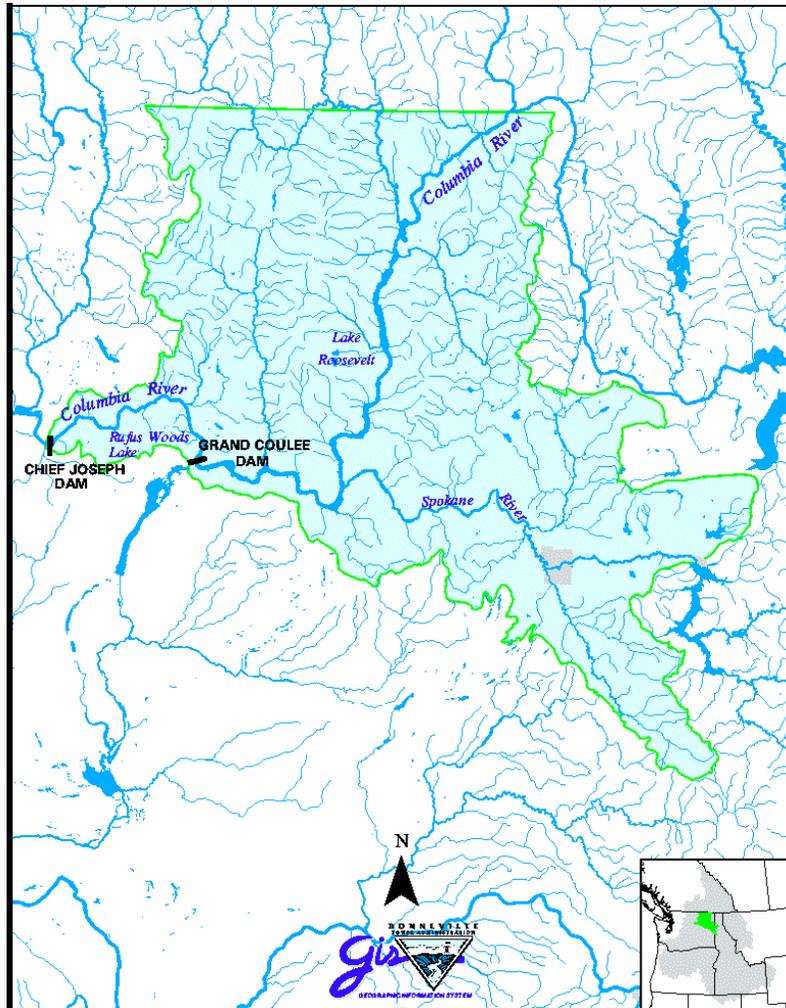


# Draft FY 2001-2003

## Inter-Mountain Province Work Plan



Prepared for the  
Northwest Power Planning Council

by the  
Columbia Basin Fish and Wildlife Authority

November 15, 2000

# Draft FY 2001-2003 Inter-Mountain Province Work Plan

## Table of Contents

Introduction.....	1
Geographic Description.....	2
Project Review Process.....	3
Three-year Budget Recommendations .....	14
Lake Rufus Woods Summary .....	(see tabbed sections in this document)
Lake Roosevelt Summary .....	(see tabbed sections in this document)
San Poil River Summary .....	(see tabbed sections in this document)
Spokane River Summary.....	(see tabbed sections in this document)
Appendix. Hatchery Genetic Management Plans .....	(separate document)

## Introduction

The “rolling” provincial review process was developed by the Northwest Power Planning Council (NWPPC) in February 2000 in response to recommendations by the Independent Scientific Review Panel (ISRP) and the Columbia Basin Fish and Wildlife Authority (CBFWA). Under this new province based process each individual project within a province will be reviewed for technical merit and management relevance every three years. Under the previous process all project proposals for Bonneville Power Administration (BPA) funding under the Fish and Wildlife Program were reviewed annually. The purpose of the NWPPC’s new multi-year process is to reduce the burden of reviewing large numbers of projects, most of which had been reviewed just one year before, and to provide for a more thorough review of the project proposals in the context of a subbasin summary. Additionally, the process is intended to provide the opportunity for site visits by reviewers, project presentations with a question and answer period, and provide reviewers with more detailed background and planning documents which will reduce the reviewer’s reliance strictly on the proposal form.

The subbasin summaries developed under this process are intended to be interim and will be replaced by subbasin plans developed to meet requirements of the recently amended Fish and Wildlife Program. The Columbia Gorge and Inter-Mountain provinces are the first to be reviewed under this new process. The results of this review for the Inter-Mountain Province are summarized here.

This document was developed collaboratively by the NWPPC staff, ISRP, fish and wildlife managers, other stakeholders and CBFWA staff, culminating in project and budget recommendations for FY 2001-2003. The subbasin summaries are provided only as context for the project recommendations.

The CBFWA process for providing these recommendations utilized the ISRP preliminary findings and integrated manager evaluations of the technical and management merits of the project proposals relative to anadromous fish, resident fish and wildlife management needs, and the goals and objectives identified in the subbasin summaries. A total of 30 project proposals were submitted and reviewed in the Inter-Mountain Province with seven projects receiving a “do not fund” recommendation. The recommended project proposals address needs identified in the subbasin summaries and include 17 new projects and 13 ongoing projects totaling \$9.5 million.

This draft work plan includes the subbasin summaries, which describe the physical and biological characteristics of each subbasin within the Inter-Mountain Province. The summaries also identify past accomplishments, limiting factors, management objectives and strategies, current needs and recommended budgets for project implementation.

## Geographic Description

Located in northeastern Washington, the Inter-Mountain Province consists of all Columbia River mainstem reservoirs and associated tributaries above Chief Joseph Dam (River Mile (RM) 541.1) and below the U.S. border (Figure 1). For this review, the following subbasins have been evaluated:

1. Rufus Woods (including the Nespelem River)
2. Lake Roosevelt (including the Kettle and Colville rivers)
3. San Poil River and
4. Spokane River.

