

O&M OF YAKIMA FISH PROTECTION, MITIGATION & ENHANCEMENT FACILITIES

9503300

SHORT DESCRIPTION:

Provide for O&M of BPA owned anadromous fish passage and protective facilities within the Yakima River Basin, including several irrigation system fish screens and one major adult fish trapping facility.

SPONSOR/CONTRACTOR: USBR

US Bureau of Reclamation
Jim Faith, Facilities Maintenance Program Specialist
PO Box 1749, Yakima, WA 98907-1749
509-575-5848 x215 jfaith@pn.usbr.gov

SUB-CONTRACTORS:

Some operation and maintenance tasks are being subcontracted to water users.

GOALS

GENERAL:

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

ANADROMOUS FISH:

O&M

NPPC PROGRAM MEASURE:

7.4K.1

RELATION TO MEASURE:

This project funds operation and maintenance of several BPA owned fish protection and enhancement facilities constructed in the Yakima River Basin as part of a program to mitigate impacts to anadromous fish by BPA owned mainstream Columbia River structures.

BIOLOGICAL OPINION ID:

N/A

OTHER PLANNING DOCUMENTS:

N/A

TARGET STOCK

Yakima Coho
Yakima Fall Chinook
Naches Steelhead
Naches Spring Chinook
Yakima Steelhead
Yakima Spring Chinook

LIFE STAGE

Juveniles at all life stages
Juveniles at all life stages

MGMT CODE (see below)

A
S,W
N,P,W
N,W
S,P,W
S,W

AFFECTED STOCK

Naches Resident Rainbow Trout
Yakima Resident Rainbow Trout

BENEFIT OR DETRIMENT

Beneficial
Beneficial

BACKGROUND

Stream name:

Yakima River and tributaries

Subbasin:

Yakima

Land ownership:

Public

Hydro project mitigated:

Mitigates impacts to anadromous fish by BPA owned mainstream Columbia River hydroelectric structures.

HISTORY:

In accordance with the Pacific Northwest Electric Power Planning and Conservation Act, BPA is funding the design, construction, operation and maintenance of fish protection and enhancement facilities in the Yakima River Basin as part of a program to mitigate impacts to anadromous fish by BPA owned mainstream Columbia River structures. Approximately 60 facilities are planned for construction or modification by the year 1999. Construction has been completed and O&M begun on 15 facilities to date, with 6 more expected to come on-line by the end of 1997. As sites are brought on-line, custody is assigned to Reclamation for operation and maintenance, with BPA reimbursing Reclamation for all costs. Where cost effective or otherwise desirable, Reclamation is transferring specific O&M responsibilities to the Washington Dept. of Fish & Wildlife.

BIOLOGICAL RESULTS ACHIEVED:

Completed facilities are routinely and effectively preventing fish from entering and thus being lost in dead-end irrigation system waterways.

PROJECT REPORTS AND PAPERS:

N/A

ADAPTIVE MANAGEMENT IMPLICATIONS:

N/A

PURPOSE AND METHODS

SPECIFIC MEASUREABLE OBJECTIVES:

The objective is to increase the numbers of adult anadromous fish returning to spawn in the Yakima River basin by protecting fish through an effective fish protective facility operation and maintenance program.

CRITICAL UNCERTAINTIES:

N/A

BIOLOGICAL NEED:

Yakima basin anadromous fish populations have been steadily declining. These facilities are intended to help reverse this decline by preventing anadromous fish from moving into and thus being lost in deadend irrigation system waterways. Migrating smolt are particularly prone to follow the current into these deadend waterways. A good O&M program is needed to closely monitor and properly maintain these facilities to assure that fish are being protected.

HYPOTHESIS TO BE TESTED:

N/A

ALTERNATIVE APPROACHES:

N/A

JUSTIFICATION FOR PLANNING:

N/A

METHODS:

O&M of facilities is being accomplished using Reclamation and Washington Dept. of Fish & Wildlife personnel and equipment, and subcontractors including impacted irrigation districts. Reclamation also provides administrative and specialized craft support for tasks assigned to the Washington Dept. of Fish & Wildlife.

PLANNED ACTIVITIES

SCHEDULE:

O&M Phase **Start** 1995 **End** 2000 **Subcontractor**

Task Activities include routine day-to-day monitoring, operation, maintenance, repair, lubrication and adjustment of structures and equipment. It also includes clearing waterborne trash and obstructions, verifying that fish are being protected, and providing site security. Work also includes periodic major overhaul and replacement of site components and structures to assure the long-term integrity of the facilities.

PROJECT COMPLETION DATE:

2000

CONSTRAINTS OR FACTORS THAT MAY CAUSE SCHEDULE OR BUDGET CHANGES:

There are currently 15 BPA owned Yakima Phase II fish facilities under the custody of Reclamation, with 6 additional sites scheduled for construction completion during 1997. This may increase to 60 or more when Phase II construction is complete in approximately the year 2000, depending on the timing and level of construction funding provided by BPA. The actual yearly increase in O&M costs will depend on the rate that these facilities are brought on-line.

OUTCOMES, MONITORING AND EVALUATION

SUMMARY OF EXPECTED OUTCOMES

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

An increase in numbers of returning and spawning anadromous fish is expected over several years.

