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January 3, 2018

MEMORANDUM

TO: Fish and Wildlife Committee members

FROM: Patty O'Toole and Council staff

SUBJECT: Fish and Wildlife Amendment Update - possible amendment topics

BACKGROUND:

Presenter: Patty O'Toole and Council staff

Summary: The Council and staff previously discussed the option of using the next Program amendment process to focus attention on a key set of Program issues and areas of implementation. At the January committee meeting the staff will discuss a few possible amendment topics with the Committee.

Relevance: The Council is due to begin the process to amend its Columbia River Basin Fish and Wildlife Program in 2018. In the months leading up to the Council requesting recommendations for amending the Program, the staff suggests taking some time for discussing important regional and Program issues in order to prepare.

Background: In addition to staff work on developing possible focus topics, the review of the 2014 Fish and Wildlife Program by the ISAB will provide topics for further consideration as will anticipated discussion with the basin's fish and wildlife managers, currently scheduled for February during the Regional Coordination Forum meeting. As staff have been considering Program topic areas, it has become clear that some topic areas can be addressed as a discrete issues, while others are strongly inter-related. A couple of key areas are described below.

Anadromous Fish:

Under the protection, mitigation and enhancement authority of the Northwest Power Act and the associated Columbia River Basin Fish and Wildlife Program, actions are funded and implemented to protect and mitigate anadromous fish adversely affected by the development and operation of the Columbia River hydrosystem. These actions are of two different types. One consists of “on-site” efforts to improve the survival of the fish through the mainstem hydrosystem, through improved water management, changes in reservoir operations, passage improvements, and spill. The other type consists of off-site enhancement actions, not directly aimed at reducing hydrosystem impacts. These actions are intended to compensate in some way for the remaining hydrosystem impacts not addressed “on-site” by addressing the survival, productivity and habitat capacity of anadromous fish in tributaries, the estuary and mainstem, or by producing fish in hatcheries.

Hatchery production occurs under the Power Act, but a significant amount the basin’s artificial production to address hydrosystem impacts occurs under laws passed by Congress prior to the Power Act, such as the Mitchell Act and Lower Snake River Compensation Act. To the extent that some of the species and runs of fish targeted are *also* listed as threatened or endangered under the federal Endangered Species Act, these hydrosystem protection, mitigation and enhancement actions are analyzed and included in the Endangered Species Act review.

Fundamental to the Program are several basic questions:

- What does it mean to “protect” anadromous fish from the development and operation of the Columbia River hydropower facilities, and to “mitigate” for those effects that cannot be protected against?
- How much potential for such protection and mitigation exists in the Columbia River Basin at this point?

Thirty-five-years of program development and implementation has yielded:

- quantitative assessments of the loss of anadromous fish attributable to the development and operation of hydropower in the basin;
- goals and objectives tied to these loss assessments intended to represent at least interim success at protection and mitigation;
- significant program planning over several decades to identify actions for implementation to help achieve the broader program goals;
- protection and mitigation actions implemented at the cost of hundreds of millions of dollars annually; and
- improvement in abundance for some anadromous fish populations, but overall numbers remain below Program goals based on the hydrosystem loss assessments.

A number of things have occurred lately that bring the basic questions back to the forefront. These include:

- A federal court order has required the federal agencies to work with state and tribal partners to investigate whether additional spill over the mainstem dams could increase juvenile survival through the hydrosystem. This is part of the broader question that has been asked in the basin for some time. After 35 years of water management and passage actions, are there additional hydrosystem *protection* actions that can increase salmon survival through the hydrosystem? Have survival benefits gained through hydrosystem protection actions been maximized so that additional opportunities of improvements in survival through the mainstem are minimal?
- Court decisions regarding the current Federal Columbia River Power System (FCRPS) Biological Opinion have raised issues about the extent of benefits to anadromous fish that can be gained from habitat restoration actions in the tributaries, and how to quantify and assess those benefits. Council reviews of habitat projects and habitat monitoring and evaluation methods have identified similar issues.
- The federal agencies are working on a new FCRPS Biological Opinion to evaluate the impacts of the federal hydropower system on salmon and steelhead. This will be accompanied by a NEPA assessment that aims to consider the benefits from protection and mitigation actions, what more might be gained from a set of alternatives to those actions, and at what cost and effects? The entire process is to be completed by 2021.
- The Independent Scientific Advisory Board issued a report raising concerns about density dependence. Is there overcrowding that affects salmon survival in some subbasins and in other parts of the salmon life-cycle environment resulting from the total amount of natural and artificial production or from significantly reduced habitat availability?
- The Columbia Basin Partnership (CBP) Task Force, a special task force organized under NOAA Fisheries' Marine Fisheries Advisory Committee, will be making recommendations to NOAA on common goals for salmon and steelhead. The CBP Task Force will recommend a vision for Columbia Basin salmon and quantitative goals to meet conservation needs and provide harvest opportunities.

The Council will need to consider the relevance of these issues to the Council's Fish and Wildlife Program. One way to do so may be for the Council to consider some basic questions that are central to the future of the Fish and Wildlife Program and how its implementation could change over time:

- Is there information indicating how much potential exists, if any, for additional on-site gains in survival through further changes in mainstem water management, reservoir and passage operations? Is there a need for additional gains in survival

through the mainstem hydrosystem for some or all populations? If the information is not sufficient to answer these questions, how should the Council and the program go about developing this information?

- How much potential exists in each subbasin, the mainstem, the estuary and in the Basin as a whole, for further improvements in survival, productivity and capacity through additional off-site actions? Does this information exist and if not, how would the Council go about developing this information? The Council staff asked the ISAB to also consider this and the previous question in their review of the 2014 Fish and Wildlife Program which is anticipated to be completed at the end of February.
- What impacts do environmental threats such as warming temperatures, contaminants, predation and non-native species have on the ability to reach Program goals and objectives? How should these threats be accounted for or addressed in the Program? What can be done to increase the resiliency of salmon and steelhead to maximize their ability to survive in an altered ecosystem?

Wildlife:

The staff believes the Program will benefit from an update of the wildlife mitigation strategy. The staff is preparing an assessment of progress toward the adopted wildlife losses in the Program. The assessment will consider direct accounting for Habitat Unit (HU) gains credited against losses as well as settlement of mitigation through agreements. Bonneville has reviewed the assessment and has provided comments. The assessment will be shared with the basin's wildlife managers in coming months. At a future Council meeting the staff will review the assessment with the Council members, along with Program policy issues that arise from the assessment. The upcoming amendment process provides an opportunity to update the Program's wildlife strategy with recent information on mitigation progress and to address remaining issues.

More Info: [September 2017 memo to Council members](#)