

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

Section 1. General administrative information

**Pittsburg Landing, Capt. John Rapids, & Big
Canyon Fall Chinook Acclimation Facilities**

Bonneville project number, if an ongoing project 9801005

Business name of agency, institution or organization requesting funding
Nez Perce Tribe

Business acronym (if appropriate) NPT

Proposal contact person or principal investigator:

Name	<u>Grant Walker</u>
Mailing Address	<u>P.O. Box 365</u>
City, ST Zip	<u>Lapwai, ID 83540</u>
Phone	<u>208-843-7320 x 3</u>
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Email address	<u>grantw@nezperce.org</u>

Subcontractors. List one subcontractor per row; to add more rows, press Alt-Insert from within this table

Organization	Mailing Address	City, ST Zip	Contact Name
TBD - acclimation site assembly/disassembly			

NPPC Program Measure Number(s) which this project addresses.
7.3B; 7.3B7; 7.4F; 7.5B,

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

Pittsburg Landing: 1. Informal ESA Consultation, W.Stelle, Nov. 6, 1995, Operation of Pittsburg Landing Acclimation Facility

2. Informal ESA Consultation, W.Stelle, 1995, Construction and Installation Pittsburg Landing Temporary Acclimation Site

Capt. John Rapids: Informal ESA Consultation, W.Stelle, June 9, 1997, Operation of Second Acclimation Facility on the Snake River.

Big Canyon: 1. Consultation No. 649, Operation of Big Canyon fall chinook acclimation facility 1997-1999
 2. Consultation No. 652, Construction and installation of Big Canyon fall chinook temporary acclimation site

Other planning document references.

If the project type is “Watershed” (see Section 2), reference any demonstrable support from affected agencies, tribes, local watershed groups, and public and/or private landowners, and cite available documentation.

Wy-Kan-Ush-Mi-Wa-Kish-Wit: Vol. II, pp.97-99, 108-110, Summary Tables B & C Clearwater Subbasin Plan, p.115.

Subbasin.

Snake River (between Asotin, WA and Hells Canyon Dam), Lower Clearwater River.

Short description.

Enhance natural production of Snake River fall chinook above Lower Granite Dam through acclimation and final rearing of Lyons Ferry yearlings and subyearlings at two sites on the Snake River and one site on the Clearwater River. (Combines 9801005, 9801007 & 9801008).

Section 2. Key words

Mark	Programmatic Categories	Mark	Activities	Mark	Project Types
X	Anadromous fish		Construction		Watershed
	Resident fish	X	O & M		Biodiversity/genetics
	Wildlife	0	Production		Population dynamics
	Oceans/estuaries		Research		Ecosystems
	Climate		Monitoring/eval.		Flow/survival
	Other		Resource mgmt		Fish disease
			Planning/admin.	X	Supplementation
			Enforcement		Wildlife habitat en-

Other keywords.

ESA, Portable Acclimation

Section 3. Relationships to other Bonneville projects

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Project #	Project title/description	Nature of relationship
9801004	M&E of Yearling Snake River Fall Chinook	Monitor and evaluate releases in Clearwater River and second Snake River site.

Section 4. Objectives, tasks and schedules

Objectives and tasks

Obj 1,2,3	Objective	Task a,b,c	Task
1	Coordination/Planning	a	Coordinate with WDFW to arrange for the transfer of 450,000 yearlings, (150,000 yearlings to each of three facilities). Provide release summaries and other information to WDFW, USFWS, PSMFC, to assist in the M&E of releases from all three facilities.
		b	Coordinate with USFWS to collect pre-release fish health samples, securing a fish transport permit from IDFG, and M&E of Pittsburg Landing releases.
		c	Coordinate with NMFS to ensure that the planned activities as presented in the biological assessments are adhered to and include NMFS in the review of changes to planned production that may effect listed stocks.
		d	Coordinate with LSRCP to facilitate transport of the yearlings.

