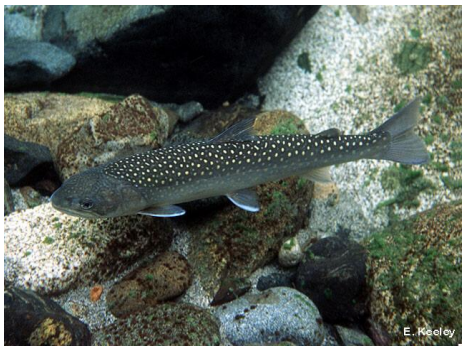
Strategy for Protection and Improvement of Native Salmonid Habitat

in the Pend Oreille Watershed, Washington
Water Resource Inventory Area 62



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II. EXECUTIVE SUMMARY

The Pend Oreille Salmonid Recovery Team (Recovery Team) was created under the Salmon Recovery Act (Act) in June 2000 for Water Resource Inventory Area (WRIA) 62 in northeastern Washington. The Recovery Team consists of a Technical Advisory Group (TAG) and a Citizens Advisory Group (CAG) and is coordinated by the Pend Oreille Conservation District (POCD) under contract with the Washington Department of Fish and Wildlife (WDFW). The Act provides an annual opportunity for the Recovery Team to submit a list of salmonid habitat protection and improvement projects to the Salmon Recovery Funding Board (SRFB) for funding consideration. The SRFB is authorized by the Washington State Legislature to fund projects that are targeted at salmonid recovery activities and projects statewide.

This strategy addresses protection and improvement of native salmonid habitat in WRIA 62 and provides a framework for developing an annual project list for submittal to the SRFB. The Recovery Team's vision for salmonid recovery in WRIA 62 is: "A healthy watershed that provides for the recovery of native salmonids, while also providing ecological, cultural, recreational, and socio-economic benefits". Several short- and long-term goals have been developed to help achieve the vision.

WRIA 62 DESCRIPTION

WRIA 62 is drained by the Pend Oreille River, which is the second largest river in Washington. The Pend Oreille River flows for 155 miles from its headwaters at Lake Pend Oreille, Idaho to the confluence with the Columbia River in Canada. Several large tributaries drain to the Pend Oreille River including Sullivan, Cedar, LeClerc, Tacoma, Ruby and Calispell creeks. WRIA 62 also includes a small portion of the South Fork Salmo River and the headwaters of several tributaries which drain to the Priest River system in Idaho.

PRIORITY, STATUS, AND DISTRIBUTION OF SALMONID SPECIES

Salmonids native to WRIA 62 include Chinook salmon, steelhead trout, bull trout, westslope cutthroat trout, mountain whitefish and pygmy whitefish. Of these, Chinook salmon and steelhead have been extirpated, bull trout is listed as "threatened" under the Endangered Species Act (ESA), westslope cutthroat trout is designated a "species of concern" by the U.S. Fish and Wildlife Service (USFWS), and pygmy whitefish is a Washington State "sensitive" species. The TAG and CAG have chosen bull trout, westslope cutthroat trout, and pygmy whitefish as priority species for recovery in WRIA 62. The primary focus of this strategy is on recovery of bull trout due to its ESA-listed status.

HABITAT LIMITING FACTORS AND WATERSHED PROCESSES

It is unknown which watershed processes and habitat attributes or combination of attributes are most limiting bull trout in WRIA 62 (WCC 2003). However, several habitat factors are known to be significant in the decline of bull trout populations in WRIA 62: habitat degradation on the mainstem and within tributaries; human-made fish passage barriers into tributaries of the Pend Oreille River; non-native species introduction and management; and the construction and operation of three hydroelectric facilities on the mainstream Pend Oreille River (i.e., Boundary, Box Canyon, and Albeni Falls dams), which were constructed without fish passage facilities

(WCC 2003). An assessment of watershed processes limiting native salmonid recovery has not been undertaken in WRIA 62.

PRIORITY AREAS, LIMITING FACTORS AND ACTIONS

The TAG used a two-step approach to prioritize and rank geographic areas within WRIA 62 for salmonid protection and habitat improvement actions. The prioritization process resulted in 11 of the 43 subbasins in WRIA 62 being designed as "High" priority subbasins, 4 as "medium" priority, and the remainder as "low" priority based on recent documentation of ESA-listed species, habitat suitability, and presence of natural barriers to fish passage. "High" and "Medium" priority subbasins were then ranked using seven additional criteria including habitat utilization, restoration potential, and amount of public land within subbasin (see Appendix B for details).

