APPENDIX F: COMMENTS

April 1, 2004

To: Frank Shrier, PacifiCorp
Diana MacDonald, Cowlitz PUD

cc. Lewis River Negotiation Group
From: Janne Kaje
Technical Advisor to the Cowlitz Indian Tribe

FISH PLANNING DOCUMENT COMMENTS

These comments on the Fish Planning Document are submitted on behalf of the Cowlitz Indian Tribe by Technical Advisor, Janne Kaje. As we have indicated during recent weeks through communications with the Mediation Team, the time schedule for review is entirely inadequate, given the aggressive schedule in the broader Lewis River Relicensing process, as well as the length of the document. It follows that while we have attempted to provide constructive, thorough comments, we consider these to be preliminary in nature, i.e., more comments will likely be submitted at a later date. Moreover, we are disappointed to find that some comments provided by the Tribe in the past have been summarily ignored. Some of these comments are repeated herein. The document certainly provides a great deal of useful information; however, until our comments are adequately addressed, we can not support the interpretation of the document as a consensus-based planning resource that adequately reflects the collective views of the Parties.
The comments below are for the most part presented in the order encountered in the document.

1. Several of the executive summary statements have been highly contentious throughout the process. This document should not be billed as a consensus view of the signatory parties. Opposing points of view should be acknowledged instead of summarily ignored. The most significant ones are:

Response: Deleted conceptual agreement statement in executive summary first paragraph (FPD pg. i)

   a. Salmon and steelhead populations introduced into Swift reservoir are negatively affected by passage systems which include anadromous fish access to Yale and Merwin Reservoirs. ***SEE #5 and #6 below.***

   Response: Changed executive summary bullet to <u>may</u> be negatively affected (FPD pg. i.)

   b. A population goal of 86,000 adults was supported as a reflection of pre-dam construction fish abundance in the Lewis River upstream of Merwin Dam. ***SEE #8 below.***

   Response: Re-stated executive summary bullet to reflect intent of 86,000 estimate (FPD pg. i)

2. Dates all wrong in “Sub Product Tracking”, p.5-6

Response: Clarified last three product entries. Updated to reflect appropriate month and year.

3. As we have noted so many times before, the packaging of actions into Alternatives makes no logical sense, especially since these alternatives were developed by the mediators. While the document "recognizes" that some of these would likely be intermingled, it does not acknowledge the complete absence of logic in the development of these alternatives. They do not describe a consensus set of potential actions.

Response: Clarified intent of alternatives developed by the mediation as a starting point for analysis. Not a consensus (FPD pg. 9)

4. P. 36. The Comparative Risk Assessment was co-authored by Steward & Associates on behalf of the Cowlitz Indian Tribe.

Response: Made change in the document (FPD pg. 36)

5. Fundamental problem with how adult passage in particular is modeled by Salmon PopCycle. This issue has been raised numerous times in the past. The model assumes a ladder/trap attraction efficiency of 95%. The model further assumes that the missing 5% evaporate into thin air. In other words, a fish that is destined for Swift (i.e., the location of their natal stream) that fails to enter, say, the ladder/trap between Yale and Swift, is counted as dead, whereas it is quite likely that this fish would spawn successfully in Yale, contributing to the broader population. Similarly, while it is quite likely that some adults would "stray" to upper parts of the basin despite originating in Merwin or Yale, the model does not allow for this type of behavior. This questionable approach is the cornerstone (on the adult side) of the argument that full-connectivity leads to lower returns in Swift. The Tribe strongly rejects this line of argument. These assumptions severely punish 'full connectivity' approaches in a completely unrealistic way.

Response: Added a paragraph in Systems description section explaining that no fish were added to lower reservoirs for 5% loss at each trap from fish originating from upper reservoirs (FPD pg. 37). We do believe that some of these fish may spawn successfully in another area, but because the additional fish numbers are small, and the outcomes in the lower reservoirs are so highly dependent on habitat parameters, the results would not differ enough to change conclusions.

6. Furthermore, the 95% adult trap efficiency, when coupled with an additional ladder/trap mortality rate, presents a bleak picture of adult passage success. The Columbia River estimates of 96-98% are a tailrace-to-tailrace estimate. In other words, that value includes trap efficiency, ladder survival and reservoir passage. Recall that the reservoirs on the Columbia are also many times longer than their counterparts on the Lewis. Though ladders on the Lewis will be longer/higher, we are not convinced that these estimates are realistic.

Response: A higher (or lower) adult passage rate can be assessed by referring to the sensitivity analysis in appendix C. We believe the cumulative sum of all passage parameters used (including the LRFPA model parameters) are relatively optimistic

when compared with historical Columbia River adult passage, Deshutes steelhead trap rates, and Cowlitz juvenile collection efficiency data.

