FY 2001 High Priority Project Recommendations

Addendum:

Response to the ISRP Comments

Prepared for the
Northwest Power Planning Council

by the
Columbia Basin Fish and Wildlife Authority

February 15, 2001

Response to the ISRP Comments
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Introduction

On February 1, 2001 Columbia Basin Fish & Wildlife Authority (CBFWA) provided recommendations to the Northwest Power Planning Council (NWPPC) regarding the High Priority project proposals. The responses in this addendum are provided in support of the CBFWA's recommendations.

The project sponsors were asked to provide responses to the ISRP comments regarding their proposals. These responses were reviewed and modified by the CBFWA staff. The original responses are on file at the CBFWA office in Portland, Oregon. The project sponsors may submit their responses individually through the NWPPC's public comment process.

Final CBFWA High Priority Project Recommendation Categories

The final CBFWA's recommendations are reflected in Table A. Projects were assigned to one of three funding priorities; however, projects were not prioritized within budget categories. The placement of a proposal relative to others in a budget category does not suggest the project is more or less important than any of the other projects in the category. The three categories are described below.

In addition to reviewing these projects based on the solicitation criteria, the NMFS and USFWS provided a review and summary of projects that are needed or required for the action agencies to meet the recent biological opinions. These projects have been identified with a "BiOp" designation in the Funding Category column of Table A.

High Priority "A"
The CBFWA identified 46 projects that meet the solicitation criteria and totaled $45 million. The projects were generally land and water acquisitions and habitat improvement projects. The CBFWA supports funding these projects in an expedited manner.

High Priority "B"
A total of 42 projects did not meet the solicitation criteria; however, they are considered High Priority projects by the CBFWA and total nearly $45 million. These projects address the transition needs identified by the NWPPC and supported by the CBFWA including subbasin assessment and planning; research, monitoring and evaluation; needs identified in the biological opinions; and other projects that should be funded outside of the Rolling Provincial Review and in an expedited manner. Table A assigns each HP-"B" proposal to one of the other Council transition needs in the Other Notes column listed below:

- "S" = Subbasin Planning and Assessment
- "H" = Habitat Acquisition (Land, Water, Easement)
- "M" = Monitoring, Evaluation and Research
- "RW" = Resident Fish and Wildlife
- "P" = High Priority for timeliness, needs to be done this year.
- "W" = Wait for provincial review

If the NWPPC is not going to solicit projects for these other categories of transition needs, these HP"B" projects should be funded immediately.

Not High Priority
Seven projects were generally not considered urgent and it was felt that the Rolling Provincial Review should determine their funding priority. These projects are generally habitat restoration efforts that will take a long time to implement or demonstrate results. These projects suit the Rolling Provincial Review process in that the habitat these projects will protect or restore needs to be prioritized in relation to the rest of the subbasin.

ISRP High Priority Project Recommendation Categories

The Independent Scientific Review Panel (ISRP) provided their recommendations for "High Priority" projects in a document titled "Review of Fiscal Year 2001 High Priority Proposals for the Columbia River Basin Fish and Wildlife Program" (ISRP 2001-1). In developing its recommendations, the ISRP considered the overall quality of the proposal as well as the extent to which the proposal met the three high priority tiers. Proposal recommendations fell into the five categories listed below (see Table A). These categories reflect the degree of ISRP confidence that the proposal will meet its objective to benefit ESA-listed species. In general, projects that proposed to directly address passage issues, restore or acquire quality habitat, and increase and protect instream flows matched the high priority criteria the best; proposals to conduct assessments or feasibility studies did meet the criteria. The recommendation categories do not take into account the relative cost and benefits of each proposal (e.g. cfs per dollar spent), but such cost considerations could elevate funding of a Category B proposal above a Category A proposal.

Category A Proposals - Full Recommendation
These eleven proposals were judged to clearly address imminent risks to an ESA listed or threatened species by providing direct on-the-ground benefits and meeting a majority of the other criteria, including cost sharing and collaboration with other projects and entities. These proposals were generally well written, providing strong biological justification for the proposed actions and provisions for future monitoring and evaluation. They targeted clearly demonstrated high priority habitats or problems. Most were on par with the highest quality proposals seen in previous ISRP annual and provincial reviews. Under the normal provincial review process, the ISRP would not have requested a response from the project proponents.

Category B Proposals - Good Faith Recommendation
These nineteen proposals were judged to meet the threshold criteria and likely to offer important benefits to ESA listed or threatened species. However, many of the proposals failed to provide adequate detail for technical review on issues such as biological justification, stock status, priority of projects within a watershed, or quantification of instream water protection. In spite of these deficiencies, the reviewers had some confidence that the proposals would yield important benefits to fish and wildlife. Under a response review, proponents would have needed to clarify points of uncertainty.

Category C Proposals
These ten proposals were judged to meet the threshold criteria but the extent of benefits to ESA listed or threatened species was not adequately described and justified. In general, these were proposals for activities that benefit fish, but the proposals were not placed in a subbasin context, lacked details on the location of activities, and were generally too brief for adequate technical review. Under a response review, the proposals would have needed substantial revision to address reviewers' concerns.

Category D Proposals
These eight proposals meet many of the Council's criteria, but overall were inadequate and are not recommended for funding consideration.

Did Not Meet Threshold Criteria
Forty-eight proposals did not meet the threshold criteria for a variety of reasons. Foremost, they did not offer direct on-the-ground benefits with one-time funding. Many of these projects proposed assessment or planning activities that would require subsequent or continued funding to achieve on-the-ground benefits.

Response to the ISRP Comments

Upon reception of the ISRP's comments on February 2, 2001, the CBFWA disseminated the comments to all project proposal sponsors with a request for materials supporting CBFWA's recommendations. The project proposal sponsors have provided the following responses to the ISRP's technical comments regarding their proposals. The

project proposals for which sponsors provided responses to the ISRP comments are bolded in Table A. Additional responses will be provided through the NWPPC's public comment process.

Table A: FY 2001 High Priority Recommendations

Project ID#	Title	Sponsor	Subbasin	CBFWA Budget Category	Other Notes	Task Cost	ISRP Rating
23001	Protect Bear Valley Wild Salmon, Steelhead, Bull Trout Spawning and Rearing Habitat	SBT & IDFG	Salmon	HP "A"	BiOp	$320,000	A
23015	Protect Salmon River Breaks Wild Salmon, Steelhead, Bull Trout Spawning and Rearing Habitat	Valley Sun L.L.C.	Salmon	HP "A"		$47,000	A
23032	**Return Spawning/Rearing Habitat to Anadromous/Resident Fish within the Squaw Creek to Papoose Creek Analysis Area Watersheds**	**NPTFWP**	**Clearwater**	**HP "A"**		**$420,000**	**A**
23045	Gourley Creek Dam Fish Ladder	City of Scappoose		HP "A"	BiOp	$200,119	A
23053	Wagner Ranch Acquisition	CTWSRO	John Day	HP "A"	BiOp	$2,658,774	A
23054	**Forrest Ranch Acquisition**	**CTWSRO**	**John Day**	**HP "A"**	**BiOp**	**$4,184,185**	**A**
23055	Acquire Prime Salmonid Spawning and Rearing Habitat on Entiat River	CDLT	Entiat	HP "A"	BiOp	$1,411,320	A
23073	**Purchase Perpetual Conservation Easement on Holliday Ranch and Crown Ranch Riparian Corridors and Uplands**	**ODFW**	**John Day**	**HP "A"**	**BiOp**	**$481,800**	**A**
23088	Renovate Selway Falls Anadromous Fish Passage Tunnel	IDFG	Clearwater	HP "A"		$308,938	A
23094	Acquire 27,000 Camp Creek Ranch at Zumwalt Prairie	TNC	Imnaha	HP "A"	BiOp	$2,000,000	A
23012	**Arrowleaf/Methow River Conservation Project**	**TPL, WDFW**	**Methow**	**HP "A"**		**$3,750,000**	**B**
23013	**Locate, Mark, and Removal of Lost "Ghost" Fishing Nets in Selected Columbia River Reservoirs: A Feasibility Study**	**CRITFC**	**Mainstem**	**HP "A"**		**$86,109**	**B**
23018	Crawford Vegetative Management Road Decommission	USFS	John Day	HP "A"		$98,000	B
23019	Trout Creek Culvert Replacement	USFS	Deschutes	HP "A"		$128,000	B
23021	**Restoring Bull Trout Habitat In The Blackfoot River's North Fork**	**TU**	**Blackfoot**	**HP "A"**	**BiOp**	**$750,300**	**B**
23024	**Hancock Springs Passage and Habitat Restoration Improvements**	**YN**	**Methow**	**HP "A"**	**BiOp**	**$49,941**	**B**
23026	**Klickitat Basin Key Habitat Acquisition**	**YN**	**Klickitat**	**HP "A"**		**$3,000,000**	**B**
23027	**Methow Basin Floodplain and Riparian Land Acquisitions**	**YN**	**Methow**	**HP "A"**		**$2,332,150**	**B**

Project ID#	Title	Sponsor	Subbasin	CBFWA Budget Category	Other Notes	Task Cost	ISRP Rating
23028	Increase Naches River In-stream Flows By Purchasing Wapatox Water Right	YN	Yakima	HP "A"		$4,000,000	B
23035	Buckskin Slough Restoration	WDFW	Yakima	HP "A"		$13,200	B
23036	Evaluate live capture selective harvesting methods for commercial fisheries on the Columbia River	WDFW, ODFW	Mainstem Columbia	HP "A"	BiOp	$384,285	B
23040	**Re-introduction of Lower Columbia River Chum Salmon into Duncan Creek**	**PSMFC, WDFW**	**Mainstem Columbia**	**HP "A"**	**BiOp**	**$420,796**	**B**
23044	Naches River Water Treatment Plant Intake Screening Project.	City of Yakima	Yakima	HP "A"		$1,657,500	B
23046	Increase In Stream Flows to De-watered Stream Reaches in the Walla Walla Basin	WWCCD	Walla Walla	HP "A"	BiOp	$590,000	B
23047	Acquire Tucannon River Water Rights	WWT	Tucannon	HP "A"		$120,000	B
23052	Acquire and Enhance Lower Big and Little Creeks, Columbia River Estuarine Floodplain, Clatsop County, Oregon.	NCLC	Mainstem Columbia	HP "A"	BiOp	$528,500	B
23084	**Acquisition of Lower Desolation Creek, John Day Basin**	**CTUIR**	**John Day**	**HP "A"**		**$4,987,754**	**B**
23091	Protect East Fork Salmon River chinook salmon, steelhead, and bull trout habitat	SBT	Salmon	HP "A"	BiOp	$1,030,000	B
23006	Walla Walla River Flow Recruitment - Eastside Ditch Piping	WWBWC	Walla Walla	HP "A"		$189,000	C
23007	**Conservation Easement, Baker Ranch, Salmon River East Fork**	**IOSC**	**Salmon**	**HP "A"**	**BiOp**	**$1,415,000**	**C**
23023	Stormy Creek High Priority Culvert Replacement	YN	Entiat	HP "A"		$122,800	C
23031	**Protect John's Creek Watershed**	**NPTFWP**	**Clearwater**	**HP "A"**		**$73,878**	**C**
23033	Big Creek Passage and Screening	WDFW	Yakima	HP "A"	BiOp	$187,000	C
23039	Upper Yakima River Acquisitions	WDFW	Yakima	HP "A"	BiOp	$1,936,000	C
23048	Install Fish Screens to Protect ESA-listed Steelhead and Bull Trout in the Walla Walla Basin	WWCCD	Walla Walla	HP "A"	BiOp	$461,700	C
23056	**Farmers Irrigation District Mainstem Hood River Fish Screen Project**	**CTWSRO**	**Hood**	**HP "A"**	**BiOp**	**$500,000**	**C**
23029	Decommission ten miles of roads in the Wind River Subbasin	YN	Wind	HP "A"		$104,000	D
23061	**Securing Wildlife Mitigation Sites – Oregon**	**OWC**		**HP "A"**		**$1,500,000**	**D**
23062	**Construct approved fish screening systems on unscreened irrigation diversions.**	**ODFW**	**Mainstem Snake**	**HP "A"**	**BiOp**	**$71,142**	**D**

Project ID#	Title	Sponsor	Subbasin	CBFWA Budget Category	Other Notes	Task Cost	ISRP Rating
23017	**Assess Surface-Water Flow And Feasibility of Enhancing White Sturgeon Spawning Substrate Habitat, Kootenai R., Idaho**	**KTOI, USGS**	**Kootenai**	**HP "A"**	**BiOp**	**$535,000**	**NA**
23050	**Establishing a Regional Salmonid Germplasm Repository for Populations Listed under the Endangered Species Act**	**NPT / UI**	**System wide**	**HP "A"**	**BiOp**	**$1,235,275**	**NA**
23071	**Calapooia River Flow Acquisition and Fish Passage Assessment**	**ODFW**	**Willamette**	**HP "A"**		**$55,015**	**NA**
23082	**Protect Fish Habitat Through Education and Enforcement**	**CRITFC**	**System wide**	**HP "A"**		**$303,575**	**NA**
23002	Ames Creek Restoration	USFS	Willamette	HP "A"		$170,000	A
23020	Badger Creek Culvert Replacement and Road Closure Projects	USFS	Deschutes	HP "A"		$87,000	B
23030	Initiate wetland and wet prairie restoration and restore historic stream function, Bessett Property, Willamette Valley, Oregon.	NHI	Willamette	HP "A"		$112,630	C
23022	Chumstick Culvert Replacement and Habitat Enhancement 2001	YN	Wenatchee	HP "B"	W	$270,825	C
23008	Improve Stream Habitat by Reducing Discharge from Animal Feeding Operations in Salmon and Clearwater Basins	IOSC	Clearwater/Salmon	HP "B"	W	$3,366,000	D
23064	Hood River-Punch Bowl Falls Fishway-Replacement of Access Stairway	ODFW	Hood	HP "B"	W	$136,750	D
23003	Experimental Selective Fishery Techniques Development, Evaluation, and Coordination	NMFS-SFD	System wide	HP "B"	W	$400,000	NA
23004	Support for the Development and Certification (FDA approval) of Effective Drugs and Anesthesia for Fish	USFWS, Bozeman NIO	System wide	HP "B"	BiOp P	$240,000	NA
23005	Develop an Anadromous Salmonid Habitat Carrying Capacity Model	University of Idaho	Middle Snake	HP "B"	S	$375,895	NA
23014	Distribution and seasonal habitat use of ESA-listed salmonid species in City of Portland tributary streams	City of Portland	Willamette	HP "B"	S	$54,792	NA
23016	Reconnection of floodplain slough habitat to the Kootenai River	KTOI	Kootenai	HP "B"	S	$139,974	NA
23025	Restore anadromous fish passage at Hemlock Dam on Trout Creek, tributary to Wind River	YN	Wind	HP "B"	S	$220,763	NA
23034	Reproductive Success Of Naturally Spawning Wild and Hatchery-origin	WDFW	Yakima	HP "B"	BiOp W	$260,674	NA

Project ID#	Title	Sponsor	Subbasin	CBFWA Budget Category	Other Notes	Task Cost	ISRP Rating
	Spring Chinook						
23037	Assessment of bull trout populations in the Columbia Basin (excluding the Columbia Gorge), WA.	WDFW	System wide	HP "B"	S	$809,279	NA
23038	Yakima Basin Inventory and Assessment (SSHIAP), and Study and Model Integration	WDFW	Yakima	HP "B"	S	$194,000	NA
23042	Forest and Fish - Road Inventory	WDFW	System wide	HP "B"	S	$256,080	NA
23043	Columbia Basin Fish Passage and Screening Inventory; WDFW Lands and Kittitas County	WDFW		HP "B"	S	$182,040	NA
23049	**Benefit/Risk Analysis to Promote Long-Term Persistence of Chinook Salmon in the Middle Fork Salmon River**	**NPT**	**Salmon**	**HP "B"**	**S**	**$108,236**	**NA**
23051	**Assessment and Implementation of Technologies to Monitor Adult Spring and Summer Chinook Salmon Abundance in Snake River Basin Tributary Streams**	**NPT**	**Salmon**	**HP "B"**	**S**	**$516,678**	**NA**
23057	Enhance Instream Flows and Fish Habitat for 2001 Irrigation Season	OWT	System wide	HP "B"	S	$51,000	NA
23058	Acquire BAIC Tract: Wildlife Mitigation Site - Horn Butte Area, Oregon	TNC, ODFW	Umatilla	HP "B"	R	$5,669,617	NA
23059	Prevention and Control of Agricultural Water Pollution in the Columbia Basin of Oregon	ODA	System wide	HP "B"	S	$5,341,000	NA
23060	Assess Stream Quality for Salmonid Recovery	DEQ		HP "B"	M	$369,816	NA
23063	Bull Trout Population Assessment	ODFW		HP "B"	S	$191,739	NA
23065	Develop System to Acquire Additional In-stream Flow Through Market Based Incentives	ODFW	System wide	HP "B"	S	$310,442	NA
23066	Fish Distribution Data Development for Cutthroat Trout and Non-anadromous areas	ODFW	System wide	HP "B"	S	$200,579	NA
23067	Compile and Digitize Oregon's Fish Screen and Culvert Data	ODFW	Deschutes	HP "B"	S	$28,848	NA
23068	Fish Presence Survey & Georeference Data Entry	ODFW	Deschutes	HP "B"	S	$37,717	NA
23069	Apply for Additional In-stream Water Rights	ODFW	System wide	HP "B"	H	$65,442	NA
23070	Web Based System for Interactive Mapping, GIS Data, Metadata and Map Distribution	ODFW	System wide	HP "B"	S	$63,640	NA
23072	Fifteenmile Creek Adult Trapping Facility	ODFW	Fifteenmile	HP "B"	M	$572,648	NA
23074	Lower Columbia River and Estuary Habitat Assessment and Mapping Project	LCREP	Mainstem Columbia	HP "B"	S	$256,500	NA

