
PART I - ADMINISTRATIVE

Section 1. General administrative information

Title of project

Protect And Restore The Squaw To Papoose Creeks Watersheds

BPA project number: 9607709
Contract renewal date (mm/yyyy): 3/2000 **Multiple actions?**

Business name of agency, institution or organization requesting funding
Nez Perce Tribal Fisheries/Watershed Program

Business acronym (if appropriate) NPT

Proposal contact person or principal investigator:

Name	<u>Emmit E. Taylor Jr.</u>
Mailing Address	<u>P.O. Box 365</u>
City, ST Zip	<u>Lapwai, ID 83540</u>
Phone	<u>(208) 843-2253</u>
Fax	<u>(208) 843-7322</u>
Email address	<u>emmitt@nezperce.org</u>

NPPC Program Measure Number(s) which this project addresses

Section 7.1 - Ensuring Biodiversity;
Section 7.6 - Habitat Goals, Policies, and Objectives;
Section 7.7 - Cooperative Habitat Protection and Improvement with Private Landowners; Section 7.8 - Implement State, Federal, and Tribal Habitat Improvements.

FWS/NMFS Biological Opinion Number(s) which this project addresses

Land and Resource Management Plans for National Forests Bureau of Land Management Resource Areas in the Upper Columbia Basins and Snake River Basin Evolutionarily Significant Units, 1998.

Other planning document references

BPA. 1997. Watershed Management Program: Final Environmental Impact Statement.

Connor, A.H., and C. Bradbury. 1998. The 1997 Watershed Improvement Needs Inventory and Road Obliteration Survey of Squaw and Papoose Creek and the Cedars Areas. Clearwater National Forest (CNF). Orofino, ID.

CNF and Nez Perce Tribe (NPT). 1997. Challenge Cost-Share Agreement between the CNF and the NPT. Lapwai, ID.

Columbia Basin Fish and Wildlife Authority. 1997. Integrated Watershed Projects: The Process and Criteria for Selecting Watershed Projects for the Columbia Basin Fish and Wildlife Program.

NPPC. 1994. Columbia River Basin Fish and Wildlife Program. Portland, OR.

CRITFC. 1995. WY-KAN-USH-MI WA-KISH-WIT, Spirit of the Salmon. Vol. I and II. Portland, OR.

CNF, NPT. 1998. A Watershed Analysis for the area from Squaw to Papoose Creeks. Powell, ID.

NPT and Idaho Dept. of Fish and Game. 1990. Clearwater River Subbasin Salmon and Steelhead Production.

Short description

Protecting and restoring the Squaw to Papoose Creek Watersheds is the overall goal of this project. We will achieve this working within an overall watershed approach, based on a completed watershed analysis.

Target species

Spring Chinook Salmon, Steelhead, Bull Trout, and Westslope Cutthroat Trout.

Section 2. Sorting and evaluation

Subbasin

Clearwater Sub-basin

Evaluation Process Sort

CBFWA caucus	Special evaluation process	ISRP project type
Mark one or more caucus	If your project fits either of these processes, mark one or both	Mark one or more categories
<input checked="" type="checkbox"/> Anadromous fish <input type="checkbox"/> Resident fish <input type="checkbox"/> Wildlife	<input checked="" type="checkbox"/> Multi-year (milestone-based evaluation) <input checked="" type="checkbox"/> Watershed project evaluation	<input type="checkbox"/> Watershed councils/model watersheds <input type="checkbox"/> Information dissemination <input type="checkbox"/> Operation & maintenance <input type="checkbox"/> New construction <input checked="" type="checkbox"/> Research & monitoring <input checked="" type="checkbox"/> Implementation & management <input type="checkbox"/> Wildlife habitat acquisitions

Section 3. Relationships to other Bonneville projects

Umbrella / sub-proposal relationships. List umbrella project first.

Project #	Project title/description

Other dependent or critically-related projects

Project #	Project title/description	Nature of relationship
9608600	Idaho Soil Conservation Commission Focus Watershed Program	The Focus Program is co-coordinated between the NPT and the State of Idaho.
970600	Nez Perce Tribal Focus Watershed Program	The Focus Program is co-coordinated between the NPT and the State of Idaho.
9809802	Salmon Supplementation in Idaho Rivers	Protect and restore watersheds for anadromous and resident fish habitat.
9607707	Focus Watershed Coordinator	was in umbrella table

9901700	Protecting and Restoring Lapwai Creek Watershed	was in umbrella table
9607708	Protecting and Restoring Lolo Creek Watershed	was in umbrella table
9901600	Rehabilitation of Big Canyon Creek	was in umbrella table
9607711	Restoring McComas Meadows - Meadow Creek	was in umbrella table
	Lostine River Rehabilitation	was in umbrella table
20087	Protection of Mill Creek	was in umbrella table
20086	Rehabilitation of Newsome Creek	was in umbrella table

Section 4. Objectives, tasks and schedules

Past accomplishments

Year	Accomplishment	Met biological objectives?
1996	Stabilized 3 landslides.	N/A
1996	Unplugged 5 culverts.	N/A
1996	Placed large woody debris in-stream.	N/A
1996	Re-vegetated 1 mile of stream banks.	N/A
1997	Obliterated 9 miles of system/non-system roads.	N/A
1998	Obliterated 12 miles of system/non-system roads.	N/A

Objectives and tasks

Obj 1,2,3	Objective	Task a,b,c	Task
1	Alleviate sediment input and potential from road sources.	a	Consult, update, and finalize the Cost-Share Agreement between the Nez Perce Tribe (NPT) and the Clearwater National Forest (CNF) on watershed restoration.
		b	Consult with the CNF on identifying 40 miles of roads for survey inventory and 20 miles of road to be obliterated.
		c	Perform all pre-work needs, training, and logistics internally and with the CNF.
		d	Consult with the CNF on any necessary environmental analysis - Categorical Exclusion.
		e	Survey 40 miles of roads.
		f	Obliterate 20 miles of roads and provide erosion control on any disturbed areas.
2	Perform monitoring and evaluation (M&E) of road obliteration techniques and procedures.	a	Re-visit previous years work to evaluate and improve road obliteration techniques.
		b	Consult with the CNF on techniques and procedures M&E program.
3	Develop a monitoring and evaluation program of road obliteration overall	a	Gather watershed and stream survey information.

	success.		
		b	Develop a program on benefits of road obliteration on the affected watersheds over time.
4	Transfer of project information to all obligatory agencies and interested organizations or parties.	a	Perform quarterly reports on project progress as they become due.
		b	Complete final end of the year report of project.
		c	Perform necessary presentations to the public and project peers.

