



DIRK KEMPTHORNE
GOVERNOR

February 28, 2003

VIA E-MAIL AND U.S. MAIL

Mark Walker
Director, Public Affairs Division
Northwest Power Council
851 SW Sixth Avenue, Suite 1100
Portland, Oregon 97204

Dear Mr. Walker,

Thank you for the opportunity to offer Idaho's comments on the Independent Scientific Advisory Board's (ISAB) "Review of Flow Augmentation: Update and Clarification." The ISAB review was conducted at the request of the Northwest Power and Conservation Council (NWPCC) in November 2002 in conjunction with proposed amendments to the mainstem portion of the Fish and Wildlife Program.

The ISAB review offers a fresh perspective regarding flow augmentation, and Idaho commends the Council and the ISAB for examining the scientific basis for flow augmentation. Recognizing that the "prevailing rationale for flow augmentation is inadequate" opens the door for meaningful dialogue, exploration of alternative explanations of available data, and the development of strategies that enhance anadromous fish survival. Idaho agrees with the ISAB that "with improved knowledge and subsequent management actions, it may be possible to achieve improved survival of juvenile salmonids through the lower Snake River reaches and their dams..." (ISAB Review, page 7).

Idaho recognizes the preliminary ISAB finding for the lower Snake River that flows above 100 kcfs for yearling chinook salmon and steelhead and 50 kcfs for subyearling fall chinook salmon appear to offer little benefit for inriver survival. This finding may provide a basis for managing existing flows in such a way as to increase water availability during other portions of the migration season.

Idaho appreciates the attention given to different ways of managing daily flow operations at the lower Snake River dams. Minimizing daily flow fluctuations, reducing seiches in the three lower Snake River reservoirs, and better characterizing reservoir flow characteristics (spatial and temporal temperature and velocity characteristics) represent a promising strategy for increasing anadromous migrant survival.

Several parts of the ISAB review note a potential of increased mortality at lower flows. For example, the Executive Summary states, "... the reduced flows in comparison to BiOp of July-August (near or below 50 kcfs) have the potential of significantly reducing the reach survival of underyearling Chinook salmon." (ISAB Review, page 6). We assume that these statements refer to changes in current river operations, and not to possible reductions in summer flow targets. Current BiOp flow targets for the Snake River often have not been met, particularly during the summer, and especially during dry years. A change in the BiOp flow targets that does not lead to changes in current flows therefore would not lead to increases in mortality. We assume ISAB references to BiOp flows are references to currently observed or modeled flows. Operational changes that may mitigate decreases in (or even increase) survival would consist of re-shaping current flows.

Idaho recognizes benefits of flow augmentation with respect to temperature influences from Dworshak Reservoir, and is open to exploring ways of enhancing the benefit of these effects from Dworshak Reservoir under certain conditions. Idaho also appreciates the growing recognition, fostered by the ISAB and the Council, that attributes of water (e.g., temperature) associated with current flow augmentation may be as or more important than the flow itself. The State is concerned that adding summer flow from the upper Snake simply to add flow may do more harm than good in the lower Snake River reaches.

The ISAB notes, "While the mechanisms hypothesized to operate to reduce or increase survival whilst flow is low are all reasonable, none of them has actually been shown to cause a reduction or increase in survival" (ISAB Review, page 23). We encourage further examination of specific physical and biological factors influencing survival and mortality in the context of specific flow attributes. We are hopeful that current work by the U.S. Fish and Wildlife Service (PIT tag studies with wild fish) and NOAA-Fisheries (radiotelemetric counting of migrants entering lower Granite pool) will lead to greater insight in this regard.

The ISAB states, "decreased travel time and survival through a particular reach are linked" (ISAB Review, page 28). However, Dreher et al. (2000) noted that in several years hatchery-raised subyearling fall Chinook in early releases had substantially longer travel times and higher survival than subyearling migrants in later releases. We suggest that the relationship between travel time and survival may be more complex, and travel time (especially for hatchery-raised fish) may be influenced by factors other than flow (e.g., time spent rearing, acclimating, etc.).

The ISAB review affirms, "Below approximately 100 kcfs, steady levels of flow or other management alternatives may be needed to avoid deleterious effects." We assume that this refers to steady daily flows, not steady flows as indicated in the current BiOp flow targets.

There has been much emphasis placed on the “flow and survival relationship” as a basis for flow augmentation. However, the discussion about the flow and survival relationship has been based largely on correlations, and causation associated with specific flow attributes has not been established. Therefore, in summary, Idaho appreciates the ISAB’s and Council’s evaluation of some of the scientific factors underlying flow and anadromous migrant survival, and the recognition that currently “we have no way of knowing whether the flow increments that are provided by the present flow augmentation policy will or will not induce conditions that enhance smolt survival” (ISAB Review, page 26). The State encourages the Council to “conduct a comprehensive evaluation of survival, flow targets, and flow augmentation to determine the relationship between specific management actions and changes in life-cycle survival” as suggested in the Council’s proposed Mainstem Amendments (page 30).

Sincerely,

A handwritten signature in black ink, appearing to read "Dirk Kempthorne", with a long horizontal flourish extending to the right.

DIRK KEMPTHORNE
Governor

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