



COLUMBIA RIVER INTER-TRIBAL FISH COMMISSION

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SUBJECT: Comments on Draft 2004 FCRPS Water Management Plan for the Federal Columbia River Power System

Dear Ms. Henriksen and Mr. Ruff:

On behalf of its member tribes, the Columbia River Inter-Tribal Fish Commission (CRITFC) appreciates the opportunity to comment on the draft -2004 Water Management Plan (DWMP) for the federal hydro system. We believe that significant information that is necessary to develop the plan has yet to be available or materialize. Thus, it is premature at this time to be considering many DWMP foundation issues. In the future, we recommend that the region expend precious fish recovery resources only once in developing the plan, when critical information is available in mid-January. This information includes but is not limited to:

- The first official water supply forecast is not released until January 1, 2004. Water supply is integral to the draft plan.
- Research results for many hydrosystem and fishery studies that will highly influence draft plan measures are not currently available.
- Other issues such as new transmission capability are still under development.

We have the following additional general comments on the DWMP.

First, the conduct of the Technical Management Team does not allow the free exchange of information between the fishery managers and the federal operators of the FCRPS. This is because power marketing representatives are allowed to observe and “listen in” on discussions regarding river operations that influence power marketing and sales, which may place federal operators at an economic disadvantage. This leads the federal operators to restrict fishery manager access to important river operation information, such as ~~inflows to forecasted daily reservoir outflows reservoirs~~ and reservoir elevations to the fishery managers. Thus, CRITFC and other fishery managers cannot access critical information to plan operations to best benefit fish populations before and during the fish migration season.¹ To address this problem, we recommend that the federal operators convene a routine preseason and during season forum that excludes the marketing representatives, but allows the free exchange of hydrological and other information to the tribes and other fisheries managers. We suggest that the final water management plan (WMP) include a reference to this forum.

Second, we strongly recommend that the Corps’ Annual Fish Passage Plan be appended to the final WMP. The FPP has specifics on spill operations, transportation, research and fish facility operations that are intricately tied to the WMP. Both of these documents are called for by the 2000 Biological Opinion; it does not make sense that they are kept in separate forums and never formally integrated.

Third, although the CRITFC tribes officially withdrew from the NMFS’ Adaptive Management Forum in 1997,² the federal operators and federal fishery agencies still have a trust responsibility to formally consult with the CRITFC tribes before implementing actions, such as the water management plan, that will impact their trust and treaty resources. CRITFC can assist the federal agencies in arranging these consultations. The final WMP should contain a specific section indicating how the federal agencies intend to coordinate and consult with the tribes regarding all actions that will affect their treaty trust resources as required by the 1998 Secretarial Order for the Departments of Commerce and Interior, BPA’s obligations to tribes, and the Corps’ Nationwide Policy for Native American Tribes.

Fourth, the final WMP should include reference to and the details of the Detailed Operating Plan and annual PNCA planning hydro-regulations and non-power fishery constraints data submittals as the overarching plan to operate the FCRPS. The Corps and

¹ This information includes forecasted elevation at storage reservoirs and outflow information. Without this information, fishery managers cannot make well-informed decisions about flow management for fishery needs.

² In a letter dated May 16, 1997 from Ted Strong, CRITFC Executive Director to Will Stelle, NMFS Regional Director, CRITFC informed the federal government that it would, “... no longer participate in the NMFS adaptive management process, except as necessary to obtain information on system operations and configuration that cannot otherwise be obtained.” In reaching this conclusion, CRITFC stated, “ It is absolutely inappropriate for the policies of the United States, with respect to fulfillment of our treaties, to be determined by technical committees of biologists and engineers.” CRITFC recommended that, “NMFS and the other federal agencies work with the Commission’s member tribes to establish meaningful government-to-government relationship between the federal agencies and the tribes.” And, “Consultations must be structured to reach agreement between NMFS and the tribes on policy issues before technical issues are referred to technical committees”.

Reclamation's respective data submittals create the foundation for real-time decision making for river operations. Thus, while real-time river operations may be "tweaked" by the TMT, the actual plan to operate the river has already been established the February before the water year begins by the PNCA parties.