Objective schedules and costs

Obj #	Start date mm/yyyy	End date mm/yyyy	Measureable biological objective(s)	Milestone	FY2000 Cost %
1	1/2000	8/2000	N/A	X	85.34%
2	5/2000	8/2000	N/A	X	5.83%
3	7/2000	11/2000	N/A	X	5.87%
4	3/2000	12/2000	N/A	N/A	2.96%
				Total	100.00%

Schedule constraints

Existing schedules for the 2000 budget year may change due to weather conditions. All on-the-ground projects occur in mountainous areas at elevations up to 5000 feet above sea level, where unpredictable weather patterns may occur.

Completion date

Based on a completed watershed analysis, watershed work is estimated to be done by the year 2003 with M&E to continue beyond. The Cost-Share Agreement for watershed restoration between the NPT and the CNF is designed to be extended for the next 5 years.

Section 5. Budget

FY99 project budget (BPA obligated): \$241,693

FY2000 budget by line item

Item	Note	% of total	FY2000
Personnel		%27	96,328
Fringe benefits		%4	14,776
Supplies, materials, non-expendable property		%1	2,860
Operations & maintenance		%0	
Capital acquisitions or improvements (e.g. land, buildings, major equip.)		%0	
NEPA costs		%0	
Construction-related support		%0	

PIT tags	# of tags:	%0	
Travel		%6	22,380
Indirect costs		%10	35443
Subcontractor		%46	163,200
Other	Vehicle Costs	%5	18,620
TOTAL BPA FY2000 BUDGET REQUEST			\$353,607

Cost sharing

Organization	Item or service provided	% total project cost (incl. BPA)	Amount (\$)
Clearwater National Forest	Planning, road identification, technical support, onsite contract administration, obliteration of additional miles of roads, continuation of flood damage restoration.	%46	300,000
		%0	
		%0	
		%0	
Total project cost (including BPA portion)			\$653,607

Outyear costs

	FY2001	FY02	FY03	FY04
Total budget	\$399,698	\$439,668	\$483,634	\$65,805

Section 6. References

Watershed?	Reference
<input type="checkbox"/>	Clearwater BioStudies, Inc. 1996. Repeat surveys of selected reaches of streams in the Lochsa River drainage (Draft), Idaho. Powell and Lochsa Ranger Districts, Summer 1996. Contract No. 52-0276-5-18, prepared for USDA Forest Service, CNF. Orofino, ID
<input type="checkbox"/>	Clearwater BioStudies, Inc. 1994d. Habitat conditions and salmonid abundance in Papoose Creek, Powell Ranger District, Summer 1993. Contract report no. 53-0276-3-15, prepared for USDA Forest Service, Clearwater National Forest. Orofino, ID.
<input checked="" type="checkbox"/>	CNF, NPT (Clearwater National Forest, Nez Perce Tribe). 1998. A Watershed Analysis for the Area from Squaw to Papoose Creeks. Lochsa Ranger District, Powell Unit.
<input type="checkbox"/>	Connor, A.H., and C. Bradbury. 1998. The 1997 Watershed Improvement Needs Inventory and Road Obliteration Survey of Squaw and Papoose Creeks and the Cedars Area. Clearwater National Forest. Orofino, ID.
<input type="checkbox"/>	CRITFC (Columbia River Inter-Tribal Fish Commission). 1995. WY-KAN-USH-MI-WA-KISH-WIT, Spirit of the Salmon, The Columbia River Anadromous Fish Restoration Plan of the Nez Perce, Umatilla, Warm Springs, and Yakama Tribes. Volume I. Portland, OR.
<input type="checkbox"/>	McClelland, et al. 1997. Assessment of the 1995 & 1996 Floods and Landslides on the Clearwater National Forest. Part 1: Landslide Assessment. Northern Region United States Forest Service. Missoula, MT.
<input type="checkbox"/>	Nez Perce Treaty of 1855 with the United States Federal Government.
<input type="checkbox"/>	NPPC (Northwest Power Planning Council). 1994. Columbia River Basin Fish and Wildlife Program.
<input type="checkbox"/>	Pipp, et al. 1997. Watershed Response to an Extreme Precipitation and High Streamflow

	Event in Managed Basins (Draft). Powell Ranger District of the Clearwater National Forest, Powell, ID.
<input type="checkbox"/>	USDA (United States Department of Agriculture). 1997. National Indian Forest Resource Management Act, Public Law 101-630.

