

**Bonneville Power Administration
Fish and Wildlife Program FY99 Proposal**

Section 1. General administrative information

**NE Oregon Hatchery Master Plan And Facilities -
ODFW**

Bonneville project number, if an ongoing project 8805305

Business name of agency, institution or organization requesting funding
Oregon Department of Fish and Wildlife

Business acronym (if appropriate) ODFW

Proposal contact person or principal investigator:

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Subcontractors.

Organization	Mailing Address	City, ST Zip	Contact Name

NPPC Program Measure Number(s) which this project addresses.

7.4L

NMFS Biological Opinion Number(s) which this project addresses.

95-98 Hatchery Operations in the Columbia River Basin, Consultation Number 383,
Section X (B) (3 and 4). NMFS Permit 1011.

Other planning document references.

Snake River Salmon Recovery Plan and Volume 2 Grande Ronde and Imnaha section of
the Wy Kan Ush Me Wa Kush Wit.

Subbasin.

Walla Walla, Grande Ronde, and Imnaha.

Short description.

Develop the Walla Walla, Grande Ronde, and Imnaha Master Plans. Develop facility designs and costs with schedule for implementation. Construct and operate new facilities as agreed between comanagers; initially, operate for Captive and Endemic Brood.

Section 2. Key words

Mark	Programmatic Categories	Mark	Activities	Mark	Project Types
X	Anadromous fish	*	Construction		Watershed
	Resident fish	*	O & M	*	Biodiversity/genetics
	Wildlife	*	Production	*	Population dynamics
	Oceans/estuaries	*	Research		Ecosystems
	Climate	*	Monitoring/eval.		Flow/survival
	Other	*	Resource mgmt		Fish disease
		X	Planning/admin.	X	Supplementation
			Enforcement		Wildlife habitat en-
			Acquisitions		hancement/restoration

Other keywords.

Recovery, stock identification and hatchery-wild interactions.

Section 3. Relationships to other Bonneville projects

Project #	Project title/description	Nature of relationship
8805301	NE Oregon Outplanting Facility Master Plan	Nez Perce comanagement, Lostine River.
8805302	NE Oregon Hatchery - Grande Ronde Satellite Facilities	CTUIR comanagement on upper Grande Ronde River and Catherine Creek.
9202604	Spring Chinook Salmon Early Life History	Grande Ronde Basin early life history M&E.
9604400	Grande Ronde Basin Spring Chinook Captive Brood Capitol Construction	Grande Ronde Basin Spring Chinook Captive Brood Capitol Construction
9801001	Grande Ronde Basin Spring Chinook Captive Brood O&M, M&E, Fish Health Monit	Grande Ronde Basin Spring Chinook Captive Brood O&M, M&E, Fish Health Monitoring.

Section 4. Objectives, tasks and schedules

Objectives and tasks

Obj 1,2,3	Objective	Task a,b,c	Task
1	Planning	a	Imnaha Subbasin - Complete Master Planning and Design.
		b	Grande Ronde Subbasin - Complete Master Planning and Design.
		c	Walla Walla Subbasin - Complete Master Planning and Design.
2	Implementation	a	Imnaha Subbasin - Construct facilities.
		b	Grande Ronde Subbasin - Construct facilities.
		c	Walla Walla Subbasin - Construct facilities.
3	O & M	a	Imnaha Subbasin - Implement planned operation.
		b	Grande Ronde Subbasin - Implement planned operation.
		c	Walla Walla Subbasin - Implement planned operation.

Objective schedules and costs

Objective #	Start Date mm/yyyy	End Date mm/yyyy	Cost %
1	10/1998	10/2001	25.00%
2	6/1998	10/2013	50.00%
3	10/1998	10/2015	25.00%
			TOTAL 100.00%

Schedule constraints.

Completion date.

ongoing

Section 5. Budget

FY99 budget by line item

Item	Note	FY99
Personnel		\$82,000
Fringe benefits		\$29,500
Supplies, materials, non-expendable property		\$24,000
Operations & maintenance		\$47,000
Capital acquisitions or improvements (e.g. land, buildings, major equip.)		\$41,000
PIT tags	# of tags:	
Travel		\$17,800
Indirect costs		\$45,900
Subcontracts		
Other		
TOTAL		\$287,200

Outyear costs

Outyear costs	FY2000	FY01	FY02	FY03
Total budget	\$240,000	\$250,000	\$260,000	\$270,000
O&M as % of total	40.00%	75.00%	85.00%	90.00%

Section 6. Abstract

This project was initiated as one of the Northeast Oregon Hatchery Projects to improve fish production in the Imnaha, Grande Ronde and Walla Walla basins via hatchery and satellite facility development. Originally this project focused on contributing to the council's doubling goal. With the listing of Snake River chinook and steelhead under the federal Endangered Species Act, efforts have been refocused on contributing to recovery before attempting to meet the Council's doubling goal.

