

# SCREENS AND TRAPS ON THE WALLA WALLA AND TOUCHET

9601100

## SHORT DESCRIPTION:

Provide for safe outmigration of smolts in order to enhance summer steelhead and restore spring chinook salmon runs in the Walla Walla Subbasin. Develop screen/trap facilities to bypass smolts safely to river or capture smolts for trucking from the Little Walla Walla Diversion to the mouth of the Walla Walla River when conditions are not adequate for safe smolt outmigration.

## SPONSOR/CONTRACTOR: CTUIR

Confederated Tribes of the Umatilla Indian Reservation  
Gary James, Fisheries Program Manager  
Pendleton, OR 97801  
541/276-4109

## SUB-CONTRACTORS:

Montgomery Watson Engineering/Construction  
Contractor(s)

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## GOALS

### GENERAL:

Supports a healthy Columbia basin, Maintains biological diversity, Maintains genetic integrity, Increases run sizes or populations, Provides needed habitat protection

### ANADROMOUS FISH:

Habitat or tributary passage

### NPPC PROGRAM MEASURE:

7.10A

### RELATION TO MEASURE:

Project directly relates to language: "Provide passage and protective screens on tributaries".

### OTHER PLANNING DOCUMENTS:

Wy Kan Ush Me Wa Kush Wit, Walla Walla Subbasin Plan

### TARGET STOCK

Walla Walla/Carson Spring Chinook  
Walla Walla River Summer Steelhead

### LIFE STAGE

Smolt  
Smolt

### MGMT CODE (see below)

E, S  
S, W

### AFFECTED STOCK

Bull Trout

### BENEFIT OR DETRIMENT

Beneficial to intrabasin migration

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## BACKGROUND

### Stream name:

Walla Walla and Touchet Rivers

### Subbasin:

Walla Walla

### Stream miles affected:

47 mi. below projects for increased juvenile access and utilization

### HISTORY:

The native summer steelhead run in the Walla Walla River is currently in a severely depressed state and spring chinook are extinct due largely to inadequate conditions (poor screens and ladders, low flows, etc.) for up and downstream migration. The NE Oregon Hatchery project developed hatchery facility plans for enhancement of summer steelhead and re-establishment of spring chinook in the upper Walla Walla and Touchet Rivers. Fish released from this effort will need improved irrigation ditch screening and a trap and haul contingency plan to ensure that they reach the Columbia River. The proposed screen/trap facilities would be used to capture smolts for trucking from the Little Walla Walla Diversion to the mouth of the Walla Walla River when conditions are not adequate for safe smolt outmigration (similar to Umatilla program). Existing screen facilities do not provide

adequate conditions for bypassing or trapping smolts for transportation. Delay of this project may result in further decline of the wild summer steelhead population and limited effectiveness of spring chinook restoration efforts. In 1996, design and engineering work was initiated for the Little Walla Walla Diversion Screens/Trap and Haul project using BPA funds. In 1997 designs continued on this project and a ditch consolidation project in the lower Walla Walla River. Initial project construction is also expected in 1997.

**BIOLOGICAL RESULTS ACHIEVED:**

Only some design work completed at this time. Results expected upon completion of projects is improved survival for downstream migrating smolts.

**PROJECT REPORTS AND PAPERS:**

No project reports completed at this time. Engineering/design documents are being developed in 1997.

**ADAPTIVE MANAGEMENT IMPLICATIONS:**

Improved juvenile fish passage will compliment other projects (adult fish passage, habitat enhancement, artificial production) necessary for restoration of anadromous fisheries in the Walla Walla Basin. Monitoring and evaluation of fish passage effectiveness at completed facilities will provide useful information for any necessary adjustment at the Walla Walla River projects and possibly useful information for similar adult fish passage needs elsewhere in the Columbia River Basin.

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**PURPOSE AND METHODS**

**SPECIFIC MEASUREABLE OBJECTIVES:**

Juvenile steelhead mortality is observed annually due to poor screening bypass conditions (most severe is Little Walla Walla River diversion). Measurable results will be the reduction or elimination of this fish loss.