Fifth, there is not enough emphasis on water quality in the plan. Other than a section on dissolved gas, the plan is essentially silent on water quality actions to establish preferred temperatures and turbidity for the survival and productivity of anadromous fish. For example, water temperatures at the McNary juvenile bypass facility violate standards for an extended period of time every summer. There is no mention of point source pollution from the FCRPS (i.e., leaks from turbine and other equipment on dams).

Sixth, there is no mention of load following or power peaking operations in the plan. Such operations can cause desiccation of salmon redds, stranding of juvenile anadromous and resident fish and cause delay of juvenile and adult salmon. The final plan should acknowledge the impacts of power peaking on fish and offer management actions to reduce these impacts, such as limited peaking to some small percentage of the predicted base flow for the month. Such actions as experimental measures were offered by the ISAB in Report 2003-1, *Review of flow augmentation: Update and Clarification*.

Specific Comments

Section 1.1: Preparation of Plans

The DWMP does not refer to the tribes' *Spirit of the Salmon* (Nez Perce et al. 1995) anadromous fish restoration plan that has specific measures for river operations for all anadromous fish. As in the 2000 FCRPS Biological Opinion, the federal agencies should include reference to the tribes' plan, consistent with the federal agencies' obligations to consult and provide trust responsibility to the tribes.

Section 1.2: Strategy

This section lacks any reference to a basin-wide, ecosystem approach to increase productivity of listed and unlisted anadromous and resident fish (see Williams et al. 1996). Simply measuring reach survival of migrating juvenile fish as a performance standard is not adequate to restore productivity. For example, delayed mortality from hydrosystem passage does not occur until after the fish leave the last dam and enter saltwater (Budy et al. 2002). Further, there is no mention of increasing adult survival through the hydrosystem and increasing spawning success, two metrics essential to increasing anadromous fish productivity (Lichatowich and Cramer 1979). This section should be expanded beyond mere reach survival-performance standards.

Section 1.2.1. Hydro Strategies and Substrategies

Actions to meet water quality standards are needed for this section. Among other things, actions should include selected water releases from Dworshak Reservoir, investigation of selected water releases from Lake Roosevelt, keeping fish out of dam bypass and transportation systems under elevated temperature conditions that exceed standards, avoiding trapping adult fish under elevated temperature conditions that exceed standards, and monitoring of disease at dams under elevated temperature conditions. A high CRITFC priority is establishment of a peaking (*i.e., normative*) hydrograph that provides for the environmental and passage conditions that support anadromous fish productivity to recovery goals (Williams et al. 1996). This is not mentioned in the DWMP.

Section 1.3: Non-Biological Opinion Actions

Tribal fishing should be listed for the John Day and The Dalles pools—not just Bonneville, and provision for a summer fishing season in July should be included. We recommend that the final WMP be restricted to fish and wildlife related actions, flood control and navigation actions. Recreational actions are lower priority and should not conflict with the other actions.

Section 2.1: Hydro-System Priorities

The action agencies must consult with NMFS and USFWS and the tribes before establishing priorities in the plan. We recommend that:

- The April 10 refill operation of reservoirs to their upper rule curve should be priority one.
- Refill of reservoirs to the June 30 should be priority two.
- Operation of storage reservoirs to meet criteria for bull trout and sturgeon as priority three.

Meeting these priorities should take precedence over meeting power generation needs. If flood control is operated with flexibility and a reasonable minimum spawning flow for chum is established and maintained through reduction of lower river power peaking, it is not necessary to consider reducing Hanford Reach flows established to protect thousands of fall chinook redds. The 2000 FCRPS Biological Opinion, through adoption of the 1995 FCFPS Biological Opinion, established scientific evidence why the flow targets must be met as the minimum to avoid jeopardy to listed stocks. Meeting flow targets must be given a higher priority than meeting minimum elevations in reservoirs at the end of August and not the other way around as stated by the DWMP.

Adaptive management is not, as described in the DWMP, “.... The concept that the operation of the system should be adjusted based on acquired knowledge about current conditions in the system...” but is instead involves management actions that will

increase the ability to discriminate between alternative states of nature (Hilborn 1987). This requires that exploratory, probing actions be employed that provide information about the true state of nature. An example of this probing could be that no fish are transported in an average flow year. The final WMP should reflect this difference in the use of the terminology. We concur with the ISAB (2003) that, “.. decisions to implement actions that have any potential for adversely affecting an ESU will be required to satisfy a burden of proof that no harm is likely to be done as a result of the action.”