Project ID#	Title	Sponsor	Subbasin	CBFWA Budget Category	Other Notes	Task Cost	ISRP Rating
23075	Life history strategies in Oncorhynchus mykiss: interactions between anadromous and resident forms.	ODFW	Grande Ronde	HP "B"	M	$209,925	NA
23076	Complete Watershed Assessments in the Columbia Plateau	OWEB	System wide	HP "B"	S	$1,602,836	NA
23077	Evaluation, Prioritization and Resolution of Fish Passage Impediments	OWEB		HP "B"	S	$11,000,000	NA
23078	Walla Walla Basin Flow Restoration Project	OWRD	Walla Walla	HP "B"	M	$951,254	NA
23079	Implement Anadromous and Resident Salmonid Population and Habitat Monitoring in the Oregon Portion of the Columbia River Basin	ODFW	System wide	HP "B"	M	$2,291,923	NA
23080	Hydrographic Record Update Project	OWRD	System wide	HP "B"	S	$1,119,719	NA
23081	Water Right Acquisition Support Project	OWRD	System wide	HP "B"		$423,576	NA
23083	Rear and Release 1.0 million spring chinook at Ringold Springs Hatchery	CRITFC	System wide	HP "B"	P	$235,584	NA
23085	Columbia Basin, Native American Fish Tissue Contaminant Study: Ecological Analysis Section	YN		HP "B"	M	$125,750	NA
23087	**Collaborative Center for Applied Fish Science**	**CRITFC**	**System wide**	**HP "B"**	**P**	**$4,216,852**	**NA**
23089	Purchase of Tanker Trucks and River Racks/Wiers	CRITFC	System wide	HP "B"	P	$533,367	NA
23095	Aerial Photography and Digital Mapping of the floodplain of the Willamette River	DOGAMI	Willamette	HP "B"	S	$1,047,655	NA
23096	Assessment of Riparian Condition Through Spectrometric Imaging of Riparian Vegetation	ODEQ		HP "B"	S	$240,000	NA
23009	Reconnect Falls Creek to the Main-stem Pahsimeroi River	IOSC	Salmon	Not HP		$830,000	D
23010	Restoration of Anadromous Fish Access to Hawley Creek	IOSC	Salmon	Not HP		$2,159,000	D
23011	Reconnect Little Morgan Creek to the Main-stem Pahsimeroi River	IOSC	Salmon	Not HP		$1,100,000	D
23041	Restoration of ecosystem nutrient levels in the Columbia Basin	WDFW	System wide	Not HP		$57,428	NA
23086	Support for CRITFC participation in Willamette-Lower Columbia restoration activities.	CRITFC	Willamette	Not HP		$122,289	NA
23090	Farm to Fish	SBT	Salmon	Not HP		$88,000	NA

Project ID#	Title	Sponsor	Subbasin	CBFWA Budget Category	Other Notes	Task Cost	ISRP Rating
23093	Evaluate the Feasibility of Modifying the Selah Moxee Irrigation Canal to Increase Water Available for Fish by 15,000 Acre Feet	Selah Moxee Irrigation District	Yakima	Not HP		$99,607	NA
23092	Genetic relationship of steelhead in North East Oregon	ODFW	Grande Ronde	Withdrawn		$266,930	NA

	Budget Category:					**Task Cost**	
	HP "A" = meets solicitation criteria and is considered high priority by CBFWA members					$45,017,686	
	HP "B" = does not fit solicitation criteria but is needed for emergency or long term actions					$44,689,415	
	Not HP = does not meet solicitation criteria and/or should be considered in rolling province review					$4,456,324	
	Withdrawn -					$266,930	

Other Notes:
"S" = Subbasin Planning and Assessment
"H" = Habitat Acquisition (Land, Water, Easement)
"M" = Monitoring, Evaluation and Research
"RW" = Resident Fish and Wildlife
"P" = High Priority for timeliness, needs to be done this year.
"W" = Wait for provincial review

Project: 23007 Conservation Easement, Baker Ranch, and Salmon River East Fork

Sponsor: State of Idaho Office of Species Conservation (IOSC)
Subbasin: Salmon
Budget Request: $1,415,000
CBFWA Budget Category: HP “A” – “BiOp”
ISRP Rating: C

Short Description: Protect riparian areas, restore stream banks & save 70 cfs in the E.F. of the Salmon through a 740 acre ranch. Conservation easement will eliminate the use of water from 7 irrigation diversions, saving $647,000 of cost of 7 fish screens and a bridge.

Response: Regarding the issue of saving 70 cfs. Within the confines of current Idaho water laws, there are no assurances that saved water will remain in the stream. Diverters downstream of the proposed conservation easement have historically received sufficient amounts of water to meet their irrigation needs without de-watering the stream. The topographic and geographic nature of the East Fork drainage precludes the consumption of significant amounts of additional water downstream. Therefore, agricultural expansion within the narrow canyon is highly unlikely.

Previous efforts to reduce consumptive use of water from the East Fork have been successful downstream. Two irrigation ditches downstream were eliminated and replaced with a sprinkler system. Change in land ownership is occurring with the acquisition of agricultural property by conservation groups. It is inevitable that Idaho water law will be changed to provide for more stringent control of diversions and establishment of minimum instream flows. This eventual shift in attitude and utilization of lands along the east fork will only serve to guarantee the benefits to be derived from implementation of the East Fork Conservation Easement proposal.

The conservation easement would first be negotiated for "no livestock" within the riparian fence. The general consensus of the Model Watershed technical team was that a zone grazing plan could be implemented without jeopardizing the restoration goal. The grazing plan would be a negotiable item in the agreement should the "no livestock option" threaten any agreement by the landowner.

The proposal assumed a cross-buck wooden rail fence 42 inches in height. This was felt to best accommodate wildlife common to the area while restricting livestock. It also assumes the best longevity for the area. The area is near the Sawtooth National Recreation Area and the cross buck fence would be compatible with the SNRA visual goals.

The cost of the cross-buck fence was estimated using previous experience for the Stanley area. Contractors are not locally available. We estimate the price at $4/f t or $21,000/mile times 5 miles of riparian area ($105,000), plus the zone fences if needed ($45,000), plus one timbered wet area $10,000. Hopefully this is slightly higher than needed.

The landowner would be responsible for maintenance of the fence.

The conservation easement would require the holder to allow access to Idaho Department of Fish and Game for inspection of the property but would not necessarily be open to the public.

The landowner said he would enter into an agreement but there is never any guarantee until the lawyers and other parties agree. An assessment was completed for the riparian portion of the agreement. It would require modification to include the entire ranch. The sponsors intent was that Mr. Baker would take $1 million, the fence would cost less than our projected $160,000 and some demolition would be required to remove some old dikes, headgates and old fish screens that do not meet NMFS criteria.

Project: 23012 Arrowleaf/Methow River Conservation Project

Sponsor: Washington Department of Fish and Wildlife (WDFW) and The Trust for Public Land (TPL)
Subbasin: Methow
Budget Request: $3,750,000
CBFWA Budget Category: HP "A"
ISRP Rating: B

Short Description: The project is an acquisition of the 1020-acre Arrowleaf property on the Methow River-- critical habitat for 9 ESA listed species. If not purchased the property will be subdivided into 70 lots and much of the upland and riparian habitat will be destroyed

Response: The ISRP expressed very strong support for the project, yet it was categorized as a "Category B" proposal. It appears this resulted from an error in interpreting how much the project sponsors are requesting from the Fish and Wildlife Program.

The Arrowleaf project sponsors are requesting $3.75 million for the purchase of conservation easements over approximately 600 acres of the 1,020-acre Arrowleaf property. TPL negotiated the purchase of the property at a total project cost of $17,055,000, which is the amount erroneously stated as being requested from the Fish and Wildlife Program. To the contrary, a Fish and Wildlife Program ("FWP") appropriation of $3.75 million to this project will be leveraged against an innovative combination of private and other public funding sources to complete the project. This cost-sharing arrangement is of the type looked upon with approval by the ISRP in its review of the Camp Creek Ranch project, a Category A proposal. That, at a perceived cost to the FWP of $17 million, the ISRP stated that the Council "should look at the cost of this purchase relative to other purchases" is the only negative comment made by the ISRP strongly indicates that this project should properly have been a Category A proposal.

Thus, the ISRP comment that the cost of the project to the FWP is excessive should be disregarded. Instead, focus should be placed on the ISRP's other comments. The ISRP unanimously supported the project. The Arrowleaf property is "clearly desirable." This project presents "an important opportunity that should be seized upon by the Council and BPA." The property has "many wildlife and habitat features that approximate pristine condition."

The Trust for Public Land will submit additional comments directly to the Council within the designated comment period.

Project: 23013 Locate, Mark, and Removal of Lost "Ghost" Fishing Nets in Selected Columbia River Reservoirs: A Feasibility Study

Sponsor: Columbia River Inter-Tribal Fish Commission (CRITFC)
Subbasin: Mainstem
Budget Request: $86,109
CBFWA Budget Category: HP "A"
ISRP Rating: B

Short Description: Every fishing season, gillnets used by treaty Indian commercial fishers are sometimes lost and unrecoverable. The number present in Zone 6 is unknown, but is likely in the hundreds, all with the potential to catch listed salmon species.

ISRP Comment: How many nets are reported lost each year? Is this really a problem?

Response: In Zone 6 (the Columbia River from Bonneville Dam to McNary Dam), tribal commercial and subsistence fisheries use both surface and bottom set gillnets to harvest anadromous salmonids, white sturgeon, walleye, carp, and shad during specific fishing seasons. These seasons are primarily in the late winter and early spring and in the late summer and early fall. During the course of these fisheries, gillnets can be lost for a variety of reasons. The most common problem is the accidental and sometimes intentional loss (i.e. vandalism) of marker

floats that note the location of each net. Nets can also be snagged by industrial shipping and moved considerable distances from their original set location, making prompt retrieval difficult if not impossible.

From 1995-2000, the Columbia River Inter-Tribal Fisheries Enforcement office in Hood River, Oregon recorded a total of 50 diver gillnets as missing or possibly stolen. These nets are still at large. Many nets are reported as missing, but are found later and recovered. There are no records regarding the numbers of fish in the nets at the time of recovery. Records prior to 1995 are incomplete and less detailed.

Equally interesting is the transition of using biodegradable fibers (i.e. cotton) for net webbing to the use of synthetic materials during the 1960's. The obvious concern is the long-term persistence of synthetics versus the biodegradability of natural fibers. In talking with local tribal fishers and net suppliers, it was noted that synthetic (e.g. nylon and monofilament) fiber gillnets have been used in Zone 6 since the late 1960's. Unlike linen or cotton fiber netting, synthetic material is long lasting, even out of the water (Johnson 1989). Given the long life of synthetic materials and the limited loss data from CRITFE, the potential is high for the presence and persistence of many gillnets at large in the Zone 6 management area. Using the data available, if we assume that over a 30-year period (i.e. 1970-2000) an average of 50 nets were lost every 6 years, an estimated 250 nets were lost over the 30 years. In reviewing the lost nets reported to CRITFE, the mean length of each lost net was calculated at 293 feet. If we multiply this mean length with the estimated 250 lost nets over 30 years, we could expect that approximately 13.9 miles of webbing to be present in the Columbia River within the Zone 6 management area.

Additional information was received in 1999, when a Yakama Nation fisheries technician noted the presence of lost nets during sturgeon tagging efforts in Bonneville Pool in 1999. The tagging crew near the mouth of the Klickitat River temporarily lost a gill net. Subsequent recovery efforts were successful at retrieving the lost net, but also yielded two additional nets. These nets, later recovered by CRITFE personnel contained substantial numbers of dead and decaying fish, although no information was collected regarding numbers or species. This illustrates the ongoing risk to listed Columbia Basin salmon species and also to white sturgeon and other resident fish species from the lost gillnets in management Zone 6. Lost nets are definitely a problem, but the magnitude of the problem is undetermined at the present time.

ISRP Comment: Are there requirements to report lost nets?

Response: No and Yes. Tribal fishers are not required to report lost fishing gear, but it is their best interest to do so. Since tribal fishers are required to label their gear with their name or enrollment number, identification is generally known. If they don't report the gear as missing, they could be cited if the gear was found after a seasonal closure or if it drifted into a sanctuary where fishing was prohibited. The reporting rate is not known. The CRITFE has kept records of lost and stolen gillnets since 1993. The analysis focused on just diver gillnets, but scaffold nets and floating gillnets are also lost during fishing activities. The average reported loss rate per year is 8 diver gillnets, with ranges of 6-11 diver gillnets per year. These numbers only represent the minimum number of nets lost, as some lost nets are unreported.

In addition to the previous two questions, ISRP reviewers also had two concerns regarding technical feasibility. These are as follows:

ISRP Comment: What is the detectability of the nets?

Response: It will vary greatly from easy to very difficult. Modern sonar equipment that will be used in the project is quite sophisticated and will be able to "identify" fairly small objects on the river bottom. Personnel at CRITFC are experienced with this equipment and have noted that objects as small as a sturgeon setline with baited hooks is clearly discernable on the river bottom. The setline line is a single 3/8" rope with baited hooks, much smaller and less complex than a gillnet with 4" corks, webbing, and a heavy lead line. Granted, the degree of difficulty will increase with the amount of debris in the mesh and how deeply it may be buried into the riverbed. Recently lost nets will likely be relatively easy to find, whereas the nets that have been at large for a long time maybe completely covered and not accessible to the sonar. The project sponsor intends to deploy a side-scanning sonar to help locate lost nets.

ISRP Comment: What is the feasibility of retrieving the nets?

Response: As with the previous concern, it will likely range from easy to very difficult. Nets that are recently lost and free of large objects such as trees or stumps should be relatively easy to snag and recover. Tribal fishers commonly retrieve recently lost nets with nothing more than a heavy rope and a homemade grappling hook. Nets that have been lost for some time will likely be laden with debris and quite heavy. Others may be wrapped around rocks, sunken trees and navigation markers and will be very difficult to remove. On the water recovery strategies will have to be fluid and adaptable to meet a variety of situations. The project sponsors plan on working with local fishers and law enforcement staff who have some experience with these recoveries, as well as learning some novel methods once the recover portion of the project has been implemented.

References

Johnson, S.W. 1989. Deposition, fate, and characteristics of derelict trawl web on an Alaskan beach. Marine Pollution Bulletin. Vol. 20, No. 4, pp. 164-168.

Project: 23017 Assess Surface-Water Flow and Feasibility of Enhancing White Sturgeon Spawning Substrate Habitat, Kootenai River, Idaho

Sponsor: Kootenai Tribe of Idaho (KTOI) and U.S. Geological Survey (USGS)
Subbasin: Kootenai
Budget Request: $535,000
CBFWA Budget Category: HP "A" - "BiOp"
ISRP Rating: NA

Short Description: Construct real-time surface-water flow model to evaluate the impact of Kootenay Lake levels and pre-Libby Dam and Libby Dam era flows on white sturgeon spawning patterns and construct sediment-transport models to assess feasibility of habitat enhancement

ISRP Comment: This resident fish proposal does not address imminent risks to ESA stocks by offering direct on-the-ground benefits with one-time funding. The proposal focuses on modeling and assessment. This proposal is being reviewed as part of the Mountain Columbia review, which is an appropriate venue for review and potential funding.

Response: The USFWS review rated this as a High Priority project that addressed Reasonable and Prudent Alternative *3i* and *3j* for white sturgeon in the December 20, 2000 USFWS Biological Opinion.

This project does address an imminent risk to an important ESA stock. The imminent threat directly addressed by this proposal is to the ESA listed Kootenai River white sturgeon population, in the form of a persistent lack of natural recruitment on decadal scales; this endangered population has provided only 2 strong year classes during the past 40 years: 1961 and 1974 (USFWS 1994, Duke et al. 1999; USFWS 1999).

The goal of the proposed project is to enhance native Kootenai River white sturgeon spawning habitat in order to assist with recovery of the population. The objectives and products of Phase I of this proposed high priority project will provide the appropriate and valid scientific information to the white sturgeon recovery team's adaptive management decision process for determining whether or not to implement substrate enhancement measures in the spawning reach. The objectives and products of Phase II deal with implementation as well as monitoring and evaluation of the effectiveness of in-stream spawning habitat structures.

