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COUNCIL ANALYSIS COMPARES 2004 BIOP FOR COLUMBIA/SNAKE HYDRO OPERATIONS WITH 2008 BIOP

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Mainstem Columbia/Snake River hydroelectric operations planned in NOAA Fisheries Service's 2008 biological opinion are expected to cost the region's ratepayers an estimated $15 million more per year as compared with 2004 BiOp provisions, according to analysis prepared by Northwest Power and Conservation staff.

The new federal plan is also expected to boost juvenile salmon survivals by as much as 23 percent during their migration through the system.

The analysis compares hydro operations prescriptions described in the new 2008 Federal Columbia River Power System BiOp and its "reasonable and prudent alternative" with those of the document it replaced, the 2004 BiOp. The new BiOp was released May 5.

BiOps are required to judge whether particular federal "actions," in this case the hydro system, jeopardize the survival of species listed under the Endangered Species Act.

There are 13 listed Columbia basin salmon and steelhead stocks that must negotiate as many as eight dams and reservoirs on their way to the ocean as juveniles and on their return as spawning adults.

The increased cost is mostly attributed to increased spill over what was required under the 2004 BiOp. Water channeled through spill gates, rather than through the turbines, to facilitate fish passage represents foregone power generation opportunity.

The analysis produced by the Council's Jim Ruff and John Fazio estimates that power generation will be reduced by about 20 average megawatts as compared to the 2004 plan. Those costs could spike to as high as $60 million in some years, according to the analysis. In other years there could be little or no cost.

The comparison "does not include the court ordered spill" of the past three years, Ruff told the Council Monday. Court-generated agreements and injunctions during those years required more spill than is called for in the 2008 BiOp.

"Specifically, spill in the 2008 BiOp begins later in April at the Snake River dams, is proposed to be curtailed for two weeks in May at the three Snake River collector dams in most years, and will be stopped in the Snake River in early August based on low fish counts," according to a memo prepared by Fazio and Ruff. "Also, the 2008 BiOp includes summer spill at McNary Dam, an operation that was not in the 2004 BiOp."

The juvenile salmon survival estimates come from the BiOp's Supplemental Comprehensive Analysis.

The latest COMPASS survival modeling predicts a relative survival improvement for Upper Columbia River spring chinook of about 9-10 percent over current operations. Full implementation of the 2008 BiOp begins next year. For Upper Columbia River steelhead the modeling predicts a relative survival improvement of more than 23 percent

The memo notes that roughly half of the survival improvements identified are expected to be realized by passage improvements at the mid-Columbia public utility district dams as a result of their Habitat Conservation Plan implementation. The other half are associated with passage improvements at the four lower Columbia River federal projects stemming from the 2008 BiOp RPA.

The NOAA estimates show a 15-16 percent improvement in relative survival for Snake River steelhead and spring/summer chinook stocks. Most of them must hurdle eight dams.

"For Middle Columbia steelhead stocks, which migrate through one to four federal projects, the passage modeling predicts relative improvements in survival due to full implementation of the draft BiOp RPAs compared to the current survival level ranging from a minimal survival change (for migration past one dam) up to a 10 percent survival

improvement for those stocks migrating through all four dams," according to the Ruff-Fazio memo.

The analysis is "initial" because some uncertainty remains about bypass spill volumes and juvenile transport operations. The spill levels at some mainstem projects could change in the future based on evaluations of different operational alternatives to confirm which best meets performance standards described in the BiOp.

Fazio and Ruff also caution that the cost estimates do not take into account price fluctuations due to changes in hydro operations or peak vs. off-peak price differences.

"Cost estimates only provide order-of magnitude values," according to their presentation to the Council.

The changed operations from the 2004 to the 2008 BiOp include:

-- Snake River dams: increase in spring flows and decrease in summer flows;

-- Columbia dams: increase in winter and spring flows and decrease in summer flows;

-- More level and prolonged summer outflows from Libby and Horse Horse reservoirs in northwest Montana. The strategy leaves the reservoir elevations 5 to 10 feet higher at the end of August as compared to 2004 BiOp operations. That shift is consistent with operations called for in the Council's 2003 mainstem program amendments.

-- Lake Roosevelt, backed up by Grand Coulee Dam, will be 1-1 ½ feet lower at the end of summer, assuming implementation of provisions of Washington's Columbia River Water Management Program.

-- More spill is planned at Snake dams except for a reduction at Ice Harbor;