The objective is to contribute to an upward trend in spawning ground counts. This will be accomplished through increased outmigration of wild smolts, while avoiding unintended changes to population structure, fitness and genetics. Without intervention, loss of biodiversity and inbreeding depression due to small population size may put these stocks further at risk. Project implementation is expected to result in the return of increased numbers of wild adults, reducing those risks and hastening recovery and delisting.

We expect recovery of these weak populations over the next 5+ generations (20+ years), to population sizes supporting ESA delisting.

Specifics developed in the Master Plan will include: Evaluate success of returning adults from the Captive Brood and conventional hatchery programs, their resultant natural smolt production and adult returns. Success will be measured by progress toward recovery, delisting and healthy populations capable of supporting Tribal and Nontribal harvest.

Section 7. Project description

a. Technical and/or scientific background.

We have attempted recovery of Grande Ronde stocks using non-indigenous stocks. Conclusions of the Grande Ronde Panel convened by US v. Oregon parties found this approach to be inappropriate and recommended the initiation of endemic broods (Responses of the Independent Scientific Panel to Questions about the Interpretation of Genetic Data For Spring Chinook Salmon in the Grande Ronde Basin, September 1996). The Snake River Recovery Team's report (Snake River Salmon Recovery Report, 1994) and the Northwest Power Planning Council's Fish and Wildlife Program (Northwest Power Planning Council, 1994), also support supplementation with endemic brood. NMFS draft recovery plan states "captive broodstock and supplementation programs should be initiated and/or continued for populations identified as being at imminent risk of extinction, facing severe inbreeding depression, or facing demographic risks" and "considering the critical low abundance of Grande Ronde spring/summer chinook salmon, impacts to listed fish should be avoided and Lookingglass Hatchery should be operated to prevent extinction of local populations. Consequently indigenous broodstock should be immediately transferred to Lookingglass Hatchery, and production should be maximized to supplement natural populations." Natural fish were subsequently collected, beginning in 1995. Recovery of Grande Ronde stocks using an endemic brood strategy will require hatchery satellite and adult capture facilities on the upper Grande Ronde and Lostine rivers and Catherine Creek. These facilities will be utilized with Captive Brood programs (Project 9604400 and 9801001) as well as Conventional Brood supplementation programs in development. Monitoring and Evaluation of project activities will provide information to allow decisions to be made utilizing Adaptive Management to recover listed species and move toward delisting.

Project Reports and Papers, include:

Northeast Oregon Salmon and Steelhead Draft Master Plan, Imnaha River, Larson, March 1990. Northeast Oregon Salmon and Steelhead Draft Master Plan, Grande Ronde River, Bryson, March 1990. Feasibility for reintroducing Sockeye & Coho Salmon in the Grande Ronde River and Coho and Chum in the Walla Walla River, S. P. Cramer, November 1990. Draft Siting Report for Northeast Oregon Hatchery Project, Montgomery Watson, February 1992. Draft Conceptual Design Report for Northeast Oregon Hatchery Project, Montgomery Watson, October 1992. Northeast Oregon hatchery Project Grande Ronde River Master Plan Final Report, Bryson, January 1993. Genetic Risk Assessment of the Imnaha Master Plan, S.P. Cramer, December 1993. Genetic Risk Assessment of the Grande Ronde River Master Plan, S.P. Cramer, December 1994. US v. Oregon Dispute Resolution, Responses of the Independent

Scientific Panel to Questions about the Interpretation of Genetic Data For Spring Chinook Salmon in the Grande Ronde Basin, September 1996.

b. Proposal objectives.

1. Upward trend in spawning ground counts.
2. Increased outmigration of wild smolts while avoiding unintended changes to population structure, fitness and genetics, which would lead to increased numbers of wild adult returns.

c. Rationale and significance to Regional Programs.

ODFW is involved as a comanager to plan, coordinate and participate in the operation of facilities which will release fish to reduce the likelihood of extinction and progress toward recovery and delisting. ODFW, CTUIR and NPT are comanagers and will be funded under this and other projects to participate in the continued planning, construction, operation & maintenance and monitoring related to these facilities. This coordination and planning is required to ensure that this project is well thought out and has the highest potential for success.

d. Project history

This project was initiated as one of the Northeast Oregon Hatchery Projects to improve fish production in the Imnaha, Grande Ronde and Walla Walla basins via hatchery and weir development. Originally this project focused on contributing to the council's doubling goal. With the listing of Snake River chinook and steelhead under the federal Endangered Species Act, efforts have been refocused on contributing to recovery before attempting to meet the Council's doubling goal.

e. Methods.

Specific measurable objectives are: Upward trend in spawning ground counts; Increased outmigration of wild smolts while avoiding unintended changes to population structure, fitness and genetics.

Critical uncertainties: Without intervention, loss of biodiversity and inbreeding depression due to small population size may put these stocks further at risk. Project implementation is expected to reduce those risks and hasten recovery and delisting.

Biological need: Recovery of weak populations within 5+ generations (20+ years), to population sizes supporting ESA delisting. Prevent loss of biodiversity and inbreeding depression due to small population size. Develop population sizes capable of sustaining Tribal and Nontribal harvests.

Hypothesis to be tested: Supplementation with endemic stocks will improve returns of ESA listed salmon species and stocks.