NWPPC support for funding this project will begin the long-overdue process of rehabilitating dysfunctional post-development habitat in the Kootenai River and its historic floodplain.

References

Duke, S., P. Anders, G. Ennis, R. Hallock, J. Hammond, S. Ireland, J. Laufle, L. Lockard, B. Marotz, V. Paragamian., and R. Westerhof. 1999. Recovery Plan for Kootenai River white sturgeon (*Acipenser transmontanus)*. Journal of Applied Ichthyology (15):157-163.

USFWS (U.S. Department of Interior, Fish and Wildlife Service). 1994. Determination of endangered status for the Kootenai River white sturgeon population. Federal Register 59(171) 45989.

USFWS (U.S. Department of Interior, Fish and Wildlife Service). 1999. Recovery Plan for the White Sturgeon (*Acipenser transmontanus*): Kootenai River Population. U.S. Fish and Wildlife Service, Portland, Oregon.

Project: 23021 Restoring Bull Trout Habitat in the Blackfoot River's North Fork

Sponsor: Trout Unlimited (TU)
Subbasin: Blackfoot
Budget Request: $750,300
CBFWA Budget Category: HP "A" - "BiOp"
ISRP Rating: B

Short Description: Comprehensive bull trout recovery project aimed at streamflow enhancement, using irrigation efficiency projects and habitat restoration in combination with voluntary water leasing.

Comment: Upon the reviewers' independent inquiry, it appears the water would remain instream for the benefit of fish; however, the response should describe the legal assurances that the water will remain instream for the benefit of fish.

Response: Montana Water law will extend water right protection to instream flows created through the lease and conversion of an existing water right. Leases can be establish for a period of 10 years and renewed for an additional 10-year period. In the instance of leasing conserved or salvaged water the term of the lease may be set at 30 years.

Montana Department of Natural Resources and Conservation, Water Resources Division is the legal entity in Montana having the jurisdiction to approve and evaluate new water rights, water reservation and changes to existing appropriative water rights. This agency reviews and approves all new water rights and all water leases that convert water rights to instream flow.

A DNRC review of the N. F. Blackfoot project proposal indicates that water leasing is a critical component of the applicant's plan. The applicant has proposed a positive action to acquire a protectable interest as allowed under Montana law.

Montana Law has three sections of code that specifically provide for the leasing of private water rights to provide instream flows. These are found in
85-2-436 – 438, MCA [1999], "Water Leasing Study" (Fish, Wildlife and Parks water leasing authority
85-2-439 – 449, MCA [1999] "Upper Clark Fork basin Instream Flow Pilot Program" (a leasing program open to all interests but limited to the watershed above Milltown Dam – Blackfoot and Upper Clark Fork Watersheds)
85-2-408 – 409, MCA [1999] "Temporary Change Authorization of instream flow – Additional Requirements" (A leasing program open to all interests, except Department of Fish, Wildlife and Parks, and statewide in its geographic area of application.)

DNRC is encouraged to see the effort made to enhance instream flows and then to protect those flows developed through water conservation. They are also encouraged to see the water users and other affected interests looking at the shared benefits that can be derived through stream restoration and water conservation in the North Fork of the Blackfoot River.

Montana Fish, Wildlife and Parks presently have over fourteen water leases in place protecting instream flows and providing fishery benefits. In addition, Trout Unlimited has one lease in place and is in the process of negotiating others.

ISRP Comment: Although the proposal seems like a good approach to protect a strong existing population, the response should make a stronger case that bull trout in the North Fork are in jeopardy. What evidence exists to show that spawning and rearing area in tributaries limits the size of this population?

Response: Excluding the Clearwater River, fluvial bull trout currently inhabit 14 sub-basins, and based on historical records, are extirpated from 10 drainages or approximately 110 miles of streams. Fluvial bull trout currently occupy approximately 430 river miles in the drainage, including 120 miles of mainstem river and 310 miles of tributaries. Spawning occurs in groundwater upwelling areas that represent approximately 24 of these 310 stream miles (Pierce et al. 1997). In 1989, only three of the 19 sampled tributaries had densities of bull trout YOY greater than one fish/100' (Peters 1990). The North Fork Blackfoot River (CPUE 5.6/100'), Monture Creek (CPUE 5.6/100') and Copper Creek (CPUE 3.8/100') contained the largest populations of juvenile bull trout in the Blackfoot Basin (Pierce et al. 1998).

MT Fish, Wildlife & Parks in its Blackfoot River Restoration Project: Monitoring and Progress Report, 1997-1998, list three restoration objectives: 1) Eliminate the loss of bull trout and westslope cutthroat trout to irrigation canals. 2) Manage riparian areas to protect habitat for native fish. 3) Improve recruitment of native fish to the Blackfoot River. As stated in the High Priority Proposal, all five irrigation ditches have been screened. In 1998, fish surveys were completed in four of the five irrigation canals downstream of fish screens. No fish were collected in any of these ditch samples. The High Priority Proposal if funded, would help address objectives 2 and 3 listed above.

In MT Fish, Wildlife and Parks "Blackfoot River Fisheries Inventory, Monitoring and Restoration Report 2000" they list restoration objectives for Kleinschmidt Creek (a tributary to Rock Creek and the North Fork) as: reduce whirling disease infection levels, restore stream channel morphology for all life stages of trout, increase recruitment of trout to the Blackfoot River, and restore thermal refugia and rearing areas for North Fork bull trout. This High Priority Proposal if funded may address all of these objectives.

Rock Creek (a tributary to the North Fork) historically supported spawning migrations of bull trout and cutthroat trout, and also was a migration corridor between the North Fork Blackfoot River and the Coopers Lake and upper Dry Creek drainages (Pierce et al. 1997). MT Fish, Wildlife & Parks in its Blackfoot River Restoration Project: Monitoring and Progress Report, 1997-1998, found very low numbers of westslope cutthroat trout and bull trout in Rock Creek. That same report also listed Restoration Objectives for Rock Creek as: 1) Restore Migration corridors for westslope cutthroat and bull trout. 2) Restore natural stream morphology to improve rearing and spawning habitat for all fish using the system. Again, if funded the High Priority Proposal would address these issues.

While the North Fork River Watershed is one of three strong holds for bull trout in the Blackfoot Watershed, bull trout numbers are believed to be a fraction of what they were historically. In fact tributaries to the North Fork such as Rock Creek and Kleinschmidt Creek, bull trout are just barely measurable. We believe instream flow enhancement and habitat restoration projects will provide better access to spawning sites; improve complex habitat for staging bull trout; improve water temperature; and significantly improve juvenile bull trout rearing habitat. Because of these reasons, the North Fork Watershed is our highest priority for restoration work in 2001. We also believe that restoration efforts in the North Fork Watershed will give us the greatest chance for bull trout recovery in the Blackfoot River Watershed.

ISRP Comment: Reviewers need assurances that MDFPW is doing appropriate monitoring; e.g. Page 13, Objective 2. The number of juvenile bull trout also will be influenced by population size. It will be difficult (require extended data series) to separate effects of habitat improvements from effects of population density. What is the monitoring plan? (Specifically related to juvenile bull trout)?

Response: Montana Fish, Wildlife & Parks has documented its inventorying and monitoring activities through a series of reports including:

Peters, D. and R. Spoon 1989. Preliminary Fisheries inventory of the Big Blackfoot River. Montana Fish, Wildlife and Parks (MTFWP)

Peters, D. 1990. Inventory of Fishery resources in the Blackfoot River and Major Tributaries. MTFWP

Pierce, R. 1991. A Stream habitat and Fisheries Analysis for six tributaries from the Blackfoot River. MTFWP

Peters, D. and R. Pierce 1995. Aquatic Restoration in the Blackfoot River and Rock Creek Drainages. MTFWP

Pierce, R., D. Peters and T. Swanberg 1997. Blackfoot River Restoration Project Progress Report. MTFWP

Pierce, R. and D. Schmetterling 1999. Blackfoot River Restoration Project: Progress and Monitoring Report 1997-1999. MTFWP

Pierce, R. and C. Podner 2000. Blackfoot River Fisheries Inventory, Monitoring and Restoration Report 2000. MTFWP

Specific fish population monitoring ongoing in the North Fork River Watershed include:

North Fork: Five levels of fish population surveys have been undertaken on the North Fork Blackfoot River including: 1) bull trout redd counts established in 1989 and redone yearly; 2) juvenile bull trout shoreline samples in five index sections originally established in 1989 and redone in 1990, 1991, 1994, 1996, 1998, 2000; 3) mark-and-recapture population surveys in the lower reach of the North Fork (RM 5.9-2.1) originally established in 1989 and redone as listed above; 4) fish surveys in irrigation canals; and 5) radio telemetry studies beginning in 1994.

Rock Creek: Five levels of fish habitat and fish population surveys have been completed in Rock Creek including: 1) instream habitat surveys, 2) riparian inventories, 3) temperature monitoring, 4) fish population monitoring at several locations, and 5) pre- and post-restoration project surveys.

Kleinschmidt Creek: Three levels of fish habitat and fish population surveys have been completed in Kleinschmidt Creek including: 1) fish population surveys at three locations established in 1998, 2) stream temperature monitoring, and 3) a whirling disease sentinel cage study.

Blackfoot River: Two long-term monitoring sections were established in the Blackfoot River below the North Fork Blackfoot River in 1989. These spring monitoring reaches track estimated fish population densities in the Blackfoot River. We believe these numbers are also good indicators for the success of our restoration efforts in tributary streams including the North Fork.

The long-term monitoring plan is to first and foremost continue monitoring all of the established monitoring reaches listed above at a minimum of once every two years. Reports will be generated at least every two years to document native fish populations. We will also monitor all restoration projects within the North Fork Watershed before and after restoration and quantify in reports bull trout and westslope cutthroat trout responses.

More detailed information may be obtained from the reports listed above or by contacting Ron Pierce, a Fisheries Biologist with MTFWP in Missoula, MT (406 542-5532) . Ron is the principle fisheries biologist working on the North Fork Project and has been involved with all phases of this project.

Project: 23024 Hancock Springs Passage and Habitat Restoration Improvements

Sponsor: Yakama Nation (YN)
Subbasin: Methow
Budget Request: $49,941

CBFWA Budget Category: HP "A" – "BiOp"
ISRP Rating: B

Short Description: Increase juvenile salmonid access to, and enhance the habitat of a spring fed off-channel to the upper Methow River.

ISRP Comment: "…, there is no statement about what the quantitative biological effects of opening up this area might be."

Response: It's believed the greatest survival advantage will occur for juvenile spring chinook that overwinter in Hancock Springs, opposed to the mainstem of the upper Methow River. The project sponsor used Yakima Basin Ecosystem Diagnosis and Treatment (EDT) to estimate overwinter lifestage survival values. The project sponsor believes that the upper Naches River is similar in overwinter habitat attributes to that of the upper Methow Basin. For example, both reaches lack channel complexity and are dominated by run-type reaches in the winter months. Therefore, it's believed that use of the Naches EDT overwinter survival values are reasonable to apply to the upper Methow in the absence of any empirical data specific to the Methow Basin.

The EDT benchmark overwinter survival rate for spring chinook is 70%, meaning this is the highest survival rate obtainable in nature under ideal habitat conditions. The estimated value in the upper Naches River was 47%; while it's believed Hancock Springs will achieve a 70% overwinter survival rate when the habitat is fully restored. This equates to a 1.5 times increase in overwinter survival for spring chinook rearing in the springs, opposed to the mainstem.

It's difficult to estimate what fraction of the entire juvenile population would utilize the springs to make some statement of its importance relative to the entire population. Using an overwinter rearing density of 0.3 fish/m^2 (based on the EDT value used in the model), and the amount of available rearing habitat as 5,900 m^2, the approximate spring chinook overwintering capacity is 1,800 juveniles. Based on these values the absolute difference in the number of fish surviving to the smolt stage between the river and the springs is 846 and 1,260 fish, respectively. Though this represents a small number of fish relative to the entire population, this project provides an opportunity to reconnect existing habitat, which is valuable in the Methow for overwintering spring chinook.

ISRP Comment: "The description of the location of the project is inadequate."

Response: Hancock Springs enters on the right bank of the Methow River at river mile 58.6, which is 8.5 river miles upstream to the Chewuch River confluence with the Methow River. Hancock Springs is located in Township 35 N, Range 21 E, in the SE Corner of Section 15.

ISRP Comment: "They should consider potential impacts on native resident stocks if any are present above the culverts."

Response: No inventory has ever been conducted in the springs above the culvert to know what other fish species, if any, reside in the upper 4,200 feet. The author has not been able to find any written or verbal information pertaining to what species inhabitant the springs. Certainly a snorkel survey could be conducted this spring this by YN and WDFW staff present in the basin to address this data gap.

Project: 23026 Klickitat Basin Key Habitat Acquisition

Sponsor: Yakama Nation (YN)
Subbasin: Klickitat
Budget Request: $3,000,000
CBFWA Budget Category: HP "A"
ISRP Rating: B

Short Description: Purchase high priority lands for preservation of refugia habitat. Protection of stream channel and riparian habitats and associated uplands which influence immediate riparian function and channel processes.

Comments: Objectives 1 - 3A appear to meet the High Priority criteria and critical areas appear to be targeted, however 3b, 3c and 4 do not meet the criteria and appear to be primarily developing infrastructure for the future. A major part of the project is "prioritization" of future purchases.

Response: Project #23026 was developed by the Yakama Nation (YN) in conjunction with Columbia Land Trust (CLT) to address immediate land development pressures within the Klickitat Basin. As outlined in Objectives 1-3 of the proposal, two important parcels were identified for immediate acquisition. Subsequent the Washington State Salmon Recovery Board (SRFB) has agreed to purchase of the Dillacort Canyon parcel, which secures 579 acres of quality spawning and rearing habitat for threatened Klickitat steelhead for $333,175.

As stated in the original proposal, the YN believes that land acquisition is a cost effective means to preserve critical habitat in perpetuity thus preventing costly habitat restoration. To successfully preserve these habitats, an administrative infrastructure, which uses a prioritized approach and trust fund account to expedite implementation, should be a fundamental part of any strategy. However, the YN agrees with the ISRP comments that, for the intent of the "High Priority" solicitation, the administrative infrastructure and trust accounts should be eliminated. The YN will work in collaboration with CLT to develop the administrative/infrastructure component in an alternative forum.

Therefore, modifications to the existing proposal are as follows:
Elimination of the Dillacort Canyon property acquisition of $333, 175.
Elimination of the FTE at $50,568.
Elimination of the trust account for future acquisition at $1,716,257.

The revised proposal includes the following elements:
Purchase of the Logging Camp Creek property for $900,000.
Cost-share of $135,000 through property owner land donation.
Cost-share of $1,500 with CLT for administrative support.
Cost-share of $800 with YN for monitoring and evaluation activities.

See revised project #23026 budget form.

ISRP Comment: "There is little indication that the purchases are time sensitive".

Response: The YN concurs with the ISRP that the proposal inadequately described the time sensitivity specific to each parcel. While the YN adequately described the overarching development pressures, lack of County ordinances, and biological and ESA rationale, specific issues relating to each parcel were not presented. The following is a summary of the time sensitive issues affecting the Logging Camp Creek parcel.

Major land developers in Klickitat County have actively solicited the Logging Camp Creek owner who is getting out of the ranching business and actively divesting his land holdings. The owner has expressed a strong desire to preserve the natural resource value of Logging Camp Creek. The property was on the market in 1999 and contracted with a major land developer. No sale was negotiated during that time because of the landowners desire to protect the natural resource value. Currently the property owner is under no contract, but has indicated his strong desire to sell the property. The landowner is very aware that adjacent properties have recently sold for $4,0000/acre for 20-acre parcels. The Logging Camp Creek property will be sold in the very near future.

Excerpt from Original Proposal, Describing Logging Camp Creek Acquisition and Project Linkage: Logging Camp Canyon land acquisition proposal is the fee simple purchase of 380 acres of land, which provides 4,620 linear feet of stream frontage. Logging Camp Canyon is a west bank tributary that enters the Klickitat River at River Mile 9.5 in Klickitat County. The Canyon creek has 2.5 miles of quality spawning and rearing habitat accessible to anadromous fish Logging Camp Canyon provides one of the last best vestiges of quality habitat. It has a dense

forest canopy and suitable water temperatures. Purchase of this property will ensure that steelhead spawning and rearing habitat will be protected from development and degradation. Wild Klickitat River steelhead (summer and winter run) are ESA "threatened" stocks that have limited tributary spawning and rearing opportunities in this portion of the basin. This project will complement the following habitat restoration activities currently underway within Logging Camp Canyon: 1) Klickitat County-sponsored Logging Camp Canyon Passage Improvement Grant (Salmon Recovery Funding Board (SRFB) funded 1999), 2) Yakama Nation/Bonneville Power Administration (BPA) projects (#97-BI-61835 and #9506800). The BPA/Yakama Nation projects will conduct riparian plantings in conjunction with the SRFB Passage Project and project monitoring via Timber Fish & Wildlife (1994 TFW Ambient Monitoring Manual) habitat inventory methodology, spawner surveys and snorkel counts. The willing seller would like to complete this land sale during 2001.