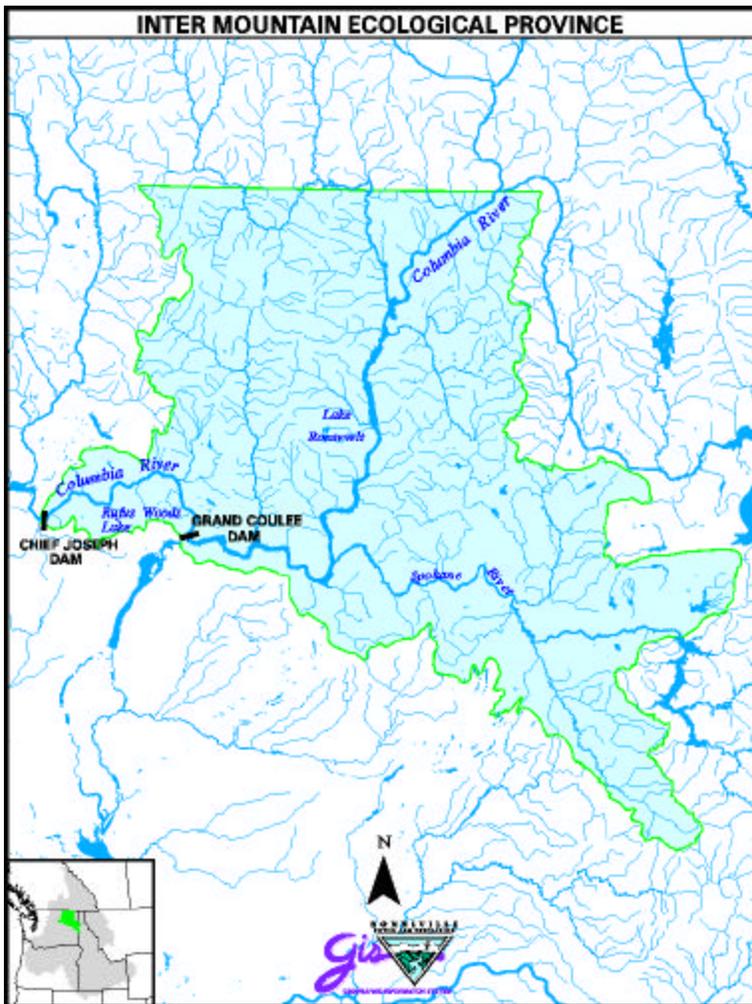


Figure 1. Inter-Mountain Province

## **Project Review Process**

### **Subbasin Summaries**

The Inter-Mountain province review was initiated at an April 10-11, 2000 meeting in Spokane, Washington. An invitation was sent to an extensive distribution list to encourage all interested parties (i.e. land and water managers, representatives of watershed councils, etc.) to attend and provide input. The purpose of this first meeting was to provide all interested parties with the opportunity to identify sources of information necessary for the development of subbasin summaries for this province (e.g., monitoring data, habitat restoration results, existing assessments, etc.). The intent was to ensure that Bonneville Power Administration (BPA) expenditures for fish and wildlife projects compliment and enhance existing efforts and ensure that priority needs are addressed. Subsequent meetings were held to review draft summaries and identify goals and objectives.

Previously, ecosystem summaries for each subbasin were developed as a means of providing context for project proposals. Under the new process a more formal structure with subbasin teams was formed to develop the more comprehensive subbasin summaries of the newly identified provinces.

Subbasin summaries for the Inter-Mountain Province were completed in July 2000. BPA issued the solicitation for project proposals for the Inter-Mountain Province July 13, 2000 with project proposals due August 16, 2000. The project sponsors were asked to show a direct tie between their projects and the needs identified in the subbasin summaries

### **Review by the ISRP**

The ISRP reviewed 30 project proposals for the Inter-Mountain Province. At least three ISRP/Peer Review Group members reviewed each proposal. To ensure a consistent and fair evaluation, standard formats and criteria were applied to all proposals to generate comments and scores prior to the proposal review workshop. These scores and comments were not made available to the project sponsors at the workshop, but were used by the ISRP to develop questions for the site visits and workshop presentations. The workshops consisted of site visits and project presentations.

#### **Site Visits (September 18-19, 2000)**

The ISRP, subbasin teams, fish and wildlife managers, the CBFWA province review team and other stakeholders toured the province to gain a better understanding of the existing ecological conditions and limiting factors as well as view some ongoing projects in each subbasin. During the tour, managers provided oral presentations for areas/projects within the province that the group was unable to visit.

#### **Project Presentation (September 20-21, 2000)**

Prior to the presentation of individual project proposals, subbasin team leaders provided a general overview for their respective summaries. Following each subbasin summary presentation, project proposals relative to that subbasin were presented to the ISRP, CBFWA province review team, fish and wildlife managers, NWPPC staff, CBFWA staff and other stakeholders. All project sponsors were provided 15 minutes to present their proposal and answer questions. During this review, the CBFWA province review team

applied Subbasin Project Review Criteria (Table 1) to each project. Every effort was made to be consistent among all projects reviewed.

Table 1. CBFWA Subbasin Project Review Criteria

<b>Technical Criteria</b>	
1. Does the proposal demonstrate that the project uses appropriate scientifically valid strategies or techniques and sound principles (best available science)?	<b>Y or N</b>
2. Are the objectives clearly defined with measurable outcomes and tasks that contribute toward accomplishment of the objectives?	<b>Y or N</b>
3. Are the resources proposed (staff, equipment, materials) appropriate to achieve the objectives and time frame milestones?	<b>Y or N</b>
4. Does the proposal include monitoring and evaluation to determine whether objectives are being achieved (including performance measures/methods) at the project level?	<b>Y or N</b>
5. Will the proposed project significantly benefit the target species/ indicator populations?	<b>Y or N</b>
6. Does the proposal demonstrate that project benefits are likely to persist over the long term and will not be compromised by other activities in the basin?	<b>Y or N</b>
7. Does the proposal demonstrate that all reasonable precautions have been taken, to not adversely affect habitat/populations of wildlife, native resident and anadromous fish?	<b>Y or N</b>
8. Are there explicit plans for how the information, technology etc. from this project will be disseminated or used?	<b>Y or N</b>
<b>Management Criteria</b>	
1. Does the proposed project address fish and wildlife related objectives, strategies, needs and actions as identified in the subbasin summaries?	<b>Y or N</b>
2. Does the project address an urgent requirement or threat to population maintenance and/or habitat protection (i.e., threatened, endangered or sensitive species)?	<b>Y or N</b>
3. Does the project promote/maintain sustainable and /or ecosystem processes or maintain desirable community diversity?	<b>Y or N</b>
4. Is there cost share for the construction/implementation and/or monitoring and evaluation of the project?	<b>Y or N</b>
5. Will the project complement management actions on private, public and tribal lands and does the project have demonstrable support from affected agencies, tribes and public?	<b>Y or N</b>
6. Will the project provide data critical for in season, annual and/or longer term management decisions?	<b>Y or N</b>
7. Will this project provide or protect riparian or other habitat that may benefit both fish and wildlife?	<b>Y or N</b>

### **Preliminary ISRP Report**

On October 6, 2000 the ISRP released a Preliminary Review of Fiscal Year 2001 Project Proposals for the Columbia River Gorge and Inter-Mountain provinces (ISRP 2000-8 at NWPPC). This report summarized the ISRP's preliminary review of each project and identified areas of concern where they had requested a written response to questions. The due date for written responses to this report was October 27, 2000.