We disagree with the statement that, “...[t]he use of water for any one fish species or project purpose will most likely affect the amount of water available for other fish species or project purposes.” This is not correct. For example, storage added to natural runoff will provide good migration conditions for a particular year class for all anadromous fish stocks that are present. On the other hand, filling of reservoirs for recreational purposes, such as boat races, will increase water particle travel time through those reservoirs and delay fish migrations. The final WMP should correct this broad, incorrect statement.

Because chum spawning requirements affect storage and refill for all anadromous fish the following year, a precautionary approach should be used when setting chum flows in November and December. Preseason forecasts, groundwater storage and the previous year’s runoff and meteorological conditions should be carefully considered when setting minimum chum flow spawning regimes. For example, the University of Washington Climate ~~Forecasting Center~~ Impacts Group has projected a 110.4 MAF January- July runoff at The Dalles for 2004, while CRITFC has independently projected a 103.74 MAF runoff for the same period. Use of this information and the status of deficient groundwater supplies from the below normal runoff in 2003 supports limiting minimum chum spawning flows below Bonneville Dam to 120 kcfs. Power peaking from load following tends to complicate chum spawning and the maintenance of flows to protect chum redds. CRITFC strongly encourages the Corps and the other federal operators to consider reducing load following at Bonneville Dam to reduce these impacts.

The 2000 FCRPS Biological Opinion requires flow and spill measures to increase the survival of listed anadromous fish in order to avoid jeopardy and to meet tribal trust obligations, since these fish must pass many dams and reservoirs. The action agencies must consult, not coordinate, with NMFS, USFWS and the tribes on all aspects of river operations that affect this very high priority. The final WMP should reflect these responsibilities.

Section 2.2: Conflicts

In order to meet the 2000 Biological Opinion river operations requirements and other requirements, flood control rule curves should be modified. There is additional flood control space located in Canadian reservoirs that is available for purchase that could be utilized as part of this modification.³ The DWMP fails to include relaxing

³ This space of 500 kaf, is noted in the 1995 FCRPS Biological Opinion.

flood control management in Libby, Dworshak, Brownlee and other storage reservoirs in the upper Snake River. Further, several state-of-the-art advanced weather and climate diagnostic tools are available to be used to modify flood control, especially when conducting long-range water planning.⁴ These include: probabilistic streamflow and climate forecasts, multivariate ENSO (El Niño Southern Oscillation) index, ENSO Risk Model, and sea-surface temperature departure analysis. As mentioned above, the University of Washington Climate Impacts Group now produces a one-year lead ensemble forecast for the Columbia at The Dalles that should be considered. A comprehensive package of the above climate forecast tools is needed to better manage all Columbia Basin reservoirs. These methods are recommended in the 2000 FCRPS Biological Opinion and should be included in the final plan.

Section 2.2.2: Spring Flows vs. Project Refill

CRITFC continues to advocate for a natural peaking flow or normative hydrograph concept. For the past several years we have offered the federal operating agencies a detailed water management plan that meets the dual objectives of a peaking hydrograph and meeting reservoir refill levels. We have yet to receive any written comments on these plans. Again, we ask the federal operators to review our River Operations plans and consider using them as a paradigm to meet spring and summer flows and reservoir elevations.

Section 2.2.3: Chum Tailwater Elevations vs. Spring Flows

We responded to this issue in our above comments.

Section 2.2.4: Sturgeon Pulse vs. Summer Flows

We are unsure as to how the sturgeon operation comports with VAR-Q at Libby that is likely to occur in WY 2004. The final WMP should carefully explain this issue.

Section 2.2.5: Fish Operations vs. Other Project Uses

If non-power constraints are identified in detail and specified in the 2004 PNCA planning, there should only be minimal in-season conflicts between fish and power operations. Spill levels and flows should be clearly specified from the PNCA non-power constraint in the 2004 final WMP. Irrigation demands and recreational elevations can and should be modeled prior to the water management season to determine if conflicts will exist. In any case, they should have a lower priority than meeting fish flows under the Endangered Species Act. If preseason runoff forecasting tools are utilized and an increased level of precision and detail is applied to planning to avoid conflicts before the

⁴ RPA Number 35 in the 2000 FCRPS Biological Opinion specifies use of these new technologies that, "...[w]ould enhance system response and afford greater precision in system flood control operations". To our knowledge, the federal operators are not using available technologies that could make available more fish flows.

fish passage season begins, in-season conflicts should be minimal and all parties involved with water management actions will know beforehand what to expect.

