



**Response to ISRP comments on project 29010: Restore Passage on Private Lands in Beaver Creek Drainage to Benefit Spring Chinook, Steelhead, and Bull Trout.**

**March 15 2002**

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*The proponents should provide one response that also addresses proposal #29046. In particular, the proponents should explain why this project should be funded before the CRMP proposed in #29046 is completed.*

The mutual benefits of funding both 29010 and 29046:

1. Potential CRMP stakeholders have willingly expressed an interest in addressing fish passage barriers identified on their land. Project monies will provide for an immediate and timely correction of these barriers.
2. The CRMP will increase coordination and communication when barriers are addressed. This coordination is important and ensures the successful implementation of this proposal.
3. WDFW will be able to build on local support initiated by the CRMP.
4. Local stakeholders are comfortable with the non-regulatory nature of the CRMP. Specifically, addressing passage barriers through the CRMP process. Current and future projects in Beaver Creek rely on the CRMP process.
5. Regardless of flows, these projects will immediately benefit adult steelhead, since they spawn when flows are not an issue.

*The proponents should provide better estimates of the expected increased production of steelhead and potential production of spring chinook if this and other projects in the Beaver drainage are completed.*

A comprehensive habitat assessment completed by WDFW in 1998 indicated there is 48,000 m<sup>2</sup> of spawning habitat and 102,000 m<sup>2</sup> of rearing habitat above the lowest identified barrier. In other words, thirty-seven miles of stream exist above the lowest barrier. Mullen et al. estimated that there is a total of 6,420,000 m<sup>2</sup> of rearing habitat and 3,970,000 m<sup>2</sup> of spawning habitat in the Methow basin. Beaver Creek represents about 1.6% and 1.2% of the total rearing and spawning habitat respectively.

Production Estimates:

Habitat accessed would produce approximately **214 adult steelhead** or about **10%** of the current steelhead run in the Methow. Potentially, **101 adult spring Chinook** could be produced by newly accessible habitat, this would represent about **3.7%** of the current spring chinook run in the Methow. Spring chinook production from non-natal rearing juveniles is not known or well understood.

*A detailed M&E plan is needed in the “Proposal objectives, tasks, and methods” section, particularly for the baseline, pre-project monitoring but also post-project monitoring. The specific sample areas, methods, and sampling frequency and intensity (i.e., how many samples of what type where and when) need to be specified. Baseline data should be given if monitoring is already in place.*

The Draft Strategy Framework of the Washington Comprehensive Monitoring Strategy (Strategy) currently in development by the Governor’s Salmon Recovery Team refers to two levels of monitoring for determining effect of certain enhancement actions: 1) Status and trend monitoring and 2) Validation monitoring.

The Strategy proposes a sampling regime that will provide answer to questions about the status and trends of key indicators that measure salmon recovery, water quality and quantity, and the condition of aquatic and marine habitat. These estimates will be associated with known statistical certainty and specific sampling design. The Strategy proposes using the USEPA’s Monitoring and Assessment Program (EMAP) approach to sampling. This consists of a GIS based statistical sampling protocol that uses a series of randomly selected sites in each watershed and salmon recovery region sampled on a recurring basis known as a rotating panel. Conceptually, 100 sites per salmon recovery region would be sampled each year. Fifty sites would be randomly selected throughout the salmon recovery region and another 50 would be randomly selected within a specific WRIA within the salmon recovery region, with a different WRIA each year. This would allow the detection of trends within a salmon recovery region within 3 years. Juvenile abundance and habitat would be measured at the same sampling locations providing cost savings and correlations between the abundance of juveniles and existing habitat parameters.

One of the most important needs identified by project funding entities is the need to correlate habitat restoration projects with increased fish production. The Strategy proposes to identify ‘Intensively Monitored Watersheds’ (IMWs) where monitoring is designed to address these questions in a disciplined scientific manner. Lack of coordination between where fish are measured and where habitat is measured and the distribution of restoration projects across watersheds do not allow detection of benefits from any one project. The total production and productivity of the watershed must be measured in terms of juvenile migrant salmon produced to measure the number of fish

produced by various kinds of projects. The Methow watershed is currently a candidate IMW in the Strategy.

Although the Strategy is still in development, by designing monitoring efforts that meet the intent of the plan will provide a foundation of data to support the goals of the Strategy.

