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VIA Electronic Mail

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The Office of Species Conservation, the Idaho Department of Fish and Game and the Idaho Office of the Attorney General would like to thank you for the opportunity to provide comments to the 2003 Check-in Report for the Federal Columbia River Power System.

We respectfully submit the attached State of Idaho's Comments for your review. If you have any questions, please contact Jeff Allen with our office at (208) 334-2189.

Sincerely,

James L. Caswell
Administrator

/tm

Attachment

cc: Virgil Moore
Sharon Kiefer
Clay Smith

State of Idaho Comments to the 2003 Check-in Report for the Federal Columbia River Power System

Comment Overview

The 2003 Check-in Report for the Federal Columbia River Power System (FCRPS) does a good job of characterizing strategies and the implementation structure of the 2000 FCRPS Biological opinion. Our primary concerns deal largely with analytical issues that were also raised by the State of Idaho in comments to the 2000 FCRPS Biological Opinion (BiOp) and in subsequent Implementation Plan comments. These issues remain relevant to BiOp implementation and the key technical viewpoints are summarized in the following comments.

An overarching recommendation is that the report should do a better job of distinguishing between implementation of actions specific to the 2000 FCRPS BiOp and ongoing implementation of actions tied to previous hydrosystem BiOps.

Comments are summarized according to the major sections of the report.

Section II – What Have We Accomplished for Fish Conservation?

It is appropriate for the action agencies to account for and be credited for accomplishments of prior hydrosystem BiOps but as a separate category than new RPA's that would be affiliated specifically with the 2000 FCPRS BiOp. An example of an ongoing measure from previous BiOps is the drafting of cold water from Dworshak Reservoir to aid summer migration (p. 4). Another example is the ongoing captive broodstock program for Snake River sockeye (p. 6) or much of the work conducted in the Upper Salmon River pursuant to Model Watershed efforts (p. 9). This is because measures already implemented pursuant to previous BiOps would presumably have been included in the NOAA Fisheries (NOAAF) jeopardy analysis for the 2000 BiOp, when they found that additional measures were needed to avoid jeopardy. We also believe the Action Agencies referenced measures that were not implemented or ongoing pursuant to the 2000 FCRPS BiOp, such as providing improved gill nets to tribal commercial fishers (p. 6). This reference should be deleted.

The description of water management (p. 4) may be better summarized in table form to compare actual conditions to BiOp targets. It should be noted that spring and summer flow objectives were not realized at Lower Granite Dam on an average seasonal basis in 2002 (Fish Passage Center, 2003).

The State of Idaho has previously commented in Implementation Plan comments that inclusion of the Little Salmon as a priority subbasin for fish passage issues does not seem to match the current biological production or production potential of this subbasin. Dollars could be spent with more recovery effectiveness in subbasins of higher biological importance, such as the Pahsimeroi subbasin.

The Columbia Basin Fish and Wildlife Authority (CBFWA) offered its perspective on BiOp implementation and challenges at a recent Congressional Hearing (Appendix A). Several recommendations made by the Fish and Wildlife managers in the testimony would facilitate challenges identified by the Action Agencies.

Section III – How Are Listed Salmon and Steelhead Doing?

The Action Agencies correctly identified that the dominant cause of recently increased runs is a change in ocean productivity, but management of the FCRPS to meet the 2000 and previous BiOp RPAs has surely assisted. The Action Agencies should identify linkage to any Research, Monitoring and Evaluation (RME) strategy that will help them parse out effects of ocean productivity versus FCRPS RPAs on abundance.

There is emerging evidence that the combination of natural environmental factors combined with management decisions in 2001 to terminate many of the direct hydrosystem mitigation measures may have had an adverse effect on smolt-to-adult survival (SAR) for at least Snake River yearling chinook. This decline would not necessarily be evident from river reach survival information. While it is uncertain whether this reduction in survival for migration year 2001 will have long-term effects, the Action Agencies should recognize that full life cycle analyses are important to illustrate biological effects of hydromanagement decisions.

Section IV – What is the Status of Performance Standards and Measures?