Priority limiting factors and protection and improvement actions were determined by the TAG for each of the "High" and "Medium" priority subbasins using information contained in the Bull Trout Habitat Limiting Factors Report for WRIA 62 (WCC 2003) and professional judgment. In summary, major actions necessary to protect and improve bull trout and other native salmonid populations in WRIA 62 may include:

- Restoring fish passage at all major barriers (i.e., dams, dikes, weirs, etc.) and culverts crossings
- Removing non-native fish
- Restoring habitat complexity (instream and riparian)
- Relocating, obliterating, or reconstructing road segments out of riparian areas
- Restoring floodplain connectivity
- Identifying and prioritizing fish passage barriers for removal
- Identifying and addressing road maintenance problems

COMMUNITY INTERESTS

Community interests and support is assessed and promoted by the lead entity on two levels. The first and most important is project level landowner support, which is assessed on a project by project basis when sponsors are available and projects are a priority within the subbasin. The second is general community support of priority actions and areas. To assess this element, CAG members identified a level of community support present for each priority action within each subbasin recommended by the TAG. The level of community support was based on the effects each action may have on a number of socioeconomic concerns including but not limited to:

- Local industry and landowner ability to avoid undue economic hardship by sustaining adequate use of natural resources
- Continued outdoor recreation, hunting and fishing opportunities
- Continued resource-based economic activity (timber harvest, farming and mining)
- Retaining the rural character of the land
- Preservation of flood control
- Further restricting access to public lands

The minimum amount of community support required to successfully implement high priority projects is landowner support. The level of local community support was assessed for each priority action suggested for each high and medium priority subbasin. This level of support is shown in the Priority Actions and Areas Table and used by the CAG when the Habitat Project List is ranked each funding cycle. General community support for projects WRIA wide focuses on:

- Assessments
- Barrier/culvert replacement
- Bank stabilization projects
- Actions improving public lands
- Easements to compensate for agriculture lands lost to conservation practices

Any priority project with landowner support as well as actions identified as having "high or moderate" community support are actively promoted to project sponsors. When sponsored these projects are prioritized by the CAG, both on their current level of community support and their ability to develop support for the salmonid recovery process in the future (see Appendix D).

Priority actions and areas with a low level of community and landowner support include:

- Acquisition of private land if removed from the county tax base
- Removal of non-native fish species in subbasins supporting a sport fishery
- Actions proposed in the lower Calispell subbasin; benefits of these actions in a primarily agricultural area protected from flooding of the Pend Oreille River by a diking system are in question by many local community members and landowners
- Road removal, abandonment or obliteration reducing access to public land.

The strategy for increasing the level of support for actions identified as having lower community support include:

1. Continuing adult and youth education for high priority activities in high priority areas.
    a. Actions with low community support will be prioritized for support building activities based on its subbasin priority, the rank of action within a priority subbasin, and the ability of the activity to achieve long and short term goals of the strategy.
    b. Actions with low level of community support will be promoted though continual educational events including guest speakers at local public and Lead Entity CAG meetings and field trips for project sponsors, landowners and citizens to past project sites of similar actions or subbasins.

2. The Lead Entity, when ever possible, will actively promote sponsorship of habitat improvement actions in areas enjoying higher levels of community support which are similar to those priority actions in areas with low community support including:
    a. Pilot studies and priority actions located in adjacent subbasins which have similar limiting factors

b. Priority actions on public lands (i.e. with landowner support) within low community support, high priority subbasins addressing limiting factors similar to those present on the privately owned reaches.

As the first step to achieve a higher level of understanding of the community support and concerns regarding priority actions in priority areas, the CAG produced a survey for water front landowners with questions relating specifically to actions proposed in their subbasin. Results of this survey were used to refine the list of educational events and activities as well as identify additional areas of community support, at the subbasin level, for priority habitat improvement activities enhancing the knowledge of the current community representatives. The survey results were also used to clarify the current level of community support for each recovery action proposed in this strategy as seen in the Community Support column of the Priority Actions and Areas Table (Table 4). An additional survey was conducted of residents WRIA-wide to complete the picture of community support and concern for actions suggested in this strategy.

