



DIRK KEMPTHORNE
GOVERNOR

February 7, 2003

VIA E-MAIL AND U.S. MAIL

Mr Mark Walker
Northwest Power and Conservation Council
851 SW 6th, Suite 1100
Portland, OR 97204

**RE: State of Idaho Comments on the Northwest Power and Conservation Council
Draft Mainstem Amendments to the Columbia River Basin Fish and Wildlife Program
(October, 2002).**

Dear Mr. Walker:

Attached are the comments from the State of Idaho on the Draft Mainstem Amendments. We appreciate the Council efforts to fulfill its mandate to balance the needs of fish and wildlife with the region's power needs.

Idaho supports the objectives of reestablishing a natural hydrograph, protecting and restoring ecosystem function in the Columbia River estuary as presented in the amendment as they are consistent with the Four Governors' Recommendations. We offer these comments in an effort to assist the Council in the refinement of the Amendment.

Sincerely,

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

DIRK KEMPTHORNE
Governor

DK:lmb

Attachment

Mark Walker
Public Affairs, Northwest Power and Conservation Council
851 SW 6th Ave., Suite 1100
Portland, OR 97204

These comments respond on the State of Idaho's behalf to the Northwest Power and Conservation Council (NWPPCC) *Draft Mainstem Amendments to the Columbia River Basin Fish and Wildlife Program* (October, 2002). Idaho commends the Council for its thoughtful and comprehensive approach to the difficult questions raised by the interaction of fish and hydropower in the Columbia River Basin. Idaho's comments are intended as constructive suggestions for improving the proposed amendments. The first section will focus on several of the specific issues as to which the Council has especially requested analysis. The remainder of comments address matters of particular concern to Idaho.

Section 1. Response to "Specific Issues for Comment", NWPPC, October 28, 2002

1. Changes in storage reservoir operations in general.

Idaho acknowledges the Council's interest in alternative reservoir operations. However, the deeper winter drafts called for in the draft mainstem amendments may run counter to a number of the Council's fish and wildlife objectives. The proposed deeper winter drafts reduce the current ability of the FCRPS to provide spring flows for smolt migrations, and are counter to restoration of the natural hydrograph and ecosystem function in the estuary and ocean plume. Inflow water currently passed through storage reservoirs used to aid migrations and support ecosystem function would go towards filling evacuated storage under the Council's proposal. Within the context of Idaho's desire for additional evaluation of the benefit of flow to fish survival. Idaho supports utilizing flood control releases without jeopardizing refill from Dworshak and Brownlee Reservoirs to aid spring migration when juvenile migrants are present. This would be consistent with the NMFS 2000 BiOp Action 35, which has the objective of evaluating the feasibility of increasing spring flows through refinements in flood control operations by 2005. A key component to maximizing upper Snake River flows is the formation of a shaping agreement between Idaho Power and the Bonneville Power Administration. Idaho calls upon the Council to advocate the establishment of such an agreement to allow flows from Brownlee Reservoir to assist migration when they are most needed and most beneficial from a temperature standpoint. Idaho recommends the Council consider previous State comments on this issue (State of Idaho 2000, pages 4-5).

3. Changes in storage reservoir operations - elimination of April 10 flood control elevation target.

Idaho is interested in more flexibility to improve the survival of migrating salmon and steelhead. Idaho recommends a review of flood control rule curves to shape flows to improve survival of migrating salmon and steelhead (State of Idaho 2000, 2001). Idaho recommended for the federal Implementation Plan that the Action Agencies should

collaborate with the Basin States to determine whether flood control rule curves, particularly for the Brownlee and Dworshak projects, can be reconfigured to enhance migration conditions for salmon and steelhead while minimizing flood risks and not affecting refill probability.