### **CBFWA Province Review Group**

On October 10-11, 2000 the CBFWA province review group reviewed all project proposals within the province using criteria listed in Table 1 which resulted in a consensus Yes or No. Subbasin team members also participated in the review of the project proposals. The following elements were considered during the review:

- How well does the project relate to the criteria (Table 1)
- Validation of existing work- Is the current funding level appropriate (Section 6 O&M and Section 7 M&E of existing projects)? Is it appropriate to continue implementation of existing work (Section 4 P&D and Section 5 C&I of existing projects)?
- Evaluation of proposed new work- Does a new project proposal demonstrate a priority need over implementation strategies within existing projects (Sections 4 and 5 of existing projects)?

The preliminary ISRP technical review of all proposals was utilized while discussing the technical merits of each project. Project proposals were grouped by subbasin during their review. Following the technical and management review, the project proposals were prioritized within each subbasin according to the fish and wildlife needs within that subbasin. The following definitions were used for the subbasin prioritization:

- Urgent - These projects or tasks within a project are of urgent need. They will either have a direct impact on survival or protection of a key species or will protect investments made in this subbasin. These projects should be able to demonstrate an immediate cost if not funded (loss of habitat, impact on a population, etc.). An example might also include ongoing O+M costs.
- High Priority - These projects or tasks within a project are high priority within the subbasin. The project addresses a specific need within the subbasin summaries.
- Recommended Actions - These are good projects that cannot demonstrate a significant loss by not funding this year. These projects should be funded, but under a limited budget could be delayed temporarily without significant loss.
- Do not fund - These projects are either technically inadequate or do not address a need within the subbasin summaries. These projects may be inappropriate for BPA funding.

### **CBFWA Review and Approval of Project Recommendations and Subbasin Summaries**

The final step in the project review process was the consensus approval of the project recommendations by CBFWA members. The CBFWA members review and the recommendations in the subbasin summaries and province work plan demonstrate regional support by the fish and wildlife managers.

During October 30 - November 1, 2000, the province recommendations and subbasin summaries were discussed in the CBFWA Anadromous Fish, Resident Fish and Wildlife committees. The committees made some modifications to the province recommendations based on technical or regional management concerns. Some inconsistencies in approach between the Columbia Gorge and Inter-Mountain provinces were identified and corrected. It was decided to group the Urgent and High Priority projects for the final recommendation to NWPPC since all of these projects should be funded in FY 2001.

### **Proposal Review Results**

A total of 30 project proposals were reviewed in the Inter-Mountain Province (13 ongoing projects and 17 new proposals (Table 2)). Seven proposals were categorized as “do not fund”. These projects, except for Project Number 21003, were inappropriate for Direct Program funding. Individual project proposal comments follow.

Table 2. CBFWA project proposal review for the Inter-Mountain Province

Note: Due to space constraints, text in the criteria fields shown as “N” over “A” should be interpreted as “N/A”.

ProjectID	Title	Sponsor	Subbasin	Technical Criteria								Management Criteria							Project Review Comments	CBFWA Category	
				T1	T2	T3	T4	T5	T6	T7	T8	M1	M2	M3	M4	M5	M6	M7			
21002	Early life history and survival of adfluvial rainbow trout in the San Poil River Basin	PNNL	San Poil	y	y	y	N/A	n	n	y	y	y	n	n	A	n	y	y	N/A	<p><b>T5</b><sup>-1</sup></p> <p><b>T6</b><sup>-2</sup></p> <p><b>M2</b>- population has persisted for years under the stated conditions</p> <p><b>M3</b><sup>-4</sup></p>	Recommended Action
21003	Upper Columbia Subbasin Native Rainbow Population Study	WT	Inter-Mountain	n	y	y	n	n	n	y	y	y	n	n	y	n	n	N/A	<p><b>T1</b>-collection techniques/methods and design are problematic</p> <p><b>T4</b>-data collecting exercise</p> <p><b>T5</b><sup>-1</sup></p> <p><b>T6</b><sup>-2</sup></p> <p><b>M2</b><sup>-3</sup></p> <p><b>M3</b><sup>-4</sup></p> <p><b>M5</b>-Not consistent with all resource managers. The money would be more wisely spent rectifying problems associated with the interactions.</p> <p><b>M6</b>-Most results that would likely be gained from this project are already known.</p> <p>Comments - Methods are unlikely to meet objectives, research goals are basic and the numerous studies have been conducted to compare the statements, this proposal does not articulate what the need is for the data that would be gathered, we are unsure of what the question is that the author is asking.</p>	DNF	
21006	Characterize and Assess Wildlife-Habitat Types and Structural Conditions for Sub-Basins within the Inter Mountain Ecoprovince	NHI	Inter-Mountain	y	y	y	N/A	n	n	N/A	y	y	n	n	y	y	y	n	<p><b>T5</b><sup>-1</sup></p> <p><b>T6</b><sup>-2</sup></p> <p><b>M2</b><sup>-3</sup></p> <p><b>M3</b><sup>-4</sup></p> <p><b>M7</b>-maps by themselves are not capable of protecting habitat</p> <p>Comments - This project is being funded under the EDT component of the NWPPC assessment effort. If expansion of the project is necessary, that expansion should be determined and funded under the EDT development process. Not appropriate to fund with wildlife funds. The Wildlife Committee also has concerns over data access based on past experience.</p>	DNF	
21008	Evaluation of the Banks Lake Fishery	WDFW	Lake Roosevelt	y	y	y	y	n	n	y	y	y	n	n	y	y	y	n	<p><b>M3</b><sup>-4</sup></p> <p><b>M7</b>-This is not a habitat-oriented project but instead a project that will address abundance and ecological interactions of Banks Lake fish populations as well as identify factors limiting recruitment -move creel survey to Ford proposal</p>	Urgent/High Priority	
21017	Implement Wildlife Habitat Protection and Restoration	Cd'A	Spokane	y	y	y	y	y	y	y	y	y	n	y	y	y	y	y	<p><b>M2</b><sup>-3</sup></p> <p>Comment - Response to managers comments are included in</p>	Urgent/High	