OVERALL APPROACH TO GUIDE PROJECT PRIORITIES

Priority subbasin ranking when combined with subbasin specific priority actions will focus the Recovery Team in developing and soliciting salmonid protection and improvement projects for submittal to the SRFB. Any priority action with landowner support will be accepted for submission to the SRFB. The final project ranking criteria ensures that actions with equal scientific benefit and certainty ratings will be ranked higher on the habitat project list if the project is highly visible, publicly supported or has the potential to increase public support for the recovery process.

The success of this strategy in achieving native salmonid habitat recovery depends on the Recovery Team's ability to continually fund high quality projects shown, through project monitoring, to have a positive effect on fish habitat without negatively effecting property owners or public land use. This will lead to higher level of public support for both salmonid habitat recovery and the proposed actions within this strategy.

III. VISION AND GOALS

VISION STATEMENT: We envision a healthy watershed that provides for the recovery of native salmonids, while also providing ecological, cultural, recreational, and socio-economic benefits.

Short-term goals important to achieving the vision include:

- Stakeholders working together to identify all possible voluntary habitat improvement projects
- Through public outreach, educate the public and potential project stakeholders on the importance of salmonid recovery and watershed issues.
- Improve habitat and restore complete connectivity on a subbasin by subbasin level starting with those subbasin that will provide the most suitable habitat for recolonization of native salmonids for the least amount of money and without negatively impacting social or economic status of local citizens.
- Recommend adoption of public and private road building and maintenance standards by agencies that will, when implemented, help minimize negative impacts on fish habitat.

Long-term goals important to achieving the vision include:

- Bring more stakeholders together to continue to identify voluntary habitat improvement projects.
- Use results from monitoring past projects to increase the effectiveness of future projects.
- Enforce public and private road-building and maintenance standards and practices to minimize negative impacts on fish habitat.
- Manage our National Forest lands so as to minimize negative impacts to fish habitat.
- Achieve de-listing of ESA listed species in selected tributaries of WRIA 62.
- Protect, enhance, and restore native salmonid populations to maintain stable, viable levels, to ensure long-term, self-sustaining persistence, and to provide ecological, cultural, economic, and sociological benefits.
- Restore, protect, and maintain spawning and rearing habitat in tributary streams to improve survival of native salmonids.
- Operate dams and reservoirs to minimize negative impacts to native salmonids.
- Conserve genetic diversity of native fish populations and provide opportunity for genetic exchange among local populations.
- Improve conditions for native salmonids by reducing competition with brook trout and other non-native fish.

IV. INTRODUCTION

A. BACKGROUND

Currently, 15 stocks of salmon, trout, and char (salmonids) are listed as threatened or endangered under the Endangered Species Act (ESA) in Washington State. To address this issue, in 1998 the state legislature passed the Salmon Recovery Act (Chapter 77.85 RCW), which provides for the creation of Lead Entities (Chapter 77.85.050 RCW) to coordinate salmonid recovery efforts at a local level. Lead Entities are jointly appointed by the counties, tribes, and municipalities within the Lead Entity area. The Washington Department of Fish and Wildlife (WDFW) administers funds for expenses associated with operation and maintenance of Lead Entities. With technical assistance from WDFW, the Lead Entities assemble, facilitate, and administer a local citizen committee of representative habitat interests; develop a strategy for habitat protection and improvement; solicit project applications for salmonid habitat improvement and protection projects; create a prioritized list of habitat improvement/protection projects; and, create a work schedule for project completion. The prioritized habitat project list is submitted to the state's Salmon Recovery Funding Board (SRFB). The SRFB supports local partnerships by funding habitat protection and improvement projects that are proposed by local groups through Lead Entities. The mission of the SRFB is to "support salmonid recovery by funding habitat protection and restoration projects…and related programs and activities that produce sustainable and measurable benefits to fish and their habitats".

B. PEND OREILLE LEAD ENTITY

As part of the major statewide effort to recover declining salmonid stocks, the Pend Oreille Salmonid Recovery Team (Recovery Team) was created in June 2000 under the Salmon Recovery Act. The Recovery Team is coordinated by the Pend Oreille Conservation District (POCD), which was appointed Lead Entity for Water Resource Inventory Area (WRIA) 62 through the joint support of the Kalispel Tribe, Pend Oreille County, and the City of Newport. The Recovery Team consists of a Technical Advisory Group (TAG) and a Citizens Advisory Group (CAG) and is administered by the POCD under contract with the WDFW. The Salmon Recovery Act provides an annual opportunity for the Recovery Team to submit a list of salmonid habitat protection and improvement projects to the SRFB for funding consideration. The SRFB is authorized by the Washington Legislature to fund projects that are targeted at salmonid recovery activities and projects statewide. Since 1999, the SRFB has funded sixteen projects in WRIA 62 with a value of over $3,513,000. Several additional priority projects have been funded by other entities contributing to habitat improvements which meet the goals of this strategy. For a summary of SRFB funded projects see Appendix A

