

YAKIMA HATCHERY - CONSTRUCTION

8811500

SHORT DESCRIPTION:

Capital expenses for construction of the upper Yakima River spring chinook hatchery at Cle Elum, Washington, and three satellite acclimation facilities in the upper Yakima River Basin. The O & M for the hatchery will be included in project number 97-013. This project responds directly to a need for knowledge of viable means to rebuild and maintain naturally spawning anadromous fish stock. In proposing and implementing the Yakima Fisheries Project (YFP), BPA and the project managers seek knowledge about how resource managers can use the strategy of supplementation in their efforts to protect and mitigate for impacts on stocks of anadromous fish in the Yakima River Basin.

The YFP is designed (1) to provide resource managers with knowledge regarding these issues and (2) to identify and apply improved methods for carrying out hatchery production and supplementation of natural production.

SPONSOR/CONTRACTOR: N/A

Yakama Indian Nation
PO Box 151
Toppenish, WA 98948

David M. Byrnes, BPA Project Manager

Fish and Wildlife Group - EWN-5
P.O. Box 3621, Portland, OR 97208
503/230-3171

dmbyrnes@bpa.gov

SUB-CONTRACTORS:

N/A

GOALS

GENERAL:

Supports a healthy Columbia basin, Maintains biological diversity, Maintains genetic integrity, Increases run sizes or populations, Provides needed habitat protection, Adaptive management (research or M&E)

ANADROMOUS FISH:

Production, Research, M&E

NPPC PROGRAM MEASURE:

7.4K.1

RELATION TO MEASURE:

The measure calls for BPA to fund design, construction, operation and maintenance of a hatchery to enhance the fishery for the Yakama Indian Nation as well as other harvesters.

BIOLOGICAL OPINION ID:

N/A

OTHER PLANNING DOCUMENTS:

N/A

TARGET STOCK

Upper Yakima River Spring Chinook

LIFE STAGE

adult broodstock through smolt

MGMT CODE (see below)

S, N, & W

AFFECTED STOCK

Fall Chinook

Coho

BENEFIT OR DETRIMENT

Unknown

Unknown

BACKGROUND

STREAM AREA AFFECTED

Stream name:

Yakima River

Stream miles affected:

LAND AREA INFORMATION

Subbasin:

Yakima River

Land ownership:

To Be Provided

Public (BPA)

Hydro project mitigated:

Acres affected:

Off site mitigation for all Federal dams

15 out of 500 acres purchased will be developed plus about 6 acres for the three acclimation sites

Project is an office site only

HISTORY:

Project facilities are being constructed in response to Program measure 7.4K.1. A Final Environmental Impact Statement for the Yakima Fisheries Project has been completed, and a Record of Decision (ROD) to proceed with hatchery construction was signed by BPA on March 13, 1996. BPA began construction contractor solicitation upon completion of the ROD. Construction of the Cle Elum central production facility began in May 1996. The central facility will be completed in May 1997 with initial broodstock due on station in early May. Hatchery staff are being selected and will be on station starting in April.

Certain aspects of the central facility will be constructed beginning in FY 1998 as a result of deferral decisions regarding available funding in FY 1997. The major categories of work deferred until FY 1998 are the monitoring and evaluation building, interpretive center signs, land acquisition for well field sites CE5 and CE6a, well pumps and piping installation for wells CE5 and CE6a.

Land acquisition and final design for the three acclimation sites is scheduled to begin in 1997. Final design should be completed by the end of the first quarter of FY 1998 (December 1997). Construction of the acclimation sites will begin in early 1998 and all sites are expected to be complete by late calendar year 1998, in time for initial outplanting of smolts in the January/February period of 1999.

BIOLOGICAL RESULTS ACHIEVED:

The construction project has not yet produced biological results. First adult broodstock are due on station in May of the 1997.

