

## **ProjectID: 32016**

Assess the feasibility of the Upper Malheur Watershed to support the reintroduction of anadromous populations above the Beulah & Warm Springs Reservoir

**Sponsor:** BPT

**Province:** Middle Snake

**Subbasin:** Malheur

**FY03 Request:** \$168,896

**5YR Estimate:** \$298,896

**Short Description:** The project is broke into two phases, the first being a feasibility study on the reintroduction of anadromous fish in the Malheur Subbasin. The second phase is the development of a reintroduction plan for the Subbasin.

**Response Needed?** Yes

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### **Project Responses:**

**A similar proposal (for FY 00) was previously reviewed by the ISRP. That proposal was justified by its sponsors in part by a window of opportunity provided by the FERC relicensing of the Hells Canyon Dam complex. The current proposal does not refer to such a window of opportunity. Does it still exist?**

The Idaho Power Company is currently in the re-licensing process. Draft application is due this year (2002) and final application is due by 7/2005.

**A response is needed to better describe the project's proposed methods for assessing the salmonid habitat in the Malheur Subbasin (Task 1.3).**

Many of the streams and tributaries have been surveyed using various habitat inventory methods. The Forest Service, state and Tribe have stream survey habitat data on these streams. The project proposes to compile existing data from the mentioned agencies and quantify habitat attributes such as pool / riffle ratio, substrate composition, residual pool depths (pool quality), and frequency of large woody debris. After conducting a literature search on the life history requirements for anadromous fish, the result will provide an estimate of available spawning, rearing, and holding habitat for all life stages of anadromous fish in the Malheur River basin above Warm Springs and Beulah Reservoirs.

Although chinook historically occurred in the Malheur Basin, there is uncertainty and dispute about whether habitat conditions remain adequate for reintroduction. This is a critical question with Idaho Power deciding how to mitigate for two dams that have completely blocked access to the upper basin for decades. To move beyond theoretical debates, we recommend this project as a high priority as the first necessary step to move closer to actual reintroduction by summarizing existing habitat data and initiating (by trucking) of chinook above the dams to get a better idea of the realized potential of existing habitat.

**A response is needed to better describe the project's proposed methods for assessing the risks that anadromous fish reintroduction might pose for native fishes (Task 1.7).**

Though the benefits of reintroducing anadromous fish above Beulah and Warm Springs Reservoirs is assumed, the action of reintroduction may pose some risk to the resident populations. This task to identify reintroduction risks to the native resident population that includes pathogens, competition, and overlap in potential spawning ground distributions. The subcontractor will coordinate with the Oregon Department of Fish and Wildlife and US Fish and Wildlife Service to identify additional risks. The existing information collected and additional studies identified will be sufficient information for personnel to address a biological assessment and biological opinion in regards to reintroduction.

**Nearly all the requested funding is for a subcontractor. The subcontractor should be identified.**

Peter Bahls is a fish biologist with 16 years experience in ecological research and management and a M.S. in fisheries science and aquatic ecology from Oregon State University. He was the consultant writer/editor for the Malheur Subbasin Summary completed last year. Prior to founding Northwest Watershed Institute last year, he was the senior fish biologist at David Evans and Associates (DEA). While at DEA he served as the project manager and fish biologist for the Forest Service's Malheur Headwaters Watershed Analysis. He has managed numerous other salmon assessments and restoration projects, including an assessment of salmon stock status and habitat conditions in the Middle Fork John Day River, Wilson River, and Sol Duc River. He is intimately familiar with the Malheur Basin and existing data from his work on the two most recent watershed analysis in the Basin. He is the logical best choice for this project based on his expertise in salmon habitat and knowledge of the Malheur Basin.

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Mr. Bahls has 16 years of experience in fish, wildlife, and ecological research and management. He has extensive experience in salmon and steelhead habitat assessment and restoration in the Pacific Northwest. Most recently, he is the founder and director of Northwest Watershed Institute, a non-profit corporation dedicated to conducting model projects to protect and restore aquatic species and habitats in Oregon and Washington.