C. PURPOSE OF STRATEGY

This strategy addresses protection and improvement of native salmonid habitat in WRIA 62 and provides a framework for developing an annual project list for submittal to the SRFB. This document was created to serve as a guiding strategy that utilizes the best available science, local citizen's knowledge and technical expertise to identify and prioritize actions necessary for improvement of native salmonid habitat and populations in WRIA 62. This document serves the following purposes:

1) Help potential project sponsors select projects that clearly fit into a collective, unified recovery strategy;
2) Aid in the project prioritization process;
3) Facilitate coordination and cooperation between local natural resource and fisheries managers concerning specific projects, efforts, and strategies; and,
4) Identify areas and topics of community concern and outlines actions to improve community acceptance of salmonid recovery activities in WRIA 62.

This document is not intended to be an all encompassing, final strategy and implementation plan for salmonid recovery in WRIA 62. There are many factors that have and are contributing to the decline of native salmonids in the watershed which are beyond the scope of the Pend Oreille Salmonid Recovery Team and its mandate under the Salmon Recovery Act. This document will continually change as habitat protection and improvement projects are completed, new projects are developed, and knowledge of the fisheries resources and habitat improves in both quality and quantity.

D. COORDINATION WITH OTHER SALMONID RECOVERY EFFORTS/PLANS

The Northeast Washington Salmon Recovery Region, in which WRIA 62 is located, is not currently planning under Regional Salmon Recovery Planning because a federal recovery plan for bull trout, the only ESA-listed fish found in the region, has already been developed by the U.S. Fish and Wildlife Service (USFWS 2002).

However, all actions recommended in this strategy meet or exceed recovery actions identified in the USFWS draft bull trout recovery plan and critical habitat designation (USFWS 2004). Actions identified in this strategy are designed to result in, not only population recovery and delisting as addressed in the USFWS plan, but a harvestable surplus of bull trout. This strategy also incorporates priority projects identified through other planning processes, such as Northwest Planning and Conservation Council subbasin planning for the Intermountain Province (GEI Consultants, Inc. 2004), watershed planning under the Watershed Planning Act (Chapter 90.82 RCW; Golder Associates 2005), and westslope cutthroat trout status reviews (USFWS 1999, 2003). Several members of the TAG were actively involved in development of these documents insuring consistency between strategies for habitat improvement and protection.

V. WRIA 62 DESCRIPTION

This strategy addresses WRIA 62, which is located in the northeastern corner of Washington State, encompassing 794,546 acres of the Pend Oreille, Salmo, and Priest River drainages. WRIA 62 is bordered by Canada to the north, Idaho to the east, and the Chewelah Mountains to the west (Figure A). It encompasses the Pend Oreille River and its tributaries between the Canadian border and the Idaho border. The Pend Oreille River is the second largest river in Washington and flows 155 miles from its headwaters at Lake Pend Oreille to the confluence with the Columbia River in Canada. Many tributaries feed into the Pend Oreille River. The largest tributary drainage within WRIA 62 is Sullivan Creek, which drains an area of approximately 142 square miles (Dames and Moore 1995). Other significant tributaries include Cedar, LeClerc, Tacoma, Ruby, and Calispell creeks. WRIA 62 also includes a small portion of the South Fork Salmo River, where it dips down into Washington State. The South Fork Salmo River is a tributary to the Salmo River which flows into the Pend Oreille River in Canada. Some headwater portions of tributaries which drain to the Priest River system in Idaho are also captured in WRIA 62. The headwaters of tributaries contained within WRIA 62 that drain into Idaho include: Gold, Hughes Fork, Jackson, Bench, Granite, Kalispell, Lamb and Binarch creeks and the Upper and Lower West Branch of Priest River (WCC 2003).

WRIA 62 is located within the "Intermountain Province", a Northwest Power and Conservation Council designation for the area draining to the Columbia River upstream of Chief Joseph Dam. Under U.S. Fish and Wildlife Service (USFWS) bull trout recovery planning, WRIA 62 falls into two different "recovery units": the Northeast Washington Recovery Unit and the Clark Fork Recovery Unit.