		e	Participate in US V OR, PAC, to keep them informed of activities in these facilities and changes in planned actions.
		f	Work closely with the USACOE to facilitate the completion of the construction of the Capt. John Rapids facility.
		g	Continue discussions and develop plan with USFS to relocate and/or modify the Pittsburg Landing facility as per 1996 Special Use Permit.
		h	Coordinate with NPT M&E of Yearling Snake River Fall Chinook Program for monitoring protocol and requirements.
2	Facility Development / Operations & Maintenance	a	In November 1998 identify and select a contractor to install the portable tanks and associated equipment at Pittsburg Landing and Big Canyon.
		b	Work with the facility assembly contractor to ensure that the tanks and associated equipment are transported and installed correctly.
		c	Prior to fish transport, test the facility for one week to identify faulty components.
		d	On or about March 1, 1998, receive 150,000 yearlings @ 13 or 14 fpp, and rear to 10 fpp for release on or about April 15.
		e	Collect and record all criteria relevant to fish rearing, eg. feed use, mortality, fish health checks, oxygen levels, nitrogen saturation, etc.
		f	Upon release of fish monitor the disassembly of the facility and check that equipment is properly stored.

		g	Repair or replace equipment as needed. Paint tanks, winterize pumps and trailers.
3	Reports	a	Submit quarterly progress reports based on the objectives and tasks.
		b	Submit a final operational report of all activities for all three facilities by September 30, 1999 to include: numbers of fish released, procedures, daily observations (morts, etc), problems, operational changes, cost summaries, location of information concerning monitoring activities, copies of permits, and recommendations

Objective schedules and costs

Objective #	Start Date mm/yyyy	End Date mm/yyyy	Cost %
1	10/1998	09/1999	10
2	12/1998	07/1999	80
3	10/1998	09/1999	10

Schedule constraints.

This project is dependent on transfers of yearling and subyearling fall chinook from Lyons Ferry Hatchery. If fall chinook juvenile survival in the hatchery is reduced one or more of the facilities may be impacted.

Completion date.

Dependent upon adult returns. Anticipate at least 5 life cycles will be required (2022), however modifications to release sites and methods could be evaluated beginning 2001.

Section 5. Budget

FY99 budget by line item

Item	Note	FY99
Personnel		168,000
Fringe benefits		45,000
Supplies, materials, non-		46,000

expendable property		
Operations & maintenance	vehicles, rent, repair and maint., telephone	60,000
Capital acquisitions or improvements (e.g. land, buildings, major equip.)		
PIT tags	# of tags:	
Travel		32,000
Indirect costs		103,000
Subcontracts	Transport, assembling two facilities, disassembling and storing.	270,000
Other		
TOTAL		724,000

Outyear costs

Outyear costs	FY2000	FY01	FY02	FY03
Total budget	767,000	813,000	862,000	914,000
O&M as % of total	10	12	14	16

Section 6. Abstract

f. How results will be monitored and evaluated

A. Overall project goals are to enhance natural production of Snake River fall chinook above Lower Granite Dam through acclimation and final rearing of Lyons Ferry yearlings and subyearlings at two sites on the Snake River and one site on the Clearwater River. Success of this project depends on maintaining smolt to adult survival at current levels. The length of the project will depend on whether smolt to adult survival can be improved. The project could be concluded when Snake River Fall Chinook can be removed from ESA listing and returns are sufficient to provide a regular harvestable surplus.

B. Projects require funding for operations and maintenance for as many years as it takes to evaluate smolt to adult survival. Early indications from two years of releases at Pittsburg Landing are that juvenile yearling survival through the hydrosystem is very high. Jacks have been recovered at Lower Granite Dam and seem to indicate that smolt to adult survival may also be high. Data to evaluate smolt to adult survival from releases at all three sites will not be available until 2001. Decisions changing production should be deferred until at least three years of returns have been recorded, or until 2004.