ProjectID	Title	Sponsor	Subbasin	Technical Criteria								Management Criteria							Project Review Comments	CBFWA Category
				T1	T2	T3	T4	T5	T6	T7	T8	M1	M2	M3	M4	M5	M6	M7		
	on the Coeur d'Alene Indian Reservation: Hangman Watershed.																		response to ISRP. Land trust issues should be resolved in a regional forum before being established within individual subbasins or for an individual project.	Priority
21018	Implement Fisheries Enhancement on the Coeur d'Alene Indian Reservation: Hangman Creek	Cd'A	Spokane	y	y	y	y	n	n	y	y	y	n	y	y	y	y	y	<b>T5</b> <sup>-1</sup> <b>T6</b> <sup>-2</sup> <b>M2</b> <sup>-3</sup>  Comment - Fund assessment work. Implementation activities should be reviewed by CBFWA RFC prior to future funding using the within year budget modification process.	Urgent/High Priority
21020	Monitor and Enhance the Lakes and Streams of the Spokane Indian Reservation	STOI	Lake Roosevelt	y	y	y	y	y	n	y	y	y	n	y	y	y	y	y	<b>T1</b> --Methods do not exist for stock assessment, habitat, etc. Identification of methods and the sampling design/application of such methods needs to be strengthened. <b>T2</b> -The time frame identified in Objective 3 is troublesome. Rewrite Objective 3 so that it has realistic accomplishments and time periods. <b>T3</b> -Rewrite Objective 3 so that it has realistic accomplishments and time periods. <b>T4</b> -same caveat as T1(objective 3 task c is not tied to M&E as well as c in obj2 and d in obj1- <b>T6</b> -In the rewrite, clearly identify long-term benefit potential <b>M4</b> -A total of \$10,000 will be contributed from various sources. This information must be identified in the revised proposal.	Urgent/High Priority
21021	Ford Hatchery Improvement, Operation And Maintenance	WDFW	Lake Roosevelt	y	y	y	y	y	y	y	y	y	n	u	y	y	y	n		Urgent/High Priority
21022	Evaluate Fish Habitat on the Middle Spokane / Little Spokane Rivers	Spokane County Public Works Department: Utilities Division	Spokane	n	y	y	n	n	n	y	u	n	n	u	u	u	y	u	Not a BPA responsibility (should be covered by Avista (FERC issue)) <b>T1</b> -question methods	DNF
21023	Determine causes of mule deer population declines in the IM Columbia Basin: a test of the "apparent competition " hypothesis	WSU	Inter-Mountain	y	y	u	n	n	n	n	y	y	n	u	y	n	u	N A	<b>T4</b> -research/assessment project <b>T5</b> <sup>-1</sup> <b>T6</b> <sup>-2</sup> <b>T7</b> -one objective is to shot whitetail deer <b>M2</b> <sup>-3</sup> <b>M3</b> <sup>-4</sup> <b>M5</b> -more coordination with tribe and state before work can be conducted <b>M6</b> -depends on results	DNF



ProjectID	Title	Sponsor	Subbasin	Technical Criteria								Management Criteria							Project Review Comments	CBFWA Category	
				T1	T2	T3	T4	T5	T6	T7	T8	M1	M2	M3	M4	M5	M6	M7			
																				Comment - Seek funds through another funding process.	
21032	Eastern Washington Survey for Townsend's big-eared bat	WDFW	Inter-Mountain	n	n	y	N/A	n	n	y	y	y	y	y	y	N/A	N/A	N/A	N/A	T1-techniques and implementations are not well described T2-objectives are not clearly defined T5-1 T6- <sup>2</sup>	DNF
21034	Colville Tribes Restore Habitat for Sharp-tailed Grouse	CCT-FWD	Lake Roosevelt	y	y	y	N/A	n	n	y	y	y	y	N/A	n	y	y	N/A	N/A	T1- methods and analysis section too general T5- <sup>1</sup> T6- <sup>2</sup>	Urgent/High Priority
21035	Phalon Lake Native Redband Rainbow trout Trap Construction and O & M	WDFW	Lake Roosevelt	n	y	y	y	y	y	n	y	y	n	y	n	y	n	n	n	T1-Technically deficient. T2- Current objectives and task section consists of objectives and tasks that lack focus. At times, the stated objectives are actually tasks. Restructure the objectives and tasks so that they are clearly defined. T4-relies on other projects T5-id linked to O&M in other projects T6-depending on long-term operation T7-could be stocking redband in areas that support redband populations that are not genetically similar  Comment - Managers from agencies and tribes throughout the province identified this project proposal as essential for continued progress towards replacing non-native hatchery rainbow trout strains currently used in numerous hatchery programs in this province with native populations.	Urgent/High Priority
198503800	Colville Tribal Fish Hatchery	CCT	Lake Roosevelt	y	y	y	y	y	y	y	y	n	y	n	y	y	n				Urgent/High Priority
199001800	Evaluate Rainbow Trout/Habitat Improvements Of Tributaries To Lake Roosevelt	CCT	San Poil	y	y	y	y	y	y	y	y	n	y	y	y	y	y			M2- <sup>3</sup> M4-\$19,000 from Ferry County (not previously identified)	Urgent/High Priority
199104600	Spokane Tribal Hatchery (Galbraith Springs) Operation and Maintenance	STOI	Lake Roosevelt	y	y	y	y	y	y	u	y	y	n	y	n	y	y	n		T4-satisfied by project 9404300 monitors and evaluates hatchery performance T5-same as other hatchery production programs T6-benefits for kokanee are questionable due to entrainment issue T7-kokanee genetics status is unknown at this time. However, the genetic composition is being evaluated. M6-M&E completed with projects 9404300 and 9501100	Urgent/High Priority
199104700	Sherman Creek Hatchery Operations and Maintenance	WDFW	Lake Roosevelt	y	y	y	y	y	u	y	y	n	y	n	y	y	n			see comments for Project Number 199104600	Urgent/High Priority