The M&E will address:

Adaptive Management/Monitoring Development Process:

1. Understand what is known and unknown
2. Identify strategies/key actions for implementation
3. Develop measurable objectives associated with the elements of the regional strategy
4. Identify key questions and risks associated with measurable objectives
5. Review and prioritize the key questions
6. Match priorities to level of available funding
7. Develop detailed monitoring plans to answer priority questions consistent with funding availability

Indicators of success will be: (The Oregon Plan for Salmon and Watersheds Annual Report, April 1998)

1. Successfully connecting freshwater habitat that support salmonid life cycles.
2. Increased diversity of habitats that will allow expression of diverse salmonid life histories.
3. Increase diversity of populations that allows salmonids to fully realize the productive potential of the habitats that are available.

Pre-project monitoring:

Fish Passage Barrier and Surface Water Diversion Screening Assessment and Prioritization Manual (WDFW)

Timber-Fish-Wildlife (TFW) Method Manual for the Reference Point Survey (NWIFC)

Stream Channel Reference Sites: An Illustrated Guide to Field Techniques (USFS)

Spawner surveys and other monitoring activities will occur annually approximately 400-500 meters above and below each barrier.

Pre- and post-project monitoring:

Fish Passage Barrier and Surface Water Diversion Screening Assessment and Prioritization Manual (WDFW)

A Guide to Photodocumentation for Aquatic Inventory (Osprey ES)

A Guide to Establishing Points and Taking Photographs to Monitor Watershed Management Projects (Governors Watershed Enhancement Board)

Methods for Stream Habitat Surveys (ODFW)

SSHAP Stream Width Protocol (WDFW)

Sensitive Habitat Inventory and Mapping: Aquatic and Riparian Habitat Mapping (DFO)

Stream Inventory Handbook Level I and II (USFS)

R1/R4 (Northern/Intermountain Regions) Fish and Fish Habitat Standard Inventory Procedures Handbook (USFS)  
Monitoring Stream Substrate Stability, Pool Volumes, and Habitat Diversity (IDEQ)  
Benthic Macroinvertebrate Biological Monitoring Protocols for Rivers and Streams (WADOE)  
Processing, Taxonomy, and Quality Control of Benthic Macroinvertebrate Samples (USGS)  
Water Quality Monitoring: Technical Guide Book (ODFW)  
Spawner surveys and other monitoring activities will occur annually approximately 400-500 meters above and below each barrier.

Riparian:

Timber-Fish-Wildlife (TFW) Effectiveness Monitoring and Evaluation Program Riparian Stand Survey – Level II

*proponents should indicate how Beaver Creek stacks up against other watersheds for potential production of anadromous fish.*

Most anadromous production occurs in the Methow mainstem and larger tributaries like the Twisp River, Chewuch River, Early Winters Creek and Lost River. Beaver Creek is comparable production wise to smaller tributaries like Goat Creek, Wolf Creek and Gold Creek. These smaller creeks individually produce less than 1% of the spring chinook in the Methow. Steelhead production in these smaller tributaries is unknown but could be similar to Beaver Creek. A comprehensive habitat assessment on these similar creeks may provide insight on steelhead production.

Currently, spawning grounds are not surveyed for steelhead in the Methow because the adults generally spawn over a 4-5 month period coinciding with high spring flows when water visibility is low and discharge high. WDFW is working to complete some surveys this spring to provide some baseline information.

*The lack of water in late summer seems to suggest a real problem with restoration and potential to obtain late season flows should be more completely addressed in the response.*

In talking with private landowners and historians it has been agreed that approximately 3 years out of 10 the lower 1.25 miles of Beaver Creek is dewatered. Whether flow is addressed or not this project will provide habitat accessibility for adult steelhead immediately. Beaver creek is an adjudicated basin and water users are willing to work on a solution to the flow problem. Coordination is needed.

References:

Mullan, J.W., K.R. Williams, G. Rhodus, T.W. Hillman, and J.D. McIntyre. 1992b.

Production and habitat of salmonids in mid-Columbia River tributary streams. U.S. Fish and Wildlife Serv. Monogr. I. 489pp.

Johnson, D.H., Pittman, N., Wilder, E., Silver, J.A., Plotnikoff, R.W., Mason, B.C., Jones, K.K., Roger, P., O'Neil, T.A., C. Barrett. 2001. Inventory and Monitoring of Salmon Habitat in the Pacific Northwest – Directory and Synthesis of Protocols for Management/Research and Volunteers in Washington, Oregon, Idaho, Montana and British Columbia. Washington Department of Fish and Wildlife, Olympia, WA 212 p.

Additional documents submitted in response to this proposal:

[Letter in opposition from Okanogan Wilderness League](#)