4. Changes in storage reservoir operations - summer flows.

Idaho recognizes the Council's interest in refining Dworshak operations to balance uses. Idaho appreciates Council consistency with key elements of the Idaho Dworshak Operations Plan, which reflects agreement between Idaho and the Nez Perce Tribe. However, the Council should consider making the Dworshak management recommendation less prescriptive than currently suggested. While a September draft is a desired management action, implementation should not risk July and August juvenile migrants (Connor et al. in press; State, Federal, and Tribal Anadromous Fish Managers, 2003). Fish and reservoir managers need the option to assess and prioritize annually whether to utilize the agreed water volume (draft to 1520 elevation) to include September draft or not, using the water quality criteria of total dissolved gas (an aspect of the operations plan) to effect maximum outflow. The Council Plan acknowledges there may be variability with the fifth bullet on page 38 - "If river conditions degrade dramatically..." Decisions, however, may be made on the basis not only of river conditions but also of fish condition and response. When conditions warrant, utilizing a component of the Dworshak draft volume in September to aid later migrating juvenile chinook, generally from the Clearwater River, and to improve adult migration, is an Idaho priority,

We recognize there may be significant resident fish issues related to modifying the draft volume in Libby, Hungry Horse, and Grand Coulee. Idaho supports the concept of "flattening" summer flows in Libby and Hungry Horse to reduce potential ecological effects to downstream rivers. The supporting argument for resident fish benefit (in regard to limiting draft volumes) could be strengthened in the mainstem draft amendments. We ask the Council to carefully consider the biological information presented to them in regard to effects on survival of anadromous and resident fish in regard to their proposal, and to provide a better public record of the risks and benefits. The Council Plan calls for assessment of the effect of reservoir operations on resident fish and wildlife for Dworshak Reservoir. Similar information is also important for the other three reservoirs.

6. Changes in storage reservoir operations - relation to late fall/winter flows for chum and chinook spawning below Bonneville Dam.

Operations should not jeopardize existing protection measures for Snake River anadromous fish. Knowledge of status, benefits, and risks of management operations for directly and indirectly affected ESUs must be part of the decision framework. The Council should also refer to Idaho comments about Albeni Falls Operations (State of Idaho 2000a).

7. Spill operations - dam-specific spill level studies.

The draft recommends further evaluation of controlled spill to determine whether juvenile passage survival benefits from spill can be achieved alternatively while reducing spill (p, 25). Existing evidence indicates that within the management range of the FCRPS BiOp and the flow-spill risk analysis, there is minimal risk of reducing survival by increasing spill up to dissolved gas levels of 125% (State, Federal, and Tribal Anadromous Fish Managers, 2003). The Council should consider examining the effects of both operations - both on survival and power production from reduced spill and on survival and power production from increased spill - to evaluate risks and benefits.

The draft mainstem amendments do not clearly separate gas supersaturation and passage survival issues for spill up to the FCRPS BiOp levels from uncontrolled spill. Uncontrolled spill (or "forced" spill) from overgeneration flow may reduce passage survival from high total dissolved gas (> 125% TD G),

9. Juvenile Fish Transportation

Idaho appreciates the Council's deliberation about juvenile fish transportation. Idaho offers added information for the Council's consideration. Regional data do not indicate that collection and transportation during average or higher flow years improves the adult return rate of wild salmon or steelhead when compared to allowing them to migrate uncollected (inriver). For the period of record, a smolt to adult return percentage (SAR) of 2% to 6% has not been consistently achieved for either route of migration. (Figure 1). So far, transportation evaluation studies have only demonstrated that wild smolts, once collected, survive better if transported than if put back in the reservoir. That is a different scenario than for fish, which migrate inriver without collection. Thus, it cannot be concluded that smolts, which have been collected and returned to the river, are the same as uncollected smolts. The interagency Comparative Survival Study (CSS), funded by the Council, is yielding results regarding the metrics between transported and inriver migrants for hatchery and wild Snake River spring and summer chinook to determine whether smolt-to-adult return (SAR) survival is greater for fish that are collected and transported or greater for fish which migrate inriver. To date, our results encompass years classified as average or better inriver migration conditions, which conceivably, the Council Plan, as well as the FCRPS BiOp, is striving for. A key finding of the CSS study (Bouwes et al. 2002) is that "little or no transportation benefits were evident in most years for Snake River wild [spring/summer] chinook based on available PIT-tag data, 1994-1999", Approximately 90% of Snake River wild juvenile outmigrants are currently collected and transported every year. We believe the data are sufficient for the Council to emphasize an inriver migration strategy in years when better migration conditions (adequate flow and spill) can be provided.