C. See section titled: “NPPC Program Measure Number(s) which this project addresses”. Specific benefits to the program include delisting and mitigation of Snake River Fall Chinook.

D. Methods and materials for acclimation and release of fish have been reviewed by US v OR PAC members, WDFW, LSRCP, USACOE, FISHPRO Inc., USFWS, and NMFS. Fish size, transfer methods, transfer dates, release dates, and release methods are reviewed by the monitoring and evaluation group in conjunction with the manager of Lyons Ferry Hatchery, WDFW. USFWS performs fish health checks prior to release and secures fish transfer permits from IDFG.

E. The expected outcome is that fall chinook returns will increase and allow NMFS to delist. Another expected outcome is that fall chinook harvest by the Nez Perce Tribe and Idaho sportsman can be re-established.

F. Adult returns to Lower Granite Dam will be monitored. All fish released have visible implant tags. Spawning ground survey flights in the Clearwater and Snake Rivers will continue to be made until project is terminated.

Section 7. Project description

a. Technical and/or scientific background.

The NPPC F&W program lists acclimation facilities as a priority and also supports the use of portable facilities (Pittsburg Landing and Big Canyon). Although this project mitigates losses in place, the natural life history of fall chinook salmon in the lower Clearwater and Snake Rivers includes a subyearling outmigrant. Currently research is underway by NMFS, USFWS and NPT to determine the best size and time of release and their research should recommend changes to hydrosystem operations to promote subyearling migrant survival. Monitoring and evaluation of production groups of subyearlings will also help determine the best survival strategy for this age group, eg. 253,000 subyearlings were released in 1997 from the Big Canyon Facility. All fish released have received multiple marks including CWT (all), ADCLIP (all), VI tag (all), PIT tags (avg. 10k per group of 150,000).

b. Proposal objectives.

1. Transport 150,000 fall chinook yearlings from Lyons Ferry Hatchery to each of three facilities on the Snake and Clearwater Rivers on or about March 1st.
2. Acclimate and release at 10 fish/lb after 6 weeks of acclimation on or about April 15.
3. If subyearlings are available, acclimate and release at one or more of the facilities as recommended by the managers and monitoring & evaluation group.

c. Rationale and significance to Regional Programs.

The fall chinook acclimation projects relate to the following FWP objectives and measures. First of all, measures under 7.3B all relate specifically to development and construction of portable acclimation facilities. Measure 7.4.F calls for measures to address supplementation of Snake River fall chinook, which these projects address. Measure 7.3.B.2 calls for implementing the high priority supplementation projects, and the fall chinook acclimation projects are several of the 15 high priority supplementation projects.

Section 2.1 states that, "...the Council system goal is a healthy Columbia Basin...To implement this goal, the program will deal with the Columbia Basin as a system; will protect, mitigate and enhance fish and wildlife..." Section 2.2A supports native species in native habitats. It states "The program preference is to support and rebuild native species in native habitats, where feasible. This means that remaining fish and wildlife habitat should be protected and restored to promote production of native species, especially habitat that supports weak populations of fish and wildlife."

Program measure 4.1 addresses doubling salmon and steelhead runs without loss of biological diversity. It is illustrated in this section that "Both the potential biological value of weak stocks and the requirements of the Endangered Species Act suggest that the path to doubling must begin with weak populations." In addition, it states "this weak stock priority includes populations listed under the Endangered Species Act, but is not limited to these populations."

Program measure 7.4C.1, "...recognizes that immediate actions may be required for emergency cases, such as badly damaged populations with decreasing escapements." Unprecedented efforts will be needed to prevent species extinction and preserve fish for the future. Fish and Wildlife Program measure 7.4F also states, "...as weak stocks or populations of salmon and steelhead are identified and assessed, supplementation will be one option to consider to help rebuild these stocks." Artificial propagation programs are one measure to attempt to enhance populations and increase natural production in Snake River tributaries. The NMFS draft recovery plan states that "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."

