

Out-of-Subbasin Effects
Project summary and status prepared for
Regional Coordination Group Meeting, July 22, 2003

Introduction

At the last Regional Coordination Group meeting a proposal was endorsed for proceeding with development of a set of “parameter estimates” that could be used to characterize the survival of adult anadromous salmonids from the time they leave their natal subbasin to their return. This paper presents a brief summary of the status of the project.

Meeting Summary

A project work session was held on June 11 in Portland. Participants included:

Mark Bagdovitz	USFW	Drew Parkin	NPPC consultant
Tom Cooney	NOAA-NWFSC	Charlie Petrosky	IDFG
Jeff Fryer	CRITFC	Howard Schaller	USFWS
Lance Hebdon	IDFG	Jim Scott	WDFW
Keith Kutchins	Sho-Ban	John Stein	NOAA-NWFSC
Michelle McClure	NOAA-NWFSC	Chris Toole	NOAA-RO
Chip McConnaha	Mobrand Biometrics	Paul Wilson	USFWS
Dick Nason	UCSRB	Keith Wolf	CCT
Tony Nigro	ODFW	Rich Zabel	NOAA-NWFSC

The group agreed to the following sideboards:

- The project will be limited to technical issues. There are other forums for considering policy issues related to out-of-subbasin effects.
- The focus of this exercise is to define what numbers we will use, not what models we will use.
- The product will reflect the current situation, i.e., current environmental conditions, current mainstem operations, and current policies.
- The project will be limited to consideration of anadromous salmonids, including both listed and unlisted stocks. The geographic scope is the current range of anadromous fish originating within the Columbia Basin.
- The emphasis will be on development of a useful, preliminary product within 30-60 days. This short turn-around time is in response to the immediate need for this product for subbasin and recovery planning. While the focus is on the short-term, allowance must, of course, be made for integrating new information as it becomes available in the future. Thus, the scope and content of the product will almost certainly change and expand. But, for now, the focus must be on short-term need.
- The objective is to prepare a product that is regionally consistent, scientifically rigorous, and defensible. This does not mean one survival rate for the entire Basin as survival rates differ by stock and location. It also does not necessarily mean

one definitive number; there may be a range that reflects environmental variation and/or differences among data sets for survival in mainstem, estuary, and ocean.

- The scope of inquiry will be (a) a single estimate of out-of-subbasin survival for each subbasin or ESU (i.e., an estimate not broken down by life stages), and (b) estimates that apportion mortality among the mainstem, estuary, and ocean environments and that include current harvest rates. The intent is to provide a product for both. However, the critical immediate need is for (a), an estimate of out-of-subbasin survival. If time or resources are limiting this is the priority.
- The project will build upon existing data and information. The product will describe which data sets were used and which assumptions were required to arrive at the final survival estimates.
- The intent is to produce a consensus product. If this is not possible differences will be clearly noted and we will move on.

The work session focused on addressing a series of pre-defined technical questions concerning two related topics:

Adult Survival at the Subbasin of Origin. This refers to the idea of establishing a number (or index) that depicts survival using smolt to adult returns (SARs). Considerations include defining locations and populations, developing reporting protocol, and (most important) identifying data that can be used to complete the characterization.

Causes of Mortality Outside of the Subbasin of Origin. Whereas #1 above focuses on characterizing survival independent of cause, this issue looks at where out-of-subbasin mortality occurs and what are the causes of this mortality.

Conclusions

Agreements. The workgroup agreed that these two topics should be considered independently, with #1 being the first priority. This is because (1) the SAR results are the fundamental need for subbasin planning, and (2) the potential for developing a set of creditable SAR numbers in the near term is much greater than numbers relating to causes of mortality.

Strategy. Procedures for proceeding with SARs were defined and assignments made. A deadline for producing a product was set for the end of the summer. At that time the group will consider whether it will be possible to produce a similar out-of-subbasin mortality product, with a tentative deadline of the end of the calendar year.

Cautions. Interested parties must recognize that available quantitative data are not available to produce definitive numbers for either SARs or out-of-subbasin mortality. In many cases data are lacking for both specific locations and for the number of years necessary to establish a meaningful trend. Even if these data were available, natural environmental variation and unforeseen circumstances would make the task difficult. The work group does, however, believe it is possible to define a set of parameter estimates that will suffice for subbasin and recovery planning purposes.