**CRITICAL UNCERTAINTIES:**

A critically impacted life history stage currently effecting the survival of native summer steelhead and restoration of spring chinook is downstream migration of smolts. Completion of this and other related projects (listed above) addressing additional life history stages will be necessary to implement a comprehensive Walla Walla Basin fish restoration program.

**BIOLOGICAL NEED:**

Without project, native summer steelhead would continue to be impacted and spring chinook restoration would likely be precluded. See "Project History" above for more information on biological need.

**HYPOTHESIS TO BE TESTED:**

N/A

**ALTERNATIVE APPROACHES:**

N/A

**JUSTIFICATION FOR PLANNING:**

N/A

**METHODS:**

1) Conduct facility engineering and design 2) Construct state of the art screening facilities with associated smolt traps and fish hauling units 3) Evaluate fish passage effectiveness by monitoring fish passage and condition at new facilities.

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**PLANNED ACTIVITIES**

**SCHEDULE:**

<b><u>Planning Phase</u></b>	<b><u>Start</u></b> 1996	<b><u>End</u></b> 1997	<b><u>Subcontractor</u></b>
<b><u>Task</u></b> 1996 - Engineering & design work initiated on Little Walla Walla diversion and a ditch consolidation project in the lower Walla Walla River 1997 -Finalize designs			
<b><u>Implementation Phase</u></b>	<b><u>Start</u></b> 1997	<b><u>End</u></b> 1998	<b><u>Subcontractor</u></b>
<b><u>Task</u></b> 1997 Initiate construction 1998 Finalize construction			

**PROJECT COMPLETION DATE:**  
Ongoing

## **OUTCOMES, MONITORING AND EVALUATION**

### **SUMMARY OF EXPECTED OUTCOMES**

**Expected performance of target population or quality change in land area affected:**

Biologists believe that up to one-half (or more in drought years) of summer steelhead smolts migrating from natural production areas in the Walla Walla River to the Columbia River are lost due to current irrigation screening and low-flow problems in the lower drainage. Current and future hatchery programs which release fish in upriver areas will also avoid an approximate 50% smolt loss.

**Present utilization and conservation potential of target population or area:**

Present summer steelhead populations are 1,000 to 2,000 and spring chinook have been extinct for several decades.

**Assumed historic status of utilization and conservation potential:**

The Walla Walla Basin was believed to once support thousands upon thousands of both salmon and steelhead and the basin still has much pristine habitat in the headwaters.

**Long term expected utilization and conservation potential for target population or habitat:**

Walla Walla Basin anadromous fish restoration goals are 11,000 summer steelhead and 5,000 spring chinook.

**Contribution toward long-term goal:**

Completion of this and several other ongoing Walla Walla Basin fisheries restoration programs are expected to result in meeting the long-term goals and provide for natural production, harvest, and broodstock collection.

**Indirect biological or environmental changes:**

N/A

**Physical products:**

Approximately 47 stream miles in the lower Walla Walla River below the screen projects will become more "fish friendly" for smolt outmigration.

**Environmental attributes affected by the project:**

N/A

**Changes assumed or expected for affected environmental attributes:**

N/A

**Measure of attribute changes:**

See G above.

**Assessment of effects on project outcomes of critical uncertainty:**

A comprehensive fish passage and natural production assessment is anticipated (similar to the Umatilla Basin program) following completion of several ongoing Walla Walla Basin fisheries restoration projects.

**Information products:**

Following implementation of fish passage improvements, the project will evaluate the fish passage effectiveness at the new projects.

**Coordination outcomes:**

The BPA, COE, an engineering firm, CTUIR, ODFW, WDFW and the Milton-Freewater Water Control District are currently all working well together to identify fish restoration needs, develop solutions and review designs. Good coordination is expected to continue during construction and M & E phases of the project.

**MONITORING APPROACH**

1) Conduct facility engineering and design 2) Construct state of the art screening facilities with associated smolt traps and fish hauling units 3) Evaluate fish passage effectiveness by monitoring adult upstream migration.

**Provisions to monitor population status or habitat quality:**

A comprehensive fish passage and natural production assessment is anticipated (similar to the Umatilla Basin program) following completion of several ongoing Walla Walla Basin fisheries restoration projects.