This project relates to a number of measures in the Snake River Recovery Plan. Measure 4.1.d says to "Develop planning, implementation and implement management plans for Snake River fall chinook salmon gene bank and conservation programs". The fall chinook acclimation facilities are supplementing listed fall chinook salmon in the Snake and Clearwater Rivers. Measures under 4.4 (Improving survival of Columbia River Basin anadromous salmonids by improving quality of fish released from hatcheries) are all addressed by rearing techniques utilized by the fall chinook facilities.

Wy Kan Ush Me Wa Kush Wit: Volume I: 5B-14-22; Volume II: 2-118-127 recommends “Implement supplementation projects that have met the screening criteria of RASP and Cuenco” which includes these fall chinook acclimation facilities. It also recommends, “Establish additional programs for each of the subbasin tributary systems to monitor adult escapement and resulting smolt production, and to evaluate (by measuring the number of adults returning) the ability of managers to meet goals set by the Columbia River Management Plan.” Coordinating fall chinook M&E actions will do so. And finally, production goals are also addressed in the Tribal Recovery Plan.

The Clearwater River Subbasin Plan also recommends hatchery supplementation of fall chinook in efforts to restore natural spawning populations.

d. Project history

In 1996 only the Pittsburg Landing Fall Chinook Acclimation Facility was operated (project number 9801005, original title “Pittsburg Landing Acclimation/Release Facility” 5521300) and acclimated/released 114,000 fall chinook yearlings. In 1997 both the Pittsburg Landing facility and the Big Canyon Fall Chinook Acclimation Facility (Project number 9801008, original project number 5521400) were operated releasing 147K yearlings and 451K yearlings and subyearlings respectively. In 1998, all three facilities will be operated, Capt. John Rapids Fall Chinook Acclimation Facility (Project number 9801007, original number 5521500) is under construction and anticipated to be completed in February 1998. Funding for the projects was provided by LSRCP in FY1996 and FY1997 and by BPA in FY1998.

Funding for the construction of the three acclimation facilities was secured during deliberations by U.S. Congress over the FY 95 budget, during which they instructed the USACOE to construct, under the Lower Snake River Compensation Plan, final rearing and/or acclimation facilities for fall chinook salmon in the Snake River basin above Lower Granite Dam to complement their activities and efforts in compensating for fish lost due to construction of the lower Snake River dams. The conference report (Senate Report 103-672, p. 7) of the joint House-Senate Conference Committee resolving the FY95 energy and water appropriations bill (Public Law (PL) 103-316) indicated that \$5 million (“Congressional Add”) in additional funding was authorized to initiate such hatchery-related construction projects. The LSRCP was to fund the operations and maintenance of facilities constructed under the plan. In 1997 the decision was made for BPA to direct fund O&M for the facilities.

Major results include acclimation and release of: 114,000 yearling fall chinook at Pittsburg Landing in 1996; 198,000 yearling fall chinook and 253,000 subyearling fall chinook at Big Canyon in 1997; 147,000 yearling fall chinook at Pittsburg Landing in 1997.

e. Methods.

Tasks associated with objectives have been stated in Section Four.

Critical assumptions are 1. Three to six weeks of acclimation is sufficient for fall chinook salmon yearlings and subyearlings to imprint on a release location. 2. Smolt to adult survival will maintain at current levels or increase during the project. 3. Sufficient broodstock will return to Lyons Ferry Hatchery to supply 450,000 yearlings.

All three facilities begin operation in March of each year. The equipment for Pittsburg Landing and Big Canyon facilities are stored near Lapwai, ID. In January and February it is transported and assembled at the two sites. Pittsburg Landing is disassembled in April and Big Canyon in June. Captain John Rapids facility is a single large pond 17 miles south of Asotin, WA, on the Snake River. The water supply is the Snake River which is pumped by two 1,000 gallon/minute submersible pumps that are floated out into the river, submerged and retrieved for storage offsite.

