

ANNUAL FISH MARKING - MISSING HATCHERY PROD'N GROUPS 8906500

SHORT DESCRIPTION:

Mark various groups of fish for BPA funded projects using mobile fish marking trailers at federal and state hatcheries in the Columbia River basin. Provide base data from hatchery releases used to evaluate survival, contribution and hatchery goals. Starting in 1996 continue to raise and mark spring and fall chinook salmon for the Umatilla Fisheries Program.

SPONSOR/CONTRACTOR: USFWS

US. Fish and Wildlife Service

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SUB-CONTRACTORS:

Other agencies that will receive funding and are primarily responsible for the long term maintenance of this project (each is for a portion of the project only). PSMFC/Fish Passage Center (Project # 8401400 Smolt Monitoring Program-multiple agencies) The USFWS will mark fish for the Fish Passage Center in support of this project. Fish will be PIT tagged at Dworshak, Wells, Entiat, Leavenworth and Priest Rapids fish hatcheries. The USFWS will be funded directly for this marking by Bonneville. COTR: Tom Morse. Confederated Tribes of Umatilla Indian Reservation (Project #9101400 Umatilla Hatchery Satellite Program) Starting in 1996 the USFWS began rearing and marking upriver bright fall chinook and spring chinook salmon in support of this project. The USFWS also conducts all fish health exams necessary to meet fish disease monitoring requirements necessary for these fish to be transferred to

GOALS

GENERAL:

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

ANADROMOUS FISH:

Production

NPPC PROGRAM MEASURE:

7.2D.1; 7.2D.3; 7.2D.4

BIOLOGICAL OPINION ID:

NMFS BO - Basic Monitoring

TARGET STOCK

Salmon and Steelhead

LIFE STAGE

Egg to Adult

MGMT CODE (see below)

S, A, W

BACKGROUND

Stream name:

numerous

LAND AREA INFORMATION

Subbasin:

Columbia River Basin and tributaries, from Wells WDFW Hatchery downstream. Snake River Basin and tributaries, from Dworshak National Fish Hatchery downstream.

Stream miles affected:

Land ownership:

numerous

numerous

Acres affected:

numerous

HISTORY:

Since 1983 the Service has marked juvenile salmonids throughout the region for BPA funded projects and has maintained several fish marking trailers. Marking allows tracking of these fish with CWT, freeze brands, fin clips and PIT tags. The Service has conducted the fish marking for several long-term ongoing marking projects including the following: Columbia River Basin Smolt Monitoring Program, Yakima Basin Evaluation Program, and various other evaluation studies. The Service has participated in the Missing Production Hatchery Groups Coded-Wire Tag Evaluation Study since 1989.

Starting in 1996 the Service also began rearing upriver bright fall chinook and spring chinook salmon for the Umatilla Fisheries Program. The Service also conducts all fish health exams necessary to meet fish disease requirements necessary for these fish to be planted in the Umatilla River.

Historic Obligations*

1990	\$170,614
1991	\$271,410
1992	\$294,786
1993	\$406,790
1994	\$360,855
1995	\$502,700
1996	\$353,773

1997 \$362,913

*Totals shown for historic funding are for both project 8300600 and 8906500 combined. Funding has fluctuated over the years due to variations in the fish marking programs.

BIOLOGICAL RESULTS ACHIEVED:

Over 25.5 million juvenile salmonids have been marked for evaluation in the Columbia River basin. The various purposes of evaluation include: to estimate the survival of each release group, to estimate the contribution of each release group to ocean and inriver fisheries, to estimate straying rate of hatchery fish, to estimate smolt migration speed, to evaluate hatchery practices, and individual broodstocks.

PROJECT REPORTS AND PAPERS:

"Annual Coded Wire Tag Program: Missing Production Groups" Annual Reports 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996.

"Operation and Maintenance of BPA Fish Marking Trailer" Annual Reports, 1984, 1985, 1986, 1987,1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995.

ADAPTIVE MANAGEMENT IMPLICATIONS:

This information will be used to evaluate hatchery practices and individual broodstocks. It will also enable salmon harvest managers to develop a scenario to harvest excess hatchery fish while protecting the threatened or endangered stocks.

PURPOSE AND METHODS

SPECIFIC MEASUREABLE OBJECTIVES:

Continue to mark fish for evaluation studies and rear, mark and release upriver bright fall chinook salmon and spring chinook salmon for the Umatilla Fisheries Program.

CRITICAL UNCERTAINTIES:

All necessary fish will be marked and evaluated.

BIOLOGICAL NEED:

BPA funded fish projects need to be marked and evaluated.

METHODS:

Fish will be marked at Columbia River hatcheries with mobile fish marking trailers. In order to meet objectives, a minimum of one marked group of fish for each production release is necessary for evaluation. All fish released from the various facilities along with mark/unmarked ratios are reported to the Pacific States Marine Fisheries Commission (PSMFC). All fish recovered in various fisheries or at the hatchery are sampled to recover coded-wire tags. This information is then reported to the PSMFC along with sampling rate. Contribution to various fisheries and survival of the release groups can then be estimated from this information.

The fish reared, marked and released into the Umatilla River will help re-establish the upriver bright fall chinook salmon and spring chinook salmon runs. The Umatilla fish will be 100% marked for evaluation purposes.

PLANNED ACTIVITIES

SCHEDULE:

Planning Phase **Start** on-going **End** on-going **Subcontractor** on-going

Task Conduct all planning necessary to support the implementation task.

