

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

Section 1. General administrative information

**Enhance and Protect Habitat and Riparian Areas
on the Duck Valley Indian Res**

Bonneville project number, if an ongoing project 9701100

Business name of agency, institution or organization requesting funding
Shoshone-Paiute Tribes

Business acronym (if appropriate) Sho-Pai Tribes

Proposal contact person or principal investigator:

Name Guy Dodson Sr.
 Mailing Address Box 219
 City, ST Zip Owyhee, NV 89832
 Phone 208-759-3246
 Fax 208-759-3248
 Email address _____

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
Kleinfelder	554 N. Steelhead Way, Suite 184	Boise, ID 83704	Paul Bastian
MSE Technology	381 Shonp Ave	Idaho Falls, ID 83401	Dave Laudman

NPPC Program Measure Number(s) which this project addresses.
10.8C.2, 10.8C.3, 10.8C.5

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

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.

Duck Valley Indian Reservation (DVIR) Natural Resources Plan

Subbasin.

Upper Snake River subbasin, Owyhee River subbasin

Short description.

This project increases critical riparian areas of the Owyhee River and its tributaries as well as preserves the numerous natural springs located on the Duck Valley Indian Reservation. Provides a clean pure source of water for the fish and wildlife in the Owyhee and upper Snake river subbasins in accordance with the Northwest Power Planning Councils (NPPC) measures.

Section 2. Key words

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

Other keywords.

Section 3. Relationships to other Bonneville projects

If you need more rows, press Alt-Insert from within this table.

Project #	Project title/description	Nature of relationship
88-156	Fish Stocking	Clean, cool water in reservoirs
95-015	Lake Billy Shaw	Clean water in new reservoir, cool water for fish to spawn naturally

Section 4. Objectives, tasks and schedules

Objectives and tasks

Obj 1,2,3	Objective	Task a,b,c	Task
1	Identify resident trout species and determine populations of fish and invertebrates	a	Snorkel surveys, electrofishing, to determine population estimates
		b	Survey fish and invertebrates
2	Identify and protect spawning areas	a	Evaluate river and streams to determine spawning areas
		b	Protect (through fencing) and monitor spawning areas
3	Protect and repair natural springs	a	Prioritize springs for fencing
		b	Fence spring areas and install water troughs
		c	Inspect existing windmills and obtain repair cost estimates
		d	Repair windmills
		e	set maintenance schedule for fences, windmills, and springs
4	Enhance river and stream habitat	a	Plant native grasses and trees on eroded areas of river and streams
		b	evaluate and monitor seeded areas for disturbance and regrowth

Objective schedules and costs

Objective #	Start Date mm/yyyy	End Date mm/yyyy	Cost %
1	04/1999	03/2000	35
2	04/1999	03/2000	15
3	04/1999	03/2000	30
4	04/1999	03/2000	20

Schedule constraints.

The only constraints that may cause schedule changes or delays would be the inclement weather that often occurs in the Duck Valley area. This may cause changes or delays to some of the construction projects such as access to spring sites, problems accessing some of the streams, or problems in purchasing needed equipment or engineering work.

Completion date.

Section 5. Budget

FY99 budget by line item

Item	Note	FY99
Personnel	Director, Biologist, temps	\$108,000.00
Fringe benefits	included in the Personnel	
Supplies, materials, non-expendable property	fence materials, trees, materials for water troughs, misc. supplies	\$65,000.00
Operations & maintenance		\$20,000.00
Capital acquisitions or improvements (e.g. land, buildings, major equip.)		0.00
PIT tags	# of tags:	NA
Travel		\$7,000.00
Indirect costs		\$51,000.00
Subcontracts		\$42,000.00
Other		
TOTAL		\$293,000.00

Outyear costs

Outyear costs	FY2000	FY01	FY02	FY03
Total budget	\$293,000.00	\$293,000.00	\$293,000.00	\$293,000.00
O&M as % of total	10%	10%	10%	10%

