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September 4, 2013

DECISION MEMORANDUM

TO: Fish and Wildlife Committee Members

FROM: Stacy Horton, Washington State Policy Analyst/Biologist
Mark Fritsch, Project Implementation Manager

SUBJECT: Council decision on *Kokanee Plan for Lake Roosevelt*.

PROPOSED ACTION: The policy issue before the Council is whether or not to allow the kokanee component of the mitigation program in Lake Roosevelt to continue as a cultural resource and subsistence fishery at a base program level. Following is the draft recommendation.

Retain the kokanee program in Lake Roosevelt at a budget level not to exceed \$200,000 per year for direct kokanee production costs. Allow the co-managers flexibility within that budget to adaptively manage kokanee in an attempt to meet their goals. Request that the co-managers be responsive to the ISRP criticisms and suggestions. Require annual reporting and a check-in in 3 years.

BACKGROUND

On September 1, 2011, the Council began a science review of projects in the Resident Fish/Blocked Areas, Regional Coordination (Program Coordination) and Data Management categories under the Council's Fish and Wildlife Program. On July 10, 2012 the Council recommended as part of the category review the following.

Implement with conditions through FY 2017. Sponsors to co-lead in the development and submission of a Kokanee Plan for Lake Roosevelt with partners WDFW (1991-047-00) and STOI (1991-046-00 and 1994-043-00) called for in the current ISRP Review and the

previous ISRP Review Document 2009-16. Final plan to be submitted by March 2013 to inform implementation in 2014 and beyond.

On May 17, 2013 the Council received a document titled *Lake Roosevelt Kokanee - Comprehensive Management Plan*. The submittal was received from the lake Roosevelt Co-managers (i.e., Spokane Tribe, Colville Confederated Tribes, and Washington Department of Fish and Wildlife). The cover letter received with the management plan acknowledged the past history of the comprehensive management plan and the relation to the category review.

On July 15, 2013 the ISRP provided their review (ISRP document 2013-7). The ISRP found the comprehensive management plan does not meet scientific review criteria, and stated the following.

The Lake Roosevelt Kokanee Management plan does not adequately address the ISRP qualifications recommended in previous reviews including the 2009 review (ISRP 2009-16) of the Lake Roosevelt Kokanee Guiding Document or those from the recent resident fish review (ISRP 2012-6; projects 1991-043, 1991-046, and 1991-047). Additionally, the sponsors did not show a reasonable or realistic path for achieving the kokanee goals within the six to ten year period specified in the plan.

ANALYSIS

The latest ISRP review continues to raise some of the same concerns identified in earlier reviews - namely that “there is no scientific justification supported by data from Lake Roosevelt that the goals and timeline can be achieved.” They also note that “...unless reservoir environmental conditions are significantly improved, including operational constraints (i.e. entrainment and drawdown) and the fish community structure (i.e. predation by non-native walleye and smallmouth bass) being altered.”

The budget for the kokanee program is now relatively small and under \$200,000 per year for kokanee related production. In 2012, the Spokane Tribes portion of the hatchery budget for kokanee was \$155,400 (Project #1991-046-00) and for WDFW \$28,401 (Project #1991-047-00). The Lake Roosevelt kokanee component has been reduced over the past five years. Conversely, rainbow trout production has significantly ramped up. While the Spokane Tribe has reduced their kokanee program, they would like to retain this species for subsistence and as a cultural resource.

While the Spokane Tribe has reduced their kokanee program, they would like to retain this species for subsistence and as a cultural resource. When Chief Joseph and Grand Coulee Dams were constructed, they blocked 100% of the anadromous fish that had previously been the lifeblood of the tribes. The tribes chose to mitigate with kokanee so that tribal members would have access to a salmon species for subsistence and as a cultural resource.

Of the outstanding obstacles identified by the ISRP (entrainment, spring operations, predation, and attaining goals in the specified timeframe) two are related to ongoing hydropower-related impacts, and the co-managers are working to address the predation issue.

Current hydropower operations make it difficult to retain kokanee in the reservoir, and the ISRP notes that entrainment and spring operations create very complicated conditions for the fish.

BiOp operations for listed fish and system operations for flood control below Grand Coulee drive the hydropower operations. The managers have included reservoir operations in the Council's Mainstem Plan, and the region has previously invested roughly five million dollars in efforts to reduce entrainment. System operations are a regional issue, and cannot be resolved by the Lake Roosevelt co-managers alone.

The co-managers are working to address remaining issues raised by the ISRP. New efforts are underway to address walleye predation through fishing regulation changes and public education. While goals have not been met, managers are trying to adaptively manage kokanee issues, and are investigating the use of triploid kokanee. Triploid kokanee are expected to stay in the reservoir longer, increase interest in the kokanee fishery, reduce jacking, and protect the wild kokanee spawners.

Lake Roosevelt Hatchery Kokanee Project

- Partial mitigation for anadromous fish losses in the blocked area above Grand Coulee Dam
- Mitigation requirement stipulates a multi-species approach (co-managers selected kokanee/rainbow)
- Kokanee provides access to a culturally important and subsistence tribal fishery as they represent closest link to anadromous salmonids above Grand Coulee
- The co-managers view the artificial production kokanee salmon and rainbow trout as essential to the mission of healthy ecosystem management in Lake Roosevelt.