IDFG comments address programmatic aspects of BiOp implementation, analytical issues related to future BiOp jeopardy determinations by NOAAF, and the Action Agencies' current characterization of population status. Many of the IDFG analytical issues carry over from the NOAAF 2000 BiOp analyses (summarized below). The analytical and collaboration issues must be resolved before future check-ins in 2005 and 2008, which will require timely development of a collaborative analytical framework.

Summary of IDFG/State of Idaho comments on NMFS 2000 draft BiOp regarding jeopardy analysis and biological requirements:

Many concerns expressed by IDFG on the NOAAF (2000) draft BiOp jeopardy analyses and biological requirements (State of Idaho 2000, Part II) were not adequately addressed in the final BiOp. Subsequent analyses performed by the Federal Caucus (NOAAF and Action Agencies) for the 2003 check-in and the BiOp remand, using similar approaches and assumptions, continue to cause IDFG concern regarding characterization of risk to the listed salmon and steelhead. These issues need to be resolved by the 2005 and 2008 check-ins.

In summary, IDFG expressed several technical concerns with the jeopardy analyses for the 2000 draft BiOp (State of Idaho 2000, p. 48). First, the characterizations of extinction risk, stock productivity, jeopardy standard and conservation opportunities were based on optimistic assumptions and generally ignored more conservative assumptions. Second, the conservation burden of the hydrosystem was discounted based on optimistic assumptions that ignored the weight of evidence regarding delayed transportation and “extra” mortality attributable to the

hydrosystem. Third, the conservation burden of the hydrosystem was shifted to other sectors. Fourth, specific RPA measures and the biological feasibility of these measures to avoid jeopardy were not identified. Fifth, the performance standards and measures were inadequate to assess the effectiveness of RPA measures. Last, a contingency RPA was not identified or evaluated in case performance standards are not met.

IDFG also expressed concern about lack of collaboration with state and tribal fisheries scientists in development of the BiOp and Recovery Strategy (State of Idaho 2000, p. 49). While the final 2000 BiOp calls for such analytical collaboration for the 2005 and 2008 check-ins (NMFS 2000; Sections 9.5.3.3 and 9.5.4.3), this has not occurred in the analyses performed by NOAAF or the Action Agencies for the 2003 check-in or BiOp remand.

V. Conclusions

Greater collaboration with fish and wildlife management agencies is needed than has occurred to date with the federal agencies draft RM&E Plan or analyses prepared for the 2003 check-in and BiOp remand. The CBFWA-sponsored Collaborative Systemwide Monitoring and Evaluation Project (CSMEP) may be a more appropriate forum for such collaboration to occur prior to the 2005 and 2008 check-ins.

The Action Agencies' Conclusions on Cumulative Implementation should identify more clearly that recent run size increases appear to be due largely to improved ocean and climatic conditions (as acknowledged in Chapter III, p. 15) and generally higher runoff (except 2001). Management actions should be sufficient to avoid jeopardy and allow recovery through both favorable and unfavorable climatic cycles. Furthermore, the 2000 BiOp states (9.5.5, p. 9-50), "[i]mprovement in stock status that is due primarily to environmental variation, such as improved ocean conditions or high runoff years, will not be a basis for curtailing measures intended to address anthropomorphic factors for decline". IDFG has previously commented on the empirical relation between life cycle survival and ocean/climatic conditions and smolt migration conditions such as flow and spill (State of Idaho 2000; pp. 50-53). These IDFG comments are further supported by subsequent analyses by State, Federal and Tribal Anadromous Fish Managers (SFTAFM 2003). Those analyses concluded that "[j]uvenile migration conditions and ocean climate conditions were both influential in explaining patterns of adult recruitment of Snake River spring and summer chinook (spawner to spawner ratio) … and SARs in Snake River spring and summer chinook and steelhead." Because of generally improved spring smolt migration conditions in most recent years, combined with implementation of BiOp mitigation measures and ocean/climatic conditions since 1997, increases in run size would have been expected.