PART II - NARRATIVE

Section 7. Abstract

Protecting and restoring the Squaw to Papoose Creeks watersheds, to assist in increasing anadromous fish populations, is the overall goal of this project. This project works toward achieving the goals and objectives of the *Columbia River Basin Fish and Wildlife Program* and the *Spirit of the Salmon Anadromous Fish Restoration Plan of the Tribes*. This project proposal works toward this by working within an overall watershed approach, based on a completed watershed assessment. Alleviating sediment input and potential from road sources has been determined a high priority by the watershed assessment. We will address this by surveying and obliterating roads that are presently or show potential for adding sediment into streams and tributaries important to anadromous fish. A road survey will be completed using the Watershed Improvement Needs (WIN) inventory, such that the survey information needed for road obliteration is gathered along with other watershed problems. Road obliteration practices vary depending on stability, and generally entails removing culverts and restoring natural drainage patterns, reshaping unstable fill and cut banks to their natural slopes, and performing erosion control on all disturbed surfaces. Monitoring and evaluation (M&E) will be done on two aspects of road obliteration. The first will M&E procedures and techniques, in order to improve future obliteration practices. The second will M&E how road obliteration has improved overall watershed and ecosystem health over time. Lastly, project progress and information will be made available to obligatory and interested organizations and parties through quarterly reports, end of the year reports, and presentations. The expected outcome of our work will decrease mass failure and surface erosion potential from road related sources. This reduction in sediment will allow these watersheds and their streams and tributaries to heal with time to their proper functioning condition, increase available fish spawning and rearing habitat, assist in enlarging their populations, and protect Nez Perce Tribal resources and cultural values.

Section 8. Project description

a. Technical and/or scientific background

The Squaw to Papoose Creeks watersheds are located within the 1855 treaty territory of the Nez Perce Tribe in the Clearwater National Forest. The analysis area provides habitat for several highly valued salmonid species, including chinook salmon, steelhead, bull trout, and westslope cutthroat trout. Within the analysis area, both anadromous and resident fish habitat were negatively affected by past land management practices, including road building, logging, and stream cleanout (CNF, NPT, 1998).

The Squaw to Papoose Creek Watersheds are extremely important to the Nez Perce Tribe for their fisheries, cultural, and traditional values. The main goals of this project are (1) to protect and restore the watersheds from Squaw to Papoose Creeks, so they can return to their proper functioning condition, producing a healthy environment for fish, and (2) protect Nez Perce Tribal resources and cultural values. This will be accomplished using an overall watershed approach, based on a completed watershed assessment.

Most forest roads in the Squaw to Papoose Creek Watersheds were built for timber harvest, in the 1950-70's. Past timber harvest equipment had extremely limited reaches, and for this reason, a great number of roads were constructed. A great portion of these roads were thought to be stable from the amount of vegetation growth and abandoned. The flood events of 1995 and 1996 proved that many of these roads are not stable. Landslides originating on closed or abandoned roads have been identified as a major cause of sediment delivery to streams (McClelland et. Al., 1997).

During late November to early December 1995, the Squaw to Papoose Creek Watersheds were hit hard by flood events, receiving 314% of the average precipitation for the area. A field survey, during the summer of 1996, identified and quantified 41 mass failures in the Squaw Creek Watershed with 51% being road related. In the Papoose Creek Watershed, 76 landslides were recorded with 74% of these being road related (Pipp, et al., 1997). Massive amounts of soil, rock, and woody debris entered into streams as a result of these landslides. This bedload and sediment deposition has increased cobble embeddedness and negatively impacted spawning and rearing habitat for salmon, steelhead, bull trout, and cutthroat trout (CRITFC, 1995). For example, monitoring results showed that in five stream reaches in the mainstem Squaw Creek, cobble embeddedness conditions ranged from 19.2 to 42.6% prior to the flooding and ranged from 34.9 to 46.0% after the landslides (Clearwater Biostudies, Inc, 1994; 1996). The instability of the streams, as a result of the high sediment and bedloads, has also limited any in-stream habitat projects and work.

Putting fish back into river and stream systems alone is not enough to restore their populations, they need a healthy system to return, spawn, and rear in. Our proposal objectives will mitigate (in place, in kind) the problems stated above by decreasing sediment into rivers and streams, which will allow the stream environment to heal and return to their original capacity for spawning and rearing habitat. The goals and objectives of our project proposal strives towards meeting all of the goals and objectives found in the Wy-Kan-Ush-Mi Wa-Kish-Wit (CRITFC, 1995), as stated below:

ANADROMOUS FISH RESTORATION PLAN OF THE TRIBES

GOALS

- Restore anadromous fishes to the rivers and streams that support the historical culture and economic practices of the tribes.
- Emphasize strategies that rely on natural production and healthy river systems to achieve this goal.
- Protect tribal sovereignty and treaty rights.
- Reclaim the anadromous fish resources and the environment on which it depends for future generations.

ANADROMOUS FISH RESTORATION PLAN OF THE TRIBES

OBJECTIVES

- Within 7 years, halt the declining trends in salmon, sturgeon, and lamprey populations originating upstream of Bonneville Dam.
- Within 25 years, increase the total adult salmon returns of stocking originating above Bonneville Dam to 4 million annually and in a manner that sustains natural production to support tribal commercial as well as ceremonial and subsistence harvests.
- Within 25 years, increase sturgeon and lamprey populations to naturally sustainable levels that also support tribal harvest abundance in perpetuity.

The project proposal also protects the goal of tribal sovereignty and treaty rights. In the Treaty of 1855, the Nez Perce Tribe ceded much of their aboriginal territory to the United States in exchange for a reservation

that was to serve as a permanent homeland. In that treaty, the Nez Perce Tribe reserved certain rights including, “the exclusive right of taking fish in all the streams running through or bordering said reservations is further secured to said Indians (Nez Perce Treaty, 1855).” According to this, the federal government’s has a trust agreement to protect all tribal resources. The proposal will work toward protecting our resources, therefore fulfilling the government’s responsibilities. The project will also allow the tribe to manage our own tribal resources, which will in turn protect our sovereignty and treaty rights. This is called for in the *National Indian Forest Resource Management Act (PL 101-630)*, which provides for the management of forested tribal trust lands (USDA, 1997).

