia Habitat and Monitoring Program - (CHaMP)*
   - Project start date: 2011
     - Total cost to date $17,459,498 (FY 2011-2016)
     - FY16 Contract Amount: $3,129,182
     - FY17 SOY Budget: $2,329,788

Background: The Council's Fish and Wildlife Program is "a habitat-based Program," aiming "to rebuild healthy, naturally producing fish and wildlife populations by protecting, mitigating, and restoring habitats and the biological systems within them. It is critical to assess whether the Program's habitat strategy and measures are contributing to mitigation and whether specific habitat actions are effective. For this reason, one of the key programmatic issues identified by the Council during its 2010-11 review of the *RME and AP Category* of projects, was whether the collective suite of ongoing and proposed habitat monitoring and effectiveness projects are adequate to inform the Program's strategies and on-the-ground implementation of habitat actions.

Staff will discuss with the Council the below proposed actions for increasing our understanding about the adequacy of the habitat monitoring and effectiveness work implemented for the Program:

1. Conducting discussions with fish and wildlife managers about the 2013 Bonneville approach for habitat action effectiveness in the tributaries, including the role of ISEMP, CHaMP, and BPA AEM projects. These

discussions will aim to increase understanding of existing gaps and options for improvements to better inform the Program's strategies and on-the-ground implementation of habitat actions. These discussions will also focus on understanding the value-added from the work produced by the ISEMP, CHaMP, and BPA AEM projects.

2. Requesting Bonneville to submit for review
   - Bonneville's approach for habitat monitoring and action effectiveness in the tributaries, the 2013 version called *Columbia Basin Tributary Habitat Improvement: A Framework for Research, Monitoring and Evaluation (2013 Framework*). This submittal should explain how this framework will guide habitat action implementation and whether it is adequate to address the needs of the Fish and Wildlife Program.
   - Bonneville's summary of information to-date on habitat monitoring and action effectiveness in the tributaries referenced by Bonneville as *Tributary RME Synthesis (Synthesis).* Bonneville should explain how this synthesis will be used to inform habitat monitoring and action effectiveness in the tributaries.
   - ISEMP, CHaMP and Bonneville's AEM projects along with details about their current and historical budgets. According to the 2013 Framework these three projects are expected to contribute guidance to fish managers implementing habitat actions as described in the 2013 Framework. This submittal should explain how these projects are providing guidance to on-the-ground habitat action implementation, and at what resolution. For example can this information be used to determine location of activities or is it used to provide information about general activities suited for the area.

     The three projects, ISEMP, CHaMP and Bonneville's AEM, are specifically of interest because of the significant financial investment designed to inform Program habitat effectiveness. The Council needs to understand the value added of these project to inform decisions by managers and for improving the Program.

More Info:

- On June 12, 2013 the Council provided recommendations to Bonneville decision letter aimed to further advance the intent of the Council's 2011 decision as described under *Programmatic 2 Habitat effectiveness monitoring and evaluation.*
- Over the course of the last 5 years Bonneville staff have provided products and updates that have addressed components of the Council's 2011 decision letter and the 2013 conditions and recommendation letter (please see November 2016 staff memo). The latest update provided to the full Council during the December

2016 meeting (Bonneville's letter[1] and presentation) and the ensuing Council member discussion with Bonneville serves as the basis for Council staff recommendations.

- In January 2017, staff discussed with the fish and wildlife Committee several draft questions aimed at obtaining the additional information and clarity needed. Since then several state and tribal fish managers have asked to be included in those discussions (draft staff memo).

[1] December 12, 2016 letter from Jeffrey Stier, Acting Executive Manager of Fish and Wildlife Program, to Tony Grover, Fish and Wildlife Director.

Attachment 1: Project summaries for ISEMP, CHaMP, and BPA AEM. For a summary of the evolution of ISEMP and CHaMP (also see pages 9, 10 and 11 of the Council's 2013 conditions and recommendations).

Project #2003-017-00, *Integrated Status and Effectiveness Monitoring Program (ISEMP)*

- *Purpose:*
  - Develop and test sampling protocols and methodologies for habitat and population monitoring to facilitate collection of data of known resolution, accuracy and precision. Note that the habitat monitoring protocol is implemented by CHaMP which continues to refine the protocol (see CHaMP below)
    - ISEMP developed the habitat status and trend monitoring techniques now used in CHaMP and continues to collect data on juvenile salmonids (e.g. pit-tag detectors).
  - Initiate monitoring and evaluation programs that address:
    - (i) subbasin-scale pilot status and trend monitoring efforts for anadromous salmonids and their habitat in three target subbasins
    - (ii) effectiveness monitoring for suites of habitat restoration projects in selected watersheds within the target subbasins.
  - Develop a framework of tools that assist practitioners with data management while also standardizing the format and delivery of data sets to a regional data management system.
    - network of in-stream PIT tag detection arrays.
  - Inform the development of fish-habitat relationship tools that can be applied to other areas of the basin using available data. These tool assess whether and how habitat actions result in a response in fish populations. For example, these tools could estimate habitat capacity for specific life-stages, thus identifying limiting habitat factors and informing habitat actions for a given watershed.
- *Geographic Area:*
  - IMWs in the Entiat (2009-2020), Bridge Creek (2008-2017), and Lemhi (2009-2018)
  - Population status and trends monitoring watersheds in Wenatchee, John Day and South Fork Salmon.

Project #2011-006-00, *Columbia Habitat Monitoring Program (CHaMP)*

- *Purpose:*
  - Monitor basin-wide habitat status and trends in selected watersheds. Applies and refines the standard habitat monitoring approach developed under ISEMP to a streamline set of habitat attributes that correlate with changes in fish.
  - Supports correlations of basin-wide habitat condition with biological response indicators for fish to evaluate habitat management strategies. This includes assessing that the habitat action resulted in the intended

habitat improvements and also assessing the relationship between habitat actions and fish survival/productivity.
    - The habitat data collected by CHaMP is used by ISEMP to explore the fish/habitat relationships (see ISEMP summary).
- *Geographic Area*:
    - Wenatchee, Entiat, Methow, John Day, Upper Grande Ronde, Tucannon, Lemhi and Secesh/South Fork Salmon.

Project #2016-001-00, *BPA Project Action Effectiveness Monitoring (AEM) Programmatic*

- *Purpose:*
    - Collect, gather and interpret data following the standardized BPA Protocol.
    - Work in a collaborative manner with project sponsors to guide and provide information about the effectiveness of habitat restoration actions that address habitat impairments (limiting factors).
        - 2016 work focusing on large woody debris, floodplain restoration actions, partial passage barriers, bank stabilization fencing, and land acquisition habitat action categories.
- *Geographic Area*:
    - Selection of projects that are representative of specific types of habitat actions within the anadromous zone of the basin (e.g., subsample of existing projects implementing large woody debris).