Section 6. Abstract

f. How results will be monitored and evaluated

The Shoshone-Paiute Tribes of the Duck Valley Indian Reservation are currently in the second year of the Habitat Enhancement Project on the Reservation. The Goals are to protect and enhance the Owyhee River and its tributaries on the Reservation, and to develop a database that can be used by other fisheries professionals which includes information on water quality and fish composition, health, abundance, and genetic makeup. This project will aid all Columbia Basin Fish and Wildlife programs in helping to identify genetically pure strains of fish (as called for in the Council's measures) and provide for clean water flowing into the Snake River and Columbia River. One habitat portion of this project will focus on protecting the numerous springs that provide clean cool water to the Owyhee River. This will be accomplished through enclosure fences at the springs and water troughs to provide wild and domestic stock access to drinking water. Part of this work also includes maintenance work on windmills and the purchase of pumps (solar powered) to ensure sufficient water for stock. The remaining portion of this project will focus on protecting and enhancing the Owyhee River and its tributaries

by excluding domestic and wild stock from critical fish spawning areas, especially those streams with suspected populations of redband trout. This project is expected to last up to five years, once all areas are protected/enhanced the remaining time and money will focus on maintenance of these areas. The desired outcome of this project is to determine the populations and species of trout in the river and streams of the Reservation as well as to increase the natural reproduction of resident trout. It is the Tribes eventual goal to have a suitable habitat for anadromous fish to once again return to the Owyhee River basin. Yearly monitoring and evaluation will occur throughout the entirety of this project to ensure that the project is achieving the desired goals. Also, new areas will be evaluated for protection and enhancement as the project continues.

Section 7. Project description

a. Technical and/or scientific background.

The Duck Valley Indian Reservation is located in Idaho and Nevada. The Owyhee River enters the Reservation at the southeast corner in Nevada and exits in the northwest corner of the Reservation in Idaho, continuing into Oregon where it enters the Snake River. The surface water resources of the Reservation consists of the Owyhee River, two man-made lakes, over 350 miles of tributary streams, many fresh water stock ponds, and a new proposed man-made lake in the Billy Shaw slough area.

The Habitat Enhancement project for the Duck Valley Indian Reservation is part of an on-going project begun in 1997 and funded by Bonneville Power Administration as substitution for the loss of resident fish habitat due to the construction of federal and non-federal hydroelectric dams on the Columbia and Snake Rivers. These dams resulted in the complete abolishment of anadromous fish and greatly disturbed the habitat for native resident fish from the Owyhee River and its tributaries on the Reservation. The loss adversely impacted our tribal treaty rights and natural resources, as well as negatively impacting our social, cultural, and economic resources on the Duck Valley Indian Reservation.

The project being proposed is to protect the near pristine natural resources of the Reservation. We propose to protect and enhance all natural springs on the Reservation. Also, we are proposing to protect the spawning areas of wild trout in the Owyhee River and its tributaries. There are known populations of redband trout (*Oncorhynchus mykiss gairdneri*) on the Reservation. The areas that are observed to have spawning trout (both redband trout and rainbow trout (*Oncorhynchus mykiss*)) will be fenced in order to protect these areas from getting trampled by the wild and domestic stock on the Reservation. Once redds are observed or fish are seen spawning, fences will be erected approximately 1/4 mile up and down stream of these areas on both shores and across the stream. The area will be flagged and fences will be left in place for future observation and to monitor the area for regrowth of riparian vegetation as well as use of the area by fishermen or wild game. There are over 200 springs and stock ponds with very few of them being

protected from trampling by wild and domestic animals. These natural springs provide cool, clean water to the Owyhee River and in turn provide this same cool, clean water downstream to the lower Owyhee and Snake Rivers. Many of these springs currently are not flowing due to excessive use of the wild and domestic animals in these areas. The spring areas get trampled and compacted, eventually diverting the water away from these areas, thus destroying a clean source of water. We propose to fence these areas in order to keep animals from trampling the springs. A water trough will be provide outside the fenced area to provide water for the animals. Along with this spring protection, many windmills near these springs will be rehabilitated to pump this clean water to the troughs and to the river or stream below. This is a fast, cost efficient solution to provide the Owyhee River, all its tributaries, and the rivers (Snake and Columbia) at least one clean, cool, source of water.

