CENWD-PDD 1 August 2008

MEMO FOR: Andrew Kolosseus (WDOE), AMT Co-chair
Agnes Lut (ODEQ), AMT Co-chair

FROM: Rudd Turner (Corps of Engineers), AMT member

SUBJECT: Corps comments on CRITFC adult passage memorandum.

As requested, this memo provides Corps of Engineers (Corps) comments on the memorandum from Bob Heinith, Columbia River Inter-Tribal Fish Commission (CRITFC), "Review of Adult Passage Through Different Dam Passage Routes", dated July 3, 2008.

Research data on adult fish passage and survival are taken out of context and are incomplete. The spill section combines passage data on spill with other surface bypass routes in concluding that spill is benign. This is not appropriate. In actuality, spillway discharges are quite different from the operation of ice and trash sluiceways for fish passage or conditions at the Bonneville Dam Second Powerhouse Corner Collector. The Corps disagrees that increasing spill discharge levels will improve escapement of adult salmon. Extensive multiyear studies conducted by the University of Idaho in the Columbia and Snake Rivers have shown that increasing spill levels also increases fallback percentages for adult fish. These higher fallback percentages correlate directly with reduced system escapement, which means reduced survival to spawning grounds or hatchery returns. The University of Idaho studies also found that, in years with low project spill, the fallback related escapement reduction was also low.

This does not mean that other surface passage routes cannot be beneficial. Research on kelts (downstream migrating adult steelhead) also has shown that, when a small volume surface route such as the B2CC is available, the fish will find it and use it. We need to ensure this use actually benefits fish survival; however, considering the limited adult passage data on lower survival via turbine and JBS passage due to small sample sizes and other factors, it is likely that such surface routes are more benign and can provide DS routes for those fish looking for them without exacerbating fallback for upstream migrants attempting to reach spawning grounds or hatcheries.

An additional problem at Bonneville with increasing spring Chinook salmon fallback, such as has occurred the last two years with high spring flows, has resulted in very low reascension rates and a loss to system escapement, likely related to sea lion predation. Delays and even blockages of passage have occurred when spill is too high at Bonneville and other dams. This illustrates again why daytime spill limits are in place for adult salmon at Bonneville and Ice Harbor Dams. Fallback during times of uncontrollable spill can have negative consequences to spring Chinook salmon and winter steelhead.

This is another example of where the careful design and installation of surface bypass routes at dams, resulting in reduced spill levels, can benefit fish survival and reproductive success, while improving water quality conditions and overall river health. The CRITFC memo fails to acknowledge these benefits.