Present utilization and conservation potential of target population or area:

Target stocks are presently too weak to support sub-basin harvest. Some stocks could be headed for eventual extinction without intervention.

Assumed historic status of utilization and conservation potential:

Target stocks once supported significant tribal and non-tribal harvest.

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

Restore target stocks to self-sustaining levels capable of supporting significant tribal and non-tribal harvest. The Phase II fish facilities are a critical part of this restoration plan.

Contribution toward long-term goal:

This project will contribute to the goal by funding an O&M program that assures that these facilities continue to protect anadromous fish .

Indirect biological or environmental changes:

Resident fish will also be protected.

Physical products:

Approximately 21 fish protective facilities will be on-line and thus require maintenance by the beginning of 1998. As many as 60 facilities will be maintained under this program when all construction is complete in approximately the year 2000.

Environmental attributes affected by the project:

None known

Changes assumed or expected for affected environmental attributes:

None known

Measure of attribute changes:

N/A

Assessment of effects on project outcomes of critical uncertainty:

N/A

Information products:

N/A

Coordination outcomes:

N/A

MONITORING APPROACH

Provisions to monitor population status or habitat quality:

Biological results are being monitored and reported by other agencies and organizations, including the Yakama Indian Nation, Battelle Pacific NW Laboratories, Washington Dept. of Fish & Wildlife, and National Marine Fisheries Service.

Data analysis and evaluation:

N/A

Information feed back to management decisions:

N/A

Critical uncertainties affecting project's outcomes:

N/A

EVALUATION

Success will be indicated by the stabilization or increase of numbers of returning and spawning adult anadromous fish.

Incorporating new information regarding uncertainties:

The Yakima Technical Work Group made up of engineers, biologists, irrigators and other interested persons and organizations (including BPA and Reclamation) meet several times during the year to discuss project progress and direction, including reviewing new information arising out of site observations and problems.

Increasing public awareness of F&W activities:

Protection of declining anadromous fish is a sensitive issue in the Yakima valley. BPA's role is publicized during the various forums where this issue is discussed.

RELATIONSHIPS

RELATED BPA PROJECT

8562000

RELATIONSHIP

Battelle Pacific NW Laboratories is monitoring and evaluating the effectiveness of Phase II facilities under Project No. 85-620.

9105700

The Washington Dept. of Fish & Wildlife is fabricating fishscreens for Phase II facilities under Project No. 91-057 Yakima Phase II Screen Fabrication.

9200900

Phase II facilities are being operated and maintained through a cooperative effort between Reclamation and the Washington Dept. of Fish & Wildlife. WDFW is performing their O&M tasks under Project No. 92-09 Yakima-Klickitat Production Project Phase II Fish Screens O&M.

9107500 Yakima Phase II Screens - Construction

Design and construction of Phase II facilities is being funded by BPA and administered by Reclamation under Project no. 91-075 Yakima Phase II Screen Construction.

RELATED NON-BPA PROJECT

Yakima Phase I Fish Facilities Funding by BPA & Reclamation

RELATIONSHIP

Yakima Phase I fish facilities provide for screening of major Yakima river system irrigation diversions whereas Phase II provides for screening of minor diversions. Construction of Phase I facilities is complete. BPA funded most Phase I design and construction costs whereas Reclamation funds Phase I O&M.

OPPORTUNITIES FOR COOPERATION:

O&M tasks are being accomplished through a cooperative effort between Reclamation and Washington Dept. of Fish & Wildlife. WDFW is performing their work under Projects No. 91-057 & 92-09.

COSTS AND FTE

1997 Planned: \$190,000

FUTURE FUNDING NEEDS:

<u>FY</u>	<u>\$ NEED</u>	<u>% PLAN</u>	<u>% IMPLEMENT</u>	<u>% O AND M</u>
1998	\$210,000	0%	0%	100%
1999	\$220,000	0%	0%	100%
2000	\$230,000	0%	0%	100%
2001	\$240,000	0%	0%	100%
2002	\$250,000	0%	0%	100%

PAST OBLIGATIONS (incl. 1997 if done):

<u>FY</u>	<u>OBLIGATED</u>
1995	\$118,409
1996	\$230,320
TOTAL:	\$348,729

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

<u>FY</u>	<u>OTHER FUNDING SOURCE</u>	<u>AMOUNT</u>	<u>IN-KIND VALUE</u>
1998	Irrigation Diversion Owners		-Phase II Costs
1999	Irrigation Diversion Owners		-Phase II Costs
2000	Irrigation Diversion Owners		-Phase II Costs
2001	Irrigation Diversion Owners		-Phase II Costs
2002	Irrigation Diversion Owners		-Phase II Costs

OTHER NON-FINANCIAL SUPPORTERS:

Yakama Indian Nation, National Marine Fisheries Service

LONGER TERM COSTS:

Operation and maintenance costs will continue for outlying years at the rate of approximately \$250,000/year plus inflation.

1997 OVERHEAD PERCENT: 68%

HOW DOES PERCENTAGE APPLY TO DIRECT COSTS:

Percentage applies only to labor costs.

CONTRACTOR FTE:

No one is directly employed on this project. Rather this work is accomplished as part of a larger facility maintenance program. (Approximate FTE = 1.5)

SUBCONTRACTOR FTE:

Subcontractor has two employees who spend part of their workday on Phase II work. (Approximate FTE = 0.25)