7. For those who have not been involved in these discussions over the past 3+ years, note that the "fully volitional" model in PopCycle does not reflect the alternatives considered in the conceptual Settlement Agreement. The Agreement includes the trucking of juvenile fish from each dam directly to the lower Lewis River (similar to the "full trap and haul" option in the model), rather than volitional reservoir passage (and subsequent repeated collection).

Response: Added clarification to system 1 decription (FPD pg 33)

8. Re Population Goals by species (p.68). Note that several parties have not accepted these values as reflective of historical production in the basin. Much higher estimates were made using run-reconstruction to establish average production of coho, coupled with the use of EDT to estimate relative species abundance. These estimates produced a total (across species) average population above Merwin Dam of nearly 280,000 fish (see "**Cowlitz Tribe Population goals"** memorandum by J. Kaje, June 16, 2003**)**. <u>While parties may have agreed to lower fish numbers as the basis for establishing the Licensees' mitigation obligations, they have not agreed that the numbers produced in the Fish Planning Document accurately or adequately reflect historical population abundance.</u>

Response: Referred to as recommendations, benchmark, and mid-point estimate from a sub-group in the FPD and Hatchery Review Document

9. p.75 (3). Why does the mitigation obligation still refer to fall chinook?? Any actions to benefit fall chinook are not part of the 86,000 adult production obligation.

Response: The estimates for anadromous fish above Merwin Dam include all species historcally produced in the upper Lewis. The production obligation is intended to represent all species (including fall chinook)in terms of numbers of fish above Merwin, however, the number will be achieved with production of spring chinook, coho, and steelhead. (see the Species Goal option section of the Hatchery Review)

10. p.80. Coho run reconstruction population estimate methodology. As noted in several previous discussions, the coho methodology (i.e., adjusting terminal escapement as reflected by fish caught in the trap by harvest estimates) assumes that the trap collected 100% of returning adult coho. While adult traps can be quite effective, this seems a ludicrous assumption, particularly with our knowledge of trap efficiency problems during certain operational scenarios. Even if the harvest rate estimate (63%) is correct, the trap efficiency has a major effect on the production estimate. For example, a trap efficiency of 85% would yield a population estimate of 92,450 coho, as compared to 78,582.

Response: We recognize that the escapement estimate is dependent on the1933 trap number as the only reference point (see note on page 82).

11. In the Stock Productivity section of the Salmon PopCycle description (p. B-17,18), the assumptions regarding egg-to-parr survival rates need to be substantiated. In particular, it is not clear why coho egg-to-parr survival is thought to be fully 33% lower in Merwin than in Swift, and 26% lower in Yale than in Swift. Swift spring chinook egg-to-parr survival is 26% greater than in Yale. These assumptions clearly tilt the analysis toward lower per-unit productivity in Yale and Merwin, but they have not been substantiated in any way.

Response: egg-par-survival variations derived from EDT analysis (Appendix E)

12. Re Depensation Threshold (p. B-19), it appears that 300 was used as the threshold for spawners before depensation effects take hold. However, if I understand the model correctly, this threshold was applied separately to each production "area" (i.e., Yale, Merwin, Swift). In the full-connectivity scenario, this simply doesn't make sense, since the population would be connected via passage systems. Adults will likely stray (accidental movement into non-natal streams) as well as colonize/expand into other areas within the basin. In this case the 300 threshold simply does not make sense.

Response: Yes; applied separately (further clarified in FPD page 43). We believe increased risks to the spring chinook and steelhead populations in Swift Reservoir represent increased risks in the ability to establish natural populations anywhere in the upper Lewis basin for these species. There are not enough fish gained for these species in the lower reservoirs (even under optimistic passage conditions) to compensate for increased risks to the Swift population. This result is not the same for coho because there is more potential for coho production in the lower reservoirs.

13. The document spends a significant amount of time highlighting the fact that EDT and PopCycle come up with very similar results, as if to argue that this indicates some sort of independent verification. Upon reading the PopCycle documentation, most of the key parameters (especially those related to the productive capacity of the system) are taken directly from EDT results. It follows that it is hardly surprising for results to be the same, and it should be recognized that the entire analysis rests on the quality of the EDT data inputs.

