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November 6, 2018

### MEMORANDUM

**TO:** Fish and Wildlife Committee members

**FROM:** Council Staff

**SUBJECT:** Update on Tributary Habitat Monitoring and Evaluation

### BACKGROUND:

**Presenters:** Leslie Bach, Nancy Leonard, Mark Fritsch

**Summary:** To help prepare for the upcoming amendment process, Council staff will discuss tributary habitat monitoring in the context of program evaluation. Council staff will 1) update the Committee on progress of a collaborative process among BPA, NOAA, the Council and Fish and Wildlife managers to develop a habitat monitoring and evaluation strategy; 2) describe general ideas for habitat evaluation and reporting for the Fish and Wildlife Program; and 3) discuss considerations for organizing habitat monitoring and evaluation in the amended program.

**Relevance:** This work addresses the [Council's 2013](#) conditions and recommendations for ensuring a cost-effective approach to tributary habitat monitoring and evaluation, as defined in [Programmatic Issue #2](#) (*Habitat effectiveness monitoring and evaluation*), from the 2010-11 review of the RME and AP Category. This also addresses Part 4 of the [2014 Fish and Wildlife Program](#), Adaptive Management, and the tributary habitat theme in the Council's 2017 [Research Plan](#).

**Background:** At the July 2017 meeting, the Council directed staff to work with the region's fish and wildlife managers and BPA to develop a tributary habitat monitoring strategy. Over the past two years Council staff have reviewed current tributary habitat monitoring, held discussion meetings with co-managers and sponsors and hosted a series of webinars and workshops on tributary habitat monitoring and evaluation. Based in these efforts, staff developed a draft strategy which was reviewed and revised by regional managers.

As a follow-up to that initial effort, BPA, NOAA and the Council agreed to proceed with development of an integrated habitat Research, Monitoring and Evaluation strategy (integrated habitat RM&E strategy) that will meet multiple basin needs. This agreement was facilitated by several factors, including the Council's Fish and Wildlife Program Amendment process, on-going Endangered Species Act consultation efforts for the operation of the Columbia River Hydropower System, and concurrence among the region's fish and wildlife managers that the three entities should work together to develop a single habitat RM&E strategy that will guide project monitoring across the Basin.

BPA, NOAA and the Council are currently in phase 1 of the integrated habitat RM&E strategy, which is to develop an initial draft. Phase 2 of that process will involve extensive input from fish and wildlife managers in the region to refine the strategy. It is anticipated that Phase 2 will begin early in 2019. The integrated habitat RM&E strategy will be used to provide information on habitat effectiveness across the region as well as for informing habitat implementation actions.

Concurrent with the integrated habitat RM&E strategy development, Council staff are working on approaches for Program-level habitat evaluation and reporting to inform program effectiveness. Staff is building on the input from fish and wildlife managers received through the meetings, webinars, workshops and review comments. This effort will link closely with the Program amendment process and provide a structure for future evaluation of the Program's habitat actions.

# Habitat Monitoring and Evaluation Strategy: Progress and Status

Leslie Bach, senior program manager

Nancy Leonard, ecosystem monitoring and evaluation manager

Mark Fritsch, project implementation manager

# July 2017 Council Discussion

- Need for a programmatic approach to habitat Monitoring and Evaluation (M&E) was identified during the 2011 RME category review
- Current programmatic approach is not adequately meeting Fish and Wildlife Program needs
- Council staff should work closely with co-managers and project sponsors to develop a habitat M&E strategy for the Program
- Should be closely coordinated with ongoing BPA/NOAA efforts

# Progress to Date

- Webinar and in-person meetings with technical specialists to develop habitat monitoring and evaluation framework and strategy
- Webinar presentations by practitioners demonstrating assessment tools and approaches
- First draft Habitat Monitoring and Evaluation Strategy
- Manager comments on first draft

# Current Efforts

- Integrate Council, BPA and NOAA efforts to create Columbia Basin Habitat RM&E Strategy
  - Use draft habitat M&E strategy and manager comments as foundation
  - Timing aligns with Program amendment, NEPA and BiOp processes; Managers have indicated strong desire for single framework and strategy
- Phase 1 BPA, Council and NOAA develop draft strategy
- Phase 2 Refine habitat RM&E strategy with collaboration from States and Tribes, federal agencies, others

