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

May 3, 2016

MEMORANDUM

TO: **Council Members**

FROM: **Jeff Allen, Office Director and Policy Analyst, Idaho**

SUBJECT: **Idaho Supplementation Studies project – a summary of findings and recommendations**

BACKGROUND:

Presenter: Dr. Timothy Copeland, Coordinator of the Wild Salmon and Steelhead Monitoring Program for the Idaho Department of Fish and Game, David Venditti (IDFG), Ryan Kinzer (Nez Perce Tribe), and Kurt Tardy (Shoshone-Bannock Tribes).

Summary: Three decades ago, the Council committed to funding a large-scale management experiment in Idaho to investigate the effectiveness of hatchery supplementation as a means to conserve and manage naturally spawning Chinook salmon populations. This project, the Idaho Supplementation Study, was carried out with the Idaho Department of Fish and Game as the lead agency and with close cooperation from the Nez Perce Tribe, the Shoshone-Bannock Tribes, and the US Fish and Wildlife Service. The project was very ambitious in scope, covering locations throughout the Clearwater and Salmon sub-basins in central Idaho and lasting for several salmon generations.

The study was designed to measure the population effects of a dedicated supplementation program, using endemic or integrated hatchery stocks where possible, on abundance and productivity during and after treatments. The study was divided into three phases to evaluate

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supplementation effects using 14 reference and 13 supplemented streams. Phase 1 established baseline relationships between supplemented and reference streams in the pre-supplementation period. In phase 2, abundance and productivity shifts from baseline relationships in treatment streams were measured during supplementation. In phase 3, supplementation ceased and the population response was monitored. Analyses of Chinook salmon abundance were made at four life-stages: redds (as a surrogate for eggs), emigrants at rotary screw traps, smolts at Lower Granite Dam, and adult progeny returning to study streams. Productivity was estimated as emigrants per redd, smolts per redd, and progeny per parent.
Dr. Copeland will provide a summary of key findings and recommendations from this long-term study.

Relevance: The Fish Propagation strategy in the Council's 2014 Fish and Wildlife Plan (Council 2014-12) includes provision for the use of hatcheries for population conservation. The results of this long-term study are an important contribution to the scientific foundation referenced in the plan regarding guidance to develop hatchery strategies that address specific population management objectives (p. 76). Results and recommendations from the study are also relevant to language in the Council's Critical Uncertainties Report (ISAB/ISRB 2016-1); specifically Theme 11 – Fish Propagation (p. 58).

More Info: Idaho Supplementation Studies Project Completion Report