The Nez Perce Tribal Fisheries/Watershed Program along with the Earth Conservation Corps, (Nez Perce Salmon Corps.), completed several projects in 1996. These projects included, stabilizing 3 landslides, unplugging 5 culverts, placing large woody debris in-stream, and re-vegetating 1 mile of stream bank within the Squaw to Papoose Creeks watersheds. In the 1997 season, the Nez Perce Tribal Fisheries/Watershed Program, in conjunction with the Clearwater National Forest and Earth Conservation Corps, (Nez Perce Salmon Corps.), obliterated a total of 9.0 miles of system/non-system roads within Squaw and Papoose Creek watersheds. In the 1998 season, Emmitt E. Taylor Jr. (Civil EIT), road obliteration inspector, and a three member erosion control crew of the Nez Perce Tribal Fisheries/Watershed Program obliterated 12 miles of road. It is planned in the 1999 season (pending BPA approval) to continue with 24 miles of road to be obliterated. Mr. Taylor will continue as the inspector and the crew will continue with the erosion control. Ira Jones (Nez Perce Tribal Fisheries/Watershed Program Manager) has facilitated all activities with the Clearwater National Forest, including the Challenge Cost-Share Agreement, in 1997 and 1998, and will continue in 1999 and beyond.

b. Rationale and significance to Regional Programs

The project will work towards 7.6 Habitat Objective of the *NPPC Fish and Wildlife Program* to limit the percent of fine sediment in salmon and steelhead redds to no more than 20 percent and limit cobble embeddedness (CE) to less than 30 percent or documented historic condition (NPPC, 1994). Landslides, as a result of the 1995 and 1996 floods, have delivered massive amounts of sediment into streams and tributaries of the Squaw to Papoose Creeks. In the Squaw Creek Watershed, mean CE increased from 31% to 41% and in the Papoose Creek Watershed, mean CE shifted from 27% to 41% (CNF, 1997). As a result of this increased sedimentation and cobble embeddedness (CE), spawning habitat has decreased. With the amount of system and non-system roads remaining within the watersheds, along with surface erosion from these roads, the potential for further mass sedimentation is great. Our project proposal will directly aide in decreasing CE with in these two streams by removing roads that are adding sediment into streams and tributaries or have a high mass failure potential.

Protecting and restoring the Squaw and Papoose Creek Watershed is called for in the objectives and goals of the *Spirit of the Salmon Anadromous Fish Restoration Plan of the Nez Perce, Umatilla, Warm Spring, and Yakama Tribes (Volume II)* as stated above in Section 7, Part (a) of this proposal. This plan specifically recommends actions for the Clearwater River System including: (1) Logging, road building and the loss of the riparian vegetation has created high cobble embeddedness. To eliminate or reverse this problem, those practices should be stopped or severely restricted until the streams can recover; and (2) Sedimentation due to logging is occurring throughout the watershed. In addition, mining and road building also continue to create sedimentation problems. The watershed must be left to recover by eliminating or severely restricting these practices. This project proposal directly addresses this plan by eliminating system/non-system roads that are presently or have the potential of adding sediment into Squaw to Papoose streams and tributaries.

In the fall of 1998, *A Watershed Analysis for the Area from Squaw to Papoose Creeks* was completed by the Clearwater National Forest in partnership with the Nez Perce Tribe. In this analysis, road obliteration is a high priority due to the past, present, and future potential of sedimentation into streams by road-related causes. During the 1995-1996 flood events, mass failures and surface erosion from road sources deposited thousands of cubic yards of material into the Squaw to Papoose Creeks, most of which is still in the systems (CNF, NPT, 1998). To date, sedimentation has impacted these important anadromous fish streams negatively. The old jammer roads in these watersheds are the trigger that can potentially deliver thousands

of additional yards of coarse and fine sediments to aquatic habitat in the analysis area. Of all surveyed roads in the drainages, there is a potential of approximately 75,000 cubic yards of road fill that could fail (Connor and Bradbury, 1998). This project proposal will work toward decreasing the risk of large amounts of sediment entering these streams, which will in turn improve anadromous fish habitat.

The *Idaho Salmon Supplementation Studies*, Project Number #8909802, is a project that is funded by BPA and has direct ties to the Squaw to Papoose Creeks watersheds. In 1998, this project was awarded \$233,000 and \$339,334 in 1999 by BPA. Squaw and Papoose Creeks have been apart of this project plan since 1991, when it began, and is projected to year 2007 and possibly 2015. The *Idaho Salmon Supplementation Studies* is a cooperative research project of the Idaho Fish and Game, the NPT, Shoshone-Bannock Tribes, and the U.S. Fish and Wildlife Service to test supplementation on an experimental basis. In order for this project to be successful, habitat conditions for fish need to be as beneficial as possible. Both Squaw and Papoose Creeks were severely impacted by the amount of sedimentation by mass failures that resulted from roads during the floods of 1995 and 1996. Sedimentation is presently occurring and the potential from further mass failure by roads is great. Restoration work proposed by this project targets alleviating the potential for further habitat degradation in these supplementation streams by preventing road-derived damage.

A *Challenge Cost-Share Agreement* has been developed between the *Nez Perce Tribe (NPT)* and the *Clearwater National Forest (CNF)*. This agreement discusses the relationship between the two governments with regard to watershed work, planning, and management within the Squaw to Papoose Creeks watersheds, as well as the entire CNF. This agreement was developed in 1997, and used in 1997 and 1998 to obliterate 9 and 12 miles within these watersheds, respectively. Because of the great success of this agreement, it will be updated and used for work in 1999 and 2000. A verbal agreement has already been made with the CNF concerning this matter, with an updated memorandum of understanding to be established by January of 1999. With regards to road obliteration, according to this agreement, the CNF will pay for all administrative support (planning, road obliteration prioritization, contract administration, etc.), provide for the obliteration of additional miles, and continue funding of identified flood damage. The Nez Perce Tribe will provide funding for the excavator and operator, materials, and erosion control supplies. Under this agreement in 1998, Emmitt E. Taylor Jr. (Civil EIT) from the NPT Fisheries/Watershed Program was trained as a road obliteration inspector and a three member erosion control crew was also provided by the tribe. Mr. Taylor and the erosion control crew will be utilized for this project in 1999 and 2000, with an increase in staff possible.