# Columbia Basin Habitat RM&E Strategy

Will focus on:

- Efforts funded under the Northwest Power Act and the Endangered Species Act (specifically, the Biological Opinions)
- Key Management Questions
- Habitat effectiveness and habitat status and trends
- Data management and data accessibility

# Columbia Basin Habitat RM&E Strategy

Will address:

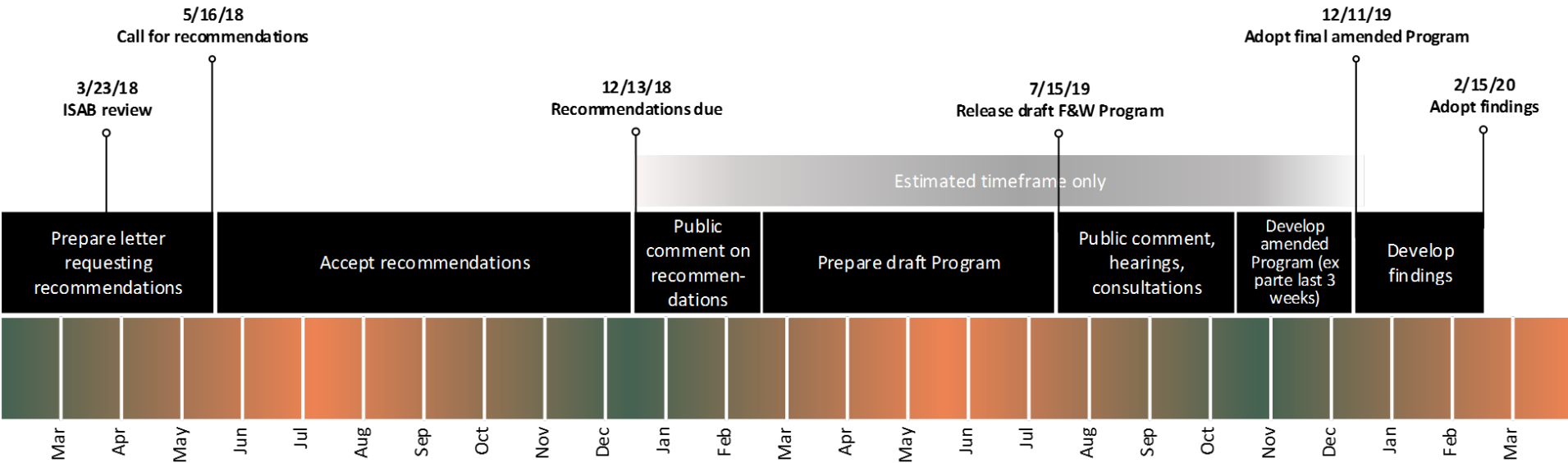
- Roles and responsibilities of each entity
- Adaptive Management (AM)
- Key Management Questions in the context of AM
- Approaches for different types of monitoring (compliance, implementation, effectiveness, etc.)
- Guidelines and timelines for applying the strategy
- Program-level synthesis and reporting



# 2018/2019 Columbia River Basin Fish and Wildlife Program

## Amendment Process

### Draft timeline



# F&W Program

## Tributary Habitat Monitoring and Evaluation

# 2014 Fish and Wildlife Program

## Part 4 Adaptive Management:

- Research and monitoring should provide information to evaluate progress toward goals and objectives
- Data should be collected so that results are applicable at multiple scales and on timeframes that can inform evaluations and decision-making
- Need regional processes that standardize data, facilitate reporting, and make the data publicly accessible
- Council will develop an evaluation process that considers new information to verify or adjust goals, objectives, strategies, measures, indicators. This AM approach will ensure program accountability.

# Council Program Logic Path

Focal fish species are impacted by habitat limiting factors

These impacts can be reduced by habitat actions

Addressing limiting factors will contribute to protecting and enhancing focal fish species

Documenting habitat change at appropriate scale and level-of-certainty will convey the Program's contribution to mitigation

Fish information needed to understand overall current conditions and trends

# Tributary Habitat Monitoring Approach

## Subbasin Plans

Assessment  
Units (HUC 6)



Limiting Factors  
(species or  
population  
specific?)



