



FISH PASSAGE CENTER

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MEMORANDUM

TO: Tom Lorz, CRITFC
Michele DeHart

FROM: Michele DeHart

DATE: February 11, 2013

RE: 2012 Performance Testing at Lower Monumental and Little Goose Dams

In response to your request, the FPC staff has reviewed the draft PNNL reports prepared for the US Army Corps of Engineers titled “BiOp Performance Testing: Passage and Survival of Yearling and Subyearling Chinook Salmon and Juvenile Steelhead at Little Goose Dam, 2012” and “BiOp Performance Testing: Passage and Survival of Yearling and Subyearling Salmon and Juvenile Steelhead at Lower Monumental Dam, 2012.” These studies raise several concerns about study conditions, experimental design, and the analyses.

This memo provides a brief summary of issues specific to 2012 testing at Lower Monumental and Little Goose Dams. There are a number of concerns that have been raised in previous FPC Memos (June 24, 2009; July 29, 2010; Feb 16 2011; March 24, 2011; June 21, 2011; Feb 15, 2012; March 16, 2012; March 23, 2012) and were summarized in an FPC Memo on January 4th, 2013. These issues include spill levels, survival inflation through usage of the Virtual-Paired Release design, rejection rates of tagged fish, mortality in control groups, smolt behavior potentially biasing results, and the failure of evaluation to take into account factors other than concrete survival, such as latent mortality. All of these issues also apply to the 2012 studies. These issues are addressed in detail in previous reviews, and therefore they are not repeated again in this review. The issues discussed in previous reviews are significant and provide an adequate basis to question the applicability of these study results to operations management decisions. Additional concerns raised by the 2012 studies may further limit the applicability of results. These concerns include:

- High flows in 2012 created spill levels greater than court-ordered spill through much of the performance testing. Survival estimates from smolts released during high spill should not be extrapolated to generate survival estimates during normal or low flow years.

- Rejection rates for tagging average 6% of smolts. This means that survival estimates represent survival only for the healthiest 94% of the population, and survival estimates are likely be considerably lower for the run-at-large.
- Many of the control group releases had low survivals in comparison to the V_1 group that passes through at least one project. This raises concerns that upriver release of the V_1 group may eliminate weaker fish before inclusion in the V_1 group, while control groups include all tagged fish. This will distort survival estimates.
- The detection of dead smolts at Little Goose Dam violates the basic assumptions of the study design and requires correction factors that have not been used in these studies before. These corrections add an additional potential source of error in the analyses.



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DATA REQUEST FORM

Request Taken By: Erin Cooper Date: Feb 11 2013

Data Requested By:

Name: Tom Lutz Phone: _____
Address: _____ Fax: _____
CRITFC Email: lort@critfc.org

Data Requested:

Review 2012 Draft Reports of 2012 Performance
Testing at LGS and LMN

Data Format: Hardcopy Text Excel

Delivery: Mail Email Fax Phone

Comments:

Data Compiled By: Erin Cooper Date: Feb 11 2013

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