Response: We agree- poor expectations for spring chinook and steelhead in the lower reservoirs is driven by very low habitat capacity and productivity derived from the EDT analysis. Remember, the majority of the habitat was above Swift reservoir before dam construction. (See FPD page 25 for miles of habitat by species and reservoir after accounting for reservoir inundation)

14. Re Adult Passage Mortality. Note again that none of the modeled scenarios are comparable to the currently proposed full connectivity configuration that includes lifts/trams over each dam. These methods involve much less handling and delay than a trucking scenario, and will likely have much lower mortality rates. It seems rather unlikely that 1 out of every 20 adult fish would die while being raised up and over the dam by a lift.

Response: Changed Testing Passage Alternatives Section of FPD description of System two to also include a lift- tram system for adults as well as truck hauling. The

model parameters remained the same as trucking mortality was 1% which we felt was a reasonable rate for a lift system mortality as well. The cumulative handling rate was also assumed to be the same. (FPD pg. 37)

15. Sensitivity Analysis (Appendix C). The values selected for an analysis of sensitivity for Adult Passage Survival do not encompass a realistic range of interest. In general, adult passage survival is likely to be very high for all passage options. It would have been much more instructive to analyze values between 80-100% at 2% increments than to analyze values of 60, 70, 80, 90, 100.

Response: Intent was to display a wide range of rates to determine where critical breaking points were in terms of reducing risk to achieving a sustainable population. Given the other parameters, we believe that the 10 percent increments reveal answers without further detail (Appendix C).

16. Similarly, one value of sensitivity analysis is the ability to identify thresholds of effect. For almost all of the parameters chosen for analysis in this study, the parameter increments are absurdly large, e.g., 50%, 100% and 150%. This negates possibly the most valuable information that can be gleaned from a sensitivity analysis.

Response: This wide range reflects the habitat parameter sensitivity analysis. Since the habitat condition in the EDT analysis was driving many of the results, we believe evaluating a wider range in the habitat sensitivity helped to display the magnitude of change in results if the habitat assessment were to change.(Appendix C)

17. More re Sensitivity Analysis. Why is the "default" adult survival set to 80%?? This is particularly perplexing for Merwin and Yale lake populations. We expect that 20% will perish while being passed over Merwin Dam??

Response: Note that the high risk level to sustaining spring chinook and steelhead in these reservoirs does not significantly change if 100 percent passage is assumed (Appendix C)

18. Sensitivity Analysis Discussion. Regarding the statement: "Also, in some cases, the sensitivity analysis indicated that realistic improvements to different parameters would unlikely result in predicted population sizes above the low run threshold. In these instances, reintroduction of these species to a distinct lake system would be tenuous at best." <u>There are so many problems with default assumptions (e.g., adult passage survival, evaporation of adults that fail to locate a passage facility, extremely stark differences in egg-to-parr survival between reservoirs, treatment of each area as a distinct population rather than a connected whole, lack of a model run that reflects the current Settlement Agreement scenario) that sweeping conclusions about the 'tenuous' nature of a decision to reintroduce are entirely irresponsible and certainly do not represent a consensus view of the Parties.</u>

Response: First paragraph in the Sensitivity Analysis Summary is re-worded. (FPD page C-49).

19. Apparently, recently revised EDT values have made a substantial impact on model results. What field studies took place to support these changes?

Response: New EDT results are referred to on page C-49, second paragraph. Complete EDT report is found in Appendix E.

From: jhmalin@pacifier.com [mailto:jhmalin@pacifier.com]
Sent: Friday, April 02, 2004 8:48 PM
To: Roma Call
Subject: Re: Lewis River: Comments on Fish Planning Document

I agree with the Cowlitz Tribes comments, particularly those about population numbers. Several of us have several times asked that the analysis done by both tribes be included in the fish planning document.

WSDF biologists have told us that they estimate that 20,000 to 30,000 adults returned to Cedar Creek this spawning season. Those of us that live
on the Creek know that 50 years ago spawning populations were much higher
then we saw this year. Historic returns to Ceder Creek must have been 3 or
4 times in not higher than current numbers. If that is true the returns above Merwin must have been high multiples of those numbers.

I am willing to support the low population numbers for several reasons:

1. The utilities certainly are not responsible for all the declines in returns. (Absent the dams however we would be able have much better recovery success in the upper basin.)

2. Full passage will partially restore the marine derived nutrient cycle in the upper basin which was interupted by the dams. Mitigation of that project effect is important.

3. Past performance indicated it will be difficult to achieve even these low numbers.

I am not asking for higher goals, only an honest documentation of the analysis and logic that resulted in these goals.

Jim Malinowski

Response: We have referred to the population estimates as recommendations by a sub-group for consideration for Lewis River management. We have indicated that these estimates were derived from the sub-group and represent a mid-point of those estimates. See the Executive Summary and Population Goal sections of the FPD and the Species Options section of the Hatchery Review Document.