The Shoshone-Paiute Tribes believe the best way to provide clean water downstream is to ensure that there is clean water upstream. This work is the most logical component of our goal for the Columbia Basin Ecosystem, which is to "protect, mitigate, and enhance fish and wildlife" in the Columbia River Basin. It is difficult to achieve these goals in the Columbia, Snake or any other river in Idaho, Oregon, or Washington without first having clean water entering these drainages.

In 1997 the Shoshone-Paiute Tribes Habitat and Parks Department began the Habitat Enhancement Project with the completion of the following significant work. This is the only habitat work that has been completed on the Reservation and the Tribes are looking forward to protecting this beautiful area and preserving it for future generations to enjoy.

The following work is currently underway or near completion: 1) RV dump station/boat wash. 2) New spillway at Mt. View Reservoir.

All work has been completed under the direction of Guy Dodson Sr. (Director of the Habitat, Parks, Fish and Game Department) (HPFG). The following key personnel have also been important in the completion of this work:

Personnel:

Guy Dodson Sr. - Director Habitat, Parks Fish and Game
Vincent Pero - Tribal Biologist
Reggie Premo - Fisheries/Wildlife Technician

To date the HPFG department of the Shoshone-Paiute Tribes has completed the building of a new bridge and spillway at Sheep Creek Reservoir, regrading and graveling the roads at both reservoirs (erosion control measure), planting of trees at Sheep Creek Reservoir and on many stream banks, habitat surveys on the Owyhee River and many tributaries to the river. Quarterly reports from FY97 work are available from the Shoshone-Paiute Tribes or BPA.

b. Proposal objectives.

The specific objectives for this project for Fiscal Year 1999 are as follows:

Objectives:

1. Identify resident trout species, determine populations of fish and invertebrates
2. Identify and protect spawning areas
3. Protect and repair natural springs
4. Enhance river and stream habitat

Expected Outcomes/Products:

1. Compiled database of species, distribution, and density of fish and invertebrates in the Owyhee River and streams on the Duck Valley Indian Reservation.
2. Exclosure fencing of spawning areas and the provision of suitable habitat for spawning and natural reproduction. Increase water quality of these streams for increased survivorability of fish
3. Improved water quality and quantity in the Owyhee River and streams
4. Increased water quality and bank stability. Lower water temperatures for increased survivorability of trout in streams.

As this is only the second year of the project, we are still collecting and compiling baseline data which we hope in the future will lead to a database of all the streams and the Owyhee River on the Reservation. This database will include but not be limited to, water temperatures, spawning habitat areas (quality and quantity), species composition and population, flows, water quality, increased riparian habitat for fish and wildlife. All this information will be entered into a database for use by scientists in the Columbia Basin and elsewhere. To date there is no, or very little information available on the Owyhee River subbasin, and with this project we hope to compile a complete database of the above information.

c. Rationale and significance to Regional Programs.

The Habitat Enhancement Project for the Shoshone-Paiute Tribes is designed to improve the overall water quality and quantity of the Owyhee River Basin, thus improving the water quality entering the Snake and Columbia River Basins. In accomplishing this task, we are also helping the survival of the native redband trout and rainbow trout. This will be done by fencing off portions of spawning streams to exclude cattle and wild game from trampling spawning redds. We will also be fencing off portions of the Owyhee River in areas that have been severely damaged by cattle and wild game crossing the river. The fencing will help to reestablish riparian grasses and vegetation as well as provide for more suitable areas for the wild and domestic stock to water and graze.

Along with the spring development and fencing of the spawning grounds the Tribes will also be planting trees and native grasses along degraded stream banks, on the reservoirs shoreline, and along the Owyhee River. Included with this part of the project will be the work begun last year (FY 97) that involves vegetation control in the reservoirs, maintenance of fish screens to prevent stocked fish from entering the Owyhee River and keep non-game fish out of the reservoirs. (Council Measure 10.8C.5)

We hope to provide pure and clean streams on the Reservation for the native salmonids to spawn and live. There are already some very pristine areas on the Reservation that will serve as a model of what a healthy stream system should be, both biological and physical.