The NWPCC has specifically asked about low flow and transport benefits, and forthcoming results from 2001 will demonstrate results from poor inriver migration conditions. However, it is critical to recognize that whatever transportation benefits exist for low flow conditions are only relative. Data indicate conditions of low flow and spill

are associated with in migration delays, altering timing and reducing fish condition for both inriver migrants and even transported smolts (State, Federal, and Tribal Anadromous Fish Managers 2003). Transportation cannot totally mitigate for these types of low-flow impacts, even if there are relative transport benefits.

The draft amendments propose to continue transportation as a transitional strategy, while calling for evaluations, and endorsing a "spread-the-risk" strategy. Idaho supports a spread-the-risk transportation strategy. That notwithstanding, the Council's proposal will likely increase the percentage of collected and transported fish (currently about 90%), an increase that may be at odds with the spread-the-risk objective. Provision of good in-river migration conditions through spill is critical to a "spread the risk" strategy. However, it appears that the Council excluded Snake River spring and summer migrants from these spill priorities (p, 25). Proposed priorities are to "optimize passage survival benefits for populations ... which cannot be transported or are ineffectively transported". The draft lists only lower and middle Columbia River populations and thus apparently assumes transportation from the Snake River is effective (p. 24). Idaho requests inclusion of the Snake River in the spill priorities.

10. Smolt-to-adult survival rates (SAR).

The draft amendments have interim SAR objectives of 2-6%, with a minimum of 2% and an average of 4%. We commend the Council for including an interim 2-6% SAR objective for Snake and upper Columbia wild spring/summer chinook and steelhead. We believe that SARs are the correct indices to measure the effectiveness of mainstem efforts and an appropriate biological objective to measure success of the Council's program. For Snake River spring and summer chinook, this range has been identified as sufficient for population rebuilding and recovery. It is likely that an appropriate steelhead SAR will fall within this range, as well. Conceptually, an SAR objective should be developed for summer migrants, such as Snake River fall chinook.

12. Criteria and procedures for emergency operations.

Idaho policy and technical personnel have worked within the existing management framework to provide comments and recommendations to the Action Agencies in drafting criteria for power system emergencies. We do not believe it is necessary to adopt such criteria into the Council's Fish and Wildlife Program.

Section 2. General Comments to elements Council Document 2002-16, Draft Mainstem Amendments to the Columbia River Basin Fish and Wildlife Program

Flow Targets

Idaho commends the Council for reviewing current flow targets in the context of and attainable goals and scientific physical and biological information. At the outset, Idaho recognizes that flow targets are constrained by the Bureau of Reclamation's obligations under state law with respect to flow augmentation and that Idaho Code § 42-1763B,

which restricts the amount of such augmentation and the conditions under which it may be supplied, from the upper Snake River Basin,

NOAA-Fisheries (formerly the National Marine Fisheries Service, or NMFS) has identified flow management as a key mitigative action needed to reduce the jeopardy of the FCRPS. Flow management, of which flow augmentation can be a component (depending on amounts and attributes of water available for flow augmentation), is a tool for doing so. The Council recognizes that current "flow objectives [at Lower Granite and McNary Dams] are not hard constraints because: (1) flow objectives are highly influenced by natural precipitation and runoff, and (2) hydraulic conditions and their constraints may preclude meeting these objectives at all times ..." (Proposed Amendments, pg 35),

The NWPCC has expressed concern about the current flow targets, especially in regard to flow augmentation from the upper Snake River. The Council therefore proposes a series of consultations with the Bonneville Power Administration, NOAA Fisheries, U.S. Fish and Wildlife Service, and other agencies to "determine whether and how 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" (Proposed Amendments, pg 30). Idaho agrees with this approach, which would include "a public review process, with the goal of providing revised recommendations to the federal agencies of continuing or modifying the current system water management program for migrating salmon and steelhead (pg. 31)."