The Action Agencies should not imply without rigorous analyses that recent or future increases in run sizes are primarily a result of BiOp implementation. The focus should be on distinguishing between biological benefits of natural environmental factors and biological benefits from managed factors. A key consideration will be attention to year class strength to avoid misconceptions, such as with the 2003 Snake River chinook return. Although robust, this return was comprised primarily of adults that migrated to the ocean in 2000, creating an atypically large three-ocean return group. However, due to lack of attention to age structure, many people attributed the return to the 2001 migration year, an assumption which would lead to incorrect conclusions about natural and hydrosystem management effects during 2001.

VI. Reports Addressing Individual Check-in Criteria

Report 1 - RPA Action Funding and Authorizations Update

There has been substantial interest and emphasis in planning forums in removable spillway weir design and schedule. More attention should be given to progress and planning for this passage tool.

Report 2 - Pilot Studies, Research and Monitoring Projects Update

P. 2-2, RME plans for hatcheries and harvest – Similar to the collaborative efforts underway for a regional RM&E plan, efforts at RM&E directed at hatcheries and harvest would benefit from a broader, more regional approach that includes the actual managers of hatcheries and harvest. The Action agencies are funders but it is the States and Tribes that have the production and management authority.

P. 2-5, It should be recognized that full implementation of the identified research activities that address the hydro critical uncertainty research RPA actions are being constrained by funding decisions and thus may constrain future decisions and knowledge. An example is the Comparative Survival Study. Although approved for full funding and implementation through the appropriate Northwest Power and Conservation Council (NPCC) process, this study has still not been fully funded. In addition to the primary information relative to the hydro RPAs, the project has provided extensive management information, which is being used by state, tribal, and federal agencies for migration timing and forecasting information, relevant to hatchery and harvest RPAs. An aspect of project funding decisions should include whether there are substantial benefits to other critical needs generated by a project along with providing information for the primary objective.

P. 2-6, Investigate potential hydro system EM ("extra mortality") on stock productivity. EM has not been specifically acknowledged in the BiOp. Thorough evaluation of the extent of delayed mortality suffered by in-river migrants through the hydro system will require an analytical framework and an assessment of the weight of evidence supporting alternative hypotheses about differential stock performance. The region continues to lack such a framework or forum to perform these evaluations collaboratively. In addition, a decision analysis process to assess risks associated with alternative management options and hypotheses would help clarify the implications for, and the state of the science supporting, upcoming decisions.

Pp. 2-4, 2-9, references to "CBFWA Project". IDFG interprets these references to mean the CBFWA CSMEP. If so, this would be an appropriate forum to establish a collaborative systemwide analytical framework to address key management questions and assess risk of alternative BiOp options.

Report 3 - Part A: Subbasin Assessments, Hatchery Genetic Management Plans and Safety Net Plans

P.3-3, IDFG recommends the Action Agencies consider expanding their implementation criteria for funding hatchery reform actions. There are numerous hatcheries other than Bonneville Power Adminstration (BPA) funded programs that need reform and investment due to the fish survival and resulting ESA constraints imposed by the FCRPS. The focus for funding reform should be broader than just BPA-funded facilities if regional change and effectiveness is desired.

P. 3-4, There is not a West Fork Yankee Fork sum chinook population; this should be removed from Table 3-1. The Upper Valley Cr. sum chinook should be changed to Lower Valley Cr.

P. 3-5, Table 3-1 was referenced as data sets provided by the TRT. These are not data sets provided by the Interior Columbia Basin TRT and do not match the Snake Basin population description recently developed by the TRT. The reference should be clarified; it may be that the information was provided by the Biological Review Team.

There are several programs listed in Table 3-2 that predate the 2000 BiOp and the safety-net RPA. While the Action Agencies should take credit for funding the programs, there should be a distinction between programs previously funded to mitigate hydrosystem effects (and not necessarily "safety-net," such as Johnson Creek, Snake River fall chinook acclimation, and fall chinook propagation efforts in the Clearwater River), and those funded specifically in response to the 2000 BiOp safety-net RPA.