Reducing stress and improving imprintation of native stock smolts from the Captive Brood and the Conventional Brood programs that will use these facilities is expected to assist in the recovery and delisting of these stocks.

The initial Monitoring and Evaluation is described in Project Number 9604400.

Additional M&E needs will be described in the Master Plan, including; Evaluate success of returning adults from the Captive Brood and Conventional programs, their resultant natural smolt production and adult returns. Success will be measured by progress toward recovery, delisting and healthy populations capable of supporting Tribal and Nontribal harvest.

f. Facilities and equipment.

Equipment for ODFW participation in this comanagement program should be available by 1999. This includes major fish transportation equipment and adult holding facilities. Success of the combined program depends on the construction of acclimation facilities and weirs, and modifications to Lookingglass Hatchery, included in CTUIR, NPT and ODFW proposals.

g. References.

Northeast Oregon Salmon and Steelhead Draft Master Plan, Imnaha River, Larson, March 1990.

Northeast Oregon Salmon and Steelhead Draft Master Plan, Grande Ronde River, Bryson, March 1990.

Feasibility for reintroducing Sockeye & Coho Salmon in the Grande Ronde River and Coho and Chum in the Walla Walla River, S. P. Cramer, November 1990.

Draft Siting Report for Northeast Oregon Hatchery Project, Montgomery Watson, February 1992.

Draft Conceptual Design Report for Northeast Oregon Hatchery Project, Montgomery Watson, October 1992.

Northeast Oregon hatchery Project Grande Ronde River Master Plan Final Report, Bryson, January 1993.

Genetic Risk Assessment of the Imnaha Master Plan, S.P. Cramer, December 1993.

Genetic Risk Assessment of the Grande Ronde River Master Plan, S.P. Cramer, December 1994. US v. Oregon Dispute Resolution, Responses of the Independent Scientific Panel to Questions about the Interpretation of Genetic Data For Spring Chinook Salmon in the Grande Ronde Basin, September 1996.

Section 8. Relationships to other projects

5520600 NPT Cryopreservation of Sperm: Cryopreservation of sperm of listed spring/summer chinook.

5520700 NPT Cooperative Evaluation: Cooperate with comanagers, Captive Brood M&E.

8402500 Grande Ronde Habitat Enhancement: Grande Ronde Habitat Enhancement:

8712700 NPT Smolt Monitoring: Cooperate in smolt monitoring on the Imnaha River.
 8810804 STREAMNET: Provide Information for use in database.
 9403900 NPT Wallowa River Basin Project Planning: Contribute comanager input.
 9405400 Bull Trout Life History: Contribute data to study of Bull Trout life History.
 9600800 PATH: Provide data for life cycle model.
 9608300 CTUIR Grande Ronde Subbasin Watershed Restoration: Contribute input.
 9702500 NPT Wallowa County Salmon Habitat Recovery: Contribute comanager input.
 9800702 NPT Grande Ronde Supplementation O&M/M&E: Contribute comanager input relative to the Lostine River.

LSRCP, ODFW, USFWS, Lookingglass Hatchery Production Imnaha summer chinook:
 LSRCP, ODFW, USFWS, NPT: 1995-96 Captive Broodstock Program NPPC #74D:
 Include work being done to benefit listed spring/summer chinook in the Imnaha and Grande Ronde basins by ODFW and comanagers.

Monitoring and Evaluation on Imnaha, Lostine and upper Grande Ronde rivers and Catherine Creek: Information needed for management direction and adaptive management.

Section 9. Key personnel

<u>Name</u>	<u>Title</u>	<u>Experience*</u>	<u>Assignment</u>
Bob Becker	Regional Lib. Coordinator	14 years	Fish Transportation
Harvey Moyer	Regional Fish Liberator	15 years	Fish Transportation
Paul Smith	Regional Fish Liberator	11 years	Fish Transportation
Randy Lewis	Regional Fish Liberator	2 years	Fish Transportation
Dirk Weaver	Regional Fish Liberator	3 years	Fish Transportation
Bob Lund	Hatchery Manager	15 years	Fish Culture
Don Falk	Hatchery Technician	2 years	Fish Culture
Gary Huser	Hatchery Technician	17 years	Fish Culture
Steve Landwehr	Hatchery Technician	2 years	Fish Culture
Brad Smith	Fish Biologist	21 years	Planning
Bill Knox	Fish Biologist	15 years	Planning
Jeff Zakel	Fish Biologist	14 years	Planning
Tim Walters	Fish Biologist	11 years	Planning
Tim Bailey	Fish Biologist	11 years	Planning
Jon Germond	Fish Biologist	11 years	Planning
Jim Phelps	Hatchery Coordinator	30 years	Planning

* If more information is required, please contact the ODFW NE Regional Office.

Section 10. Information/technology transfer

Information from the project will continue to be reported in publications (see Section 7 for some of the existing publications), and annual, monthly and annual reports. Comanagers also communicate regularly, as described in our annual AOP (Annual Operation Plan), for the Snake River tributaries that we manage together.