ADAPTIVE MANAGEMENT IMPLICATIONS:

The project will use an adaptive management policy in order to achieve project goals and protect the basin's fishery resources from unforeseen, adverse project impacts. The effects of management actions are monitored and evaluated, and programs, procedures, and facilities may all be modified in response to these findings.

Quantitative production objectives for upper Yakima spring chinook have been refined and are based on computer simulations using the Ecosystem Diagnostic and Treatment Planning Model developed under the Regional Assessment of Supplementation Project.

The project responds directly to a need for knowledge of viable means to rebuild and maintain naturally spawning anadromous fish stocks. BPA and the project managers (Yakama Indian Nation and WDFW) seek knowledge about how resource managers can use the strategy of supplementation in their efforts to protect and mitigate for the impacts on stocks of anadromous fish in the Yakima River Basin.

PURPOSE AND METHODS

SPECIFIC MEASURABLE OBJECTIVES:

Construct, operate, and maintain upper Yakima River spring chinook salmon production facilities in order to conduct research activities designed to increase knowledge of supplementation techniques. These techniques would be applied to rebuild naturally spawning anadromous fish stocks in the Yakima River Basin and ultimately, to rebuild those throughout the Columbia River Basin.

CRITICAL UNCERTAINTIES:

Critical uncertainties are contained in the Final EIS for the Yakima Fisheries Project. The project's M & E plan is due to be issued in April 1997. The M & E Plan will contain a summary of the project's critical uncertainties and risks.

The project will provide an approach to resolve specific uncertainties related to the effectiveness of supplementation and to the selection of treatments for fish in the artificial environment. The project will incorporate two repeated tests or treatments: a New Innovative Treatment using incubation, rearing, and release techniques that attempt to produce smolts with attributes and, consequently, survival, similar to those of wild or native fish. The second approach is the Optional Conventional Treatment. This approach is to incubate, rear, and acclimate salmonids using the currently accepted "Best Technology" used at state, Tribal, and Federal hatcheries.

BIOLOGICAL NEED:

There is need for more knowledge of supplementation techniques and for mitigation for anadromous fish losses.

ALTERNATIVE APPROACHES:

See the Final YFP EIS for more detail. This project will rely on adaptive management as noted above. This project is to construct, operate and maintain anadromous fish production facilities in order to conduct research activities designed to increase knowledge of supplementation techniques. These techniques would be applied to rebuild naturally spawning Upper Yakima River spring chinook, a stock historically present in the Yakima River Basin and ultimately, to rebuild those throughout the Columbia River Basin.

PLANNED ACTIVITIES

SCHEDULE:

Planning Phase **Start** **End** 5/97 **Subcontractor**

Task Planning was complete by 3/96 with the issuance of FEIS

Implementation Phase **Start** 4/96 **End** 11/98 **Subcontractor**

Task 1997: Complete construction of Cle Elum central production facility April 1997; begin broodstock collection spring 1997. Begin Final design acclimation facilities.

1998: Rear Brood Year (BY) 1997 juveniles at Cle Elum; continue broodstock collection. Complete final design and begin construction of acclimation sites. Complete pump and piping installation of last two wells (CE5 and 6a) for central production facility, test aquifer, design and construct the river water chiller, design and construct monitoring and evaluation building, design and construct interpretive center. (NOTE: the O & M for these facilities is reflected in a different project.)

1999: Major construction of the central facility in Cle Elum and the three acclimation sites are expected to be complete. The first broodstock (BY1997) are scheduled to be moved to the acclimation site(s) Jan/Feb, 1999.

O&M Phase **Start** 4/97 **End** **Subcontractor**

Task Central production facility will be operational starting 4/97. Acclimation sites scheduled to be operational 11/98. The O & M for this project are covered under a different project

PROJECT COMPLETION DATE:

Central Production Facility May 1997

Acclimation Sites Estimated by November 1998

CONSTRAINTS OR FACTORS THAT MAY CAUSE SCHEDULE OR BUDGET CHANGES:

Risk analysis is contained in the Final EIS for the Yakima Fisheries Project.

