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# Overview: 2019 Columbia River System Biological Opinion

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# 2019 CRS Biological Opinion

- The biological opinion considers the effects of the CRS and related mitigation programs on 13 species of salmon and steelhead along with other Endangered Species Act (ESA)-listed species under NOAA Fisheries' jurisdiction.
- The 2019 CRS BiOp is expected to be in place through 2020 (or 2021).

# Proposed Action

- New “Flexible Spill” Operation supported by Oregon, Washington, The Nez Perce Tribe, and the federal Action Agencies
- Continuation of actions required by the Reasonable and Prudent Alternative from the 2008 FCRPS BiOp (as amended in 2010 and 2014).
- Contemplates regional discussions to improve future RM&E and decision-making with respect to tributary habitat mitigation and population monitoring

# Proposed Action

Continues implementing the suite of actions developed through the 2008 biological opinion (and the supplemental biological opinions issued in 2010 and 2014):

- system operations of Congressionally-authorized purposed
  - flood risk management, conservation of fish and wildlife, power system management, irrigation / water supply, navigation, recreation, and system maintenance.
- tributary habitat restoration program
- estuary habitat mitigation program
- hatchery mitigation programs
- predator management programs
- research, monitoring and evaluation programs

# Hydro Operations Action - Flexible Spill Program

- Action includes spilling water at the mainstem dams at levels similar to recent operations for about 8 hours (total) each day when power demand is higher (typically mornings and evenings), and increasing spill up to, but not to exceed the 120% TDG limits in 2019, and potentially up to 125% TDG limits in 2020) for the remaining 16 hours each day.
- Increasing spill will reduce the proportion of juvenile salmon and steelhead passing through the eight mainstem dams via the turbine units or juvenile bypass systems.
- This operation begins to test the latent mortality “powerhouse passage” hypothesis with continued monitoring to detect substantial, positive changes in juvenile travel times and survival and smolt-to-adult returns.

# Tributary Habitat Framework & RM&E

- Continued focus and refinement of the concept of focal populations (to better target tributary mitigation efforts to key limiting factors for specific populations)
- Intent to work on a larger regional framework for conducting both tributary habitat restoration monitoring and population status monitoring over the coming year.

# Life Cycle Modeling

- Environmental Baseline (pg. 785-791)
  - Past Tributary Habitat Actions
  - Hatchery Supplementation (where applicable)
  - Pinniped Predation
- Proposed Action (pg. 816-837)
  - Hydro Action (120% Flex Spill and 125% Flex Spill)
  - Latent Mortality (10%, 25%, 50% improvements in productivity)
- Snake River spring/summer Chinook salmon
  - 4 MPGs; 20 populations
  - Mean Abundance (24 years)
  - Quasi-Extinction Risk (<30 and 50 adults for 4 consecutive years)

# Incidental Take Statement

- Reorganized Reasonable and Prudent Measures (and associated Terms and Conditions)
  - CRS operations and maintenance
  - Tributary and Estuary Habitat Improvement
  - Predator management
  - RM&E

# Conservation Recommendations

- Conservation Recommendations
  - 18 recommended, discretionary measures to “minimize or avoid adverse effects of the proposed action”
    - CRS structural and operational improvements
    - Potential improvements to predator management programs
    - Improved effectiveness of tributary habitat improvement actions
    - Develop and implement an improved RM&E framework
    - Eulachon conservation and uncertainties
    - Investigation of key uncertainties

# Conclusions

For salmon, steelhead, and eulachon:

- The Proposed Action is NOT likely to jeopardize the species or destroy or adversely modify their critical habitat.

For green sturgeon and Southern Resident Killer Whales

- The Action is NOT likely to adversely affect the species or their critical habitat

# Snake River spring/summer-run Chinook salmon, sockeye salmon, and steelhead

- No Jeopardy conclusion based on analysis of species status, the environmental baseline, and the effects of the action, and the interim nature of this action pending development of a new action stemming from the Action Agencies' CRSO NEPA process.

An aerial photograph of a river, likely the Columbia River, showing a dam structure on the left side. The water is dark green and turbulent, with white foam from the dam's spillway. The word "QUESTIONS?" is written in large, white, bold, sans-serif capital letters in the upper right corner of the image.

# QUESTIONS?

<https://www.fisheries.noaa.gov/resource/document/continued-operation-and-maintenance-columbia-river-system>