c. Relationships to other projects

The *Idaho Salmon Supplementation Studies*, Project Number #8909802, is a project that is funded by BPA and has direct ties to the Squaw to Papoose Creek watersheds. In 1998, this project was awarded \$233,000 and \$339,334 in 1999 by BPA. Squaw and Papoose Creeks have been apart of this project plan since 1991, when it began, and is projected to year 2007 and possibly 2015. The *Idaho Salmon Supplementation Studies* is a cooperative research project of the Idaho Fish and Game, the NPT, Shoshone-Bannock Tribes, and the U.S. Fish and Wildlife Service to test supplementation on an experimental basis. In order for this project to be successful, habitat conditions for fish need to be as beneficial as possible. Both Squaw and Papoose Creeks were severely impacted by the amount of sedimentation by mass failures that resulted from roads during the floods of 1995 and 1996. Sedimentation is presently occurring and the potential from further mass failures by roads is great. Restoration work proposed by this project targets alleviating the potential for further habitat degradation in these supplementation streams by reducing road-derived damage.

A *Challenge Cost-Share Agreement* has been developed between the *Nez Perce Tribe (NPT)* and the *Clearwater National Forest (CNF)*. This agreement discusses the relationship between the two governments with regard to watershed work, planning, and management within the Squaw to Papoose Creeks watersheds, as well as the entire CNF. This agreement was developed in 1997, and used in 1997 and 1998 to obliterate 9 and 12 miles within these watersheds, respectively. Because of the great success of this agreement, it will be updated and used for work in 1999 and 2000. A verbal agreement has already been made with the CNF concerning this matter, with an updated memorandum of understanding to be

established by January of 1999. With regards to road obliteration, according to this agreement, the CNF will pay for all administration support (planning, road obliteration prioritization, contract administrative, etc.), provide for the obliteration of additional miles, and continue to funding of identified flood damage. The Nez Perce Tribe will provide funding for the excavator and operator, materials, and erosion control supplies. Under this agreement in 1998, Emmit E. Taylor Jr. (Civil EIT) from the NPT Fisheries/Watershed Program was trained as a road obliteration inspector and a three member erosion control crew was also provided by the tribe. Mr. Taylor and the erosion control crew will be utilized in 1999 and 2000, with an increase in staff possible.

d. Project history (for ongoing projects)

The Nez Perce Tribal Fisheries/Watershed Program has been involved in restoration work within the Squaw to Papoose Creeks watersheds since 1996. In cooperation with the Nez Perce Salmon Corps, four major accomplishments were completed in 1996. The first and second accomplishments involved stabilizing three landslides and one mile of stream bank that had high potential for inputting sediment into Squaw and Papoose Creeks and their tributaries. This stabilization included planting and mulching areas with native grass, shrubs, and trees. The third accomplishment was the placement of large woody debris into the creeks for fish habitat. Unplugging five culverts of debris and sediment having a potential of failing, was the fourth accomplishment in 1996. The Nez Perce Salmon Corps provided a 10-12 person crew and their salaries, and the Clearwater National Forest provided their housing. The costs to the Nez Perce Tribal Fisheries/Watershed Program associated with this year were approximately \$23,000.

In 1997, a *Challenge Cost-Share Agreement* was developed between the *Nez Perce Tribe (NPT)* and the *Clearwater National Forest (CNF)*. This agreement discussed the relationship between the two governments with regard to watershed work, planning, and management within the Squaw to Papoose Creek watersheds, as well as the entire CNF. This agreement was used in 1997 to obliterate 10 miles of road. According to this agreement, the CNF will pay for all administration support (planning, road obliteration prioritization, contract administrative, etc.), provide for the obliteration of additional miles, and continue to funding of identified flood damage. The Nez Perce Tribe will provide funding for the excavator and operator, materials, and erosion control supplies. A three-member crew was also provided by the tribe for erosion control. The costs associated with 1997 were approximately \$98,000.

In 1998, the *Challenge Cost-Share Agreement* was updated and used to obliterate 12 miles of system/non-system roads within the Squaw to Papoose Creek watersheds. Under this agreement, Emmit E. Taylor Jr. (Civil EIT) from the NPT Fisheries/Watershed Program was trained as a road obliteration inspector and a three member erosion control crew was also provided by the tribe. The cost for the 1998 year was \$232,050.

Because of the great success of the *Challenge Cost-Share Agreement*, planning and updating it for restoration work in 1999 (pending BPA approval) has begun. It is planned to cost share in the obliteration of 24 miles of road with the CNF. The Nez Perce Tribal Fisheries/Watershed Program are going to provide an inspector(s) and erosion control crew(s) for on-the-ground work. It is planned to perform two monitoring and evaluation (M&E) programs. The first will be to M&E road obliteration practices to improve techniques and obliteration success. The second is to M&E road obliteration over time to measure the overall success of the road obliteration program. The budget for 1999 is \$241,693.

e. Proposal objectives

OBJECTIVE 1: Alleviate sediment input and potential from road sources.

Product:

- Updated, finalized Challenge Cost-Share Agreement to be used for restoration work within the Squaw to Papoose Creeks watersheds between the Nez Perce Tribe and the Clearwater National Forest.
- Forty miles of system/non-system roads surveyed. These surveys will be used to determine road characteristics and the level of obliteration needed for long-term stability.

- Twenty miles of system/non-system roads obliterated. The obliteration will stabilize roads, reducing the high risk of mass failures and surface erosion.

OBJECTIVE 2: Perform monitoring and evaluation of road obliteration techniques and procedures.

Product:

- A greater knowledge of road obliteration past practices successes and failures.
- Higher overall road obliteration success through improved techniques and procedures.

