

State, Federal and Tribal Fishery Agencies Joint Technical Staff

US Fish and Wildlife Service

Columbia River Inter-Tribal Fish Commission

Idaho Department of Fish and Game

Oregon Department of Fish and Wildlife

April 23, 2003

Brian Brown
National Marine Fisheries Service
525 NE Oregon St., Suite 420
Portland, OR 97232

Subject: Lower Monumental Spill Operational Change

Dear Mr. Brown:

The stilling basin repairs and end bay deflector construction were completed by the end of the 2003 in-water work period. Spill was approved for the 2003 spill season at the Implementation Meeting and again at the Technical Management Meeting on April 9, 2003. We apologize for the late date of this letter, but until only a few weeks ago spill in the Snake River was unlikely to occur because flow forecasts were below the BiOp 85 kcfs trigger. Thus, efforts to review spill operations lagged. However, after reviewing the proposed change and the rationale for altering Lower Monumental spill levels, several noteworthy issues need consideration.

After reviewing the Fish Passage Plan and considering discussions at regional meetings, it has become apparent that NOAA Fisheries and the Action Agencies have agreed to reduce the spill for fish passage level at Lower Monumental from the proposed Biological Opinion (BiOp) level of 24-hour Total Dissolved Gas cap, (approximately 45 – 50 kcfs); to a spill level of 45% – 50% of the river flow depending on the river volume. After extensive discussions with NOAA Fisheries staff, we cannot agree with the reduction in spill volume below the BiOp levels for the following reasons:

- **The BiOp, 24-hour spill to the gas cap test has never been completed at Lower Monumental Dam.** This operational change was developed with limited regional consideration and coordination with the state, tribal and other federal fishery agencies. A test had been proposed in 2001 and again in 2002, but an energy emergency declared by BPA in 2001 coupled with low flows in the Snake basin and concerns with erosion in the stilling basin and dam safety issues in 2002, lead the Corps to halt the proposed evaluations. Consequently, no

biological information has been gathered pursuant to the 24-hour spill program to the gas cap at Lower Monumental dam, as described in the BiOp.

- **There is no project specific biological information that indicates that the reduction of spill at the project will improve survival.** The rationale for changing the spill level at Lower Monumental presumes that lower survival occurs when juvenile migrants encounter large-scale eddies in the tailrace after passing the hydroelectric project. Currently, there is no project specific biological data to support this assumption and no site-specific information at Lower Monumental Dam. NOAA fishery is relying on survival data from studies conducted at Ice Harbor Dam in 2000 and 2002 to justify this operational change. This is problematic since the 2002 results have not been widely distributed, reviewed or finalized. In fact the Ice Harbor study will continue in 2003 to further investigate fish passage at Ice Harbor Dam. Since the indication of a problem at Ice Harbor Dam has only been observed in one year and is largely undefined, we do not believe it is appropriate to try to conclude that the presence of an eddy will reduce survival and subsequently apply results of this site-specific study to other projects for these reasons: First, the formation of an eddy under BiOp spill levels is one of many possibilities for the reduced survival. Migrants that encounter an eddy take longer to leave the tailrace area and it is hypothesized that this increased time spent in the area, the migrants are more likely to encounter predators, which has not been verified with field studies. Second, there is also concern about mechanical injury occurring in the Ice Harbor spillway and stilling basin. Third, the information has also indicated that as tailwater and flow levels increased, mortality decreased. This information suggests that there are several factors potentially acting in concert that should be considered when trying to understand the causal mechanisms for juvenile mortality below Ice Harbor Dam. However, the potential reason for concern at Ice Harbor cannot be directly translated to Lower Monumental because field information has not been collected pursuant to the BiOp prescribed 24-hour spill regime. We strongly caution against taking information collected at a specific project and applying it to another without corollary site information. It would be prudent to evaluate the BiOp proposed spill level at Lower Monumental prior to implementing a decrease in BiOp measures.

- **Utilizing hydraulic model results to draw conclusions about biological effects is not appropriate.** The presence of tailrace eddies does not necessarily translate to biological effects. In 2002, Grant County Public Utility District evaluated a top spill bulkhead in one of the spillways at Wanapum Dam in the Mid Columbia. Tailrace conditions were not ideal. A large-scale eddy was present in the tailrace, similar to the one at Ice Harbor. However, according to the 2002 radio tag survival report prepared for the Grant County PUD by LGL consultants, a decrease in survival in the tailrace could not be detected despite the presence of the large eddy. While it is ill advised to apply information from one location to another due to the site specific conditions, (i.e. bathymetry, hydraulic conditions, test fish, abundance of predators, etc.) the LGL study illustrates the potential that large scale eddies in the tailrace do not necessarily lead to lower survival. This would again argue for site-specific data to aid in making the best management decision possible.

- **Reducing the spill level at Lower Monumental Dam will reduce, Fish Passage Efficiency, FPE.** Lower Monumental is equipped with standard length traveling screens and has lower fish guidance efficiency than projects with extended screens. Under the proposed spill level change, more fish will pass via the turbines, which will reduce FPE and project survival. Reduced spill is also likely to increase forebay residence time further reducing survival. Spillway passage has consistently provided higher survival than turbine passage. Furthermore, reduced spill will increase the number of migrants transported, which will negatively affect a spread the risk policy for the percentage of migrants transported from the Snake River. Thus, it would seem that the operation with the least risk to juveniles this year would be to continue with the BiOp spill level until site-specific studies demonstrate that project survival is provided at BiOp versus lower spill levels.
- **This year promises to have one of the strongest wild yearling spring/summer chinook out migrations in recent history and thus should be afforded the maximum protection.** The number of migrants passing Lower Monumental Dam will likely be larger than expected when one considers the potential increase in juvenile passage from the Removable Spillway Weir, RSW, at Lower Granite, which could increase the number of in river migrants in the Snake River. The proposed change in spill levels could reduce spill volume by half at lower flows at Lower Monumental Dam. This represents a significant deterioration in the BiOp spill measures at this project without any certainty of biological benefit.

In summary, without any biological information to support any change we do not agree with the proposed change and would strongly recommend a return to the BiOp spill level for the 2003 spill season.

Sincerely,



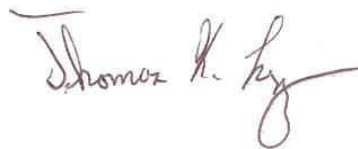
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