If this project continues as planned, the Duck Valley Indian Reservation could serve as a model watershed for all those in the Columbia Basin to strive towards. It is our goal to once again have anadromous fish share these streams with the native resident fish. In providing this crucial habitat for the native fish we hope to show both BPA and IPC that we have the resources to support anadromous fish runs here, as they were in the past.

d. Project history

The project history of the Habitat Enhancement Project for the Shoshone-Paiute Tribes is very limited as it just got underway in March of 1997. There is very little data available at this time however, all work that has been completed is available in three quarterly reports from the HPFG office of the Shoshone-Paiute Tribes or BPA. The history is as follows:

- three quarterly reports to BPA
- project underway one year
- budget for FY97 \$645,000.00

Major results achieved to date include the beginning of compiled water quality data and habitat information of the Owyhee river and many of the tributaries to the river. We have also made improvements to both reservoirs by grading the roads and graveling the road areas in order to prevent erosion and sedimentation from entering these waters. Rip-rap has been added to the dike at Sheep Creek Reservoir to try and prevent further breaching of the dam. Some habitat enhancement has begun on the streams of the reservation, especially streams with suspected redband trout. Willows have been planted on eroded banks and further work will continue in 1998. A monitoring schedule is in the process of being set to watch these areas for further degradation and improvements.

e. Methods.

Objective 1: Identify resident trout on the Duck Valley Indian Reservation and determine populations of fish and invertebrates.

This objective will be addressed first and with the most effort on Mary's Creek, Skull Creek, Fawn Creek, Miller Creek, and the Owyhee River. Time and weather permitting analysis will occur on other streams of the Reservation. Many of the streams do not have names but will be named with location descriptions upon fish collection. This work will

be done through snorkel surveys, electrofishing and creel surveys.

The risks associated with this type of work are excessive mortalities to target and non-target fish species. These risks will be lessened by care of equipment and use by trained employees. Sample size, transportation, and collecting protocol is available at the HPFG office.

Task 1.1: Snorkel surveys of streams to determine species present and get baseline population estimates

Task 1.2: Fish population estimates of the above named streams and Owyhee River. Invertebrate compositions and population estimates from same streams and River.

Estimates will be made using the Zippin multiple pass method-or modified single pass method (to reduce injury to fish) (Mesa and Schreck 1989).

Invertebrates will be sampled using a Ponar dredge, kick screen, and plankton net.

Objective 2: Identify and protect spawning areas

The river and streams of the Reservation will be evaluated and areas critical to the survival (spawning areas) of redband and rainbow trout will be fenced in order to prevent trampling of redds. These areas will be determined by the Biologist, Director, and possibly an outside contractor. Areas of severe degradation on the River and streams will be reseeded with native grasses, trees planted and fenced to help prevent further erosion and establish stable banks and riparian areas.

The areas that are to be fenced will be monitored in the following years of this project to evaluate results of fencing the reseeded areas. The areas of the streams that are enhanced will be monitored for regrowth of vegetation, water quality in that area, bank stabilization, and use by wildlife. These results will be recorded and entered into a database for evaluation on later projects.

Task 2.1

Evaluate river and streams to determine spawning areas for fencing and rehabilitation.

Task 2.2

Fencing of spawning areas. Fencing will be erected in critical spawning areas on the streams and river of the Reservation. These areas will be monitored periodically for maintenance of fence, disturbance to redds, and bank/riparian area condition.

Objective 3: Protect and repair natural springs

The many natural springs and existing windmills (for pumping water) will be fenced to protect these vital riparian areas from trampling by domestic and wild animals as well as humans. These areas provide a source of clean, cool water to the Owyhee River and

streams on the Reservation. These areas will have a small (appr. 50yd X 50yd) fence erected around the area of the spring where the water exits the ground. PVC pipes will be placed in the spring and run to a water trough to supply water for stock (domestic/wild), and to keep them from the spring. Also, many of these spring have existing windmills that, in the past, were used for pumping water into troughs. Many of these windmills need only minor repairs and a maintenance schedule setup to become efficient again. We will be working on these existing windmills to get them in working order and keep them working properly.

