2010 FCRPS Supplemental BiOp

Presentation to NPCC
June, 2010

FCRPS Biological Opinion
2008-2017

Overview

NOAA released 2010 FCRPS Supplemental Biological Opinion on May 20, 2010

Presentation today covers:

1. Process: Integration of 2008 BiOp and AMIP
2. Science Review
3. New Actions

Background

- The Court granted the Agencies a 3 month voluntary remand – allowing the Agencies to review recent scientific information and integrate the AMIP into the BiOp
- We reviewed new and relevant science since May, 2008
- We considered comments we received on the AMIP

Structure of the Supplemental BiOp

1. Introduction: Purposes and Litigation Background
2. Updating the Scientific Information in the 2008 BiOp
3. Additional Actions: Amendments to the AMIP
4. Conclusions
5. Supplemental Incidental Take Statement

How the pieces fit together

The 2010 Supplemental BiOp integrates the 2008 RPA and the AMIP

The AMIP and its actions become RPA Action 1A

Actions will be tracked and reported by AAs' Progress Reports and Implementation Plans

Sources of New Science

New and relevant science from NOAA and NWFSC staff and other parties (tribes; federal and state agencies; litigation parties) and the ISAB

Independent scientists review of independent assessments and comments on AMIP

Information on AAs' implementation from 2008 Progress Report and Draft 2010-13 Implementation Plan.

New Information that is Relevant to the 2008 FCRPS BiOp

- New adult return data,
- New information on biological effects of climate change,
- New information on cormorant predation,
- New information on invasive species and toxics
- Six new actions to address key uncertainties and climate change

Outcomes of New Science Review

- The BiOp anticipated annual variations in the abundance and productivity of ESA-listed species.
- The updated metrics are within the BiOp's confidence limits and the new scientific information is generally consistent with the information considered in the BiOp

Updated Adult Returns

- NWFSC concluded that abundance and trends were stable or increasing over the most recent ten years for all species, except for SR Sockeye (which is mixed).
- Variations in productivity to be expected; recent downturn in productivity is consistent with the expectations of stock recruitment, in which productivity generally declines following years of higher abundance, in part due to density dependence.
- While fish populations and environmental conditions will always vary over the short term, long term abundance and trends are expected to increase.

New Climate Change Info

- New observations and predictions regarding physical effects of climate change are within the range of assumptions considered in the 2008 FCRPS BiOp and the AMIP.
- New studies of biological effects of climate change on salmon and steelhead provide additional details on effects previously considered

New Climate Change Info
(continued)

- In particular, the future effects of higher temperatures on modified adult migration timing and on reduced adult survival and spawning success in the Snake and Columbia Rivers.
- Tributaries in the lower Columbia are identified as containing thermal refugia for both steelhead and Chinook. The new studies suggest that the adult life stage may need particular attention through monitoring and proactive actions.

Updated Predation Results

Marine Mammals

Adult losses due to marine mammals in the Bonneville tailrace appear to have stabilized; losses in the lower Columbia River are unknown; west coast sea lion populations are increasing

Cormorants

Between 2001 and 2009, cormorant predation rates declined slightly for steelhead and yearling Chinook and increased for subyearling Chinook in the lower Columbia River

New Invasive Species and Toxics Info

Invasive species are likely to benefit from climate change (expanded ranges, increased foraging rates, etc.)

Toxics (chemical contaminants) are affecting the survival and productivity of individual fish and could reduce the intrinsic productivity of affected populations

Supplemental RPA Action

Adaptive Management Implementation Plan (AMIP)

The primary action is a new RPA Action 1A that integrates the AMIP.

The AMIP, as amended, includes new actions to reduce the uncertainties associated with climate change and key assumptions.

AMIP Amendments

Amendment 1

As part of their research to resolve hydrosystem uncertainties, by June 2012, the Corps will complete a report to identify the use and location of adult salmon thermal refugia in the lower Columbia and lower Snake rivers utilizing existing information on adult migration, temperature monitoring data, and modeling efforts.

AMIP Amendments

Amendment 2

As part of their efforts to monitor fish populations, in February 2011, the Corps will initiate a study at The Dalles and John Dam dams to determine if PIT-tag detectors can improve inter-dam adult survival estimates.

AMIP Amendments

Amendment 3

As part of their efforts to implement water quality measures, the Action Agencies provide NOAA past and future water temperature data from their existing monitoring stations, to be used as part of a regional climate change database

AMIP Amendments

Amendment 4

As part of their efforts to consider potential effects of climate change on limiting factors in their selection of tributary habitat projects, the Action Agencies will continue to coordinate with NOAA in its efforts to use existing tributary habitat effectiveness studies, IMWs, and the NOAA enhanced lifecycle modeling to track climate change impacts.

Starting in September 2011, the Action Agencies will annually provide NOAA with study data to be used as part of a regional climate change database. After 2011, new climate change findings will be provided to the tributary habitat expert panels to apply and use to help identify and prioritize habitat improvement actions.

AMIP Amendments

Amendment 5

As part of their efforts to identify tributary habitat projects for implementation, the Action Agencies will include as a consideration in the expert panel project evaluation process 1) the presence of invasive species and 2) site-specific toxicology issues, based on information made available by the appropriate state and Federal agencies.

AMIP Amendments

Amendment 6

As part of their efforts to resolve hatchery critical uncertainties, the Action Agencies will assist NOAA to further develop or modify existing studies that address the Ad Hoc Supplementation Workgroup Recommendations Report and that additionally address potential density-dependent impacts of FCRPS hatchery releases on listed species. These studies would provide support for future hatchery management actions to reduce potential adverse hatchery effects.

Incidental Take Statement

Capture and Transport of Adult Sockeye

Implementation of RPA 42 is expected to result in the loss of no more than 5% of the adult SR sockeye passing Lower Granite Dam.

Next Steps

Action Agencies' Records of Decision

Action Agencies' Final 2010-2013 Implementation Plan

2009 Progress Report

Regional Coordination through RIOG