Report 3 - Part B: Detailed Site-Specific Plans to Meet Offsite Mitigation Performance Standards

We previously provided our perspective regarding inclusion of the Little Salmon River subbasin as a priority subbasin. From a perspective of biological production and potential to contribute to recovery, the Little Salmon River should not be a priority subbasin. In contrast, the Lemhi and upper Salmon subbasins have tremendous production and production potential. The Pahsimeroi subbasin should be elevated to priority subbasin status in place of the Little Salmon River. The Federal Caucus' insistence on funding projects in only NOAAF-designated priority subbasins has delayed projects outside said subbasins deemed by local technical teams to be of greater biological benefit. This approach has frustrated local biologists and private landowners alike. Idaho feels strongly that BPA and others should receive credit for excellent work and that such credit should not be restricted to work done in few scattered subbasins.

Criteria for priority subbasin tributary activities should include assessment of population priorities in other forums. For example, NOAAF has identified its concern about Snake River B-run steelhead status in harvest arenas because this stock can be a key constraint in important fall chinook fisheries. Thus, focus on B-run steelhead habitat measures may be beneficial to multiple forums. Ongoing efforts by the TRT to conduct viability analysis and safety-net extinction risk analyses should also be considered to inform future priority subbasins and actions. Incorporating these additional criteria into tributary and project selection would be beneficial from a regional perspective.

Report 4 - Status of Biological and Physical Performance Standards

The BiOp requests progress reports from the Action Agencies on development and adoption of biological and physical performance standards. Biological standards should be sufficient to 1) evaluate status of each ESU relative to survival and recovery indicator criteria using ESU-specific recovery standards that incorporate measures of abundance, productivity trends, species diversity and population distribution; and 2) evaluate effectiveness of actions to improve survival to meet off-site mitigation standards. Physical standards are to achieve habitat attributes and hatchery management reforms that provide life cycle improvements to achieve survival and recovery indicator criteria.

The Action Agencies state they are using adult abundance and trends as primary measures of population performance, and population growth rate estimates (lambda) as a longer-term performance metric. IDFG notes that survival and recovery indicator criteria will require more than these metrics to address the abundance and productivity criteria, and especially the diversity and distribution criteria. Variance in population growth rate (or spawner-to-spawner ratios) also must be taken into account in risk assessments. In addition, more traditional stock assessment approaches, incorporating density dependent growth rate, may be more appropriate than the current approach NOAAF used with population growth rate estimates. This may be especially true in assessing progress toward recovery. Metrics should include spawner-to-spawner ratios, recruit-to-spawner ratios (pre-harvest recruits), residuals from stock recruitment relationships, and life-stage survival estimates (smolts/spawner and SARs). IDFG commented extensively on analytical issues with the draft 2000 BiOp (State of Idaho 2000), and the need for a collaborative analytical framework to address these key management questions.

The Action Agencies believe that the primary standard for hydro performance standards should be total system survival (in-river survival adjusted by delayed differential transport mortality, D), with in-river survival serving as a secondary standard. IDFG notes that both are inadequate standards if in-river migrants also suffer delayed mortality due to the hydrosystem ("extra mortality" or EM). There is substantial evidence supporting hypotheses that the hydrosystem causes EM (State of Idaho 2000; Budy et al. 2002). As explained earlier in these comments, this issue is best addressed in a life-cycle context through an analytical framework, which is lacking within the region.

Report 4 summarizes hydro performance standards for in-river and system (in-river survival modified by "D") survival. Recent estimates of "D" for wild Snake River spring/summer chinook from the Comparative Survival Study (CSS) were about 0.5 (Berggren et al. 2003), considerably lower than the range assumed by NOAAF for establishing the 2000 BiOp hydro performance standards. The Action Agencies appear to assume substantial transportation benefits will aid in meeting the hydro performance standards, by stating a preference for system survival over in-river survival. However, this may be overly optimistic given that little or no transport benefits were evident from the CSS study in most years for Snake River wild spring/summer chinook based on available PIT tag data, 1994-2000 (Berggren et al 2003).