ProjectID	Title	Sponsor	Subbasin	Technical Criteria								Management Criteria							Project Review Comments	CBFWA Category
				T1	T2	T3	T4	T5	T6	T7	T8	M1	M2	M3	M4	M5	M6	M7		
199106200	Spokane Tribe of Indians Wildlife Mitigation Project	STOI	Lake Roosevelt	y	y	y	N A	y	y	y	n	y	n	y	n	y	y	y	<b>T8</b> -will address in revision <b>M2</b> -no protected species on project area, however suitable habitat does exist and there are plans to reintroduce sharptail grouse in the future <b>M4</b> -potential for STOI to include additional land	Urgent/H igh Priority
199204800	Hellsgate Big Game Winter Range Operation And Maintenance Project	CCT-FWD	Lake Roosevelt	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y		Urgent/H igh Priority
199404300	Lake Roosevelt Fisheries Evaluation Program	STOI	Lake Roosevelt	y	y	y	y	y	n	y	y	n	y	n	y	y	n		<b>T6</b> - <sup>2</sup> <b>M2</b> -no listed species involved <b>M7</b> -if recommendations are implemented then would protect habitat	Urgent/H igh Priority
199500900	Rainbow Trout Net Pen Rearing Project	LRDA	Lake Roosevelt	y	y	y	N A	y	y	y	y	n	y	y	y	N A	N A		<b>T4</b> -9404300 is responsible for M&E <b>M2</b> - <sup>3</sup> <b>M6</b> -not a data collecting project	Urgent/H igh Priority
199501100	Chief Joseph Kokanee Enhancement Project	CCT	San Poil	y	y	y	y	y	n	y	y	y	n	y	y	y	N A		<b>M4</b> -BOR will loan strobe lights	Urgent/H igh Priority
199502700	Develop and Implement Recovery Plan for Depressed Lake Roosevelt White Sturgeon Populations.	STOI	Lake Roosevelt	y	y	y	y	n	n	n	y	y	y	n	y	y	y	N A	<b>T5</b> - <sup>1</sup> <b>T6</b> - <sup>2</sup> <b>M2</b> -not listed in the US but redlisted (scientific group has identified this group as requiring special attention) in Canada, tracking studies have shown that this is transboundary population  Comment - Fund for one year or for life of the \$152,000 implementation money. This project should be reviewed by the CBFWA RFC for future funding.	Urgent/H igh Priority
199502800	Restore Moses Lake Recreational Fishery	WDFW	Lake Roosevelt	y	y	y	n	n	n	n	y	y	n	y	y	y	N A		<b>T4</b> -M&E will begin in 2002 <b>T5</b> - <sup>1</sup> <b>T6</b> - <sup>2</sup> <b>M2</b> - <sup>3</sup>	Urgent/H igh Priority
199506700	Colville Tribes Performance Contract for Continuing Acquisition	CCT-FWD	Lake Roosevelt	y	y	y	y	y	y	y	y	y	y	n	y	y	y		need for a trust fund	Urgent/H igh Priority
199800300	Spokane Tribe of Indians Wildlife Operations and Maintenance	STOI	Lake Roosevelt	y	y	y	y	y	y	n	y	n	y	y	y	y	y		<b>T1&amp;T4</b> - Revisions will address slight deficiencies <b>T8</b> -will address in revision <b>M2</b> - <sup>3</sup>	Urgent/H igh Priority

**NOTES**

<sup>1</sup>The proposed work is research/assessment oriented thus target species/indicator populations would not benefit from the work. However, results from the studies could lead to the development of M&E plans from which the species/populations could benefit

<sup>2</sup>The proposed work is research/assessment oriented. Until results are obtained through the assessment and an M&E plan is developed and implemented, it is unknown whether the long-term benefits will be realized.

ProjectID	Title	Sponsor	Subbasin	Technical Criteria								Management Criteria							Project Review Comments	CBFWA Category
				T1	T2	T3	T4	T5	T6	T7	T8	M1	M2	M3	M4	M5	M6	M7		
<sup>3</sup> The proposed work is not associated with an urgent issue involving a listed (i.e., sensitive threatened, endangered) species. However, for many of the projects urgency does exist in the form of mitigation opportunities. <sup>4</sup> Project does not directly promote/maintain sustainable and/or ecosystem processes or maintain desirable community diversity. However, data gathered through this project could be used for these purposes.																				

Project Number 21003, *Upper Columbia Subbasin Native Rainbow Population Study*, is a proposal to evaluate the physical conditions in the stream channel, riparian zone, and catchment uplands on population productivity and structure of redband trout. In addition, a comparison of redband trout population productivity and structure with and without competitive interactions with non-native brook trout was proposed. The fish and wildlife managers judged that the methods are likely unable to allow the sponsors to meet their objectives.

Project Number 21006, *Characterize and Assess Wildlife-Habitat Types and Structural Conditions for Subbasins within the Inter-Mountain Eco-province*, is currently being funded under the Ecosystem Diagnosis and Treatment project by the NWPPC. The need for expansion of this project to produce finer resolution within each province should be determined through the EDT assessment process. If that process determines that finer resolution is necessary for regional planning, then funding for expansion should be provided through the NWPPC subbasin assessment effort.

Project Number 21022, *Evaluate Fish Habitat on the Middle Spokane/Little Spokane Rivers*, is a proposal to augment existing data and information gathered as part of the Watershed Plan for WRIA 55 and 57 and provide the technical basis for defining the potential for fisheries production within the two WRIA areas. The fish and wildlife managers judged that this was a FERC issue (should be covered by AVISTA) and thus inappropriate for Direct Program funding.

Project Number 21023, *Determine Causes of Mule Deer Population Declines in the IM Columbia Basin: A Test of the "Apparent Hypothesis"*, is a proposal to test the apparent competition hypothesis by conducting a controlled, replicated "press" experiment in two treatment and two control areas of the Inter-Mountain subbasins by reducing densities of white-tailed deer and observing any changes in cougar predation on mule deer. Due to the fact that this proposed work is evaluating a predation issue, the fish and wildlife managers judged that this proposal was inappropriate for Direct Program funding. However, the managers believe that some of the tasks should be funded under Project Number 21029.

Project Number 21030, *Forest Carnivore Surveys for Spokane Subbasin*, is a proposal to survey the area around Mt. Spokane State Park. The sponsors indicated this is an important time to conduct this work since Mt. Spokane is in the process of developing a recreational plan for the area, and the ski business is in the process of expansion. Due to the fact that the fish and wildlife managers could not identify a link between this proposal and hydro-development/operation the managers judged that this proposal was inappropriate for Direct Program funding.

Project Number 21032, *Eastern Washington survey for Townsend's big-eared bats*, is a proposal to survey human structures in eastern Washington for possible Townsend's big-eared bat maternity colonies. Due to the incomplete nature of the proposal, the fish and wildlife managers were unable to evaluate the proposal. Thus, the fish and wildlife managers judged that this proposal was inappropriate for Direct Program funding.

Project Number 21031, *Land Use Analyses of Spokane County*, is a proposal to analyze the most current aerial photos and the oldest available aerial photos of Spokane County identifying and mapping all of the vegetation types and land use types onto the Geographical Information System. The fish and wildlife managers judged that this project could provide important information but that it should receive funding through another process such as the EDT.

### **Three-year Budget Recommendations**

The primary goal for the Inter-Mountain Province is to maintain/restore a functioning upper Columbia River Basin ecosystem that supports appropriate harvest, cultural, and economic practices and the long-term sustainability of native fish and wildlife species in native habitats. An additional goal, that is supported by the Upper Columbia United Tribes and in principle through the Wild Salmonid Policy of the WDFW is the re-establishment of anadromous fish passage. Table 3 provides a three-year funding recommendation for this province that strives to meet those goals. Twenty-three new and ongoing projects totaling \$9.5 million are recommended for funding based on their proposed ability, in a technical and management sense, to address needs identified in the subbasin summaries. All of the recommended projects should be initiated within the next three years.