Excerpt from Original Proposal, Identifying Project Need: As identified in the Northwest Power Planning Council's (Council) 2000 Columbia River Basin Fish and Wildlife Program Report this proposal addresses the action to "preserve habitats that are intact and restorable".

This project will benefit ESA "threatened" Klickitat River summer and winter steelhead. Additionally, rearing and migratory habitat will be protected for spring and fall chinook, coho and resident fishes, by securing these lands through acquisition. Upland wildlife species will benefit from preservation of oak woodlands, which are identified by Washington Department of Fish & Wildlife (WDFW) as a high priority habitat for preservation.

Land acquisition for conservation eliminates the need for restoration "triage" forever. The Columbia Land Trust (CLT) and Yakama Nation Fisheries Program (YNFP) goal is to manage this land for habitat and conservation in perpetuity. This project will allow us to acquire these lands containing important salmon habitat at a 30% reduced cost. Protecting a large single-ownership parcel now is much cheaper than acquiring multiple parcels subsequent to subdivision. If subdivision of this property occurs it will seriously diminish, if not completely extinguish, steelhead re-colonization.
The Logging Camp Creek watershed is located in a portion of the county which is experiencing rapid subdivision and domestic development. Klickitat County's Critical Area Ordinance is currently under appeal. It is being challenged for not adequately protecting riparian and floodplain habitats. This project will secure a large area of land in perpetuity to protect lower basin steelhead habitat.

Recently completed EDT analysis for Klickitat steelhead identifies Reach 3A (Lyle Falls –2.2 to Swale-RM 17.2) as a very high priority for preservation (Fig. 1.). This reach ranked number 2 out of 44 reaches modeled. Reach 3A is the primary migration corridor for all steelhead production within the basin. Additionally, reach 3A provides key summer and winter rearing for progeny from mainstem spawners as well as the progeny from lower basin tributaries. Logging Camp Creek feeds into this reach of the mainstem at rivermiles 9.5 and 5.5 respectively. It is the contention of YN fisheries professionals that the majority of annual production from lower basin tributaries (Logging Camp, Dillacort, Wheeler, Swale Creeks) emigrates to rear in this portion of the mainstem. A smaller portion of the steelhead juveniles do remain in the upper and middle reaches of these lower basin tributaries if they can find adequate rearing habitat. Preservation of this portion of the Klickitat mainstem and these lower basin tributaries must be of the highest priority.

Project: 23027 Methow Basin Floodplain and Riparian Land Acquisitions

Sponsor: Yakama Nation (YN)
Subbasin: Methow
Budget Request: $2,332,150
CBFWA Budget Category: HP "A"
ISRP Rating: B

Short Description: This proposal is to purchase properties in the Methow Basin important for salmonid spawning and rearing.

ISRP Comment: "…, but they may get comparable benefit through purchase of a subset of the properties or by purchasing the property in increments."

Response: The observation that a subset of these properties may provide comparable benefit for spring chinook is correct. In preparation for this project proposal, the sponsor communicated primarily with the Methow Nature Conservancy (MNC). Given that the opportunities and status of available properties varies through time, the approach for this project, if funded in whole or in part, will be to work with MNC, WDFW, and the Okanogan Planning Unit to identify which available parcels will provide the most benefit for salmonids in the Methow Basin. There may be opportunities to dovetail with properties being purchased or with conservation easements to maximize the biological benefit within a particular river reach for salmonids. For example, the State of Washington has monies to purchase properties in the Methow Basin, and if fact, purchased some parcels in 2000. Working with the NRCS and other agency personnel, opportunities may exist to secure funding to initiate or complete the rehabilitation activities some of these parcels will require realizing their maximum benefit for salmonids. There is positive communication occurring between the various governments, conservation groups and private landowners with respect to habitat restoration for salmon. This project represents another piece of the restoration puzzle in the basin, which can be meshed with other going projects to maximize the benefit of everybody's restoration dollar.

Project: 23028 Increase Naches River In-stream Flows by Purchasing Wapatox Water Right

Sponsor: Yakama Nation (YN)
Subbasin: Yakima
Budget Request: $ 4,000,000
CBFWA Budget Category: HP "A"
ISRP Rating: B

Short Description: Cost share with Bureau of Reclamation to purchase water right from PacifiCorp's Naches Power Plant (served by the Wapatox Canal) to benefit salmon and steelhead by increasing instream flows and enhance spawning and rearing habitat in the Naches River.

ISRP Comments: Is this project time critical?

Response: This acquisition is time critical due to the fact that the current owners must determine in the near future whether to sell the facility or pursue FERC relicensing. Additionally, energy generation is becoming an ever more attractive business, and what may be a liability in the form of a water diversion on a river with two listed fish species may become a lucrative risk to undertake. Also, with increasing power prices, buy-out of a generation facility will likely become more expensive.

ISRP Comment: The M&E is not well described and needs to be clarified before being fundable.

Response: As part of his reaches study, Dr. Jack Stanford and his colleagues began analyzing (1998) a series of aerial photographs of the Naches River Wapatox bypass reach to evaluate changes in main and side channel habitat over time. This analysis includes a classification and enumeration of various habitat types, including main channel, springbrooks, side channels and mid-channel island ponds/wetlands. We are beginning to understand the effects of numerous human influences on this reach of the Naches River, and have one of the most comprehensive chronological habitat change studies in the Columbia Basin forming the baseline. Monitoring and evaluation (M&E) subsequent to the funding of this project will continue in the form of the Reaches Study and among other YN, BOR, USFWS and WDFW efforts.

Although knowing the relative aerial change in habitat in the Naches bypass reach is vital, we also need to tie in salmonid presence/absence and habitat utilization to begin to determine overall project success. Ideally, this evaluation will include all life stages of salmon, steelhead and bull trout affected by water management in the Naches River below Wapatox Dam.

Beginning in the summer of 2000, representatives from the BOR, YN, USFWS and WDFW began working collaboratively to determine juvenile salmonid presence/absence and habitat utilization in the Naches River bypass reach as discharge decreased and became indicative of "normal" summer operations with the Wapatox power plant online. Data collection centered on side channels that were lost or were endangered as main channel flow decreased due to Wapatox diversions. In order to paint a picture of salmonid exploitation of the complete habitat mosaic of this bypass reach, sampling and analysis will continue in all habitat types to determine the temporal and spatial nature of fish habitat utilization.

M&E of this project will build on past data, current and ongoing efforts and future planned data collection to gage project success. The Yakama Nation has coho smolt survival data from 1998 and 1999 releases that will be compared with coho survival data after the project is completed. These data include survival to Prosser Dam on the Yakima River and McNary Dam on the Columbia River. As such, benefits to the Yakima and Columbia basins in terms of smolt to adult survival can be gauged, providing a direct feedback loop that will be helpful in estimating the affects of returning discharge to prime floodplain habitats. In addition, the response of all life stages of steelhead and spring chinook to flow addition in this reach of the Naches River will be monitored to calibrate and judge the output of EDT modeling. The EDT currently suggests that a primary limiting factor to production in this reach of the Naches is a lack of instream flow and habitat complexity, especially for juvenile salmonids. Restoring more normative flow conditions to the Naches bypass reach will provide a significant opportunity to evaluate contemporary research and modeling, and to improve future modeling and management.

ISRP Comment: Increased flow will lead to reconnection of the lower Naches River with upstream tributaries such as the American River and costs will be shared with BOR.

Response: The BOR looked at numerous options with respect to Wapatox, among them partial versus total decommissioning. In the spirit of habitat restoration, partial decommissioning during the summer and winter low-flow periods was assessed. This option was deemed unsuitable for two main reasons:

The overall goal in the Yakima basin, with respect to the restoration efforts of all federal, Tribal, and local and state agencies, is to restore the Yakima and its tributaries to the "normative" condition, especially in terms of discharge management. This philosophy has been fostered and supported by the work of Dr. Jack Stanford in the Yakima and other river basins around the world. Restoring flows during the summer and winter low-flow periods alone is not normative. Year-round flow restoration is necessary to provide ecologically significant mechanisms to the Naches bypass reach.

Significant technical and economic reasons exist for the current owner with respect to partial decommissioning. The Wapatox plant doesn't generate much revenue, and partial decommissioning would not provide enough money to keep necessary year-round staff paid and shutting down the power plant during the winter could cause canal freeze-up that would pose significant engineering, technical and safety concerns.

Therefore, in the spirit of returning the Naches River to a more normative condition, and in the face of significant technical, economic and safety concerns, the BOR recommended total decommissioning of the Wapatox power facility. This decision provided the best win-win situation for the current owners, and the most fishery and aquatic resource benefits.

ISRP Comment: How this project fits into the Big Picture of the Yakima River?

Response: The Systems Operation Advisory Committee (SOAC), in their 1999 Report to the Secretary of the Interior, founded their recommendations for biologically based flows for the Yakima River in the normative river concept. This philosophy postulates that restoring river conditions, to the extent that present-day realities allow, to a more natural condition will provide the template necessary for restoration and maintenance of all riverine physical and biological objectives. Returning flows previously diverted for year-round power production at the Wapatox facility to the Naches River is a prime example of approaching a more normative condition in the Naches River and Yakima basin as a whole.

The Yakima/Klickitat Fisheries Project (YKFP) is working on salmonid restoration in the Yakima subbasin through improved passage, habitat preservation and/or restoration, and reintroduction and supplementation of certain stocks. EDT modeling has indicated that restoring flows in the lower Naches to more normative conditions will improve spawning, incubation, rearing and passage of several species and stocks of salmon. Habitat protection and restoration are becoming increasingly important tools in restoring viable salmon populations in developed rivers like the Naches. The YKFP is negotiating for six adjoining parcels of land (approximately 210 acres) located in the geomorphic floodplain downstream from the Wapatox facility. Again, the fisheries value of these properties would be greatly increased with more normative flows through this reach.

Currently, 60 percent of the listed Steelhead stock spawn in Toppenish and Satus Creeks, which are smaller than the Naches Basin. Modeling shows that providing for stable in-stream flows in what is currently the Wapatox By-pass reach may provide a power house for steelhead production. Over 40% of the radiotagged steelhead that returned to the Naches spawned between the mouth and the Tieton River, just upstream from Wapatox dam (Hockersmith et al, 1995). These redds may be severely impacted as flows in this reach drop and side channels dewater during the incubation period. In addition to increased egg to fry survival, increased in-stream flows will increase summer rearing habitat by a level that is yet unquantified.

Coho reintroduction feasibility study in currently being conducted in the Naches and Upper Yakima Rivers. All of the smolts in the Naches must pass through this reach.
The dewatering of this reach in large degree may also increase the predation losses suffered by all anadromous species due to the concentration of juveniles to a smaller water body that lacks any form of cover. Adult coho also spawn in the mainstem Naches mainstem and tributaries in this reach.

It is also the professional opinion of the Yakama Nation Fisheries Staff that two major benefits will be realized by increasing the in-stream flows. First, with higher flows water temperatures will decrease providing increased survival and growth for juveniles. Second, smolts and juveniles will be lost at a reduced rate at diversions in the by-pass reach (S. Naches Channel) than under the current low in-stream flows created by the Wapatox Diversion.

ISRP Comment: How much habitat is going to be gained?

Response: We are working at the present time to provide an exact figure of the amount of habitat gained by adding previously diverted canal flow back into the Naches River. This data will be a product of the Reaches Study underway by the BOR, CWU and others.

However, in absolute terms, reviving the Naches Wapatox bypass reach will provide immeasurable gains in habitat to fish and aquatic resource assemblages. Prior to initiation of the Reaches Project, Dr. Jack Stanford performed aerial surveys of the entire Yakima River basin and its major tributaries. Dr. Stanford identified 9 priority reaches in the basin, and said of the Lower Naches (Wapatox bypass reach) “This large and extensively braided flood plain occurs from the Naches Canal (Wapatox) Diversion to near the Naches confluence with Yakima. The lower 8km is an extensive upwelling zone with several large springbrooks and substantial fisheries habitat. Housing encroachment is minimal (Stanford Research Proposal to BOR, 15 January, 1999)”. Restoring flow to this reach of the Naches River will provide the fuel for an enormous food web that will support all life stages of salmon, steelhead, and bull trout.

The restoration potential of the Wapatox bypass reach is a unique opportunity in the Yakima basin. Due to the relative absence of floodplain encroachment and development, the Wapatox bypass reach is primed for restoration. A vital missing link in this restoration pathway is water, and decommissioning the Wapatox power plant would provide for that missing link.

ISRP Comment: The water rights could have been better described. How senior is the water right?

Response: The purchase of this water diversion would provide for increased in-stream flow. Currently, biologically based flows have not been set for the Naches Reach but all other large-scale diversions are below this reach. The

Yakima Basin is closed to new surface water diversions and prior to any further consideration of new diversions, biologically based flows supportive of the Treaty of 1855 will be implemented.

ISRP Comment: What is the bottom line in terms of the instream flow all the way to the Columbia?

Response: In terms of magnitude, the bottom line in instream flow addition down to the Columbia River is zero. Under current operating procedures, the Wapatox power plant is a non-consumptive use of water. However, in terms of water quality, restoring flow to the Naches bypass reach will provide significant benefits to the Yakima and Columbia basins.

The Naches bypass reach encompasses the spectrum of those habitats and physical relationships vital to fisheries and aquatic species assemblages. It is a complex floodplain reach underlain by cobbles and gravels that house a shallow alluvial aquifer. We, as scientists and managers, have just begun to recognize the absolute importance of these floodplain reaches to the physical and biological maintenance of river systems. The complex interaction of surface and groundwater in the vertical, lateral and longitudinal plane serves to make alluvial floodplain reaches centers of biophysical organization and productivity for an entire river ecosystem. Under current operations, the Naches bypass reach is starved of a primary fuel for this massive "biophysical engine"—water that fits a year-round normative hydrograph.

At the head of the reach, the Naches River comes out of the Cascade Mountains and begins a journey through a wide floodplain of extensively braided channels. The head end of this reach is downwelling—in other words, a significant amount of surface water is added to the shallow alluvial groundwater system. Timing is important here; as most water available to the groundwater system comes off as snowmelt in the form of overbank flows, or flows that occupy shallow floodplain habitats. This cold melt water enters the ground at a cold time of the year and is insulated from high summer temperatures.

As the water year goes on, streamflow addition from snowpack in the mountains decreases and groundwater supports baseflow. As the Naches flows down-gradient to its confluence with the Yakima River, geologic influences at the end of the Wapatox bypass reach cause the whole system to be upwelling—water from the ground bubbles up in various places along the floodplain corridor, augmenting streamflow. Of vital note here is the quality of this water that upwells from the shallow alluvial groundwater aquifer. It is very cool in the summer, and can be as much as 15°C cooler than water that has been in the river proper. In essence, Wapatox bypass reach is a huge, cooling sponge that absorbs an excess of cool water in the spring and returns this water to the Naches river and its distributaries in the late summer and early fall flow as cool groundwater recharge. This mechanism historically served to support year-round runs of salmon and steelhead.

The bulk cooling effects of making more water available to the system are of extreme importance to salmonids and their habitat in the Naches bypass reach. Under current operations, the Wapatox canal at the head end of this bulk cooling system serves to significantly deplete the amount of water available on a year-round basis. This non-normative management of discharge through the bypass reach has year-round consequences, and has virtually eliminated benefits that could be realized at temperature critical times.

The single factor most limiting bull trout survival in the Yakima basin could be elevated water temperatures. This project could help restore favorable flow conditions to the Naches bypass reach which could, in the future, provide viable bull trout habitats and facilitate their continued survival.

Instream flow benefits are primarily viewed, and incompletely so, as being magnitude based. Funding this project will not provide a net gain in discharge to the Columbia basin. It will provide a significant gain in water of vital importance to salmonids—cool, clean groundwater that returns to the river at a time when ambient temperatures are at their highest and salmonid populations are at their most vulnerable.

ISRP Comment: There is no enumeration in terms of stock status.

Response: Stock status will increase with the total decommissioning of the Wapatox Diversion. There is currently a direct take of a listed species and there is a high probability of additional take due to the loss of side channel habitat and juvenile salmonids being pushed into low quality habitat.

There is a direct take of steelhead based upon the fact the spawning takes place at flows generally around 3,000 cfs and spawning takes place on the margins of the river. When these fish are coming out of the gravels, flows have dropped due to irrigation flow management and it is suspected that many redds are dewatered.

Project: 23031 Protect John's Creek Watershed

Sponsor: Nez Perce Tribal Fisheries Watershed Program (NPTFWP)
Subbasin: Clearwater
Budget Request: $73,878
CBFWA Budget Category: HP "A"
ISRP Rating: C

Short Description: Protect and enhance critical riparian areas of the John's Creek Watershed to restore quality habitat for chinook salmon, steelhead trout, bull trout, and resident fish, by excluding cattle grazing from critical habitat.