Fish culture methods are the same as per IHOT guidelines and consistent with WDFW fish culture techniques at Lyons Ferry Hatchery. Any changes to standard procedures is reviewed by the NPT-DFRM Production Division Director and other agencies are consulted if necessary. Environmental precautions are necessary to handle diesel and oil for the portable water pumps. Fish health protocols are as per AFS Blue Book, IHOT and Nez Perce Tribe fish health protocols.

Results of outplants will be analyzed by the monitoring and evaluation group which will make recommendations based on juvenile survival through the hydrosystem and more importantly smolt to adult survival.

We expect returns of hatchery reared adult fall chinook to spawn naturally near release locations.

f. Facilities and equipment.

All equipment used at all three facilities was purchased by USACOE, Walla Walla under the FY95 Congressional Add (see history). Pittsburg Landing Fall Chinook Acclimation Facility and Big Canyon Fall Chinook Acclimation Facility use identical or very similar equipment summarized as follows: 31-20ft aluminum circular tanks (transported in two sections); 4 aluminum distribution boxes; 8 river intake screens; ringlock flexible hose: 4" = 1,260 ft, 6" = 1,780 ft, 8" = 3,110 ft; camlock flexible hose: 6" = 2,080 ft; 4 - 400 gpm diesel pumps; 2 - 400 gallon diesel storage tanks; 1 - 20ft storage container; 3 - 30ft camp trailers; 2 - 1996 Chevy S-10 pickups; two alarm systems; 32 emergency oxygen systems - hoses, microdiffusers and regulators (1 per tank); two trailer mounted 4,000 watt generator light plants; one utility storage trailer; 32 camouflage nets; 4 trailer

mounted hydrocyclones; miscellaneous bolts, seals, camlock fittings, etc. Pumps were not purchased for Pittsburg Landing because leasing appeared to offer the least cost over a ten year life cycle. Pumps were purchased for Big Canyon because of changes in contracting requirements at the USACOE.

Captain John Rapids facility equipment and capital construction consists of: 2 - 1000gpm submersible pumps; 2 river intake screens; anchoring system for river intakes; one large lined pond; one park trailer; one standby electric generator; one water well (domestic water); septic system; commercial electric service; alarm system; telephone service.

g. References.

Section 8. Relationships to other projects

This is not intended to duplicate the Relationships table in Section 3. Instead, it allows for more detailed descriptions of relationships, includes non-interdependent relationships, and includes those not limited to specific Bonneville projects.

Other agencies involved with this project include: WDFW, Lyons Ferry Hatchery, (B.Hardy), provides yearling and subyearling fall chinook, provides fish transport vehicles; WDFW, Snake River Lab, (G.Mendal), coordination of M&E efforts between USFWS, NPT, NMFS, WDFW; NPT-DFRM, (B.Arnsberg), “M&E of Yearling Snake River Fall Chinook”, to monitor and evaluate releases in the Clearwater River and second Snake River site; USFWS, (C.Clemens), Dworshak Fish Health Lab, provides fish health monitoring, obtains IDFG transport permit; LSRCP, (E.Crateau), (H.Brown), provides fish transport vehicles.

Section 9. Key personnel

Grant Walker led this project from 1994 to 1997 and will assist Bruce McCloud during the 1998 season because the Capt. John Rapids facility is still under construction. In 1999 Bruce McCloud will assume all project leader responsibilities.

Grant W. Walker, Hatchery Manager (0 FTE)

Nez Perce Tribe Department Fisheries Resource Management

EDUCATION

Intensive Aquaculture Training, Clearwater Marine, Ltd. Isle of Mann, U.K., 1987.

B.A. in Biological Science, University of New Orleans, LA, 1981.

TECHNICAL EXPERIENCE

Nez Perce Tribal Hatchery Manager - Nez Perce Tribe Lapwai, ID. Apr 1990 - Present.
Nez Perce Tribal Hatchery, North East Oregon Hatchery, Johnson Creek Supplementation
Project, Fall Chinook Acclimation Facilities.