Table 3. CBFWA 3-year Project Recommendations for the Inter-Mountain Province

ProjectID	Title	Sponsor	Subbasin	FY01	CBFWA Category	CBFWA Budget Comments	FY02	FY03
21002	Early life history and survival of adfluvial rainbow trout in the San Poil River Basin	PNNL	San Poil	\$155,092	Recommended Action		\$175,000	\$165,000
21008	Evaluation of the Banks Lake Fishery	WDFW	Lake Roosevelt	\$170,408	Urgent/High Priority		\$347,500	\$340,000
21017	Implement Wildlife Habitat Protection and Restoration on the Coeur d'Alene Indian Reservation: Hangman Watershed.	Cd'A	Spokane	\$158,252	Urgent/High Priority	Response to managers comments are included in response to ISRP. Land trust issues should be resolved in a regional forum before being established within individual subbasins or for an individual project.	\$1,725,500	\$1,855,000
21018	Implement Fisheries Enhancement on the Coeur d'Alene Indian Reservation: Hangman Creek	Cd'A	Spokane	\$179,483	Urgent/High Priority	Response to managers comments are included in response to ISRP. Fund assessment work. Implementation activities should be reviewed by CBFWA RFC prior to future funding using the within year budget modification process.	\$291,705	\$303,874
21020	Monitor and Enhance the Lakes and Streams of the Spokane Indian Reservation	STOI	Lake Roosevelt	\$92,177	Urgent/High Priority		\$96,000	\$93,000
21021	Ford Hatchery Improvement, Operation And Maintenance	WDFW	Lake Roosevelt	\$213,249	Urgent/High Priority		\$389,086	\$166,128
21025	Intermountain Province Resident Fish Symposium	LRF	Inter-Mountain	\$41,000	Recommended Action	This project should be supported, funded and implemented through the NWPPC's subbasin planning effort.	\$43,050	\$45,247
21029	A cooperative approach to identifying the role of forage quality in affecting physical condition....of mule deer in north central Washington.	WDFW	Inter-Mountain	\$133,650	Urgent/High Priority	Some tasks from Project 21023 should be incorporated into this project.	\$84,500	\$107,100
21034	Colville Tribes Restore Habitat for Sharp-tailed Grouse	CCT-FWD	Lake Roosevelt	\$169,400	Urgent/High Priority	Response to managers comments are included in response to ISRP.	\$169,400	\$169,400
21035	Phalon Lake Native Redband Rainbow trout Trap Construction and O & M	WDFW	Lake Roosevelt	\$126,000	Urgent/High Priority	Response to managers comments are included in response to ISRP.	\$31,421	\$42,250
198503800	Colville Tribal Fish Hatchery	CCT	Lake Roosevelt	\$789,642	Urgent/High Priority		\$829,124	\$870,580
199001800	Evaluate Rainbow Trout/Habitat Improvements Of Tributaries To Lake Roosevelt	CCT	San Poil	\$199,019	Urgent/High Priority	Response to managers comments are included in response to ISRP.	\$358,500	\$268,500
199104600	Spokane Tribal Hatchery (Galbraith Springs) Operation and Maintenance	STOI	Lake Roosevelt	\$549,856	Urgent/High Priority		\$650,000	\$536,000
199104700	Sherman Creek Hatchery Operations and Maintenance	WDFW	Lake Roosevelt	\$269,898	Urgent/High Priority		\$262,545	\$270,421
199106200	Spokane Tribe of Indians Wildlife	STOI	Lake	\$1,528,806	Urgent/High	Response to managers comments are included	\$1,655,000	\$1,603,500

ProjectID	Title	Sponsor	Subbasin	FY01	CBFWA Category	CBFWA Budget Comments	FY02	FY03
	Mitigation Project		Roosevelt		Priority	in response to ISRP.		
199204800	Hellsgate Big Game Winter Range Operation And Maintenance Project	CCT-FWD	Lake Roosevelt	\$388,071	Urgent/High Priority		\$410,400	\$465,000
199404300	Lake Roosevelt Fisheries Evaluation Program	STOI	Lake Roosevelt	\$1,113,584	Urgent/High Priority	Response to managers comments are included in response to ISRP.	\$1,048,584	\$950,000
199500900	Rainbow Trout Net Pen Rearing Project	LRDA	Lake Roosevelt	\$100,550	Urgent/High Priority		\$112,761	\$115,017
199501100	Chief Joseph Kokanee Enhancement Project	CCT	San Poil	\$1,145,762	Urgent/High Priority		\$1,471,000	\$1,371,000
199502700	Develop and Implement Recovery Plan for Depressed Lake Roosevelt White Sturgeon Populations.	STOI	Lake Roosevelt	\$152,000	Urgent/High Priority	Response to managers comments are included in response to ISRP. Fund for one year or for life of the \$152,000 implementation money. This project should be reviewed by the CBFWA RFC for future funding.	\$135,000	\$250,000
199502800	Restore Moses Lake Recreational Fishery	WDFW	Lake Roosevelt	\$213,072	Urgent/High Priority	Response to managers comments are included in response to ISRP.	\$217,902	\$222,702
199506700	Colville Tribes Performance Contract for Continuing Acquisition	CCT-FWD	Lake Roosevelt	\$1,500,000	Urgent/High Priority		\$1,500,000	\$1,500,000
199800300	Spokane Tribe of Indians Wildlife Operations and Maintenance	STOI	Lake Roosevelt	\$182,497	Urgent/High Priority	Response to managers comments are included in response to ISRP.	\$185,914	\$190,563
	Total All Recommendations:			\$9,571,468			\$12,189,892	\$11,900,282

### **Rufus Woods Subbasin**

No project proposals were submitted for the Rufus Woods Subbasin.

### **Lake Roosevelt Subbasin**

Hydro-operations significantly affect fish production in reservoirs located in the Lake Roosevelt Subbasin. Lake Roosevelt kokanee and rainbow trout fisheries are limited due to entrainment. Furthermore, inopportune pool fluctuations restrict establishment of littoral habitat and dewater/inundate rearing and spawning areas. Other factors limiting fish production include elevated dissolved gas levels that result from upriver spill, uniform temperatures and limited production of plankton which are a result of short water retention time, and predation by walleye.

Fish populations located in subbasin headwaters are limited due to riparian degradation. Riparian impacts can be attributed livestock grazing practices and human use. In addition, streambank erosion and soil from county and forest roads are constant sources of sediment input.

Limiting factors associated with lakes on the Colville Indian Reservation limit the feasibility of managing for wild self-sustaining populations of salmonids. Most of the lakes are closed basin lakes with Chara Bench traits and/or limnological conditions characteristic of eutrophic or mesoeutrophic productivity status. These conditions combined with hot arid climatic conditions result in epilimnion temperatures that exceed thermal maximums (for salmonids) and hypolimnions that are lacking dissolved oxygen.