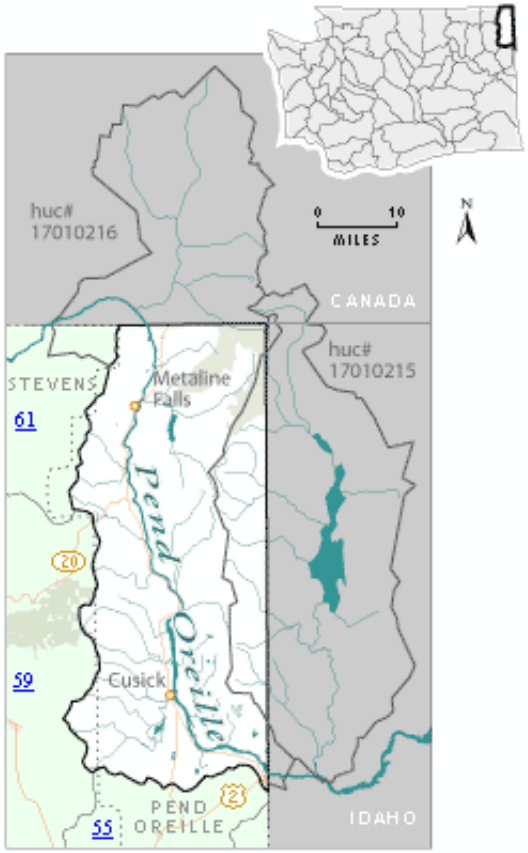


Figure A
Location of Water Resource Inventory Area (WRIA) 62

VI. PRIORITY, STATUS, AND DISTRIBUTION OF SALMONID SPECIES

Salmonids native to WRIA 62 include Chinook salmon (*Oncorhynchis tshawytscha*), steelhead trout (*O. mykiss*), bull trout (*Salvelinus confluentus*), westslope cutthroat trout (*O. clarki*), mountain whitefish (*Prosopium williamsoni*), and pygmy whitefish (*P. coulteri*). Chinook salmon and steelhead trout utilized the lower reaches of the Pend Oreille River downstream of Z-Canyon/Metaline Falls (WCC 2003; GEI Consultants 2004). These species were extirpated from the WRIA upon completion of Grand Coulee Dam in 1941, which completely blocked migration of anadromous salmonids to the region. Kokanee salmon (*O. nerka*) also occur in the watershed. Genetic analysis has determined that kokanee from Sullivan Lake are genetically similar to the Whatcom Stock, and, therefore, are not native to the Pend Oreille watershed (T. Shuhda, USFS, pers. comm. 2007). Several introduced, non-native salmonids are also found in the watershed including eastern brook trout (*Salvelinus fontinalis*), brown trout (*Salmo trutta*), and rainbow trout (*Oncorhynchis mykiss*). Table 1 provides a list of native and non-native salmonids documented to occur in each WRIA 62 subbasin.

A. PRIORITY SALMONID SPECIES

Native salmonid species in decline in WRIA 62 include bull trout, westslope cutthroat trout, and pygmy whitefish. The TAG and CAG have chosen these three species as priority for recovery in WRIA 62 with bull trout as the top priority due to its ESA status as "threatened". Westslope cutthroat trout, a USFWS "species of concern", is the second priority species and pygmy whitefish, a Washington State "Sensitive species", is the third priority species in WRIA 62.

B. STATUS AND DISTRIBUTION OF PRIORITY SPECIES

The status and population viability characteristics (PVC; i.e., abundance, productivity, genetic diversity, and spatial distribution) of each priority species are described below.

i. Bull Trout

Bull trout were listed as "Threatened" under ESA on June 10, 1998. The Bull Trout and Dolly Varden Appendix to the Washington State Salmonid Stock Inventory (SaSI, WDFW 1998) identifies the Pend Oreille bull trout stock as a distinct stock due to their geographic distribution, but lists the status of the stock as "Unknown".

Bull trout were historically abundant in the Pend Oreille River (Gilbert and Evermann 1895; WCC 2003). An adfluvial downstream migration pattern is believed to have occurred in the Pend Oreille/Priest River basin in Washington and Idaho. Adult bull trout would migrate out of Lake Pend Oreille, Idaho and then into tributary streams in WRIA 62 to spawn, with the progeny eventually returning to the lake (USFWS 2002). This migration pattern was, however, eliminated with the construction of Albeni Falls Dam in 1952 just upstream of the Idaho-Washington state-line (USFWS 2002).