**Data analysis and evaluation:**

A multi-agency research coordination committee (similar to the Umatilla Basin program) is expected to later be formed to discuss project results/needs and implement necessary adaptive management actions.

**Information feed back to management decisions:**

See answer immediately above.

**Critical uncertainties affecting project's outcomes:**

See last three answers above.

**EVALUATION**

Post-project success can be indicated by documenting uninhibited juvenile salmon and steelhead passage at the new facilities.

**Incorporating new information regarding uncertainties:**

A multi-agency research coordination committee (similar to the Umatilla Basin program) is expected to later be formed to discuss project results/needs and implement necessary adaptive management actions.

**Increasing public awareness of F&W activities:**

Numerous agencies, irrigation districts, the watershed council, and many private landowners are already involved in the Walla Walla fisheries restoration program. Public awareness is expected to increase through continued coordination of these diverse groups, publication of project reports, local news coverage, etc. (similar to the successful program in the neighboring Umatilla Basin).

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**RELATIONSHIPS**

**RELATED BPA PROJECT**

**RELATIONSHIP**

9990071  
 9990070  
 9606400  
 8805302 Adult Fish Passage Improvement in Walla Walla Basin  
 Walla Walla Basin Anadromous Fish Habitat Enhancement  
 Walla Walla Co. (SWCD) Habitat Enhancement  
 Northeast Oregon Hatchery - Walla Walla Component

All projects are part of a comprehensive Walla Walla Basin watershed/fisheries restoration program. They will compliment juvenile fish passage improvements by adding adult fish passage, habitat enhancement, and hatchery programs.

**RELATED NON-BPA PROJECT**

Walla Walla Basin Project - US BOR  
 Walla Walla Basin Project - US Army COE

**RELATIONSHIP**

Develop/implement instream flow enhancement  
 Assist with adult passage improvements and develop/implement instream flow enhancement

**OPPORTUNITIES FOR COOPERATION:**

This project represents a unique opportunity for multi-entity cooperation and cost sharing.. The COE has already begun design work on a new Nursery Bridge Dam ladder and planning for Marie Dorian Dam removal. The COE will fund 75% and BPA will fund 25% of implementation of these projects in 1997.

Habitat enhancement projects in the Walla Walla River watershed are being planned, coordinated, and implemented by the Walla Walla Watershed Council, the Oregon Department of Fish and Wildlife, the Washington Dept. of Fisheries and Wildlife, the Confederated Tribes of the Umatilla Indian Reservation, and the three Soil and Water Conservation Districts in the Walla Walla Basin.

The US Army COE and the US Bureau of Reclamation in coordination with state and tribal fisheries managers are investigating opportunities to augment low instream in the Walla Walla River Basin.

BPA is funding construction of a hatchery facility on the South Fork Walla Walla. CTUIR will operate Phase I for Umatilla Basin adult spring chinook spawning and holding beginning in 1997. Phase II will provide for summer steelhead and spring chinook production for the Walla Walla Basin and is expected to be implemented in 1999.

The adult and juvenile passage projects will be complimented by implementation of these other projects, which all together will constitute a comprehensive Walla Walla Basin fish restoration program.

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**COSTS AND FTE**

**1997 Planned:** \$500,000

**FUTURE FUNDING NEEDS:**

**PAST OBLIGATIONS (incl. 1997 if done):**

<u>FY</u>	<u>\$ NEED</u>	<u>% PLAN</u>	<u>% IMPLEMENT</u>	<u>% O AND M</u>
1998	\$2,800,000	5%	95%	
1999	\$200,000			100%
2000	\$200,000			100%
2001	\$200,000			100%
2002	\$200,000			100%

**LONGER TERM COSTS:** Expected annual cost of \$200,000.  
 For annual operation and maintenance.

**1997 OVERHEAD PERCENT:** 34%

**HOW DOES PERCENTAGE APPLY TO DIRECT COSTS:**

The 34% is not expected to be applied to at least 90% of the project costs in 1998 due to the primary activity being construction.

**CONTRACTOR FTE:** About 0.25 FTE

**SUBCONTRACTOR FTE:** Several? - Exact number unknown at this time because project designs are ongoing.

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