Section 2.2.6: Conflicts and Priorities

As mentioned above, CRITFC's member tribes withdrew from the NMFS' Adaptive Management Forum several years ago. The regional federal executives have a trust responsibility to meet with our member tribes' government officials before and during the fish passage season with respect to FCRPS operations.

Section 2.3: Emergencies

Short-term FCRPS emergencies that impact fish flows, spill and dam operations over a few hours or days should be avoided. If they do occur, tribal technical and policy representatives should be immediately notified and consulted and appropriate in-kind mitigation should be implemented as soon as possible. In no case should fish operations be interrupted due to financial reasons such as poor financial planning.

Section 4.1.1: Reservoir Passage

The Corps operated Lower Snake reservoirs to MOP+1.5 in 2003, contrary to the Biological Opinion. CRITFC expects that Lower Snake reservoirs will be operated within one foot of MOP in 2004.

Section 5.1: Flow Objectives

The 1995 FCRPS Biological Opinion stated that the minimum flows were set as bare thresholds to avoid jeopardizing the listed salmon ESUs. If the minimum flows are not met, then the listed species are placed in jeopardy. Thus, every effort must be made to meet the minimum flows through modification of flood control, and purchase of flood control space and purchase of power produced off of the river. This includes meeting the minimum flows during weekends. To migrating salmon that need flows for critical life history functions, a weekend is the same as a weekday. The FCRPS must be adjusted to meet the needs of salmon, instead of salmon trying to exist in the face of federal operators running the FCRPS to achieve financial gains. Further, substantial numbers of juvenile salmon migrate in September (FPC 2003 unpublished data) and the majority of adult salmon and steelhead migrate in September, so serious consideration should be given to extending salmon flows and spill through September.

As noted elsewhere in these comments, in CRITFC' *River Operations Plan*, we have developed a normative peaking hydrograph that in general meets seasonal target flow objectives and reservoir refill objectives. The normative peaking hydrograph also provides the physical habitat parameters, such as sediment transport, nutrient cycling, enhancement of mainstem and estuarine riparian corridors and water quality elements critical to salmon life histories (Williams et al. 1996). Using this paradigm, with trended-

and-corrected Water Supply Forecasts during the fish passage season, [the Federal Operators](#) can deliver more water in a timely manner to better coincide with the salmon's life cycle and better protect listed and unlisted salmon and other anadromous fish. We recommend that these paradigms be tested for the FCRPS in [WY 2004](#).

Section 5.2 All Storage Projects

Available research indicates a direct flow-survival relationship for juvenile steelhead, that are spring migrants (NMFS 1998). For example, Mullan et al. (1992 in NMFS 1998) regressed smolt-to-adult returns of Wells hatchery steelhead against spring flows which indicated that flows over 140 kcfs resulted in smolt-to-adult returns that were three times higher than for lower flows. Berggren and Filardo (1993) also showed a strong relationship with steelhead migrations and increased flows. Under low flows in 2001, only 4% of Snake River steelhead were estimated to survive, the survival rate in 2002, a near normal runoff year, was about 26%. All efforts, described above, must be made to achieve spring flows and reservoir refill. All of these elements should be included in the final WMP.

Brownlee and upper Snake reservoirs are not listed in this section. In the final WMP, these storage reservoirs should be listed and operations for fish should be specified. Included in these specifications should be the steps that Reclamation is taking to guarantee that the 427 Kaf of upper Snake flow augmentation will be delivered in a timely manner for 2004 fish migrations.

Section 5.8.3: Dworshak Summer Operations

Water from the upper Snake reservoirs and the Hells Canyon Complex should augment natural flows. BPA should enter into a water-power swap with Idaho Power to provide timely summer flow augmentation from the Complex. Dworshak should be prioritized for temperature control, not flow augmentation. Summer drafts should be limited to 1535 feet by August 31 unless additional water is needed for temperature control. Dworshak should be targeted for refill to msl 1600 by June 1 or earlier and be targeted for msl 1520 feet by mid-to-late September. A monitoring program should be put in place to evaluate effectiveness of Dworshak operations. The Corps should provide the Nez Perce Tribe with financial resources to protect cultural sites and resources during reservoir draw downs. All of these elements should be included in the final WMP.