Factors such as disease/parasites, loss critical habitat and forage/prey, weather conditions, overharvest, predation, alteration of seral plant communities, collisions with motor vehicles, and interactions with domestic livestock are limiting wildlife populations. These factors can be linked to livestock grazing, forest management practices, agriculture techniques, and home/road construction.

Prior to hydro-development, the upper Columbia River supported a diverse fish assemblage that included 11 anadromous salmonid stocks. However, construction of Grand Coulee Dam blocked anadromous and resident fish migration to the upper Columbia River thus extirpating all anadromous stocks and reducing the resident fish assemblage by 64%.

Due to hydro-related fish losses, six artificial production programs exist in the subbasin to partially mitigate for the loss of anadromous fish. The primary goal of these programs is the restoration and enhancement of the recreational and subsistence fisheries in Lake Roosevelt and Banks Lake. In many cases, BPA and participating agencies/tribes have entered into long-term, non-discretionary contracts (e.g. Project Number 199104700 is characterized by a 25-year, non-discretionary contract between BPA and WDFW). The following suite of new and ongoing projects are artificial production programs that mitigate for the loss of anadromous fish and have been approved by the fish and wildlife managers for funding: Project Number 21021, *Ford Hatchery Improvement, Operation, and Maintenance*; Project Number 21035, *Phalon Lake Native Redband Trout Trap Construction and O&M*; Project Number 198503800, *Colville Tribal Fish Hatchery*; Project Number 199104600, *Spokane Tribal Hatchery (Galbraith Springs) Operation and Maintenance*; Project Number 99104700, *Sherman Creek Hatchery operations and Maintenance*; and Project Number 199500900, *Rainbow Trout Net Pen Rearing Project*. These projects address the key needs identified in the subbasin summary including: 1)

continue stocking rainbow trout, kokanee salmon, and brook trout from hatcheries and net pen programs, and 2) expand hatchery programs to include locally derived salmonid stocks.

Aside from the six artificial production projects, six fish population/habitat project proposals are recommended for funding. Project Number 21008, *Evaluation of the Banks Lake Fishery*, will focus on identifying the limiting factors for kokanee and warmwater species in Banks Lake. Through the identification of limiting factors, managers will be able implement the appropriate actions to maintain a quality fishery that will provide greater harvest opportunities. Project Number 21020, *Monitor and Enhance the Lakes and Streams of the Spokane Indian Reservation*, is a mitigation project that will allow for the monitoring of interior lakes and streams. From these lake and stream evaluations, enhancement/management plans will be developed based on identified limiting factors. Project Number 19901800, *Evaluate Rainbow trout/Habitat Improvements of Tributaries to Lake Roosevelt*, will increase the quality and quantity of spawning and rearing habitat in Lake Roosevelt tributaries by eliminating barriers, improving riparian conditions, and improving instream habitat. Project Number 199404300, *Lake Roosevelt Fisheries Program*, is an evaluation program that tracks the success of the artificial production programs in the subbasin. Objectives include: 1) monitor and evaluate angler harvest of hatchery and wild fisheries; 2) monitor, evaluate, research, and model the Lake Roosevelt ecosystem; 3) recommend management actions and hydro-operations which have the highest probability of resulting in the achievement of fisheries management objectives; and 4) assess current fisheries management objectives. Project 199502700, *Develop and Implement Recovery Plan for Depressed Lake Roosevelt White Sturgeon Populations*, will assess population reproductive characteristics of white sturgeon in Lake Roosevelt and develop measures to preclude listing of this population under the Endangered Species Act. Project 199502800, *Restore Moses Lake Recreational Fishery*, will attempt to restore the failed recreational fishery for resident gamefish in Moses Lake in lieu of lost recreational fishing opportunities for anadromous species in the upper Columbia River.

Project proposals categorized as fish population/habitat evaluations address the following needs as identified in the subbasin summary: 1) continue all current ongoing BPA funded projects identified in the NWPPC's 1995 Fish and Wildlife Program and within the Lake Roosevelt Subbasin, 2) begin all unfunded projects identified in the NWPPC's 1995 Fish and Wildlife Program and within the Lake Roosevelt Subbasin, 3) continue in perpetuity and expand operation and maintenance activities on all current and future mitigation/compensation projects, 4) monitor habitat response to enhancement, protection, and maintenance measures, 5) continue stocking rainbow trout, kokanee salmon, and brook trout from hatcheries and net pen programs, 6) expand hatchery programs to include locally derived salmonid stocks, 7) expand research, monitoring and evaluation programs to all waters receiving hatchery fish and/or considered mitigation for loss of anadromous fish above Grand Coulee Dam, 8) conduct baseline species and habitat inventories of streams and lakes with limited current fish data, increase stream habitat with appropriate instream, riparian and upland management actions, 9) conduct genetic studies to identify unique native stocks of fish, 10) complete Lake Roosevelt research and modeling exercise in order to complete the Lake Roosevelt Hydro-Operations and Fisheries Management plan, 11) conduct all studies and actions necessary to expand anadromous and adfluvial salmonids ranges to include Lake Roosevelt, Lake Roosevelt

tributaries, and area lakes, 12) conduct studies sufficient to determine carrying capacity of target species, and 13) identify limiting factors to refine harvest/mitigation objectives.

Similar to mitigation for anadromous losses, numerous wildlife projects exist or have been proposed to mitigate for wildlife losses suffered from hydro-development in the upper Columbia River. Six wildlife project proposals are recommended for funding in this subbasin. Project Number 21029, *A Cooperative Approach to Identifying the Role of Forage Quality in Affecting Physical Condition of Mule Deer in North Central Washington*, will to assess the role of habitat in maintaining mule deer numbers. Project Number 21034, *Colville Tribes Restore Habitat for Sharp-tailed Grouse*, will result in the development of a comprehensive habitat management plan to restore native shrub-steppe and riparian/deciduous vegetation on the Colville and Spokane Indian Reservations and selected areas managed by the Washington Department of Fish and Wildlife for sharp-tailed grouse. The goal of this project is to develop and implement an adaptive management plan that will also include restoration of native plant communities on over 60,000 acres of former agriculture land within the province to support a viable meta-population of sharp-tailed grouse. Project Number 199106200, *Spokane Tribe of Indians Wildlife Mitigation Project*, is an effort that addresses the NWPPC's overall Wildlife Mitigation Program Goal which is to achieve and sustain levels of habitat and species productivity in order to fully mitigate for the wildlife losses that have resulted from hydropower facilities within the Lake Roosevelt Subbasin. This project identifies parcels of mitigation land that could be purchased during the next three years. Project Number 199204800, *Hellsgate Big Game Winter Range Operations and Maintenance Project*, absorbs the costs of O&M activities for the Hells Gate Big Game Winter Range Mitigation Program. Project Number 199506700, *Colville Tribes Performance Contract for Continuing Acquisition*, adds additional land (2,000 – 4,000 acres) to the existing mitigation base by acquiring management rights to adjacent or similar lands within the project area that will enhance and buffer current efforts. Project 199800300, *Spokane Tribe of Indians Wildlife Operations and Maintenance*, will achieve and sustain levels of habitats and wildlife productivity to fully mitigate for hydro-losses.