OBJECTIVE 3: Develop a monitoring and evaluation (M&E) program of road obliteration overall success.

Product:

- A M&E program and report that includes but not limited to; history of road obliteration in the Squaw to Papoose Creeks watersheds; future obliteration, and; an analysis of sediment loads, cobble embeddedness, and overall water quality over time. This will work towards a multi-year M&E program to measure overall success.

OBJECTIVE 4: Transfer of project information to all obligatory agencies and interested organizations and parties.

Product:

- Four quarterly reports on project progress as they become due.
- End of the year final report.
- Necessary presentations to the public and project peers.

f. Methods

OBJECTIVE 1

Objective 1 and the related tasks, as stated in section four of this proposal, will be accomplished by using a *Challenge Cost-Share Agreement* (between the Nez Perce Tribe and the Clearwater National Forest) as a tool in surveying forty miles and obliterating twenty miles of system/non-system roads and providing erosion control on all disturbed areas. The *Challenge Cost-Share Agreement* will be updated, finalized, and used as in past years to complete the proposed work.

According to the agreement, the CNF will provide planning, technical support and onsite contract administration. This includes the identification and prioritization of roads that are no longer needed on the forest transportation system and are presently or have the potential for mass wasting or adding sediment into creeks from surface erosion. In addition, the CNF will provide for the obliteration of additional miles of road and continue to fund restoration of identified flood damage throughout the watersheds. Under the agreement, the tribe will provide funding for the excavator and operator, and purchase of erosion control supplies. The Tribal Fisheries/Watershed Program will also provide the inspector(s), erosion control crew(s), and survey team for on-the-ground work. The Tribal Fisheries/Watershed Program and the CNF will also work cooperatively on a monitoring and evaluation programs of road obliteration practices and overall measure of success over time.

Upon completion of road identification and prioritization by the CNF, road survey identification will begin. The survey will use the Watershed Improvement Needs (WIN) inventory, which has been adopted by the CNF. This survey gathers information needed for road obliteration, along with other watershed problems in a log format. Data collection includes; beginning point of survey, distance between sites, inlet and outlet of drainage structures, depth of fill, width of the road, length of any through fills, lengths and widths of failing and failed areas, any potential access problems, and total length of the road. Distances are generally measured using a hip chain but may also be estimated, wheeled from a map, or picked off the odometer of an all terrain vehicle or truck. In addition, any tributary roads are also logged. Overall problems associated with the roads are identified and the road is recommended for abandonment or obliteration. Road obliteration coordinators then use this information to determine the level of obliteration needed, and estimate the volume of fill at risk of failing. Upon completion of this process, all involved parties meet and finalize road obliteration decisions (Connor and Bradbury, 1998).

Road obliteration practices vary depending on the history of slides and other erosion problems associated with the road, the land type the road is on, and its proximity to fish bearing streams. Most roads require combinations of practices associated with the four road obliteration levels.

- Level 1 Obliteration: Roads have shallow culverts with few large road fills, on gentle terrain with few stream crossings. Practices used to obliterate these roads include: (1) Road surface decompaction or scarification; (2) removal of culverts; (3) minor out-sloping or cross draining; (4) full raconteur or earth barrier at road approach to prevent motorized access; (5) revegetation of disturbed soils using native planting in combination with mulching and fertilizer.
- Level 2 Obliteration: Roads have a mix of shallow and deeper culverts and larger fills on moderate terrain with some stream crossings. These roads may also have small bogs or seeps that may threaten fillslope stability. Practices to obliterate these roads typically include all practices described for level 1 obliteration plus: (1) removing fills at risk of failure; (2) Obvious or frequent out-sloping and cross draining.
- Level 3 Obliteration: Roads have numerous deep culverts and larger fills on steep terrain with many stream crossings. These roads often have small bogs or seeps that may threaten fill-slope stability. Practices to obliterate these roads typically include all practices described for level 1 and 2 obliteration plus: (1) removal of all deep culverts and associated fills; (2) fill removal and slope restoration to near original contours as possible on slopes at risk.
- Level 4 Obliteration: Conditions along these roads vary widely. They may occur on extremely steep terrain with numerous, deep culverts. They may also occur within degraded riparian habitats within 300 feet of fish bearing streams. These roads represent direct and often chronic risk of degrading fish habitat and water quality. These roads are obliterated by completely removing the fill and restoring slopes to as near natural contours as feasible.

OBJECTIVE 2

Objective 2 and the related tasks, as stated in section four of the proposal, will be performed in order to implement adaptive management to road obliteration practices, which will improve overall success. This will be accomplished by completing two tasks that include, re-visiting pervious year's obliteration sites and working with the CNF on an existing M&E program.

Re-visiting previous years work will allow inspectors and erosion control crews to see how their work has responded after one year. Then, changes can be made in road obliteration practices to improve overall quality of work.

Work will be done in coordination with CNF on an M&E program that was established in 1998 on road obliteration over the entire CNF. This program consists of monitoring and evaluating 5% of all road obliteration that has taken place on the Forest. One-fourth mile monitoring segments are set up in a variety of areas with different characteristics, concentrating on the most difficult road obliteration sites. In each segment, 1-2 stream-grade channels and 3-4 cross-drain channels are monitored. Information collected in SGC's include, cross-sections and pebble counts. Additional information gathered on each segment includes vegetative growth, erosion control blanket installation, photo points, and any mass failures encountered. The M&E will occur at a minimum of two years and a maximum of five years or until it is determined that no other significant changes will occur.

Each of the tasks in this objective will enable road obliteration crews to increase their knowledge and improve road obliteration techniques and practices used to advance overall success.