Section 6.0 Hydrosystem Substrategy 2.3: Spill operations for project passage

The final WMP should describe the 120% total gas pressure as conservative, because, among other things, salmon can and do achieve depth compensation in the river from elevated levels of dissolved gas. This comports with the relevant regional research (Backman et al. 2002 and Backman and Evans 2002), a risk assessment by the regions' fishery managers (Columbia Basin Agencies and Tribes 1995) and the water quality appendix to the 2000 FCRPS Biological Opinion. All of these indicate that total dissolved

gas levels cause little harm up to 125% TGP. Thus, spill management should not be overly concerned about some excursions above 120% TGP.

Recent data obtained from turbine survival and transportation studies at McNary Dam indicate that turbine mortality of summer migrants is very high and that transportation, with respect to smolt-to-adult returns is at best the same as in-river passage may be worse. Serious consideration to implementing a spread-the-risk passage action⁵ at McNary for summer migrants should be included in the final WMP.

Recent data for spill at Bonneville Dam indicates that adult fallback is not substantially affected by daytime spill. The final WMP should incorporate a 24-hour spill program at Bonneville without a daytime spill cap.

Bonneville spill for Spring Creek National Hatchery fall chinook is not mentioned in this section. The final WMP should include a 3-7 day spill program in March to protect this stock of international importance.

Section 7.1.3: Libby Storage Reservation Diagram

The December 31 preemptive draft at Libby to msl 2411 feet should not be implemented in this year to leave additional water in storage for **WY** 2004. The final WMP should contain all work that the Corps has accomplished to modify the December 31 flood control draft point.

Section 7.9: Dworshak Draft to 1500 feet

CRITFC does not support any draft below msl 1520 feet. Drafts below this level may reduce refill probabilities the following year and cultural resources are particularly exposed at drawn down elevations and are vulnerable to vandalism and theft.

Section 7.10: Other Reclamation Water Management Actions

The final WMP should incorporate, in detail, what specific actions will be taken in 2004 to reduce illegal water spreading. The Columbia Basin Institute, in its 1994 report on the Columbia Basin Irrigation Project, identified 800 to 1000 Kaf, out of the 2.8 Maf being diverted by the Bureau of Reclamation, that is illegally being misused by some irrigation districts. The upper Snake contribution from Reclamation reservoirs should be specified in the final WMP as a minimum of 427 Kaf.

Section 12.4.1: Kokanee—Grand Coulee

The upper Columbia Tribes have indicated to us that Lake Roosevelt needs to be at msl 1283 by the end of September to allow kokanee spawning access to tributaries. Filling to elevation 1285 feet by October 1 is not necessary for kokanee spawning and

⁵ This action would entail summer spill at McNary as necessary to pass 50% of summer migrants over the spillways.

such refill could reduce lower river mainstem flows in September that would negatively impact CRITFC' member tribes treaty fisheries.

12.5 Hanford Reach Protection Flows

Flow fluctuations from Grand Coulee and Chief Joseph projects can overwhelm efforts of the mid-Columbia public utility districts to reregulate and stabilize flows into the Hanford Reach. Stable flows in the Reach are vital to protect millions of emerging and migrating fall chinook from stranding and entrapment. The federal operators should work with the fishery managers to limit flow fluctuations during the susceptibility period from late March until early June. These issues should be specifically detailed in the final WMP.

Section 12.9.1: Tribal Fishing

CRITFC's member tribes' treaty fisheries occur in all of Zone 6 (Bonneville to McNary dams). Pool elevation restrictions and steady flows should be provided during tribal fisheries for all of Zone 6, not just Bonneville Pool. The federal operators have a trust and treaty responsibility to provide this operation. The final WMP should specify these requirements.

Conclusion

CRITFC appreciates the opportunity to review and comment on the 2004 DWMP. We anticipate that the federal agencies will consider and adopt our recommendations for the final WMP. Should you have questions about these comments, please contact Kyle Martin or myself at (503) 238-0667.

Sincerely,

/s/

Robert Heinith
Hydro Program Coordinator

CC: Commissioners, Tribal staffs, tribal attorneys, CBFWA Fish Managers, Regional Executives

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