



Department of Energy

Bonneville Power Administration
P.O. Box 3621
Portland, Oregon 97208-3621

ENVIRONMENT, FISH AND WILDLIFE

December 23, 2010

In reply refer to: KE-4

Mr. Will Stelle, Jr.
Regional Administrator
National Marine Fisheries Service, Northwest Region
7600 Sand Point Way NE
Seattle, WA 98115

Dear Mr. Stelle:

As you know, the Adaptive Management Implementation Plan (AMIP) calls for the incorporation of a metric indicative of trend into the existing abundance-based Significant Decline Trigger. This task is to be completed by the end of this calendar year. Over the course of the past number of months, staff from the Action Agencies and NOAA Fisheries have been working together to complete this task and can now report that the four agencies are in agreement on our preferred approach.

Staff took as their starting point the example included in AMIP Appendix 4 of a possible approach to combining trend and abundance metrics. The proposed approach to combining the two metrics was deemed sound. Staff then examined three possible methods of estimating short-term trend and after a rigorous analysis determined that the so-called "BRT trend" method was preferable to the other trend estimators considered.¹ Though differences between the three were slight, the BRT trend metric returned – on average – the highest rate of success in predicting a Significant Decline, the fewest failures to predict a Significant Decline, and the second-lowest rate of false positives.

The proposed approach was taken to the RIOG for comment on November 17. RIOG members were invited to submit written comments on this proposal by December 7. Comments received were from the State of Oregon and the Spokane Tribe. We enclose a document summarizing the comments from these two sovereigns and our response.

This correspondence sent on behalf of the Action Agencies memorializes our compliance with a component of RPA Action 1a by incorporating a trend metric into the Significant Decline Trigger. The new trigger will be in effect beginning in calendar year 2011. We also enclose an

¹ The BRT trend is the slope of the regression of log-transformed spawner counts against time. In this case, a 5-year trend estimate is the basis for the new trigger. The other two methods analyzed were 5 year geometric means of relative abundance and 5 year geometric means of relative 4-year rolling averages of abundance.

Excel file in which we have used the AMIP's exceedence curve approach to identify the 90th percentile exceedence levels for the trend metric for the six Interior Columbia River species to which the new triggers will apply.

Sincerely,

A handwritten signature in cursive script that reads "Lorri Bodi".

F. Lorraine Bodi
Acting Vice President, Environment, Fish and Wildlife

2 Enclosures

cc:

Kate Puckett, Bureau of Reclamation
Rock Peters, Corps of Engineers
Barry Thom, NOAA Fisheries

Consideration of Comments on a Metric Indicative of Trend
December 23, 2010

On November 17, Action Agency and NOAA Fisheries staff briefed RIOG members on the Federal Agencies' proposed approach to incorporating a metric indicative of trend into the AMIP's abundance-based triggers as called for in the AMIP. RIOG members were invited to submit comments on this approach. Comments were received from the State of Oregon and the Spokane Tribe. The Action Agencies briefly summarize and respond to those comments below.

State of Oregon's Comments

Oregon, while acknowledging that the addition of a trend metric made the Significant Decline Trigger more sensitive, and therefore more likely to provide the region with advance notice of a sharp decline in abundance, reiterated its view that the AMIP's triggers represented a lowering of the jeopardy standard. We do not agree with their conclusion. The AMIP's Early Warning Indicator and Significant Decline Trigger are not a substitute for the BiOp's jeopardy standard. Instead, these specific biological triggers are precautionary tools that, if tripped, set in motion additional rapid response actions designed to have immediate benefits. They provide a cautionary approach, or safety-net, in addition to the performance standards and RM&E in the FCRPS RPA that ensure the Action Agencies are not likely to jeopardize listed species.

Spokane Tribe Comments

The Spokane Tribe indicates an interest in reviewing our analysis comparing the three trend metrics. We note that during the November 17 RIOG meeting, we offered to supply that analysis to any RIOG member. Pursuant to the Tribe's December 10 request, we have forwarded the analytical results to Mr. Howard Funke.

The Tribe also expresses a concern that listed Upper Columbia River spring Chinook Salmon and Steelhead could "virtually or literally disappear in less than two years without tripping either trigger at the ESU level." The Tribe's proposed remedy for this possibility is a hybrid or weighted means metric at the population level. However, indices at the population and/or Major Population Group levels were considered during development of the AMIP and were not adopted due to the lack of timely information on status below the ESU/DPS level (AMIP footnote 7). We note that the addition of a trend metric to the existing abundance-based AMIP triggers enhances the sensitivity of the triggers and makes it more likely they will provide notice of an impending significant decline. We also restate our intention to develop Rapid Response plans for Upper Columbia stocks first.

The Tribe suggests quantifying and weighing each of the Viable Salmonid Population parameters, particularly productivity, in any trend metric. We have a number of concerns about this suggestion. The first is that VSP parameters apply at the population level. For the reason described above, population-level data was not chosen for AMIP triggers due to the fact that

such data are not available until years after the fact. Secondly, the TRTs have developed a structured approach to assessing the VSP parameters of spatial structure and diversity, but we are confused by the suggestion that these parameters be further quantified and included in a trend metric. The independent scientists who reviewed the 2008 BiOp at the Obama Administration's request suggested triggers based on declines (or trends) in abundance. The AMIP's requirement to develop such an indicator is directly responsive to that suggestion.

We don't understand the Tribe's concern that existing abundance-based triggers have been rounded to the nearest 25 fish and that such rounding can "arbitrarily create the appearance that fish are present when, in fact, they are not present." The existing abundance triggers are based on the 80th and 90th percentile exceedences of rolling four year averages of natural-origin adult returns. The fact that the precise values of the 80th and 90th percentile exceedences have been rounded to the nearest 25 fish does not lead to the result indicated in the Tribe's comments. The Tribe is no doubt aware that the AMIP calls for the development of one or more additional Early Warning Indicators. These indicators are intended to provide even greater sensitivity to possible future declines in abundance and will hopefully address the Tribe's concern.

Finally, the Tribe indicates a concern with the source of the data used for the AMIP triggers. Presently those data are supplied by the Northwest Fisheries Science Center. The NWFSC obtains these data from a variety of sources. We agree that this process should be more transparent and will seek to make it so.