OBJECTIVE 3

Objective 3 and the related tasks, as stated in section four of this proposal, is a M&E program that will measure road obliteration success over time. The cleaning and flushing of excess sediment loads through streams and tributaries is a long-term process with many variables, and for this reason, this program is going to be long-term. In 1999, the development of this project will begin and continue into 2000 and beyond. The project will begin by determining what data is available, what is needed, and establish a protocol. In 2000, data gathering will continue and an analysis will begin.

OBJECTIVE 4

Objective four and the related tasks will be performed to relay project progress and information to obligatory and interested organizations or parties. Quarterly and end of the year reports will be made available as they become due and completed using the format provided by BPA. Project presentations will be performed to peers and the public, as they become necessary.

g. Facilities and equipment

Activities for this project will be based out of the Fisheries/Watershed Program of the Nez Perce Tribe. The program is equipped with computers and all necessary equipment to perform all in-house tasks. Vehicles for the program are leased through GSA. Four vehicles will be provided for hauling equipment and employees. The program currently owns a four-wheeler and is in the process of purchasing a six-wheeler, which will be made available for this project. The program also has hard hats, field vest available, etc., with only a few smaller items will be purchased with this proposal to include; gloves, 2 field vest, ATV ramp, 2 seeders, camera film, and 2 string boxes.

h. Budget

The *Protecting and restoring the Squaw to Papoose Creeks Watersheds Project* has been increased in project size and budget (approximately \$110,000 greater) from 1999 to year 2000. In order to obliterate roads, a road survey inventory must be completed on proposed roads. For this reason, 40 miles of road survey inventory has been added to this project for 2000. A more aggressive approach on two monitoring and evaluation (M&E) programs has also been included to this project proposal for 2000. These programs are needed to apply adaptive management and improve techniques and procedures for an increase in overall success, and a program to measure road obliteration success over time. An explanation of each budget section is given below for the 2000-year budget.

PERSONNEL: Salaries have been calculated using the pay schedule for the Nez Perce Tribe, and are based on estimated time frames to complete the proposed work per objective. The road survey inventory crew will consist of three employees, the project leader, a technician II, and a technician I. From past experience, it is expected for this crew to need five weeks to complete this work. The road obliteration crew will consist of six employees to include; project leader (inspector), technician III (inspector), 2 technician II (erosion control), 2 technician I (erosion control), and 2 aides (erosion control). It has been estimated to take 12 weeks to complete the proposed road obliteration work. The project leader, and the technician III will primarily complete all consulting with the Clearwater National Forest (CNF), objective 2, 3, and 4.

FRINGE BENEFITS: Fringe benefits are calculated using the Nez Perce Tribal standards. Fringe benefits equal 14% of tax-exempt employees (tribal) and 24 % of non-tax exempt employees (non-tribal).

SUPPLIES, MATERIALS, NON-EXPENDABLE PROPERTY: All costs are estimated on the amount of proposed work and past experience on what will be need to complete the job. Most of the field supplies, and the program already owns materials. This category included all in-house and field needs to include; office supplies (paper, pens, etc.), gloves, 2 field vests, 2 seeders, 2 string boxes, ATV ramp, and film.

TRAVEL: The project area is approximately 170 miles from the main office in Lapwai, ID. This section covers lodging costs and field per diem for all training and on-the-ground work.

INDIRECT COSTS: Indirect costs are based on Nez Perce Tribal standards. This cost equals 22.9% of personnel, travel, vehicles, and supplies and materials.

SUBCONTRACTOR: This section includes the cost for excavator rental/operator and erosion control supplies. Excavator/operator costs are based on current going rates (with a small inflation increase) and the amount of time it is expected to complete the proposed miles in the given terrain and level of obliteration. Erosion control supplies are based per mile to include mainly; erosion control blankets, seed, fertilizer, and staples.

OTHER (VEHICLE COSTS): This cost includes four vehicles to be leased from GSA and estimated costs for vehicle and ATV's repairs and service. Four vehicles will be needed to transport employees, ATV's, supplies, and materials.

Section 9. Key personnel

Emmit E. Taylor Jr.
Civil Engineer-In-Training
Nez Perce Tribal Watershed Program
1.0 FTE

Education: 1995 – BS in Civil Engineering – Colorado State University, CO

Current Responsibilities: Assist in gathering, analyzing, and interpreting watershed data; represent program in various inter-disciplinary teams; assist in surveying project areas; aide in assessing water resources/quality; knowledge of current computer software programs; design of civil engineering projects; supervise and field inspection of road obliteration; co-coordinate program projects.

Relevant Training:

- Riparian Proper Functioning Condition Training, 1998, Bureau of Land Mgmt.
- Road Obliteration Training, 1998, USDA Forest Service
- Applied Fluvial Geomorphology, 1998, Wildland Hydrology
- AutoCAD R14 Fundamentals, 1998, PacifiCAD Inc.

Duties on Project: Mr. Taylor will be the project leader for all activities of this proposal. As project leader, he will manage all road survey and road obliteration on-the-ground activities. He will be responsible for coordinating time schedules, project budget, crew members, and all activities with the Clearwater National Forest (CNF). Mr. Taylor will be a road obliteration inspector on the project and oversee all erosion control work. His duties will also include working with the CNF on two monitoring and evaluation programs and project information dissemination (quarterly reports, end of the year reports, presentations, etc.)

Previous Employment:

- August 1997 – present: *Nez Perce Tribal Fisheries/Watershed*
Civil Engineer-In-Training
- October 1995 – August 1997: *Womer and Associates Engineering and*
Architecture Firm
Civil Engineer-In-Training
- May 1993 – October 1995: *Colorado State University Tribal*
Tribal Transportation Program
Engineering Aide

Expertise: Emmit E. Taylor Jr.'s background is in Civil Engineering with an emphasis in hydrology. Mr. Taylor's analysis, design, and construction work concentrates on stream rehabilitation, stream morphology, water quality, road obliteration, in-stream structures, and fish passage improvements.