ISRP Comment: Portions of this proposed work marginally meet the basic criteria – replacement of a dilapidated fence – objective 2, task 2, 3, and 4 ($50,000 requested, but that appears to be above the going rate for fencing).

Response: The ISRP does not expand upon this comment to explain where the project does not meet the criteria. Cost was not one of the criteria, although an explanation of the cost of the project is described below. The technical review by the Idaho SRT determined that this project met every criteria but one, that the stream is not a water quality-limited stream on the 303d list.

The John's Creek watershed is one of two watersheds within the South Fork Clearwater River Subbasin that posses a habitat stronghold for spring Chinook salmon. It is also one of two watersheds to have a wild B-run steelhead habitat and population stronghold in the South Fork Clearwater River (USDA Forest Service, 1998). American Creek, a tributary to John's Creek where the project site is located, is the only degraded portion of this highly productive watershed. This degradation has occurred from cattle grazing within the stream corridor, resulting in increased levels of sedimentation, stream bank instability and increased temperatures. By fencing cattle out of the creek, we will remove the single, significant source of degradation to fisheries habitat. Not only will this protect the existing stronghold habitats and populations downstream of project site, but also by stopping the disturbance resulting from cattle in the unfenced portion of the creek, we will allow natural processes in the system to restore the existing degraded habitat. With the excellent existing connectivity between the project area and the stronghold areas with John's Creek watershed, we expect to see improvements in both habitat and population status within a few years that will benefit, protect, and strengthen the entire drainage population.

ISRP Comment: Proposed work seems very expensive relative to other fencing projects.

Response: The proposed fence will be located in a watershed where the average snowfall is over 6 feet! The fence must be constructed in a manner to withstand these conditions, so that extensive maintenance is not needed in following years. The type of construction needed is 5" wooden pressure-treated posts with only 10-foot spans between each post. The project area is located in high elevation mountainous terrain; therefore, this heavy-duty construction is warranted in this watershed, which experiences extreme winter weather conditions. The costs for this project cannot be compared to *typical* fencing projects. Typical fencing projects are generally located in lower elevations with much milder weather conditions.

Project: 23032 - Return Spawning/Rearing Habitat to Anadromous/Resident Fish within the Squaw Creek to Papoose Creek Analysis Area Watersheds

Sponsor: Nez Perce Tribal Fisheries Watershed Program (NPTFWP)
Subbasin: Clearwater
Budget Request: $420,000
CBFWA Budget Category: HP "A"
ISRP Rating: A

Short Description: Provide 20 miles of fisheries habitat within the Squaw to Papoose Creeks Analysis Area by replacing the top 10 fish barrier culverts, a critical component of an on-going watershed restoration effort, based on a completed watershed assessment.

ISRP Comment: They should consider potential impacts on native resident stocks if they are present above the culverts.

Response: There will be no impact on native resident stocks by the culvert replacements through this proposal by non-native fish species, in particular brook trout. Brook trout occur in very low numbers in the mainstem Lochsa River. There are no documented brook trout occurrences in Squaw, Papoose, Badger, Wendover, or Parachute Creek drainages; therefore the risks for impacts are very low. Replacing the culverts would not have any impact on the existing native fish populations (Draft Environmental Assessment, Clearwater National Forest and Nez Perce Tribe, 2001).

Project: 23040 Re-introduction of Lower Columbia River Chum Salmon into Duncan Creek

Sponsor: Pacific States Marine Fisheries Commission (PSMFC) and Washington Department of Fish and Wildlife (WDFW)
Subbasin: Mainstem Columbia
Budget Request: $420,796
CBFWA Budget Category: HP "A" – "BiOp"
ISRP Rating: B

Short Description: Enhance spawning areas historically used by chum salmon in Duncan Creek. Jump start the population by incubating eggs from adjacent stocks at this site. Conduct annual spawning ground counts and estimate fry production.

CBFWA Comment: The technical reviewers questioned whether the necessary paperwork could be completed by September 30, 2001 but NMFS believes it can be done.

Response: The proposal sponsors agree with National Marine Fisheries Service(NMFS) the necessary paperwork should be completed prior to the August 2001 work window and no later than the September 30, 2001 deadline. The sponsors are actively working with NMFS to have the permits and approvals secured.

Washington Department of Fish and Wildlife (WDFW) is in the process of filling out the necessary permit applications including the following: Hydraulic Protection Application, Shoreline Substantial Development Permit, National Scenic Area, Section 404(d) and the Shoreline Environmental Protection Act (SEPA) checklist. The Section 404(d) will allow NMFS to weigh in through a Section 7 consultation. WDFW will use the existing Biological Assessment (BA) for the Duncan Creek dam fish passage modification as the basis for a BA for this project and will modify it accordingly. WDFW will be meeting with NMFS field staff to discuss the project at the next WDFW/NMFS coordination meeting in Vancouver, which is in the next two months.

ISRP Comment: Objective 1 of the proposal meets the High Priority criteria, namely creation or cleaning up of the spawning grounds. The remainder of the objectives does not meet the threshold criteria of one-time funding for on-the-ground benefits.

Response: The remaining objectives are the capturing and artificial spawning of chum salmon from adjacent stocks, the incubation and marking plus rearing and release of re-introduced chum fry into Duncan Creek. The proposal sponsors believe these objectives address the threshold criteria of one-time funding for on-the-ground benefits.

Most of the costs for capturing and artificial spawning of the adults plus the incubation, marking, and rearing of the chum fry would be a one-time purchase of equipment. Seines and collection tubes would be purchased for the capturing of brood stock. Portable shelter and electronic balances would be used for the artificial spawning. For incubation of chum fry, plumbing, an alarm system and the Remote Site Incubators would be purchased. A power supply, flex hose, chiller boxes, and chillers would be purchased for marking the chum fry. Plumbing, flex hoses, valves, and raceways would be purchased for the rearing of the chum fry.

Of the adjacent stocks for supplementation, one possible brood stock source could be the chum spawning at the higher flows/elevations in the mainstem Columbia. The Hamilton Slough (the mainstem Columbia between Ives Island and the Washington mainland shore) spawners are at greater risk of inadequate water flows for incubation and emerging. These fish are not fully protected as stated in the FCRPS "BiOp".

Using the chum from Hamilton Slough for Duncan Creek supplementation would void a negative and generate a positive. Instead of a possible total loss of the higher chum redds in Hamilton Slough, a possible 90% egg to fry survival rate could be generated by artificially spawning these fish and releasing the resulting fry into Duncan Creek.

The on-the-ground benefits would be the resulting fry from the supplementation efforts. If the chum are left to spawn at the higher elevations in Hamilton Slough, the egg-to-survival rate could be 0%. Using the equipment listed above and methods listed in the proposal, a 90% egg-to-fry survival rate and a 90% survival rate during the rearing period to release is expected from the artificially spawned eggs. If 25 female chum carrying an average of 3,000 eggs are artificially spawned and the survival rates listed above are achieved, then a minimum of 60,750 chum fry would be released annually into Duncan Creek.

(Note: This survival rate was achieved for the1998-1999 brood stock collection at Grays River. The 2000 data is currently incomplete).

ISRP Comment: Natural recolonization by the remnant chum stock in Duncan Creek should be pursued prior to introduction of outside stock.

Response: The project sponsors also concur that the natural recolonization by a remnant Duncan Creek chum stock would be the preference. However, even if a remnant population remains, there may be too few fish to prevent inbreeding and genetic drift plus establish a self-sustaining natural spawning population. This could occur if the population is <50 fish (25 females).

The Duncan Creek chum returns in recent years have been few to non-existent. In the 22 years that spawning ground surveys were conducted since 1968, chum were found in only 6 of the years. The peak live and dead fish count was 4 fish in 1970.

Natural recolonization is more likely to be the result of Hardy/Hamilton/Ives chum straying into the Duncan Creek. Recent radio tagging studies of chum salmon in the area indicate that some straying likely occurs between Hardy and Hamilton creeks plus the Ives Island area. However, it is unclear whether sufficient numbers of strays from these stocks would occur into Duncan Creek.

The peak counts of live and dead fish in Hardy and Hamilton creeks have averaged 140 and 217 fish, respectively, since spawning ground surveys have been conducted. Spawning ground surveys began in 1944 for Hamilton Creek and 1957 for Hardy Creek.

Duncan Creek spawning ground surveys would be conducted in the fall 2001. If insufficient numbers of fish are present through natural recolonization (i.e. <50 fish), then the proposal sponsors suggest the capturing and artificial spawning of adjacent stocks.

The project sponsors believe they can successfully capture the chum in Hamilton Slough. Beach seines with small gillnet mesh will be used for capturing the brood stock. This gear has been successfully used to collect chum on the Grays River. In 2000, a total of 252 chum were captured there.

If >25 females are captured from the mainstem Columbia, the remaining fish might be taken from Hardy or Hamilton creeks. Trapping efforts funded through BPA are currently underway to estimate those returns. Those efforts will be utilized in brood stock collection from those streams.

ISRP Comment: The proposal might be funded at a reduced level for work on the spawning sites.

Response: The project sponsors would like to see funding approved for both the spawning habitat improvement and the supplementation efforts. Both efforts compliment each other. In addition, both are cost effective and provide an immediate assist in the efforts to recover Columbia River chum salmon.

If this proposal is funded at the reduced level for the work on the spawning sites, the sponsors believe the proposal should be ranked higher. The proposal was ranked High Priority "A" in the CBFWA review. In addition, NMFS noted the connection of this project with the "BiOp". The ISRP also noted that Objective 1 of the proposal meets the High Priority criteria.

The ISRP also noted the cost considerations could elevate a Category B proposal above a Category A proposal. Listed below are examples of the costs and benefits of the spawning channel construction and supplementation efforts listed in this proposal.

The spawning channels in Duncan Creek are expected to cost approximately $300,000. An estimated 18,726 square feet of improved spawning area will be developed. The resulting cost is approximately $15 per square foot.

Duncan Creek spawning channels will increase the amount of spawning area in the Hamilton/Hardy/Ives area by nearly 50%. Hamilton Springs spawning channel is approximately 3,400 square feet; mainstem Hardy Creek 11,900 square feet; the new but untested Hardy Creek side channel 6,000 square feet; and the mainstem Columbia including Hamilton Slough, 18,000 square feet. All total, the Hardy/Hamilton/Ives area has approximately 39,300 square feet of spawning area.

The Duncan Creek spawning ground channels could support nearly 2,700 female chum. Using the 18,726 square feet divided by an average of 7 square feet per female (the preferred lower spawning density), then 2,675 females could utilize the improved spawning area.

The capture and spawning of brood stock, marking of the embryos, monitoring the incubation system, collecting samples of fry before release, counting and feeding fish, plus cleaning raceways and liberating fry is expected to cost approximately $38,000 annually. If a minimum of 60,750 chum fry are produced through annual supplementation efforts, then the average cost would be less than $0.50/fish. One question we can't answer is how much it would cost the power system to provide water over the highest chum redds in Hamilton Slough. One could only guess it is substantially more than the estimated annual cost of supplementation.

The project sponsors have tried to be cost conscious on this proposal. For example, Pacific States Marine Fisheries Commission (PMFC) was used as the lead contractor. One reason PSMFC was chosen is their lower overhead rates (15%) and pass-through rates for subcontractors (2%) compared to a possible 30% overhead rate by WDFW. Other

reasons to use PSMFC is it should minimize problems associated with developing the contracts, billings are more timely, budgets can be monitored effectively, etc.

ISRP Comment: Long-term funding for further introduction of chum stock and O&M and M&E might be sought during the rolling review of the Lower Columbia Province.

Response: Columbia River chum returns since the 1960s have been stable albeit at low levels. The estimated returns averaged 3,000 fish/year. However, the returns may be negatively affected by the loss of an improved spawning channel in the Grays River system. High flows breached the Gorley Spring spawning channel in December 1999. Over 500 chum were counted in the creek in 1999. It is assumed the production from those fish was zero. The spawning channel has not been restored.

Gorley Creek was a major component of the Grays River return. From 1986-1999, the peak live and fish count in Gorley Creek averaged 318 fish. In comparison, the mainstem and West Fork Grays River and Crazy Johnson Creek averaged 677 fish during the same period. Of the nearly 1,000 fish counted in the Grays River system, approximately 32% of the fish were found in Gorley Creek.

Gorley Creek spawning channel was also a major component of the Columbia River return. The Hamilton/Hardy/Ives area peak live and dead fish counts averaged 395 fish from 1986-1999. Added to the Grays River system, an average of 1,390 fish were counted in the Columbia River chum index areas during this period. Therefore, 23% of the total fish counted in the lower Columbia were fish observed in Gorley Creek.

The loss of Gorley Creek means only one proven spawning channel for Columbia River chum remains; Hamilton Springs. A side channel on Hardy Creek has been developed for chum spawning. However, that area remains untested. Duncan Creek would be only the third improved spawning channel for lower Columbia chum.

As noted above, Columbia River chum returns have been stable albeit at low levels. Recent events may contribute to a decline in future returns. Supplementation into Duncan Creek could be used to compensate the loss of Gorley Creek. In addition, supplementation could be used to offset the potential loss of the higher chum redds in Hamilton Slough.

Extensive non-index chum spawning ground surveys were made on the lower Columbia this past fall. No fish were found on the Oregon side. Only one population >100 fish was found in Washington. That population was found in the mainstem Columbia just upstream from the I-205 Bridge. However, that population is also subject to Columbia flows and tides. The tidal affect on the lower site exposed the redds at low tide. In addition, the uplands of the upper spawning site have been proposed for high density housing. The ground has already been prepared for development. No other chum populations were found in the Hardy/Hamilton/Ives area.

Spawning ground channels and supplementation have been identified as possible remedies for chum restoration. On the Columbia River, the Columbia River Subbasin Plans listed this course of action. More recently, the Hatchery Genetic Management Plan for the Grays River also suggested similar plans. In Hood Canal, similar plans have lead to the recovery of summer chum stocks through the Summer Chum Salmon Conservation Initiative.

WDFW has discussed and planned recovery efforts for Duncan Creek chum since the 1960s. Other than Hardy/Hamilton/Ives Island, Duncan Creek is the only other known chum spawning location just downstream from Bonneville Dam. Recent extensive spawning ground surveys did not reveal any other populations in the immediate area. The spring sources in Duncan Creek are still present in the historic locations. The local landowners have shown their commitment to the recovery of Duncan Creek chum. The Skamania Landing Owners Association contributed $130,000 in cash towards the modification of the dam. The recent loss of Gorley Creek and the potential loss of chum redds at higher elevations in Hamilton Slough may have negative effects on future Columbia River chum returns. Columbia River chum recovery plans have been in place for years. Rather than continuing the trend of waiting, the sponsors would encourage the Northwest Power Planning Council members to move forward through the immediate funding of this proposal in the High Priority Process rather than delaying to the Provincial Review.

Project: 23049 Benefit/Risk Analysis to Promote Long-term Persistence of Chinook Salmon in the Middle Fork Salmon River

Sponsor: Nez Perce Tribe (NPT)
Subbasin: Salmon
Budget Request: $108,236
CBFWA Budget Category: HP "B" - S
ISRP Rating: NA

Short Description: Assess relative benefits and risks associated with current population status, genetics and potential for management actions aimed at increasing survival/stock status of chinook salmon in the Middle Fork Salmon River subbasin.

ISRP Comment: This proposal to conduct a Benefit/Risk Analysis in the Middle Fork Salmon River does not address imminent risks to ESA stocks by offering direct on-the-ground benefits with one-time funding. The work would benefit fish.

Response: The Nez Perce Tribe believes that this project is directly related to Section 9.6.4.3 Actions to Create an Artificial Propagation Safety-Net Program in the NMFS (2000) Biological Opinion on operation of the federal Columbia River power system. This section of the Biological Opinion outlines a four step process to apply to populations considered for potential safety net actions. It further states that planning for a safety-net program must be conducted on an accelerated basis so that, if warranted, the project can be implemented expeditiously. The purpose of the safety-net program will not be achieved, and additional populations may go extinct, if the process suffers from excessive delay, or awaits additional information that may not exist or be available for some time (NMFS 2000).

The National Marine Fisheries Service Draft Cumulative Risk Initiative (NMFS-NOAA 2000) states: *"The seven Snake River spring/summer chinook salmon index stocks are experiencing a decreasing trend in population change. This trend appears to have worsened in the most recent years for which we have complete data (1990-1994). Without additional intervention, the long-term prognosis for these stocks is clearly extremely poor"*. Three of the seven index stocks of spring/summer chinook salmon exist within the Middle Fork Salmon River, which this proposed Benefit Risk Assessment would examine. Kucera and Blenden (1999) report that Middle Fork Salmon River salmon subpopulations are in statistically significant decline, are at low levels of abundance and subsequent high demographic risk. NMFS-NOAA (2000) states in the Summary of Key Findings that: "*The most recent data for Snake River spring/summer chinook salmon reveal that this ESU may be doing worse than was previously thought. It is now even less likely that dam breaching BY ITSELF will mitigate imminent risks faced by Snake River spring/summer chinook salmon. Importantly there are no data to indicate that improvements in any of the other H's (i.e., habitat, harvest, or hatcheries) could BY THEMSELVES, mitigate the extinction risks faced by the Snake River spring/summer chinook ESU*".