Idaho supports evaluating the flow targets outlined in the 2000 Biological Opinion for three reasons: First, the current flow targets, especially for the summer period at Lower Granite Dam, are difficult to meet in an average water year, and are impossible or at least nearly impossible to meet in a poor water year. Even though the targets were not intended as hard constraints, target flow rates should be reconsidered in the context of specific biological benefits and currently available water,

Second, it is our understanding that current summer flow targets were based, in part, on flow and survival correlations using hatchery-raised subyearling fall chinook migration data collected between 1995-1998 (Muir et al., 1999). However, survival of these fish from points of release on the Snake and Clearwater Rivers to Lower Granite Dam (LGD) appeared to be dependent on multiple factors (Dreher et al., 2000), and the effects of individual flow components (e.g., velocity, turbidity, and temperature) on survival have not been determined. A review of the hatchery-raised fall Chinook data from 1999-2001 leads to similar conclusions (Dreher et al., *in preparation*) - it still is not possible to determine the effects of individual flow components on survival of the hatchery-raised subyearling fall chinook to LGD, nor can it be determined if current flow augmentation efforts are having any appreciable effects on the survival of these fish from points of release to LGD. Furthermore, variations in survival rates and migration characteristics within and between years raise questions about the condition of the fish and state of smoltification on a year to year basis for the hatchery fish used in the experiments.

Third, the flow targets do not account for differences in characteristics between flow augmentation sources. It is our understanding that recent U.S. Fish and Wildlife studies using wild summer migrants show independent benefits of temperature, and to a lesser extent flow, on survival (Connor et al, in press). However, temperature benefits realized in the lower Snake River from Dworshak releases during mid and late summer cannot be reproduced with water from the upper Snake River. Simply striving to meet flow targets regardless of the degree of biological benefit obtained seems like an ineffective and uneconomical strategy for salmon recovery.

Recognizing that current flow targets are often unattainable, Idaho supports the NWPCC's proposed review of flow targets in the context of currently available flow augmentation volumes and physical and biological information. As stated by the Independent Science Advisory Board (ISAB 2001, p. 14), "specific goals for augmentation must be evaluated in the context of the water sources available at particular times (their qualities, not just quantities)." Idaho therefore supports the "development of guidelines for conditions when flow augmentation would be beneficial and when it would not" (*ibid*) during the review of flow targets in the lower Snake River.

The review should focus, to the extent possible, on quantifying the effects of various flow attributes, such as velocity, temperature, turbidity, etc., on juvenile migration and adult returns. If hatchery fish are used in juvenile downstream migration studies, the studies should include careful monitoring and descriptions of life history, pre-release growing conditions, mitigating factors (e.g., occurrence of disease), etc. Alternatives for monitoring survival in control groups for hatchery releases should be explored.

Resident Fish

The Council states a desire to provide conditions necessary to restore populations of native fish and wildlife in areas above and below Hungry Horse and Libby Dams to self-sustaining levels capable of supporting harvest. Without a more detailed proposal for management of the Libby, Hungry Horse, Albeni Falls and Dworshak projects, it is not clear what effect the draft mainstem amendments will have on resident fish in Idaho. What is clear is that modifying the operation of the Libby, Albeni Falls, and Dworshak projects, and to a lesser extent the Hungry Horse project, has substantial potential to influence (positively or negatively) important populations of fish and highly valued fisheries, and associated fish and wildlife habitats. The information below is intended to inform the Council's future decision-making in this area,

Kootenai River

Maintaining attributes of a natural hydrograph in the Kootenai River downstream from Libby Dam is critical to recovery of federally listed Kootenai River white sturgeon, which require high spring flows to facilitate spawning, and for burbot, which require an extended period of low flows (average 7300 cfs from mid-October through the first week of February is considered close to optimal; 45 days of 7300 cfs or less from midDecember through January is considered a bare minimum to provide for some opportunity for burbot reproduction). Bull trout, an ESA listed species, are also present

in the Kootenai River, and would likely benefit from operations that maintain natural river processes, such as the flushing of gravel bars that have accumulated at the mouths of tributaries used for spawning. Other migratory native salmonids including kokanee would also likely benefit. Bull trout, as well as the native mountain whitefish, rainbow trout and cutthroat trout that support a popular fishery on the Kootenai, will also benefit from river operations that result in good quality habitat for aquatic macro invertebrates and different life stages of these fish. The relatively recent change to reduce or eliminate peaking operations is a practice that should be maintained. Flows during the early winter spawning season may be a consideration for mountain whitefish. The effects of flow manipulation on temperature regimes, and subsequent effects on native fish species, are not well understood, but lower flows during the winter months would likely reduce temperatures and favor spawning burbot (ice formation was common on the lower Kootenai prior to closing of Libby Dam).