OUTCOMES, MONITORING AND EVALUATION

SUMMARY OF EXPECTED OUTCOMES

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

Annual production of 810,000 upper Yakima spring chinook smolts. Knowledge of supplementation techniques needed to rebuild anadromous fish runs.

Contribution toward long-term goal:

Production of Upper Yakima Basin spring chinook salmon

Indirect biological or environmental changes:

Please reference the F EIS for a detailed discussion of the biological and environmental impact of the project and mitigation propo

sed to respond/study the affects.

Physical products:

The goal is to produce 810,000 upper Yakima River spring chinook in the central production facility for later acclimation in three sites. A total of 500 acres of land was acquired with development of about 15 for the central production faciity. Land acqisition for the three acclimation sites is not yet complete but should be by July 1997. It is anticipated that about 6 acraa will be needed in total for the three sites.

Environmental attributes affected by the project:

Reference the F EIS.

Changes assumed or expected for affected environmental attributes:

Reference the F EIS

Measure of attribute changes:

Reference the F EIS

Assessment of effects on project outcomes of critical uncertainty:

There is a complete M & E plan to guide the review of critical uncertainties and adaptive management.

Information products:

There will be monthly and yearly report the activities accomplished under this project. See O & M and M & E projects associated with this project.

MONITORING APPROACH

Provisions to monitor population status or habitat quality:

There is an M & E plan that will guide the activities under this project. The F EIS also discusses monitoring status of the target stock.

Data analysis and evaluation:

Per the M & E plan

Information feed back to management decisions:

There is a structure in place for this project, as described in the F EIS for feeding information back into the policy management group.

Critical uncertainties affecting project's outcomes:

The M & E plan calls for feedback to the policy group. Regular Planning Studies Reports will be prepared every year.

EVALUATION

Incorporating new information regarding uncertainties:

There is a comprehensive planning cycle that will provide this information for the policy group.

Increasing public awareness of F&W activities:

The project will rely on the policy of adaptive management to guide fisheries management decisions regarding this project. The project will increase public awarness of the fisheries enhancement work through various public information programs, annual project reviews, and scientific reports. Both the State of Washington (WDFW) and the Yakama Indian Nation will share in the getting the work out to the public.

RELATIONSHIPS

RELATED BPA PROJECT

9006900
8812000
9506200
9506300
9506400
9701300

RELATIONSHIP

These projects support the YKFP overall efforts in various ways. The planning, coordination, management, research and M & E are all parts of the larger project and directly support the supplementation planned through the operation of the hatchery and acclimation sites.

OPPORTUNITIES FOR COOPERATION:

NEPA completed 3/96 with the issuance of the ROD.

COSTS AND FTE

1997 Planned: \$13,229,000

1997 Planned: \$10,636,100)

FUTURE FUNDING NEEDS:

<u>FY</u>	<u>\$ NEED</u>	<u>% PLAN</u>	<u>% IMPLEMENT</u>	<u>% O AND M</u>
1998	\$12,000,000		100%	0%

PAST OBLIGATIONS (incl. 1997 if done):

<u>FY</u>	<u>OBLIGATED</u>
1996	\$14,218,676
1997	\$78,579

TOTAL: \$14,297,255

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

LONGER TERM COSTS:

There will be long-term issues that should be managed under O&M, such as pump replacements, etc.

There is interest by the facilities operator, the Yakama Indian Nation, to expand on-site housing for Tribal employees. Currently there is enough housing on-site to support three families. The Tribe is interested in expanding on-site housing for an additional two to four families. The additional housing is needed to support the staff who will work at the three acclimation sites. These additions have not been reflected in the out-year budget. Policy level discussions regarding this proposal are on-going and should be resolved by September 1997..

1997 OVERHEAD PERCENT:

This is a construction contract that involves BPA and contractor overhead. Estimate of percent overhead not known at this time.