**EDUCATION**

M.S. Fishery Science and Aquatic Ecology, Oregon State University, Corvallis, 1991  
B.S. Biology, Middlebury College, Middlebury, Vermont, 1984

**EMPLOYMENT HISTORY**

2001 – present Northwest Watershed Institute, Director and Senior Fish Biologist  
1998 - 2001 David Evans and Associates, Inc., Senior Fish Biologist and Aquatic Ecologist  
1992 - 1998 Port Gamble S'Klallam Tribe, Fish and Wildlife Habitat Biologist  
1984 - 1992 Various fish, wildlife, and ecological research positions in Oregon, Washington, Idaho, Alaska, Florida and Panama (for state and federal agencies and private research centers).

**REPRESENTATIVE PROJECTS**

**Watershed Assessment, Research, and Monitoring**

Project Manager and Watershed Ecologist, *Scappoose Bay Watershed Assessment*, Scappoose Bay Watershed Council, 2000.

Project Manager and Watershed Ecologist, *Comprehensive Fish Passage Assessment for the Scappoose Bay Watershed*, Scappoose Bay Watershed Council, 2001.

Project Manager and Watershed Ecologist, *Feasibility Assessment of Simpson Timber Company's South Olympic Conservation Easement Proposal*, River Conservancy, 2000-2001.

Project Manager and Watershed Ecologist, *Malheur Headwaters Watershed Analysis*, U.S. Forest Service, Malheur National Forest, 2000.

Project Manager and Fish Habitat Biologist, *Chimacum Coho Salmon Watershed Restoration Assessment*, Port Gamble S’Klallam Tribe, 1996.

Watershed Ecologist, *Salmonid Refugia Assessment for Eastern Jefferson County*, Watershed Ecology, in progress.

Project Manager and Fish Biologist, *How Healthy are Healthy Stocks? Case studies of Three “Healthy” Salmon Stocks*, Native Fish Society, 2001.

Channel Module, Fish Habitat Module, and Prescriptions Leader, *West Kitsap Watershed Analysis*, Washington Department of Natural Resources (lead agency), 1995.

Project Manager and Watershed Ecologist, *Identifying and Prioritizing Salmonid Refugia in the Scappoose Bay Watershed – A Pilot Project*, Oregon Trout, 2000.

Project Manager and Watershed Ecologist, *An Overview of Efforts to Identify and Protect Salmonid Refugia in Oregon and Washington*, Wild Salmon Center, 2001.

Project Manager and Fish Biologist, *Gourlay Creek Fish Habitat Assessment*, City of Scappoose and Scappoose Bay Watershed Council, 2000.

### **Aquatic habitat protection projects**

Project team member and founder, *Hood Canal Salmon Sanctuary Program*, Inter-agency Project, 1996-present.

Project Manager, *Lower Tarboo Creek Critical Habitat Acquisition – IAC and Federal Grant Funding*, Port Gamble S’Klallam Tribe, WDFW and USFWS, 1998.

Project Manager, *Chimacum Watershed Refugia Acquisition – Critical Habitat, Riparian Habitat, and Federal Grant Funding*, Port Gamble S’Klallam Tribe, WDFW, and USFWS, 1998-2000.

Timber, Fish, and Wildlife Representative, *Timber and Development Plan Reviews in Hood Canal Watersheds*, Port Gamble S’Klallam Tribe, 1992-1998.