The NMFS (2000) Biological Opinion also states in Action 178 that BPA shall commit to a process whereby funds can be made quickly available for funding the planning and implementation of additional safety-net projects for high risk salmon and steelhead populations NMFS identified during the term of this biological opinion. Middle Fork Salmon River chinook salmon populations clearly meet this criteria for planning purposes, regardless of whether they are recognized for implementation of a safety-net action.

Literature Cited

Kucera, P.A. and M.L. Blenden. 1999. Chinook salmon spawning ground survey in Big Creek and tributary streams in the South Fork Salmon River, Idaho 1992-1995. Assessment of the status of salmon spawning aggregates in the Middle Fork Salmon River and South Fork Salmon River. Tech. Rep. 99-7. Nez Perce Tribe Department of Fisheries Resources Management. Lapwai, ID.

National Marine Fisheries Service. 2000. Biological Opinion. Reinitiation of consultation on operation of the Federal Columbia River power system, including the juvenile fish transportation program, and 19 Bureau of Reclamation projects in the Columbia Basin. National Marine Fisheries Service, Seattle, Washington. December.

NMFS-NOAA July 17, 2000. Draft Cumulative Risk Initiative

Project: 23050 Establishing a Regional Salmonid Germplasm Repository for Populations Listed under the Endangered Species Act

Sponsor: Nez Perce Tribe (NPT) and University of Idaho (UI)
Subbasin: System wide
Budget Request: $1,235,275
CBFWA Budget Category: HP "A" - "BiOp"
ISRP Rating: NA

Short Description: A systemwide sperm bank for Endangered Species Act-listed salmonids will be established. This proposed facility will house the activities associated with the cryopreservation and storage of sperm from fishes within the Columbia Basin.

ISRP Comment: This proposal does not address imminent risks to ESA stocks by offering direct on-the-ground benefits with one-time funding.

Response: The Snake River chinook salmon and steelhead sperm bank has grown into the largest fish germplasm repository in the United States. Because the Snake River sperm bank can no longer accommodate additional populations, the program must be expanded and upgraded to meet this objective. Using the experience gained in the development of the Snake River sperm bank, the objective of this proposal is to immediately establish a regional germplasm repository for ESA-listed chinook salmon and steelhead, bull trout and other rare fishes. A facility to house the proposed Regional Salmonid Germplasm repository will have the capability of evaluating, cryopreserving, storing fish sperm and maintaining the inventory of samples from a large number of populations systemwide in an efficient and secure manner.

This is a high priority project because specific genes or combinations of genes may be lost forever given population trends in significant decline, low levels of abundance and high demographic risk (Kucera and Blenden 1999, NMFS-NOAA 2000). Alternatively, the development of a comprehensive fish germplasm repository for populations at risk can provide a tangible and quantitative solution to this potential loss. Risk of loss of genetic diversity can be reduced by cryopreservation of male salmonid gametes. It is essential that the remaining genetic diversity present within the existing Columbia River basin salmonid populations be maintained. The genetic diversity is critical for the maintenance of current populations and a germplasm repository is the resource for adaptive combinations from which new populations can be established. Cryopreservation will not replace protection and restoration of habitats and ecosystems but could augment transfer of genes from the wild to hatchery populations and provide long-term conservation and management of genetic material of endangered species (Tiersch 1998).

Other countries and agencies have established germplasm repositories for conservation of threatened and endangered species and for species propagation. The Norwegian gene bank of Atlantic salmon has established "living gene banks" for reestablishment or enhancement of threatened stocks (Gausen 1993). United States Department of Agriculture administers plant germplasm repositories, which began pre-1898 and has evolved into the National Seed Storage Laboratory and a regional station network. This program regularly uses cryopreserved genetic material for artificial propagation. The domestic livestock germplasm repositories are a huge industry which uses cryopreserved gametes for successful artificial insemination. The Frozen Zoo at the Center for Reproduction of Endangered Species at the San Diego Zoological Society employs conservation through cryopreservation of

endangered species in captivity. The National Institute of Health uses cryopreserved mice gametes (embryos and sperm) for biomedical research.

Examples of potential uses for the regional salmonid germplasm repository are in captive broodstock programs, conventional hatchery programs to infuse more genetic diversity and in conservation supplementation programs. The immediate availability of the stored genetic material is important for seed stock development to reestablish and build self-sustaining populations through adaptive evolution. This genetic material is the only raw material native to the Columbia River Basin that will be available for potentially repopulating restored watersheds when hydropower dams become obsolete or are replaced with new technologies (Brannon et al. 2000).

One-time funding is for the necessary facilities to house the repository complementing the existing BPA-funded project, which collects the salmonid genetic material. The proposed facility would house the genetic material from returning adults systemwide, offering immediate preservation and availability of ESA listed chinook salmon and steelhead male gametes. Following the building of the regional germplasm repository, the outyear operation/maintenance and monitoring/evaluation would be considered in an umbrella systemwide project with the existing, currently-funded salmonid gamete preservation project (No. 97-038-00).

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Project: 23051 Assessment and Implementation of Technologies to Monitor Adult Spring and Summer Chinook Salmon Abundance in Snake River Basin Tributary Streams

Sponsor: Nez Perce Tribe (NPT)
Subbasin: Salmon
Budget Request: $516,678
CBFWA Budget Category: HP “B” - S
ISRP Rating: NA

Short Description: Identify and implement technologies to accurately quantify adult spring and summer chinook salmon adult spawner abundance in the Secesh River. Adult abundance data would allow a measure of recovery threshold abundance of a listed species (NMFS 2000).

ISRP Comment: This proposal for an assessment does not address imminent risks to ESA stocks by offering direct on-the-ground benefits with one-time funding. The spawner surveys should be conducted.

Response: The Nez Perce Tribe believes that this High Priority project proposal is directly related to the NMFS (2000) Biological Opinion on the operation of the federal Columbia River power system. The Biological Opinion (NMFS 2000) recommended that accurate assessment of spawner escapement of listed ESU's are required for determining the characteristics, viability, recovery status, and delisting of ESU's under the Endangered Species Act. NMFS also recommended characterizing populations by abundance/productivity, diversity (viability), spatial structure and habitat capacity most of which rely on some quantitative measure of adult abundance. Adult abundance information is a necessary part of the NMFS Biological Opinion as stated in Section 9.6.5 Research, Monitoring and Evaluation Plan, and subsection 9.6.5.2 Population Status and Environmental Status Monitoring. Measurement of adult abundance is also a necessary component of proposed short-term measures of stock performance that focuses on life history stages. The recovery metric for listed ESU's is the likelihood that the 8 year geometric mean abundance of natural spawners in a population will be equal to or greater than an identified recovery abundance level.

Current chinook salmon redd count information represent an index of relative abundance only, and provides no direct quantitative measure of spawner abundance. Expansions of redd counts to spawner numbers are influenced by measurement error and uncertainty of assumptions regarding estimates of fish per redd, relative numbers in surveyed and unsurveyed areas, prespawning mortality rates, age composition and hatchery fish contribution (Beamesderfer et al. 1999, Faurot and Kucera 2000). Redd count methods will not be able to determine when or if an ESU reaches a desired recovery threshold. Collection of adult spawner abundance information allows salmon managers to know, with certainty, if recovery thresholds are being met.

This proposed project is a critical step towards initiating accurate and precise quantification of adult spawner abundances as required under the NMFS (2000) Biological Opinion. Salmon populations and investment of Fish and Wildlife Program funds in the region are placed at risk by an inability to quantify adult abundance to evaluate ESA recovery alternatives and program effectiveness. Delayed implementation of this project will further inhibit managers and policy makers ability to directly measure the benefits of recovery actions identified in the NMFS (2000) Biological Opinion.

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NMFS-NOAA July 17, 2000. Draft Cumulative Risk Initiative

Project: 23054 Forrest Ranch Acquisition

Sponsor: Confederated Tribes of Warm Springs Reservation of Oregon (CTWSRO)
Subbasin: John Day
Budget Request: $4,184,185
CBFWA Budget Category: HP "A" - "BiOp"
ISRP Rating: A

Short Description: Acquire approximately 4,295 acres of land, 25.22 cfs of water, and 12.17 miles of river habitat on the upper Middle Fork and upper mainstem John Day Rivers. Property has been designated the highest priority in the John Day basin since 1971.

ISRP Comment: This proposal meets the Council's criteria with the exception of proposed funding of future O&M and M&E.

Response: While preparing the original proposal, staff reviewed the criteria for high priority projects as described in the NWPPC's 2000 program. Those criteria, as well as the entire Program section discussing high priority projects, is completely silent regarding the topics of O&M and M&E funding. Further, none of the criteria detailed in the 13 November 2000 letter from the NWPPC and BPA to the fish and wildlife managers, referred to O&M or M&E funding. The letter stated that "proposals should clearly identify any required *funding* for operation and maintenance of the project or for monitoring and evaluation" (emphasis added) although again, this requirement was not part of the criteria. Consequently, O&M and M&E items were included in both the budget and the narrative. Also, the O&M and M&E items were incorporated into other discussions pertinent to the actual review criteria. For example, property-specific monitoring items were included in the section that responded to the "collaborative efforts" review criteria, since this task is conducted in cooperation with other agencies and organizations.

Objectives/Tasks 2, 3(a), and 4 provide an itemized listing of O&M and M&E funding items. In addition, to page 12 (paragraph 2 & 4; discussion of additional property actions), page 15 (paragraph 2; discussion of monitoring), and the Tasks and Methods section (detailed explanation of tasks identified for funding in the budget) provide additional illustrations within the narrative. It is believed that the budget section meets the NWPPC/BPA requirement to "clearly identify any required funding" for O&M and M&E and do not concur with the ISRP that O&M and M&E were review criteria for high priority projects. In hindsight, all tasks dealing with O&M and M&E should have been specifically referred to as being within these categories, in order to further meet the NPPC/BPA direction and for ease in review.

ISRP Comment: The proposal is to acquire a large ranch with over 12 miles of the upper mainstem and upper Middle Fork of the John Day River. It is high priority in that it is very likely time limited. The ISRP supports the proposal and suggests that the acquisition might be funded at a reduced level for earnest money or acquisition only while a proposal for long-term O&M and M&E is prepared and reviewed as part of the regular rolling review that is to take place in this Province in the Spring of 2001.

Response: The ISRP's support is appreciated. However, the reviewer(s) should approach with caution, the idea of funding the project at the earnest money level only since there is no guarantee that the acquisition and/or O&M/M&E funding would be appropriated through the provincial review process. The John Day is clearly being recognized as one of the top priority subbasins in the Columbia River basin. This project should receive due consideration for full funding based upon its long-standing priority in the subbasin and the immediate risk to listed species if the acquisition is lost. The splitting of appropriations between programs and program years can leads to excessive delays and escalating capital acquisition and management costs. Thus, appropriating earnest money only is not commensurate with the high priority nature of the property or the risks involved with delaying the acquisition.

As discussed in the narrative, the Tribes are completing much of the pre-acquisition planning and monitoring/evaluation using their own funds and as a result will continue these efforts regardless of the level of O&M/M&E support provided under the high priority or provincial reviews. It is difficult to justify preparing a complete and comprehensive O&M/M&E plan at the proposal stage since the property has not been secured and

access for information gathering to support these plans has been limited in past years. Further, large Tribal expenditures to develop comprehensive plans prior to the acquisition may be premature as they may eventually become lost investments if acquisition funds are not appropriated. To-date, the Tribes have expended funds on tasks that supported the acquisition, since this was our first priority. As stated in the narrative proposal, following the acquisition, detailed O&M and M&E plans will be developed.

Project: 23056 Farmers Irrigation District Mainstem Hood River Fish Screen Project

Sponsor: Confederated Tribes of Warm Springs Reservation of Oregon (CTWSRO)
Subbasin: Hood
Budget Request: $500,000
CBFWA Budget Category: HP "A" - "BiOp"
ISRP Rating: C

Short Description: The proposed project would replace the existing noncompliant drum screens with a horizontal fixed plate screen to meet or exceed current NMFS juvenile fish screening criteria.

ISRP Comment: The proposed project may not meet the solicitation criteria threshold: there is no indication that problems with screens this year are crucial to survival of stocks. Nevertheless, it is likely that the project would have benefits.

Response: The Farmers Irrigation District (FID) Farmers Canal water diversion is located at RM 11.5 on the mainstem Hood River. The mainstem Hood River is a migration and juvenile rearing corridor for all fish species within the Hood River subbasin, including three ESA-listed species and one species proposed for listing. Hood River bull trout are genetically distinct from other bull trout in Oregon (Spruell and Allendorf 1997). The population, including juveniles, is believed to number less than 300 and is classified as "at high risk of extinction" by ODFW (Buchanan et al. 1997). Bull trout were listed as Threatened under the Endangered Species Act in June 1998. Both winter and summer steelhead wild returns have declined in recent years to very low numbers within the Hood River subbasin. Summer steelhead wild adult returns declined to as low as 79 during the 1997-98 run year and winter steelhead dropped to as low as 206 during the 1994-95 run year. Both species of steelhead were listed by National Marine Fisheries Service (NMFS) as Threatened under the Endangered Species Act in March 1998. ODFW has listed sea-run cutthroat trout as a sensitive species (BPA and DOE 1996). Very few numbers have been captured in the Powerdale Dam fish trap since 1992 and sea-run cutthroat have been proposed for listing. CTWSRO staff has recovered cutthroat trout that were smolting during fish salvage operations of the FID Farmers Canal.

Spring chinook salmon, fall chinook salmon, and coho salmon have already been classified as extinct within the Hood River subbasin. Pacific lamprey have also declined significantly from historic levels (Coccoli et al. 2000). Without proper screening of all water diversions, including the Farmers Canal diversion, within the Hood River subbasin there is an imminent risk of survival for all ESA-listed stocks. Implementation of this screen project would benefit all fish species by providing safe downstream passage and juvenile rearing for juvenile and adult fish and eliminating mortality associated with operation of the existing screen, increasing smolt-to-adult survival (Table 1). Upon reading the initial proposal again, there may have been some concern from ISRP with regards to the necessary approval of the fish screen and bypass being approved by NMFS as ESA compliant. In a letter (completed January 26, 2001) by Eva Huntsinger of Century West Engineering Corporation to the National Marine Fisheries Service, parties defined and agreed to a work plan which consists of two parallel tracks for selection of the type of screen applicable and acceptable for FID's site-specific canal installation. The project schedule is such that on or about May 31, 2001 a decision shall be made as to which type of screen to install. The bottom line is that if the horizontal plate screen that is currently in development is not acceptable to NMFS, a conventional screen technology shall be selected for installation at FID's site specific location by the required September 30, 2001. Also, FID has hired fish consultant Richard Craven of Craven Consulting Group to complete a study plan that provides proof of the hydraulic performance and demonstrates the biological performance of the new fish screen and bypass facility. A Monitoring Plan approach will be used to provide NMFS, U.S. Fish and Wildlife Service, ODFW, and Bonneville Power Administration with periodic reporting of the performance of the site-specific screen.

ISRP Comment: The project will apparently be completed without these funds, perhaps even in 2001.

Response: The requested monies are essential to provide proper fish screening and bypass installation at FID's Hood River diversion and to provide safe passage of the threatened fish populations of the area - bull trout and steelhead. The NMFS, USFWS, ODFW, and CTWSRO are active participants in identifying the type of the screen and bypass that will be used to provide a permanent safe passageway and bring significant benefit to the Hood River Subbasin. The project schedule is such that on or about May 31, 2001 a decision shall be made as to which type of screen to install. Obtaining the requested funds is crucial to constructing proper and permanent fish screens and related bypass for safe passage of fish. The financial support offered through this program would be directed explicitly to the design and installation of a safe passageway; the construction of which would commence prior to the September 30, 2001 deadline. Monitoring and reporting of the fish screen and bypass facility performance will be provided by FID in compliance with NMFS, USFWS, ODFW, CTWSRO, and BPA requirements. Periodic maintenance will also be provided by FID.

Without the requested monies, the cost to install the necessary fish screen and associated bypass are at present cost prohibitive to FID which serves the rural, agricultural community of the Hood River area. The total cost of the project for engineering, construction, and fish testing is around 2.1 million dollars of which FID would be contributing $1,645,000. Given financial concerns with FID, they had originally estimated the cost to be about $800,000 - $1,000,000. Cost share dollars, both cash and in-kind, have exceeded $400,000 from various agencies and funding sources such as the Oregon Watershed Enhancement Board, National Fish and Wildlife Foundation, ODFW, CTWSRO, Bureau of Reclamation, and the Hood River Watershed Group. Additional cost share dollars may also be contributed by the U.S. Forest Service as part of the Wyden Amendment dollars that can be spent off forest, but these funds have not been secured. Most of these cost share dollars would be lost if this project does not go forward in 2001 with the much needed assistance in funding.

ISRP Comment: If this is a "High Priority" project, we were surprised not to have seen it proposed during the Columbia River Gorge provincial review.