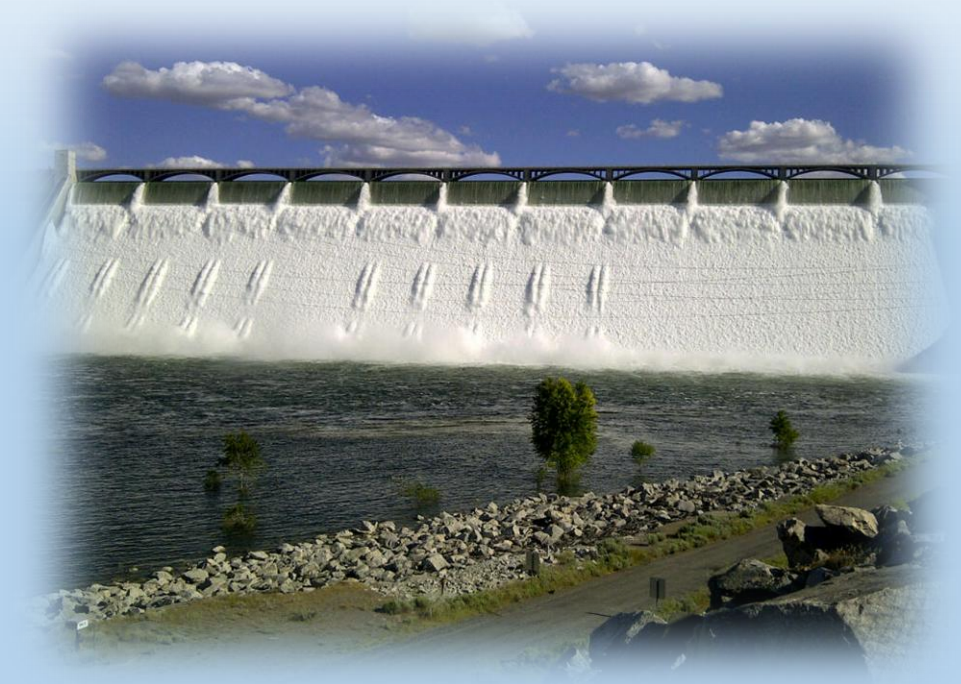
Hydrosystem Operations

- Research models link reservoir operations to entrainment
 - Co-managers have zero control over this limiting factor
- Flood control, downstream BiOp releases and agricultural drawdowns affect the water retention time within Lake Roosevelt.
- Result in seasonal changes in habitat availability



Kokanee Entrainment

- Adaptive management strategies have included:
 - Release during refill, after reservoir reaches 1260 msl
 - Water retention time 46 days
 - Release location
- Adjustments increased harvest and adult escapement levels
- CCT partnered with BioSonics on a study to estimate kokanee entrainment and invested \$5M over 3.5 years
 - Results were limited, species specific impacts difficult to quantify because of extreme conditions found in the forebay of Grand Coulee
- Co-managers not interested in spending additional mitigation dollars to quantify entrainment.
- Entrainment is worse when the reservoir is drawn down deep and flows are high.



Hatchery Kokanee Predation



- 2007 Lake Roosevelt fishing regulation changes
 - Walleye limit was increased to 8 fish with 1 over 22"
- 2010-2013 Mechanical removal of walleye and smallmouth bass in the Sanpoil Arm of Lake Roosevelt.
 - Effort removes 10% of walleye population in the Sanpoil Arm

- Spring 2012 Lake Roosevelt Walleye Derby for tribal members
- Spring 2013 Lake Roosevelt fishing regulation changes:
 - Increased the bag limit 16 and removed size restrictions for walleye on Lake Roosevelt.
 - Opened the Spokane Arm of Lake Roosevelt for walleye during April & May spawning season.

Current Directions

- Developing a standard put-take-grow program of 250,000 yearling triploid kokanee (5/lb at release)
- Success will be monitored through the creel program (2014-2019)
- Triploid kokanee:
 - 1. Will be available for harvest longer (at least 2 years, compared to 4 months)
 - 2. Reduces genetic introgression with wild stocks of kokanee
 - 3. Released at larger size to reduce predation and entrainment potential
- The STI LRFEP will work with Lake Roosevelt Kokanee Technical Working Group to develop an updated Hatchery Kokanee plan that responds to ISRP comments and incorporates the new direction. Plan will be ready by 2016, pending funding.



Proposed Action

The issue before the Committee is whether or not to recommend to the Council that the kokanee component of the mitigation program in Lake Roosevelt be allowed to continue as a cultural resource and subsistence fishery at a base program level.

Following is a draft recommendation:

Retain the kokanee program in Lake Roosevelt at a budget level not to exceed \$200,000 per year for direct kokanee production costs. Allow the co-managers flexibility within that budget to adaptively manage kokanee in an attempt to meet their goals. Request that the co-managers be responsive to the ISRP criticisms and suggestions. Require annual reporting and re-visit plan in 3 years.