Objectives



Actions

## Habitat Evaluation

- Water Quantity
- Water Quality
- Habitat Complexity
- Habitat Quantity/Connectivity
- Riparian Condition
- Biotic Factors

## Program Progress

- Selected Indicators
- Progress toward “objectives”
- Summarized at assessment unit scale
- 5-year timeframe

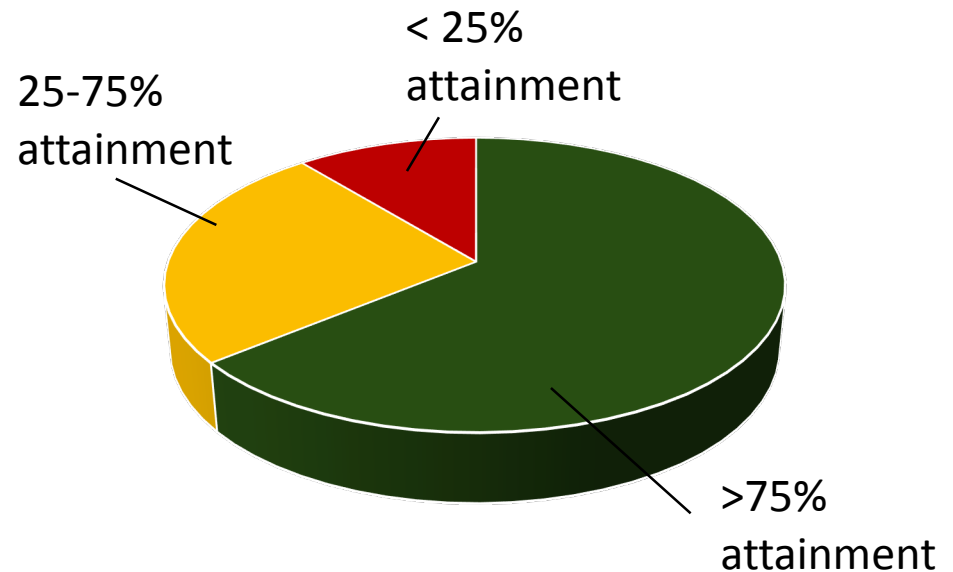
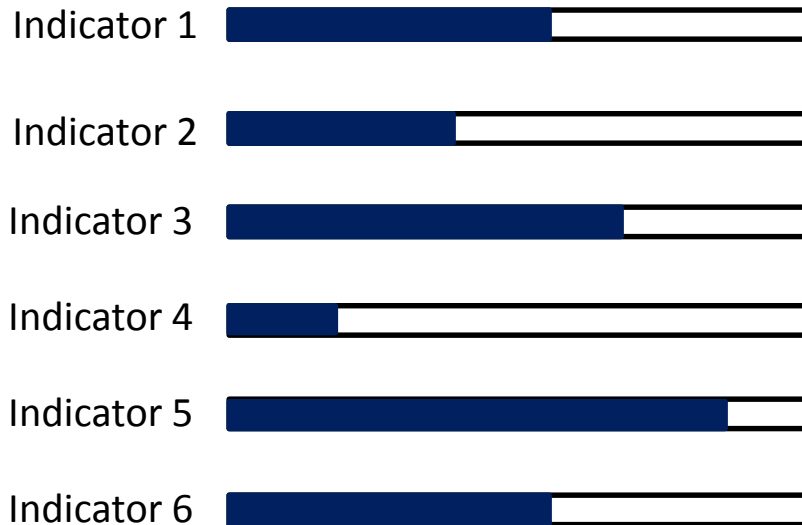
## Data Management

- Publicly-accessible website
- End-user products
  - Data summaries
  - Dashboards



# Analysis and Reporting Ideas

Example Reporting Options: Current versus potential or optimal;  
Percent and/or direction of change; Percent attainment



# Next Steps

- Work with NOAA and BPA to complete draft Columbia Basin Habitat RM&E strategy; refine and finalize with co-manager input
- Refine indicators, reporting metrics, AU selection and time scales
- Review Program amendment recommendations and use to refine Program habitat approach
- Incorporate into Program Amendment process
- Integrate with Program performance review

# Discussion & Questions