Hatchery Manager - Ocean Products Inc., East Machias, ME. Apr 1988 - Sept 1989.
Gardner Lake Hatchery, Atlantic salmon.

General Manager - Kentrout Ltd., Timau, Kenya, East Africa. 1982 - 1988. Hatchery
management, consultant on aquaculture programs.

Buyer/Restorer/Salesman - The Mariner, Inc. New Orleans, LA. 1981 - 1982. Marine
antiques, marketing and promotion.

Supervisor - X-ray and Laboratory - Medical Center of Calico Rock, AR. 1974 - 1977.

Duties: Provide direction, supervision and management for NPTH Final Design and
Construction and hatchery operation. Responsible for integrating tribal production needs
into the NPTH design. Project coordinator for the NATURE's Design Team. Provide
tribal supervision and administration for contracts let under the NPTH program.
Responsible for quarterly and annual reports for NPTH. Coordinate project development,
production and ESA issues with State, Tribal and Federal agencies.

Skills: Fifteen years of experience managing fish culture, fish health, using limited
resources in highly diverse geographic and cultural settings. Seven years experience
working specifically on development of the Nez Perce Tribal Hatchery program. Fifteen
years experience developing and overseeing contracts for various funding agencies.
Fifteen years of experience supervising technical and professional fisheries staff.

Bruce M. McLeod, Project Leader, Fall Chinook Acclimation Facilities (1FTE)
Nez Perce Tribe Department Fisheries Resource Management

Education

B.S. in Biology/Geology, Wisconsin State University, 1971

Retired from U.S. Fish & Wildlife Service 10-25-97, 38 years of service

Technical Experience

Project Leader, Carson National Fish Hatchery, Carson, WA, 10/89 - 10/97

Supervisory Fishery Biologist, Kooskia National Fish Hatchery, Kooskia, ID, 10/78 -
09/89

Assistant Hatchery Manager, Kooskia National Fish Hatchery, Kooskia, ID, 06/74 - 10/78

Assistant Hatchery Manager, Garrison Dam National Fish Hatchery, Riverdale, ND, 09/73-06/74

Assistant Hatchery Manager, Fairport National Fish Hatchery, Muscatine, IO, 08/72 - 09/73

Fishery Biologist, Marion National Fish Hatchery, Marion, AL, 07/71 - 07/72

Biological Technician, Lake Mills National Fish Hatchery, Lake Mills, WI, 08/68 - 07/71

Biological Technician, Hiawatha Forest National Fish Hatchery, Racoon, MI, 10/63 - 08/68

Fish Hatcheryman, Pendills Creek National Fish Hatchery, Brimley, MI, 09/59 - 10/63

Duties

Develop contracts for the transport, assembly, disassembly, and storage of the two portable facilities; Oversee the construction of the facility at Captain John Rapid to conform to biological criteria in the conceptual design; Coordinate all aspects of fish transfers, fish health, and fish monitoring with WDFW, IDFG, USFWS, NMFS; Develop yearly activity list, budget and statement of work; Produce quarterly and annual reports; Monitor changes to operations and ensure that they fall within the scope of the environmental analysis for each facility; Coordinate with state, federal, tribal and other agencies such as WDFW, NMFS, IDFG, USACOE, USFWS, and Asotin County.

Skills

Thirty nine years experience with all aspects of intensive and extensive fish production. Worked with warmwater, coolwater and coldwater fish species. Responsible for numerous maintenance and construction projects. Supervised technical and professional fisheries staffs at many different locations; Many years experience developing budgets, production programs, training programs and facility maintenance.

Section 10. Information/technology transfer

Submit quarterly progress reports based on the objectives and tasks. Submit a final operational report of all activities for all three facilities by September 30, 1999 to include: numbers of fish released, procedures, daily observations (morts, etc), problems, operational changes, cost summaries, location of information concerning monitoring activities, copies of permits, and recommendations.