These project proposals address the following needs identified in the subbasin summary: 1) continue all current ongoing BPA funded projects identified in the NWPPC's 1995 Fish and Wildlife Program and within the Lake Roosevelt Subbasin, 2) begin all unfunded projects identified in the NWPPC's 1995 Fish and Wildlife Program and within the Lake Roosevelt Subbasin, 3) identify specific limiting factors, such as habitat quality, reproductive performance, and mortality factors affecting mule deer populations within the Lake Roosevelt Subbasin and adjacent Subbasins/Provinces, 4) continue to acquire mitigation lands, 5) continue in perpetuity and expand operation and maintenance activities on all current and future mitigation/compensation projects, 6) monitor and evaluate wildlife response to habitat acquisition, protection and enhancement measures, 7) conduct wildlife habitat assessments to determine current status and trends, and 8) monitor habitat response to enhancement, protection, and maintenance measures.

One additional project proposal that was recommended for funding but did not fit in the fish or the wildlife category was Project Number 21025, *Inter-Mountain Province Resident Fish Symposium*, which will result in the production of an annual three-day symposium dealing with resident fish and wildlife issues within Lake Roosevelt and

elsewhere in the province. This project addresses the needs identified in the two previous paragraphs.

### **San Poil Subbasin**

Fish production in the San Poil Subbasin is limited by water/habitat quality and migration barriers. Water and habitat quality limitations include elevated water temperatures, embedded substrate, and reduced habitat complexity. In addition, barriers (e.g., dams and culverts), result in entrainment and blockage of migratory fishes. These conditions, which can be linked directly to human activities, have reduced 44% of the historically perennial streams to an intermittent categorization.

Wildlife abundance has been affected by habitat loss, fragmentation, and conversion of habitat for anthropogenic purposes. For example, intensive grazing of open lowland forests has reduced the quantity and quality of breeding and brood rearing habitat. Specific limiting factors for mule deer and sharp-tailed grouse include habitat quality, reproductive performance limitation, and relatively unknown and/or unsubstantiated mortality factors.

Three project proposals are recommended for funding in this subbasin. Project Number 21002, *Early Life History and Survival of Adfluvial Rainbow Trout in the San Poil River Basin*, will examine survival and identify critical habitat type for juvenile adfluvial rainbow trout and relate early life history to river processes in the San Poil River drainage. The goal of this project is to examine the overwintering survival and behavior of juvenile rainbow trout in the San Poil River, and link behavior and survival to key habitat types. Project Number 199001800, *Evaluate Rainbow Trout/Habitat Improvements of Tributaries to Lake Roosevelt*, is a resident fish substitution project that mitigates for anadromous losses above Chief Joseph and Grand Coulee dams. The project will analyze and address fish passage barriers. Project Number 199501100, *Chief Joseph Kokanee Enhancement Project*, is a stock identification/limiting factors analysis of kokanee that will continue to genetically evaluate kokanee stocks as well as begin to evaluate the efficacy of strobe lights as a deterrent to fish entrainment.

This suite of projects address the key needs identified in the San Poil Subbasin Summary including: 1) conduct stock assessments and population inventories (adults and juvenile) to estimate population strength and population dynamics, 2) assess fish habitat (quality and availability/passage) and riparian conditions, 3) genetic evaluation of potentially genetically distinct kokanee populations, and 4) minimize impact due to hydro-operations through the evaluation of deterrents.

### **Spokane River Subbasin**

Fish production in the Spokane River Subbasin has been impacted by land use practices in headwater areas that produce a spring freshet that occurs rapidly and eventually leads to low late summer flows. These low flows lead to degraded water quality conditions such as increased temperature, reduced dissolved oxygen concentrations, and pH fluctuations. In addition, a significant portion of spawning habitat is dewatered during low flows. Furthermore, toxic levels of arsenic, cadmium, mercury, lead, zinc, and PCB's are limiting aquatic productivity.

Urban/rural development is limiting wildlife abundance throughout the subbasin. Such development has resulted in the destruction/alteration of native habitats such as

riparian, wetlands, and low to mid elevation transition habitats and associated corridors. Avian populations are limited due to forest practices (e.g., broad leaf tree and shrub control, reduced stocking rates, pruning/thinning), intensive grazing of open lowland forests, conversions of riparian shrub and forestland habitats to croplands and pastures, wetland drainage, over-grazing, gravel-mining, and the spread of noxious weeds.

Two project proposals are recommended for funding in this subbasin. Project Number 21017, *Implement Wildlife Habitat Protection and Restoration on the Coeur d'Alene Indian Reservation: Hangman Creek*, will promote healthy self-sustaining fish and wildlife populations within headwaters of Hangman Creek by promoting, restoring, and enhancing priority riparian, wetland, and upland areas. The goal of this project is to implement wildlife protection efforts in a manner that also secures stream reaches targeted by the Tribal Fisheries Program for stream channel restoration. Project Number 21018, *Implement Fisheries Enhancement on the Coeur d'Alene Indian Reservation*, will assess the fisheries enhancement opportunities for redband trout and other native fish species in Hangman Creek. Implementation and monitoring activities will be initiated following completion of the assessment. The overarching goals of this project are to: 1) protect, mitigate, and enhance native resident fish; 2) develop, increase, and/or reintroduce natural spawning populations of native trout into reservation waters; 3) provide short and long-term harvest opportunities for the reservation community; 4) sustain long-term fitness and genetic integrity of targeted fish populations, and 5) minimize ecological and genetic impacts to non-targeted fish populations.

This suite of projects address the key needs identified in the Spokane Subbasin Summary including: 1) conduct a genetic evaluation of potentially distinct stocks of resident redband trout in the Hangman Creek watershed, 2) provide habitats that support life requisites for all native and desired wildlife and botanical species, 3) protect and enhance wildlife and botanical populations/communities to optimum levels relative to available habitat, 4) enhance existing and available habitat to optimize conditions required to increase overall wildlife and botanical productivity of desired species assemblages, 5) provide annual monitoring and evaluation of projects and apply adaptive management principles as necessary and to meet terrestrial resource goals, 6) coordinate efforts with other resource managers to maximize benefits to habitat and associated wildlife and botanical populations/communities for the benefit of the human community, and 7) establish a habitat protection fund that can be used to secure management rights to priority habitat areas with emphasis on riparian, wetland, floodplain, Palouse transition/grassland, and winter range areas.