Clark Fork River/Pend Oreille Lake and River

Lake Pend Oreille supports one of the largest known populations of bull trout, kokanee are their primary prey item. We are not clear how or if proposed operations at Hungry Horse would affect operation of Albeni Falls, or flows in the Clark Fork River. The Clark Fork is being re-established as a migratory corridor for bull trout with passage being provided at Cabinet Gorge and Noxon Rapids dams. It is unknown whether changes in flow management from Hungry Horse would affect bull trout migrating out of Lake Pend Oreille into the Clark Fork River corridor. Since the mid 1990's operations at the Albeni Falls project have been modified to improve spawning conditions for kokanee in Lake Pend Oreille, with anticipated benefits to top level predators, such as bull trout, in the lake. We have clear evidence of significant losses of kokanee spawning habitat if Lake Pend Oreille is drafted below 7055 ft on a consistent basis. Other fisheries also suffer as a result - kokanee provide the forage for the trophy rainbow trout fishery, and historically have supported harvests of over 1 million fish annually. The bass fishery in the Pend Oreille River upstream from Albeni Falls dam is limited by annual drawdowns, but current management has reduced the impact. A return to early 1990's operations at Albeni Falls would not only have a negative impact on the trout and kokanee in Lake Pend Oreille, but on the warmwater fishery in the Pend Oreille River. Impacts to the lower Clark Fork River from current and past operations of Albeni Falls dam are not well understood, but a significant portion (over a mile each of three different channels) is flooded each summer. Considerable erosion (estimated in the tens of acres annually) of important wildlife habitat in the Clark Fork delta and in the Pend Oreille River above Albeni Falls is a result of current and past operation of the reservoir.

Clearwater River/Dworshak Reservoir

Dworshak Reservoir supports an economically important kokanee fishery, and an adfluvial bull trout population. Periodic drafting of the reservoir can result in significant losses of kokanee, and substantial loss of access for recreational anglers during the late summer. Generally, kokanee entrainment is higher during winter/spring evacuations than it is during summer and fall, even at similar discharge levels. There is ongoing study to

try and minimize this effect. Power peaking during the winter does have negative effect to the steelhead fishery; effect on the spring chinook fishery from reservoir outflow depends on adult timing. Bull trout entrainment has not yet been evaluated during winter power generation, but we suspect there is risk of entrainment. High levels of dissolved gas are known to occur downstream from Dworshak Dam during spill events, with low levels of gas bubble disease documented in several species of fish, Evaluation from 1995 to 1999 demonstrated gas bubble disease did not have substantial biological effect and was only noticed in the short section of the North Fork of the Clearwater River from the dam to the Clearwater River confluence (Cochner 1999).

Fish Passage Center

The Fish Passage Center (FPC) provides an important technical management function for IDFG and all other stakeholders. FPC products and services enable IDFG to carry out the management responsibilities to "protect, preserve, and perpetuate for use" Idaho's anadromous fishery resources by adding to IDFG technical and financial resources. FPC's work also provides data and information to other stakeholders in fishery management, recreation, and river management.

The Council proposes broader oversight and supervision for the Fish Passage Center beyond fish and wildlife agencies alone (through the Columbia Basin Fish and Wildlife Authority-CBFWA). The Council should reiterate its directive from previous Fish and Wildlife program measures that the FPC provides expert assistance to the fish and wildlife managers, The Council Plan describes on page 39 key technical roles for the FPC, which reflect Fish and Wildlife program measures. Idaho supports this technical role for the FPC. The Council should focus on policy guidance and stakeholder interaction to ensure that the FPC carries out technical functions in a way that ensures regional accountability and compatibility with regional data management.

Additional Specific Comments:

Page 13, line 9-10: The amendments suggest, "where feasible, manage the hydrosystem so that patterns of flow more closely approximate the natural hydrographic patterns." This is followed by several references to changing current reservoir operations to "increase the likelihood of storage reservoir refill" (line 16), and operating outflows so that the reservoirs "can shape the water to benefit fish,," (line 23). The Council, however, should recognize explicitly that natural hydrographic patterns must be considered within system constraints. Although biological benefits are paramount, the Council should clarify that technical and economic feasibility also constitute a consideration in determining appropriate modifications of hydrosystem management.