Existing springs that are already fenced will be monitored and maintained as needed to ensure this work is providing the desired outcome (clean, cool, free flowing water). The monitoring and evaluation of this objective will be accomplished with the help of the Duck Valley Cattleman's Association. they will aid us in determining which springs and windmills are in most need and also help in maintaining them once they have been repaired.

Task 3.1

Evaluate (with Duck Valley Cattleman's Assc.) which springs are a priority for fencing and protection.

Task 3.2

Erect exclosure fences at these springs and install gravity flow water troughs.

Task 3.3

Existing windmills will be inspected and cost estimates for repairs made.

Task 3.4

Upon approval by BPA and Tribal Council, repairs will be made and windmills put back in working order.

Task 3.5

Maintenance schedule will be set for fences, windmills, and spring areas.

Schedule will include but not be limited to:

- inspection of fences and repair of broken wire or posts
- inspection of spring area and reseeding with native grasses if needed
- inspection of water pipe and water troughs - repair if necessary
- inspection of windmills, greasing, oiling, repair/disconnect during high winds

Objective 4: Enhance river and stream habitat

Trees and native grasses will be planted on degraded stream banks in order to help keep erosion during high water to a minimum, as well as lowering the water temperature for native trout survival. Also, these areas will be evaluated annually to determine whether the effort has been productive. The majority of the planting will occur in areas that have been fenced to exclude wild/domestic stock.

High water has eroded many areas on the Owyhee River and some streams on the reservation, with the planting of native grasses and trees we are hoping to protect these areas naturally without introducing big rocks and debris to the system. These areas will be monitored and evaluated much the same as the spawning areas will be monitored. We will also be using the aid of the Owyhee School district in helping monitor these areas for regrowth and water temperature. The water temperatures are expected to drop significantly in the areas of new planting. However the difference may be slight until the trees and grasses are well established.

Task 4.1

Native grasses and trees will be planted on eroded areas of the river and stream banks. This will help to maintain lower water temperatures throughout the summer months.

Task 4.2

Evaluate and monitor seeded areas for disturbance and regrowth. Annual evaluations will be done to record the progress of our efforts, and determine sections that need added plantings or attention (ie. fence repair)

f. Facilities and equipment.

The Habitat, Parks, Fish and Game Department of the Shoshone-Paiute Tribes is currently being run from an office building located on the Duck Valley Reservation. The office is equipped with computers (including scanner, printer, etc.) for the Director, Biologist, and secretary.

We have two 1997 4x4 pick-up trucks that are being leased through the Habitat Enhancement program as well as two vehicles that are used for our wildlife and parks program. The Habitat Enhancement program has access to/or purchased the following equipment:

Gill nets

Lake survey equipment (sechie disc, plankton net, dredge, etc)

Electroshocker (stream)

Water quality meter (D.O, Ph, Temp)

Substrate sampler

Various hand and power tools

16' John boat

Snorkel equipment (wetsuits, masks, etc)

Coolers

Refrigerator/freezer

Two way communication system (vehicles/base)

5000' shop space

1500' office space
2000' fisheries building

g. References.

Mesa, M.G. and C.B. Schreck. 1989. Electrofishing mark-recapture and depletion methodologies evoke behavioral and physiological changes in cutthroat trout. Transactions of the American Fisheries Society 118:644-658.

Zoellick, Bruce. 1997. Personnel communication during discussion regarding trout species and previous work in the Owyhee River subbasin. Idaho Bureau of Land Management, Boise, Idaho.