### **Salmon habitat and watershed restoration projects**

**Aquatic Ecologist, *Williamson River Delta Restoration Analysis*, Phillip Williams and Associates, Inc. and The Nature Conservancy – Oregon, 1999.**

**Project Manager and Fish Biologist, *Gourlay Creek Fish Ladder Design, Permitting, and Habitat Assessment*, City of Scappoose and Scappoose Bay Watershed Council, In progress.**

**Technical Advisor, *Quilcene-Snow Jobs for Environment Restoration Team*, Port Gamble S'Klallam Tribe, 1995-1997.**

**Fish Biologist, *Jefferson County Fish Passage Culvert Replacement Design and Permitting Assistance*, Entranco and Jefferson County, 1999.**

**Fish Biologist, *Salmon River Estuary Restoration Alternatives*, Siuslaw National Forest, 1999.**

**Project Manager and Fish Biologist, *Chimacum Headwaters Restoration Project*, WDFW, 1999.**

**Additionally, please specifically address how the project is appropriate for BPA funding.**

This project addresses the following Northwest Power Planning Council (NWPPC) Fish and Wildlife Program (1994) measures:

7.5B – Snake River Fall Chinook

7.5B.3 – Continue to fund basic life history studies for Snake River fall Chinook. This study should identify range, limiting factors, effects of flow, temperature, spawning and rearing habitat, and migratory behavior. The project proposes to identify limiting factors for anadromous fish associated with spawning, rearing and holding habitat in the Malheur River Subbasin above the irrigation reservoirs.

7.6A – Habitat Goal

7.6A.2 – At a minimum, maintain the present quantity and productivity of salmon and steelhead habitat. Then, improve the productivity of salmon and steelhead habitat critical to recovery of weak stocks. Next, enhance the productivity of habitat for other stocks of salmon and steelhead. **Last, provide access to inaccessible habitat that has been blocked by human development activities.**

7.10K – Passage into Historic Habitat

7.10K.1 – Where appropriate, determine the feasibility of providing passage above blockages to habitat caused by human development activities.

10.1 - Resident fish goal – The program goal for resident fish emphasizes the long-term sustainability of native fish in native habitats where possible. Use strategies of mitigation & substitution.

10.5 – Bull trout mitigation. **Project sponsor believes the reintroduction of anadromous fish will have biological benefits for bull trout.**

10.8 - Resident fish substitutions.

Salmon and steelhead probably never will be able to return to some areas of the basin because of blockages by dams. These include the areas above Chief Joseph and Grand Coulee dams and the Hells Canyon Complex, as well as other smaller blocked areas. In its analysis of the contribution of the hydropower system to salmon and steelhead losses, the Council has addressed the extent to which resident fish substitutions should be used to mitigate losses of salmon and steelhead production in these areas.

The Council has concluded that: 1) mitigation in blocked areas is appropriate where salmon and steelhead were affected by the development and operation of the hydroelectric projects; 2) to treat the Columbia River and its tributaries as a system, resident fish substitutions are reasonable for lost salmon and steelhead in areas where in-kind mitigation cannot occur; and 3) flexibility in approach is needed to develop a program that complements the activities of the fish and wildlife agencies and tribes and is based on the best available scientific knowledge. For substitution purposes, resident fish may include landlocked anadromous fish (e.g., white sturgeon, kokanee and coho), as well as traditionally defined

resident fish species. **The project sponsor is currently looking into how to create a substitution fishery for the Tribe, possibly even through a truck and haul operation. Feasibility work needs to be done to ensure such a project can be considered.**

10.8A - Resident Fish Substitutions Policy

The substitution of resident fish to make up for losses of anadromous fish in areas now permanently blocked to salmon and steelhead reflects the Council's resolve to address complex, long-term problems. Historical records show that the Columbia River Basin Indian tribes relied extensively on salmon and steelhead, and the permanent loss of these resources has had incalculable impacts on tribal economies, cultures and religions. Historically, the Council approved projects in the areas above Chief Joseph/Grand Coulee, and in the blocked areas above Hell's Canyon Dam.

**10.8C – Resident Fish Substitution Projects Above Hells Canyon Dam**

**The following resident fish substitution activities and projects in the blocked area above Hells Canyon Dam will partially mitigate for salmon and steelhead losses incurred in this blocked area as a result of the construction and operation of hydropower projects in the Columbia River Basin.**

The remaining NWPPC measures listed in the proposal are indirect objectives this project will address.