Response: The FID Farmers Canal fish screen project is listed as a high priority project (Table 1) within the Hood River Fish Habitat Protection, Restoration, and Monitoring Plan [Habitat Plan] (Coccoli et al., 2000). As presented to the ISRP during the provincial review process, the Habitat Plan lists a number of factors limiting the biological potential of the Hood River subbasin. The Habitat Plan is derived from a science-based watershed assessment (HRWG 1999). Both the Hood River Subbasin Summary (Coccoli et al., June 30, 2000; prepared for the NPPC as part of the provincial review) and the Habitat Plan lists artificial migration barriers, including inadequately screened diversions, as a limiting factor for anadromous and resident fish production in the Hood River subbasin. Sixteen upstream and downstream fish passage problems are identified and are considered a serious habitat problem within the subbasin
(Table 2).

As understood during the provincial review, not enough funding existed for the next three years to fund all identified high priority projects under the Hood River Fish Habitat Project for the Hood River subbasin. The new "High Priority" proposal process developed by the NPPC became available after the Gorge provincial review process was already completed. Funding needs by the Farmers Irrigation District (identified in response to question #2) in order to complete the fish screen project prompted the CTWSRO to write a proposal under the "High Priority" proposal process. The goal of the CTWSRO, Oregon Department of Fish and Wildlife, and the Hood River Watershed Group is to have all major diversions within the Hood River subbasin properly screened and have appropriate fish passage within the next five years.

Table 1. Hood River Mainstem Drainage - Proposed Actions

Priority[a]	Stream	Location	Species[b]	Deficiency	Limiting Factor[c]	Potential Action
1	Hood River	Powerdale Dam	StS, StW, ChS, ChF, Co, But, Rb, Ct	Inadequate fish screen	1	Install new screen in hydro diversion
1	Hood River	Powerdale Dam	StS, StW, ChS, ChF, Co, But, Rb, Ct	Inadequate fish screen at auxiliary intake for fish ladder	1	Install new screen at Auxiliary water supply intake
2	Hood River	Powerdale Dam	StS, StW, ChS, ChF, Co, But, Rb, Ct	Upstream passage delay	1	Operational plan and/or structural modifications to improve passage
1	**Hood River**	**Farmers Canal Diversion**	**StS, StW, ChS, ChF, Co, But, Rb, Ct**	**Inadequate fish screen**	**1**	**Replace existing screen and fish bypass**
1	Neal Creek	EFID Diversion	StW, ChF, Co, Rb, Ct	Inadequate fish screen and adult passage, sediment	1,5	Construct pipe and invert siphon to Eastside Canal, remove diversion and screen
2	Neal Creel	Lower West Fork	StW, ChF, Co, Rb, Ct	Confined channel, few pools, low complexity	2, 6, 8	Pull back or remove old road fill, add large woody debris
1	Neal Creek	Scattered sites	StW, ChF, Co, Rb, Ct	Low riparian shade and instream habitat complexity	2, 3, 5	Exclude livestock, protect/enhance riparian vegetation
3	Neal Creek	Meadowbrook Rd to Dethman Ridge Rd	StW, ChF, Co, Rb, Ct	Floodway encroachment; confinement; vegetation removal, upslope ditching	6, 8	Landowner education, riparian improvements, investigate options for flood scour reduction, wetland restoration
1	Neal Creek	QVL-Hanel Mill Yard	StW, ChF, Co, Rb, Ct	Log yard runoff to waterways	3	Improve settling ponds and drainage facilities
3	Odell Creek	Scattered sites	Rb, Ct	Low or moderate riparian shade, water quality	3	Exclude livestock, protect/enhance riparian vegetation

[a] **Relative priority ranking: 1 = High**, 2 = Medium, 3 = Low.

[b] StS = summer steelhead, StW = winter steelhead, ChS = spring chinook salmon, ChF = fall chinook salmon, Co = coho salmon, Rb = rainbow trout, Ct = cutthroat trout, But = bull trout.

[c] Limiting Factors: 1 = fish passage, 2 = habitat structure, 3 = water quality and riparian conditions, 4 = low flows, 5 = sediment and turbidity, 6 = channel modifications, 7 = marine nutrients, 8 = altered peak flows.

Table 2. Known or Potential Migration Barriers Affecting Anadromous Fish or Bull Trout in the Hood River Watershed, Excluding Road Culverts.

Entity	Stream Name	River Mile	Barrier Type	Comments/ Status
EFID	East Fork Hood River	8.6	Water diversion - low flow barrier during critical summer low flows.	Cooperative solutions to be developed with EFID.
EFID	Neal Creek	5.0	Irrigation diversion. Fails screening criteria. Canal flow can overtop screen. Upstream passage impaired.	Preliminary design in progress.
MFID	Eliot Branch Diversion	1.0	Irrigation diversion. Possible barrier to steelhead. Design challenge- heavy sediment and debris load.	Design and permit in progress. Major debris flow in November 1999 buried diversion and caused subsurface flow for 300 yards from mouth.
MFID	Evans Creek	2.0 3.6 5.3	Three miles of steelhead and coho habitat blocked by lower two diversions.	MFID plans piping installation to eliminate diversions; cost-share with CTWSRO
USFS	Lake Branch Creek	0.9	Natural boulder cascade – anadromous passage varies with flow.	Excellent, low gradient upstream habitat.
ODFW	West Fork Hood River	0.25	Punchbowl Falls fish ladder inadequate maintenance may impede upstream migration of sp. Chinook and steelhead.	Needs annual maintenance and site access; may need additional water supply.
MFID	Coe Branch	0.75	Irrigation Diversion. Upstream passage of bull trout impeded, fails screen criteria.[1]	Design and Permitting in progress- scheduled 2000.
MFID	Clear Branch Dam	1.1	Storage Reservoir and Dam at Laurance Lake. Upstream passage barrier. Unscreened deep outlet - potential loss of bull trout into pressurized pipe system.[2]	Adult fish trap & haul operated. Spillway modified in 1992 & tested by ODFW. Tagged bull trout passed spillway & survived.
Dee Irrigation District	West Fork Hood River	6.1	Irrigation diversion. Possible barrier to adult spring chinook at low flows.[3]	Screen and bypass upgrades installed in 2000. Upstream passage options under review with irrigation districts.
FID	**Hood River**	**11.5**	**Irrigation diversion. Fails screening criteria for approach velocity.[1]**	**Design & permitting in progress.**
PacifiCorp	Hood River @ Powerdale Dam	4.5	Hydroelectric diversion. Existing screens fail screen criteria.[1] Downstream migrants swept into flume. Potential upstream passage problem and delay, SOP's & design improvements under discussion.	Screens replacement is agreed to as part of FERC relicensing. Construction schedule uncertain, possibly ~2002 or beyond. Modified spillway on ladder side in conceptual design.
Phoenix Pharms	Baldwin Creek	1.2	Diversion for U-catch trout pond operation water supply. Two possible barriers to steelhead. Fails screening criteria.	Cooperative solutions to be developed with operator/landowner.
Dee Forest Products	Tony Creek	0.75	Diversion Dam. Screening internal or absent. Barrier at most flows; 1.5-ft outfall drop onto bedrock.	Interim remediation performed in 1998 and 1999 by CTWSRO and ODFW. Results being evaluated.

[1] Bull trout fry criteria screening listed as Potential Conservation Action for Bull Trout in Pribyl, et al 1996
[2] Listed as Potential Conservation Action for Bull Trout in Pribyl, et al 1996
[3] CTWSRO, December 1998

Project: 23061 Securing Wildlife Mitigation Sites - Oregon

Sponsor: Oregon Wildlife Coalition (OWC)
Subbasin:
Budget Request: $1,500,000
CBFWA Budget Category: HP "A"
ISRP Rating: D

Short Description: Develop wildlife mitigation sites in Oregon through habitat acquisition and protection and facilitated by coordination, planning, and assessment by the OWC as specified by the NWPPC's Fish and Wildlife Program.

ISRP Comment: The proposal is not amenable to scientific review. Each parcel is not specifically justified with respect to the criteria or benefits to ESA listed anadromous fish. The deficiencies of the proposal may be obscuring some opportunities.

Response: The CBFWA Wildlife Committee met on Jan 22-23 to review and discuss high priority project proposals, including the OWC's project "Securing Wildlife Mitigation Sites-Oregon" (Project No. 23061). As it was proposed, about $24 million was requested by the OWC to fund habitat acquisition of and enhancement on 14 properties identified by the Oregon wildlife managers as high priority potential mitigation sites in Oregon. The Wildlife Committee decided that this programmatic type of acquisition could not be adequately evaluated using the Northwest Power Planning Council's 13 high priority project screening criteria. Based on the Wildlife Committee's comments and suggestions, the OWC intends to refocus their proposal to address only one property, the Page Ranch. A high priority project proposal for the Rick Page ranch is provided with this response for reviewers' consideration.

The Wildlife Committee (WC) conducted an initial review of the Page property on January 22 using the NWPPC's 13 screening criteria. The WC responded "Yes" to the first three of the criteria, as well as to all the other criteria with the exception of #8. The Wildlife Committee requests that Project #23061 be re-evaluated as the "Page Ranch Acquisition and Conservation Agreement" proposal, and ranked as Category A.

The revised proposal will be sent to NWPPC under separate cover.

Abstract: Page Ranch Acquisition and Conservation Easement

The Page ranch lies in the John Day Valley, approximately 17 miles west of John Day, Oregon. The ranch runs north of the John Day River to the top of the mountain range. South of the river are 2,200 acres that connect to USFS boundary. Along the valley floor, the deeded lands include 1½ miles of river frontage on both sides of the river with flood and sprinkler irrigated hay meadows. A gravel extraction and wetland creation project has been approved by ODFW, and would be expanded over the pasture acreage. Revenues generated from this activity and sale of a sprinkler wheel line will contribute to project O&M costs this section of the mainstem John Day River provides migratory and rearing habitat for spring chinook and summer steelhead. Priority water rights (6.4 cfs) would be converted to instream water rights or used to charge the wetlands as the river level drops. A 31,000-acre Malheur National Forest grazing allotment is permitted commensurate to the approximate 260 acres of pasture. The allotment encompasses seven miles of summer steelhead spawning habitat in upper Murderers Creek and Tex Creek, and spawning habitat for west slope cutthroat in Buck Cabin Creek and Fields Creek above private land. About 10 miles of spawning and raring habitat currently unfenced and degraded by livestock grazing would be protected. Winter and summer range supports California bighorn sheep, Rocky Mountain elk, and mule deer.

Approximately 6,800 acres of uplands would be placed under conservation easement restricting development and describing management restrictions. Cost-sharing partners will be pursued to purchase the pasture planned for wetland restoration, engineering and design, fence maintenance, and upland habitat improvement projects. This area will be cooperatively managed to protect and enhance habitat values. The anticipated costs of the Page Acquisition, Easement and Enhancement project is $1.5 million. Other species that will benefit from this project include osprey,

mink, mallard, Canada goose, yellow warbler, spotted sandpiper, bald eagle, great blue heron, yellow-headed blackbird, pronghorn antelope, and wild turkey.

Project: 23062 Construct Approved Fish Screening Systems on Unscreened Irrigation Diversions

Sponsor: Oregon Department of Fish and Wildlife (ODFW)
Subbasin: Mainstem Snake
Budget Request: $ 71,142
CBFWA Budget Category: HP "A" - "BiOp"
ISRP Rating: D

Short Description: Eliminate fish losses at unscreened irrigation diversions by constructing approved fish screening devices that meets the NMFS operational criteria.

ISRP Comment: Little biological justification.

Response: Inventories, trap box records and spawning ground counts from the early 1950's clearly show the listed Snake River Chinook (1992) and Steelhead (1996) in large numbers in the Grand Ronde River Watershed. Dwindling numbers in this watershed has continued even with ESA listings. Recently the USFWS listed the Bull Trout (1998) as threatened as well. Approved fish screening devices constructed above and below these sites has revealed the above listed species in temporarily installed trap boxes as recently as November 2000. Bull Trout have not been identified in the Ladd Creek projects.

With the increased emphasis on supplementation and the extensive water conservation and habitat projects completed and in progress in the Bear Creek drainage these projects would add to the over all protection of the species and dove tail with the Bear Creek drainage projects. These projects have been funded and supported by federal, state and tribal entities.

The four Ladd Creek Projects are similar to the Bear Creek projects in that many habitat and water conservation projects have been completed. These sites support Steelhead spawning and rearing activities and Chinook rearing only. Past records indicate the timing of migration occurs simultaneously with early water withdrawal at these unscreened sites for these at risk species.

ISRP Comment: Inadequate description of locations of projects.

Response: All projects are located in the Grand Ronde Watershed of Northeastern Oregon. The four Ladd Creek projects are located four miles southeast of LaGrande, Or. The two Bear Creek project are located two miles south of Wallowa, Or. There are numerous screens in operation located above and below each of these sites that are presently providing protection for these at risk stocks.

ISRP Comment: What are the intended benefits?

Response: The intended benefits for these projects are to prevent and reduce mortality of the Snake River Chinook, Steelhead and Bull Trout. The completed screen construction and installation will prevent all species of fish from being diverted into and down the diversions, allowing water and fish to be by-passed back to the mainstem by way of a smooth coated pipe. The diversion screens provides a first line of defense for these species as sac fry and continues to provide protection through their life cycle by allowing these species to continue migration unharmed.

ISRP Comment: What are the status of the stocks?

Response: The Snake River Chinook (spring/fall) summer run Steelhead and Bull Trout are listed as threatened.

Project: 23071 Calapooia River Flow Acquisition and Fish Passage Assessment

Sponsor: Oregon Department of Fish and Wildlife (ODFW)
Subbasin: Willamette
Budget Request: $ 55,015
CBFWA Budget Category: HP "A"
ISRP Rating: NA

Short Description: Improve upstream passage for ESA-listed fish on the Calapooia River by reimbursing the owner of Thompsons Mills to not divert flows for power generation. Evaluate the effect of flow manipulation on upstream passage.

ISRP Comment: This proposal to temporarily reimburse Thompson Mills not to divert flows for power on the Calapooia River did not offer long term, on-the-ground benefits with one-time funding. This proposal would provide benefits for one year, but to secure long-term benefits it would require funding every year or permanent actions on the dam. A proposal for permanent action on the dam would have better met the high priority criteria.

Response: The expenditure of the requested funds, even if confined to a single year, would provide significant long term, on the ground benefits to ESA-listed spring chinook and winter steelhead (Tier 1 criteria).

Improved passage for listed species, even if only provided for a single season, will generate long term benefits in the form of increased adult escapements several years hence. Those returning adults will encounter much improved passage conditions at that time. Since the ad-hoc working group described in the original high priority project proposal is committed to seeking long term resolution to the existing passage problems, it is assumed that a permanent solution to the problem will take several years but that it will indeed happen in the not-too-distant future. It should also be noted that flows this season are likely to be particularly problematic from a fish passage standpoint given current hydrological indications. If conditions do not improve dramatically, it is highly probable that passage at the Mill will be significantly worse than usual this season. The ramifications of not taking action this season, particularly given the anticipated severity of the problem, could very well prove to be extremely significant from a fish conservation standpoint. Implementation of the proposal will also serve to benefit survival of ESA-listed *juvenile* salmonids that would otherwise be lost under status quo operations at the site. Increased survival of fish at this life stage will also benefit the species in the long term for the same reasons previously articulated.

Implementation of the assessment component of the proposal is crucial to the short and *long term* success of any passage "fixes" at the site. Presently, our understanding of how the existing facilities should be manipulated to optimize upstream passage under various conditions is limited. The assessment, as proposed, presents us with the unique opportunity to increase our understanding of precisely how ESA-listed fish species interact with facilities that will have been purposefully altered in configuration and function to accommodate fish passage. Never before have we had the opportunity to evaluate the site-specific physical and/or functional processes associated with fish passage under certain (e.g. low flow) conditions that will exist if this project is implemented. In the past, under status quo operations, the issue has been moot since routine flashboard installation in the spring precluded both upstream passage and the associated evaluation opportunities. The information acquired via the proposed assessment will be directly applicable to the site regardless of how the ultimate long term "fix" turns out. Dam modification/removal, in and of itself, does not automatically constitute a solution to this complex problem as their presence may actually prove beneficial to fish passage under certain conditions. In order to realize the full potential of having total discretion to manage the facilities for fish (as opposed to the industrial status quo) we must first acquire a thorough understanding of how fish interact with the system. The assessment will enable us to develop this understanding. Of course, acquisition of a single years worth of information may not be provide all the answers relative to the ultimate solution but it should nevertheless increase our understanding of the situation significantly.

In their review, IRSP stated that the proposal would have better met the established criteria if actions were directed at developing a permanent solution to passage problems at the dam(s). For the reasons mentioned above we believe that implementation of the proposal will, in fact, make great strides towards accomplishing this objective. The information generated by the project should prove invaluable in enabling the resource agencies to determine the best

long term conservation strategy relative to management/manipulation of existing facilities and flows under a variety of possible scenarios (e.g. dam removal/modification/retention, etc.).