Implementation Phase **Start** on-going **End** on-going **Subcontractor** on-going

Task In 1998 2,707,900 fish will be marked for this project and 875,000 salmon raised for the Umatilla Fisheries Program and the estimated cost is \$469,574.

O&M Phase **Start** on-going **End** on-going **Subcontractor** on-going

Task Conduct all operations necessary to support the implementation task.

PROJECT COMPLETION DATE:

on-going

OUTCOMES, MONITORING AND EVALUATION

SUMMARY OF EXPECTED OUTCOMES

Present utilization and conservation potential of target population or area:

N/A

Assumed historic status of utilization and conservation potential:

N/A

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

N/A

Contribution toward long-term goal:

Continue ongoing fish marking, monitoring and evaluation of BPA funded projects. All fish will be marked and evaluated. Continue on-going fish rearing, marking and release of salmon for the Umatilla Fisheries Program.

Physical products:

Mark 2,707,900 fish. Raise 875,000 salmon.

Environmental attributes affected by the project:

N/A

Changes assumed or expected for affected environmental attributes:

N/A

Measure of attribute changes:

N/A

Assessment of effects on project outcomes of critical uncertainty:

N/A

Information products:

Contribution to various fisheries and survival of the release group.

Coordination outcomes:

1998 - Mark 2,707,900 fish. 1998 - Raise 875,000 fish.

MONITORING APPROACH

Fish will be marked at Columbia River hatcheries with mobile fish marking trailers. In order to meet objectives, a minimum of one marked group of fish for each production release is necessary for evaluation. All fish released from the various facilities along with mark/unmarked ratios are reported to the Pacific States Marine Fisheries Commission (PSMFC). All fish recovered in various fisheries or at the hatchery are sampled to recover coded-wire tags. This information is then reported to the PSMFC along with sampling rate. Contribution to various fisheries and survival of the release groups can then be estimated from this information.

Provisions to monitor population status or habitat quality:

Smolt monitoring program will provide the basic monitoring mechanism for PIT-tagged releases. On-going state, federal and tribal sampling programs will provide necessary tag and adult recovery information to evaluate survivals and contribution levels of marked fish.

Data analysis and evaluation:

Data for juvenile passage will be analyzed, evaluated and presented in Annual Smolt Monitoring reports. Adult recovery data will be provided in annual Missing Group Production reports and annual BPA reports for specific projects the fish are reared for (e.g. Umatilla).

Information feed back to management decisions:

Smolt monitoring and adult production reports provide the mechanism for feedback to managers concerning future decisions.

Critical uncertainties affecting project's outcomes:

N/A

EVALUATION

Proposed numbers of fish to be marked, are in fact marked with minimal mortality. Identified fish production numbers are in fact reared and released in healthy condition.

Incorporating new information regarding uncertainties:

Information about uncertainties and risk would be incorporated into the planning process to determine whether the project should

be continued, altered, or terminated.

Increasing public awareness of F&W activities:

This project provides the means to collect juvenile and adult recovery information (i.e., marked fish) for selected stocks so that decision makers have better information upon which to base their management decisions and the public is better informed of regional problems and opportunities for restoration and enhancement.

RELATIONSHIPS

RELATED BPA PROJECT

Yakima River Basin Evaluation Program
 9101400 Umatilla Hatchery Satellite Project Program

 8401400 Smolt Monitoring Program
 8300600
 8906500

RELATIONSHIP

Yakama Indian Nation is one of the sponsors of this project
 Confederated Tribes of Umatilla Indian Reservation is one of the sponsors of this project
 Fish Passage Center is one of the sponsors of this project
 The project started in 1983 (as project 8300600 Operation and Maintenance of BPA Fish Marking Trailers). In 1995, projects 8906500 and 8300600 were combined and the USFWS has marked over 25.5 million fish for evaluation in the Columbia River ba

RELATED NON-BPA PROJECT

Clatsop Economic Development Council Youngs Bay Fish Rearing Program

RELATIONSHIP

Clatsop Economic Development Council is one of the sponsors of this project.

COSTS AND FTE

1997 Planned: \$362,913

FUTURE FUNDING NEEDS:

<u>FY</u>	<u>\$ NEED</u>	<u>% PLAN</u>	<u>% IMPLEMENT</u>	<u>% O AND M</u>
1998	\$469,574	2%	92%	6%
1999	\$469,574	2%	92%	6%
2000	\$469,574	2%	92%	6%
2001	\$469,574	2%	92%	6%
2002	\$469,574	2%	92%	6%

Costs in constant 1997 dollars

PAST OBLIGATIONS (incl. 1997 if done):

<u>FY</u>	<u>OBLIGATED</u>
1990	\$70,900
1991	\$114,886
1992	\$165,673
1993	\$193,397
1994	\$155,812
1995	\$337,700
1996	\$353,773
1997	\$362,913

TOTAL: \$1,755,054

Note: Data are past obligations, or amounts committed by year, not amounts billed. Does not include data for related projects.

OTHER NON-FINANCIAL SUPPORTERS:

PSMFC, Fish Passage Center, Yakama Indian Nation, Confederated Tribes of the Umatilla Indian Reservation, Clatsop Economic Development Council, NMFS, ACOE.

LONGER TERM COSTS: \$469,574 (costs in constant 1997 dollars.)

2% planning, 92% implementation and 6% operation

1997 OVERHEAD PERCENT: 33%

HOW DOES PERCENTAGE APPLY TO DIRECT COSTS:

Total project costs

SUBCONTRACTOR FTE: 1.35