Section 8. Relationships to other projects

The Habitat Enhancement project complements two other projects currently being funded by BPA. The Tribes have a resident fish stocking program which enables our dept. to stock fish in our Reservoirs. The Habitat Enhancement project enables these fish to spawn naturally in two streams that feed these reservoirs, giving these fish undisturbed areas of stream to spawn. Also, we are currently nearing the end of the "Final Engineering and Design" phase of the Billy Shaw Wetlands area project. The Habitat Enhancement project will supplement this project in the protection of spawning areas for the trout that will be initially stocked in this new body of water. This project will assist the education of both tribal and non-tribal members of the importance of maintaining a clean water system and the benefits of the riparian areas surrounding these waters. This project is incorporated with Shoshone-Paiute Tribes Wildlife and Parks (W&P) and Wildhorse Marina and RV Park programs which is under the administration of the Habitat, Parks, Fish and Game Department. We have found that by incorporating all of these programs into one department the office is more efficient and effective in helping to enhance and protect our fish and game on the Reservation. The W&P program is responsible for the campgrounds at both reservoirs and maintaining these areas for visitors. We are in the process of writing new fish and game statutes, and hope to have a conservation officer to enforce these new laws. It is the hope of the Tribes to have self sustaining wildlife, fisheries, and clean cool free flowing water on the Reservation for the enjoyment of all, both Indians and non-Indians. We are working for the good of the entire Owyhee Basin and Columbia Basin ecosystem and would like to have a place for both sportsman and recreationalists to come and enjoy.

Section 9. Key personnel

Guy Dodson Sr. Director- Habitat, Parks, Fish and Game Department

Responsible for the day-to-day operation of the department. Attends meetings sponsored by Tribal Council, Northwest Power Planning Council, CBFWA and other

important groups pertinent to this project(s). FTE (2080hrs)

RESUME

Guy Dodson Sr. - Project Director

Education

Bacon Jr. College A.A
University Nevada at Reno
May 1979

Boise State University 3 quarters
Boise Idaho

Work Experience

April 1997 - Present

Director - Habitat, Parks, Fish and Game
Department
Shoshone-Paiute Tribes-Duck Valley Indian
Reservation
Owyhee NV 89832

January 1996- Present

Director - Billy Shaw Wetlands Project
Shoshone-Paiute Tribes-Duck Valley Indian
Reservation
Owyhee NV 89832

January 1990 - December 1996

Mental Health Director (Acting)
Owyhee Hospital
Shoshone-Paiute Tribes-Duck Valley Indian
Reservation
Owyhee NV 89832

Previous work has included administration of contracts, grants, and programs for the Shoshone-Paiute Tribes including, but not limited to: education, vocational training, Dept. of Labor, EEOC, Job Corps, Job Training Partnership Act, Bureau of Indian Affairs.

Experienced in working with large and diverse groups of individuals and agencies. Experienced in the administration of large construction projects as well as participation in actual arena of labor for completion (ie. carpentry, pipelayer, masonry etc.)

Vincent Pero Tribal Biologist- Habitat, Parks, Fish and Game Department

Responsible for the biological aspects of the project(s), as well as the day-to-day operation of the temporary crew. Attends meetings pertinent to the project(s). (FTE

(2080hrs)

Resume

Vincent D. Pero

Education

University of Idaho - B.S.
Moscow Idaho
May 1996

Work Experience

March 1997-Present	Tribal Biologist - Habitat, Parks, Fish and Game Shoshone-Paiute Tribes-Duck Valley Indian Reservation Owyhee, NV
May 1996-March 1997	University of Idaho Fisheries Technician

My work experience includes five years as a field technician in fisheries work. Working with anadromous and resident fish as well as many habitat projects for Idaho Department of Fish and Game. I have construction experience both in Idaho and New York states, and am currently finishing up my first year as Tribal Biologist for the Tribes. My experience also includes work with the University of Idaho analyzing data and radio tracking steelhead and chinook salmon.

During this work I have been responsible for supervision of a four man crew, figuring budgets for many programs related to the Habitat Enhancement Project, attending pertinent meetings with state and federal agencies, writing proposal, reading and responding to various EA's and EIS's, and daily operation of our program. The work that has been completed so far in our program are my most recent job completions to date.

Section 10. Information/technology transfer

The information gathered from this project will be available at the HPFG Department during normal business hours. We will also have the information available via e-mail or US mail. The data will be available as a database at the conclusion of this project with limited information available throughout the course of this work. Upon completion of the Habitat Enhancement project and the fisheries evaluations, most of the data will be available as publications. The information gathered during the course of this project is new information and hopefully the data and observations will be able to be used by other scientists to better help them work with the native trouts of the inland Northwest.