In addition to providing immediate on-the-ground benefits to listed fish species via a one-time funding mechanism (i.e. Tier 1), the proposal meets numerous criteria established for Tiers 2 and 3. Clearly, one of its major strengths is that it represents the efforts of the ad hoc working group tasked with seeking interim and long-term solutions to the deeply entrenched problems at the site. This group, which seeks positive solutions to satisfy numerous interests, is composed of federal and state agencies, water conservation groups and historical societies, and representatives form the Oregon legislature and Governor's office. It is hoped that the successful implementation of these collaborative efforts will establish a model example by which other entities confronted with comparable challenges can benefit.

Project: 23073 Purchase Perpetual Conservation Easement on Holliday Ranch and Crown Ranch Riparian Corridors and Uplands

Sponsor: Oregon Department of Fish and Wildlife (ODFW)
Subbasin: John Day
Budget Request: $481,800
CBFWA Budget Category: HP "A" - "BiOp"
ISRP Rating: A

Short Description: Fence 17.7 miles of mainstem John Day River and tributaries, and protect 15,532 acres of uplands two miles east of John Day, Oregon under perpetual conservation easement to improve habitat and protect steelhead spawning grounds and big game winter range.

ISRP Comment: The ISRP supports this excellent project, but is confused over long-term O&M costs. The budget includes funds for long-term O&M while the text indicates that the responsibility for ongoing fence maintenance falls on the Grantor, the Hollidays. Also, there is inadequate indication who will pay for long-term M&E.

Response: Terms of this agreement are currently being negotiated with the Hollidays; however, it has been proposed that the Grantor will be responsible for O&M, while the holder of the conservation easement will accept responsibility for M&E. The proposal should be modified to reflect no O&M request from BPA in FY2001 or out years. Instead, costs should be shifted to M&E, which is estimated to require $12,000 in FY2001 and $10,000 each year over the life of the easement. These costs will include photopoints, aerial monitoring of the river and tributaries, water temperature monitoring equipment, and on-ground inspections.

Project: 23082 Protect Fish Habitat through Education and Enforcement

Sponsor: Columbia River Inter-Tribal Fish Commission (CRITFC)
Subbasin: System wide
Budget Request: $ 303,575
CBFWA Budget Category: HP "A"
ISRP Rating: NA

Short Description: Protect salmon habitat by improving and coordinating enforcement activities, educating law enforcement administrators, local volunteers and the regulated community, and monitoring and tracking issues, reports and citations.

ISRP Comment: This proposal does not address imminent risks to ESA stocks by offering direct on-the-ground benefits with one-time funding.

Response: The proposal is designed to specifically address ESA stocks through immediate improvements to habitat by stopping illegal water diversions, illegal spawning ground destruction from un-permitted construction, and other illicit activities. Halting unlawful activities will have immediate effects. Page six of our proposal identifies the

listed species in seven subbasins that will be directly protected by this proposal including steelhead, fall chinook, summer chinook, and sockeye. Three of the seven subbasins identified in the CRITFC proposal are the same three subbasins identified in the 2000 FCRPS Biological Opinion as requiring the highest priority (Methow, John Day and Salmon subbasins).

The project will have immediate on-the-ground benefits to critical habitat needs of endangered species. For example, if a person drives an All Terrain Vehicle through the middle of endangered salmon redds, and an enforcement officer stops them as a result of this program, this action would provide an immediate benefit for survival rates to an endangered salmon. Another example would be a construction site in violation of regulations that would cause sedimentation of spawning gravels, which if forced to comply with the law would provide immediate benefits to the habitat. Enforcement of habitat protection measures directly results in enforcement of reduced take of ESA listed species.

ISRP Comment: It is for infrastructure to support coordination, education, and enforcement that to be successful will need to be ongoing.

Response: On November 13, 2000, NWPPC and BPA issued a letter requesting proposals for "High Priority" project proposals for BPA funding and included criteria for project selection. One of the criteria stated,

"The proposed project would address a habitat enforcement issue and result in the protection of listed, anadromous fish habitat including marine habitat."

This type of project proposal (habitat enforcement) was specifically requested in the NWPPC and BPA criteria for a high-priority project. Therefore, this proposal meets the criteria set out by the NWPPC and BPA.

Furthermore, the benefits of education will last for several years, even if the project ends after one year. This proposal largely focuses on training volunteers and enforcement agents. Once they are trained to understand how to spot ESA violations, they will retain this knowledge, and this will provide for continuing and residual improved habitat management that protect ESA-listed species.

CBFWA Comment: Enforcement portion of this proposal meets the high priority criteria. The education portion of the proposal is not urgent but would provide benefits to the region. Project should only be funded if well coordinated with Oregon State Patrol (OSP) to avoid duplication of effort.

Response: On February 13, 2001, the objection from ODFW was eliminated. A consensus within CBFWA has been reached regarding this project. The implementation of this project is intended to compliment, not complicate, the Oregon Plan. In Oregon, all components of this proposal are directed towards tribal members and reservation lands only. This includes the education component.

Project: 23084 Acquisition of Lower Desolation Creek, John Day Basin

Sponsor: Confederated Tribes of the Umatilla Indian Reservation (CTUIR)
Subbasin: John Day
Budget Request: $ 4,987,754
CBFWA Budget Category: HP "A"
ISRP Rating: B

Short Description: Acquire and Restore Lower 11 miles of Desolation Creek and its tributaries. This would restore not less than 11 miles of anadromous streams.

Comment: "There is some confusion over the extent of stream habitat involved. In the short description, 11 miles of streams are indicated while in the text, 17 miles are mentioned."

Response: Within this acquisition there are 11 miles of Desolation Creek proper and another 6 miles of documented anadromous tributaries to Desolation Creek for a total of 17 miles of anadromous streams.

Comment: " It is unclear if there are water rights associated with this property…?"

Response: There are no water rights associated with this property. The property is 95% surrounded by U.S. Forest Service property. Desolation Creek as well as other tributaries on the property either flow from the Forest Service lands or originate on the property. A map of the area and associated streams is attached in Appendix A.

Comment: The proposal is weak in that it does not sufficiently develop the O&M and M&E components.

Response: The O&M in this project represent the permanent protection of critical anadromous fish habitat stronghold and associated terrestrial wildlife habitats. As with all such large-scale habitat acquisitions projects, a detailed project planning and public involvement effort will be done to develop a long-term management plan. This plan will contain the details of protection and restoration strategies, operations and maintenance and monitoring and evaluation. Initial efforts will include "interim management' activities to assure protection of the resources from ongoing threats.

This is a large tract that has been managed for commodity production including livestock forage and timber harvest. Removing the land from grazing in this area traditionally leaves a severe weed problem for the first 3-5 years. The Tribe will want to address this weed problem in the most environmentally sound way possible. Interim weed control would focus on controlling new infestations and addressing vector sources such as roadways. This would require that weeds be dealt with by hand removal or individual backpack spaying.

The area has been logged and grazed. We will expect to do extensive native plant community restoration including planting of native shrubs and trees in riparian areas and upland sites as well as restoration of native wetland and grassland/forb communities. We will expect this planting to take place over the course of several years in conjunction with control of non-native invasive species. This will require that some plants from the site be propagated at nursery locations and planted in later years. Other stocks of local natural shrubs, vegetation and trees will be taken and or enhanced on site.

At this point it is impossible to break down the exact cost of O+M by category, however our costs are based on past recent experience with large property acquisition and rehabilitation. Similar project costs range from $15 to $25 per acre per year for O&M and M&E. Initial protection measures including construction of perimeter fence will be completed over the first two years as funding is available and may cost up to $200,000.00

A breakdown of O&M costs for the first year will be in 2002- Interim Noxious weed control $30,000.00- Planning, and public involvement- $50,000.00- Perimeter fence construction $70,000.00

Potential funding partnerships with the U.S. Forest Service could offset some the initial and long-term O&M/ M&E costs. Subsequent to our submittal of the proposal the U.S. Forest Service has indicated that they will be spending an expected $400,000 annually in the Desolation subbasin and that a large percentage of that money can be earmarked for recovery in this acquisition area

The M&E will begin the first year with an estimated $50,000 targeting surveys to collect baseline project level data. Planning efforts will be tiered to the John Day River Subbasin Summaries and subsequent Assessment and Plan to develop a project area M&E Plan. This will be integrated with a site specific recovery plan strategies that will treat the watershed in an integrated fashion with an emphasis on natural recovery and establishment of a largely self sustaining natural habitat. It is assumed that long term M&E expenditures will average $50,000 per year for the first five years as monitoring of baseline conditions is phased into monitoring of treatment strategies.

It is important to note that while the property has been used primarily for commodity driven purposes, the current owners have taken relatively good care of the resources leaving a quality stronghold habitat with high potential for long term and cost effective restoration and management.

Appendix A – Proposed Acquisition Area

Project: 23087 Collaborative Center for Applied Fish Science

Sponsor: Columbia River Inter-Tribal Fish Commission (CRITFC) and University of Idaho (UI)
Subbasin: System wide
Budget Request: $ 4,216,852
CBFWA Budget Category: HP "B" - P
ISRP Rating: NA

Short Description: To enhance the capacity for critical research and development of supplementation methods and consequent links to natural productivity, leading to HGMPs, Benefit/Risk analyses and population management plans.

ISRP and CBFWA Comment: The CCAFS proposal has received a High Priority "B" ranking from CBFWA, meaning that *it does not fit solicitation criteria but is needed for emergency or long term actions*. It was assigned the letter "P" score, indicating that this proposal was *a high priority for timeliness, and needed to be done this year*. The ISRP did not rank the proposal, as it, in their opinion did not meet the criteria.

Response: The CRITFC agrees in essence with the conclusions of the CBFWA and ISRP that this proposal does not fit some the criteria as written. Namely, the proposal failed to demonstrate "*that the anticipated benefits to the target species will be secured with the initial funding*" (Giese memo, 20 Dec 2000). However, project funding must be obtained in the present fiscal year in order to have the desired impact on ongoing technical activities related to ESA listing and to dovetail into University of Idaho construction schedules. Failure to do so will prevent or delay construction or increase significantly the costs of expansion of the Hagerman Fish Experimental Culture Station to accommodate increased technical activities planned in the present year. Dovetailing into the University's construction schedule should result in savings of about $1 million dollars. Further, this proposal will provide the critical technical support necessary for successful implementation of already-funded NWPPC programs.

The Columbia River Inter-Tribal Fish Commission (CRITFC) represents the fisheries management and conservation interests of the Columbia River treaty tribes. Within the CRITFC, the Fish Science Department is mandated to provide technical support for tribal recovery efforts. Emphasis is recent years has been on genetics and life history research and monitoring (see Table 3). Future endeavors will include pathology, nutrition, habitat use and ecological interactions of hatchery and wild fish. Science staff are co-principal investigators on a number of BPA-funded projects on chinook and steelhead salmon population structure. Further, the tribes wish to significantly improve their education program for tribal members, with emphasis on advanced degrees in biological research.
The Hagerman Fish Culture Experimental Station (HFCES), part of the Aquaculture Research Institute (ARI) of the University of Idaho, has provided DNA assessment and interpretation services to the CRITFC regarding salmonid, sturgeon and lamprey population genetics for a number of years. In July 2001, the CRITFC and the University have joined in a partnership through a Memorandum of Agreement (MOA) that will assemble key research and technical staff at the HFCES to form the Collaborative Center for Applied Fish Science (CCAFS).
Under the MOA, the CCAFS will become a first class, applied regional center in fish genetics and other areas of artificial propagation. To achieve this goal, the CRITFC hopes to contribute to renovation and enhancement of the facilities, share operating expenses, and provide up to 5 research staff and substantial equipment. This is of utmost interest to the tribes, who wish to advance the science of recovery significantly and independently of political matters. It is also of interest to the University, which plans to devote their substantial resources for resolving scientific uncertainties pertaining to fish conservation issues.
Also of major significance are the educational opportunities that this partnership will offer to tribal members. The increasing lead role that the tribes are taking in fish production and research and the MOA link to tribal production centers and programs is the building block for an education program that would be unlike any other, regionally or nationally.

The CRITFC asks for your support of this program in its efforts to secure funding for structural expansion of the Hagerman facilities, to provide for funding for a core of scientists and technicians working in support of tribal and regional restoration efforts, and to provide seed money for our education program.

Table 3. Listing of ESA-related projects directly related to the Collaborative Center for Applied Fish Science Proposal

Project Title	**Project Number**	**Funding Source**	**Project Support from CCAFS**
Idaho Salmon Supplementation Study	8909802	NWPPC / BPA	Analysis of samples for baseline genetic profiles. Representative tissue samples (about 2000) were collected from all treatment and control spawning populations. Goal is to determine effects of supplementation on naturally-spawning populations.
Johnson Creek Artificial Propagation and Enhancement Project	9604300	NWPPC / BPA	Strategies for broodstock acquisition and spawning protocols, monitoring (genetic) and evaluation, and pathology. Development of likelihood function for the determination of effective population size in metapopulations. Determination of stock structure of South Fork Salmon River summer Chinook.
Grande Ronde River Supplementation Project – Lostine River	9800702	NWPPC / BPA	Evaluation of the potential impacts of supplementation using genetic and life history data. Determination of outplanting strategies for optimal conservation of genetic variance and population distinctness.
Nez Perce Tribal Hatchery Monitoring and Evaluation Project	8335000	NWPPC / BPA	Evaluation of the potential impacts of supplementation using genetic and life history data. Effects of NPTH on populations structure. Measures of straying and population expansion. Evolution of novel life history types.
Lower Snake River Compensation Plan hatchery evaluations project	FWS agreement 141101J005	US Fish and Wildlife Service	Evaluation of the potential impacts of supplementation using genetic and life history data. Representative tissue samples (about 2000) were collected from all spawning populations. Goal is to determine population management plans based on need to conserve naturally-spawning populations.
Captive Broodstock Program Project	9801006	NWPPC / BPA	Genetic monitoring and evaluation, and pathology. Maintenance of effective population sizes. Impact of captive brood on naturally-spawning population. BKD genetics.
Northeast Oregon Hatchery Monitoring and Evaluation Project	8805301	NWPPC / BPA	Genetic monitoring and evaluation, and pathology. Genetic microstructure and habitat use.
Listed Stock Gamete Preservation Project	9703800	NWPPC / BPA	Determine genetic profiles of cryopreserved germplasma. Determine optimal sampling design to capture maximum of genetic variance in naturally-spawning populations.
Hood River Supplementation	8805303	NWPPC / BPA	Review and re-write where necessary the Benefit / Risk Analysis & HGMP. Develop Population management Plans in collaboration with WS and ODFW.
Walla Walla steelhead supplementation		NWPPC / BPA	Baseline survey of steelhead and rainbow trout in Walla Walla subbasin, and determination of supplementation strategy. Development of Population Management Plan.
Methow River Evaluation		NWPPC / BPA	Genetic analysis and population structure of naturally spawning salmon to assist in settlement of the management dispute and arrive at a science-based solution.
Pacific Salmon Treaty Implementation		PSC	Stock identification, production, and assessment research. Specifically, a project hopes to determine stock composition of fish in the Zone 6 fisheries, in order to provide information for determination of target-population impacts.
Steelhead Kelt Reconditioning		NWPPC / BPA	Benefit / Risk Analysis, genetic profiles and stock structure. Determination of methods for reconditioning kelts on a large scale. Determination of population dynamics.

List of additional important NWPPC-funded projects underway.

Coho Restoration Mid-Columbia River Tributaries	9604000	NWPPC / BPA	Develop a M&E plan including a genetics monitoring program for coho reintroductions into the Yakima, Wenatchee, and Methow rivers.
Yakima River Coho Restoration	9603302	NWPPC / BPA	Genetic monitoring and evaluation. Development of locally-adapted broodstock and broodstock management plan.
Umatilla Basin Natural Production M&E	9000501	NWPPC / BPA	Evaluate genetic effects of supplementation on natural fish. Baseline survey

Some past and on-going projects

Fall Chinook ESU determination
Determination of Deschutes River/Snake River fall chinook ESU. Required genetic (electrophoresis and mtDNA) collection and analysis, life history analysis, coded-wire tag analysis and ocean distribution.

NEOH conceptual monitoring and evaluation plan
Lays out monitoring and evaluation methods for supplementation projects

Imnaha Steelhead genetics
Determination of metapopulation structure in the Imnaha and other Snake River tributaries.

Lamprey genetics
Determination of stock structure and homing fidelity of pacific lampreys. Development of a DNA-based species key.

Nez Perce Tribal Hatchery Benefit/Risk Analysis
Benefit/Risk Analysis, broodstock management plan, and HGMP for fall chinook.

Johnson Creek Artificial Production and enhancement Program
Benefit/Risk Analysis, broodstock management plan, HGMP and Population Management Plan for summer chinook.

Hatchery Uses
Tracking of use of hatchery fishes throughout Columbia Basin.

Toolbox development
Development of methods for monitoring impact of supplementation of naturally-spawning populations, development of management protocols and guidelines. (PSC-funded activity).