Page 21, line 44: The amendments include evaluating "the feasibility for reintroducing anadromous fish into blocked areas, including above Chief Joseph and Grand Coulee dams," Idaho recommends that the Council Amendments exclude consideration of reintroduction above Hells Canyon Dam because this is not a federal project.

Page 30: The Council draft mainstem amendments document appear to rely on a conclusion from Giorgi et al. (2002) questioning the scientific basis of a flow-survival relationship. IDFG and other salmon managers have previously provided the Council information supporting spring and summer migrant flow-survival relationships in response to the Giorgi et al. (2002) report. New information providing additional data about flow and survival is available to the Council (State, Federal, and Tribal Anadromous Fish Managers Comments 2003), Recent presentations also have provided new information to the Council regarding flow and survival studies (State, Federal, and Tribal Anadromous Fish Managers Comments 2003, Fishery Managers presentation to Council, January 15, 2003, Vancouver, WA; presentation by Karl Dreher to the NWPCC, December 11, 2002). Idaho does not suggest that existing and new data are the final word on flow and survival issues. However, they are data that should be considered by the Council in formulating the final mainstem Plan.

Pages 37-38: The draft amendments do not seem to equitably allocate summer reservoir water use from Grand Coulee Dam relative to other federal storage projects, For example, only seven feet of storage is proposed for use from Grand Coulee (1290 feet by the end of June to 1283 feet by the end of August), whereas Dworshak is drawn down 62 feet over the same time period.

In conclusion, Idaho appreciates the Council efforts to fulfill its mandate. Idaho supports the vision of balance and offers these comments in an effort to help the Council refine the Amendments.

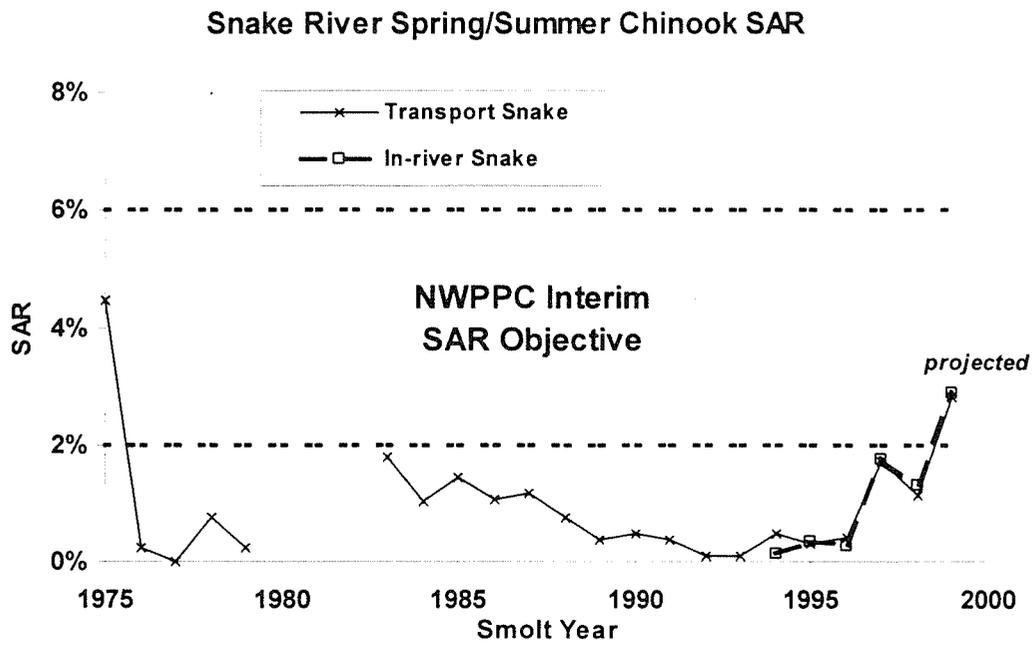


Figure 1. Smolt-to-adult return rates (SAR) for Snake River spring/summer chinook (transported 1975-1999; inriver migrants 1994-1999). (source: State, Federal, and Tribal Anadromous Fish Managers 2003).

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