Relevant Job Completions:

1) Project leader and inspector of 24 miles of road obliteration, 2) Eldorado Falls Area Survey, 3) Squaw Creek Stream Survey and Analysis, 4) Colville Confederated Tribes HRD Building Site Development Design, and 5) Geiger Boulevard Environmental Analysis.

Ira Jones

**Clearwater Subbasin Focus Coordinator
Habitat/Watershed Manager**

1.0 FTE

Education: University of Montana, Missoula, MT

Major: Wildlife

Attendance: September 1973- June 1974

Current Responsibilities: Planning and implementation of Early Action Watershed Projects, analyze programs, laws, policies related to watershed management, facilitate development of criteria to identify critical fisheries habitat, develop a system to apply criteria to watershed for project development and administration, prepare and plan documents for watershed habitat coordination, provide educational presentation and workshops for watershed management and proposal development, and provide assistance to project proponents with proposal development, implementation, monitoring and assessment.

Duties on Project: Mr. Jones will facilitate all activities with the Clearwater National Forest on the Challenge Cost-Share Agreement, which includes analyzing the laws and policies. Mr. Jones will oversee all project tasks for completion and quality of work.

Previous Employment:

- March 1997 – present: *Nez Perce Tribal Fisheries/Watershed
Habitat/Watershed Manager*
- June 1986 – March 1997: *United States Forest Service, Region 1
Tribal Government Program Manager*
- December 1980 – June 1986: *United States Forest Service, Region 1
Facilities Manager*
- July 1974- October 1979: *United States Forest Service, Region 1
Fire Cache Work Leader*

Relevant Job Completion:

- 1) Coordinated National, Multi-Regional, and Regional Civil Rights Conferences,
 - 2) Facilitated treaty rights workshops with host tribes and multi-governmental agencies,
 - 3) Organized and conducted Tribal Relations Training primarily for management level from the U.S. Forest Service, Tribes, Bureau of Land Management, and bureau of Indian Affairs,
 - 4) Introduced, implemented, and managed the Inter-tribal Youth Practicums for career in natural resources and leadership within the Forest Service Regions 1, 5, 9, and 10.
 - 5) Developed an intergovernmental Personnel Act (IPA) position to work with the Salish Kootenai College to teach environmental science courses and develop a four-year natural science curriculum at the college. This three-year position and the program developed into a four-year accredited degree program in the fall of 1996.
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Felix M. McGowan

Nez Perce Tribal Watershed Coordinator

1.0 FTE

Education: 1994 – BA in Biology – Gonzaga University Spokane, WA

Current Responsibilities: Coordinate all activities within the Nez Perce Fisheries, wildlife, water resources, and cultural resources. These activities are to include habitat, research, and production as it relates to watershed management, coordinate with cooperating agencies, work with interdisciplinary teams, inventory and evaluate habitat conditions, and coordinate riparian protection and restoration efforts.

Relevant Training:

- Riparian Proper Functioning Condition Training, 1998, Bureau of Land Mgmt.
- Integrated Ecosystem Watershed Management Workshop, 1998, OSU
- Road Obliteration Training, 1998, USDA Forest Service
- Introduction to GIS with ArcView 3.0a. 1998, BIA
- Applied Fluvial Geomorphology, 1998, Wildland Hydrology
- Coldwater Fish Culture, 1998, U.S. Fish & Wildlife Service

Duties on Project: Mr. McGowan will be an inspector in this project. This will include inspecting and supervising an excavator/operator, managing and inspecting an erosion control crew, and determining on-the-ground level of obliteration. Mr. McGowan will also assist the project leader (Emmit E. Taylor Jr.) in project reports, presentations, and coordination between the Clearwater National Forest (CNF).

Previous Employment:

- May 1997 – present: *Nez Perce Tribal Fisheries/Watershed*
Nez Perce Watershed Coordinator
- August 1994 – April 1997: *North Idaho College*
Multicultural Academic Advisor

Expertise:

- Felix has a broad educational base in the natural sciences that allows an understanding of different natural processes. The training he has received over the past year has greatly increased his understanding in fisheries and hydrological sciences. These are two of the most important sciences involved in watershed work.

Relevant Job Completions:

- 1) Squaw Creek Stream Survey,
- 2) Squaw Creek Road Obliteration,
- 3) Lapwai Creek Watershed Assessment,
- 4) Johnson Creek Restoration Review,
- 5) Big Canyon Creek Watershed Assessment.

Section 10. Information/technology transfer

Quarterly reports will be assembled stating, but not limited to, project status, time lines, dollars spent, and problems that need to be addressed during the coming quarter. The end of the year report will compile all data from the quarterly reports determining accomplishments achieved during the previous work season and what information, both negative and positive, can be applied to the upcoming season. Both quarterly and end of the year reports will be formatted by BPA standards. These reports will be made available to all obligatory and interested organization and parties. Presentations will also be performed to the public and project peers.

The forest service has a required obligation to provide research, transfer of technology, and technical assistance to Indian tribal governments (USDA, 1997). This obligation by the forest service will be used by the *Nez Perce Tribal Fisheries/Watershed Program* to aide in accomplishing the goals and objectives of our Program, NPPC Fish and Wildlife Program, and Spirit of the Salmon Anadromous Fish Restoration Plan of the Tribes. A relationship with the Clearwater National Forest has been established and has had a very positive impact on both organizations and is expected to continue in the future. This relationship has

lead to several agreements, both verbal and written, for the completion of numerous projects within the Clearwater Sub-basin.

A verbal agreement (to be included in a memorandum of understanding at a later date) has been made with the Clearwater National Forest to assist Emmitt E. Taylor Jr. (Civil Engr., EIT) in obtaining his professional engineering license. The forest service engineers will oversee Mr. Taylor's designs and the implementation of these designs. During the next 3 years he will seek qualifications to take the State of Idaho Professional Engineer License Exam.

Congratulations!