Although the Action Agencies state a preference for using system survival as the primary hydro performance standard, BPA has not funded PIT tag studies for Snake River hatchery steelhead to provide improved estimates of "D." Table 4-2 (smolt passage survival) and Table 4.3 (adult

passage survival) identify hatchery steelhead as an appropriate index stock for this purpose. The CSS PIT tagging activities were approved through the NPCC process and prioritized for funding by the fish and wildlife managers.

Report 5 - Funding and Authorizations Obtained by *Other Federal Agencies* for Timely Implementation of Basinwide Recovery Strategy Actions

P. 5-5, The description of NOAAF activities relative to harvest in Table 5-3 should be clarified. Regarding constraining harvest impacts on listed ESUs to no more than recently established current levels, NOAAF supported harvest levels by signing management agreements and writing biological opinions to authorize certain harvest impact levels. However, it was the responsibility of the States and Tribes to manage their respective fisheries for consistency with the agreed-to limits.

Report 6 - Hydrosystem Survival Update and Adult Population Trends

The BiOp expectations are for a programmatic review of implementation for the 2003 check-in report. The Action Agencies state that their support of a performance-based approach necessitates programmatic efforts are put in context of ultimate recovery efforts – adult fish returns and the more direct consequence of programmatic efforts – fish survival through the hydrosystem. The report summarizes current status of listed salmon and steelhead, recent run sizes, system and in-river survival, and adult survival through the hydrosystem.

The Action Agencies characterization of spring and summer chinook adult returns at Bonneville Dam as "record or near-record numbers" (pp. 6-2, 6-14) is misleading because it fails to mention or account for increasing proportions of hatchery fish over time. The wild run size at the uppermost Snake River Dam (Fig. 6-5) and redd counts in wild production streams indicate that Snake River spring/summer chinook are not experiencing record runs but have been increasing.

The similar response in recent increased adult abundances across ESUs (Figs. 6-5 through 6-10) of the Columbia Basin also lends support to the common year effect hypothesis from Plan for Analyzing and Testing Hypotheses (PATH) (Deriso et al. 2001; Peters et al. 2001). Important implications of the common-year effect hypothesis to analyses regarding the efficacy of hydrosystem management options were discussed in IDFG comments on the draft 2000 BiOp (State of Idaho 2000). Scientifically rigorous evaluation of such issues can only be done through a collaborative analytical framework.

Table 6-1 compares the geometric mean abundance for a 5-year period (1996-2000) with the geometric mean abundance for a 2-year period (2001-2002). The comparison is questionable due to the predominant 4 to 5 year life cycle of salmon (somewhat longer for steelhead). The adult returns in 2001 and 2002 were primarily from spawners in 1996-1997, and 1997-1998 respectively. More appropriate comparison would be spawner-to-spawner ratios from index populations and SAR estimates within and between regions and ESUs.

Report 6 summarizes in-river and system survival estimates for 2001-2003 (Tables 6-4 through 6-6). No information is presented to support the range of low and high "D" values used in

Tables 6-4 and 6-5. Because "D" is influential to the hydro performance standard, considerably more documentation is needed to evaluate independently whether the system survival estimates are justified.

The Action Agencies state that system survival is affected most by the proportion of fish transported and associated direct and indirect survival of transported fish. However, the extent to which in-river migrants may also suffer delayed hydrosystem mortality is also important to the ultimate adult return. Delayed mortality may occur through stress, reduced fish condition or altered migration timing and behavior of smolts (Budy et al. 2002). As noted in comments to 2-6, it is important to recognize that the BiOp hydro performance standards exclude EM.

The Action Agencies suggest using PIT tag groups to assess adult fish survival goals through the hydrosystem. IDFG supports a collaborative approach to evaluating adult fish survival using PIT tags through CSMEP and the *U.S. v. Oregon* Technical Advisory Committee to resolve questions of adult passage mortality loss. Adult passage loss rates of Snake River steelhead are particularly uncertain. However, BPA has not funded PIT tag studies for Snake River hatchery steelhead to provide improved estimates of dam passage loss even though the CSS PIT tagging activities were approved through the NPCC process and prioritized for funding by the fish and wildlife managers.

Literature Cited

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