Currently, the abundance of bull trout is very low in the Pend Oreille watershed (USFWS 2002, WCC 2003). Bull trout observations in WRIA 62 in the mainstem Pend Oreille River and its tributaries are infrequent and little life history information is known. Bull trout productivity is

not well understood, but is also believed to be low. Reproducing bull trout populations still exist in those WRIA 62 tributaries which are part of the Priest River drainage and in the South Fork of the Salmo River (WCC 2003). However, documented bull trout reproduction has been declining in recent years in the Priest River drainage (M. Fairchild, USFS, pers. comm. 2004). Bull trout reproduction has been documented in a few WRIA 62 tributaries including South Fork Salmo River (Baxter 2004; 2005), LeClerc Creek (T. Andersen, KNRD, pers. comm., 2002; Plum Creek 1993 field notes), Granite Creek, and Hughes Fork (Irving 1987). Diversity of bull trout in the Pend Oreille watershed is not well understood, but is believed to be low, consisting of only adfluvial stocks. It is not known if resident stocks are currently present in tributaries to the Pend Oreille River (C. Vail, WDFW, pers. comm. 2004), but they are known to be absent from the Priest River drainage (M. Fairchild, USFS, pers. comm. 2004). Current bull trout distribution within the Pend Oreille River drainage is limited, despite extensive sampling efforts since 1988 (Barber et al. 1990; Ashe et al. 1991; Bennet and Liter 1991, R2 Resource Consultants 1998; DE&S 2001; KNRD and WDFW 1998; KNRD 1999, 2000; Andersen 2001a, 2001b; Geist, et al. 2004; Baxter 2004, 2005). With the exception of known reproducing populations noted above, primarily only observations of individual fish have been documented in recent years (WCC 2003). However, in 2003, eleven bull trout were observed and/or captured in the tailrace of Albeni Falls Dam (Geist et al. 2004).

Figure B shows the current known distribution of bull trout and bull trout habitat in WRIA 62 (based on WCC 2003 and updated information provided by the TAG).

Several factors are significant to the decline of bull trout populations in the Pend Oreille River in WRIA 62: habitat degradation on the mainstem and within the tributaries; human-made fish passage barriers into tributaries to the Pend Oreille River; non-native fish species introductions and management (i.e., eastern brook trout, brown trout, rainbow trout); and, the construction and operation of three hydroelectric facilities (Boundary, Box Canyon, and Albeni Falls dams) on the mainstem Pend Oreille River (WCC 2003). Human-caused habitat degradation associated with forest management practices, fire, flood control, livestock grazing, road construction, and land use practices associated with agriculture and residential development have also impacted bull trout in the WRIA (WCC 2003).

ii. Westslope Cutthroat Trout

Westslope cutthroat trout is considered to be a "Species of Concern" by the USFWS. In 1997, the westslope cutthroat trout was petitioned for listing under ESA as a threatened species. In 1999 and 2003, the USFWS determined that listing was not warranted. The westslope cutthroat trout is considered to be a "Sensitive Species" by the Colville and Idaho Panhandle National Forests.

Historically, westslope cutthroat trout were abundant in the Pend Oreille River basin (Wydoski and Whitney 2003) and both fluvial and resident forms were believed to be present (USFWS 1999).

Currently, resident westslope cutthroat trout are found in numerous WRIA 62 tributary streams and adfluvial populations are found in the Sullivan subbasin (Sullivan Lake/Harvey Creek) and those subbasins which drain to Priest Lake (i.e. Hughes Fork, Kalispell, Granite). Abundance is

largely unknown (C. Vail, WDFW, pers comm. 2004), but appears to be dependent upon quality and quantity of habitat and competition from other species (T. Shuhda, USFS, pers. comm. 2004; M. Fairchild, USFS, pers. comm. 2004). In four WRIA 62 streams surveyed in 1995, westslope cutthroat trout abundance ranged from 5.9-40.1 trout/100 m^2 (KNRD and WDFW 1998). Productivity is unknown (C. Vail, WDFW, pers. comm. 2004). Diversity has been reduced from historic levels due to the loss of the fluvial form of cutthroat trout from most subbasins in the watershed(C. Vail, WDFW, pers. comm. 2004). Fluvial stocks apparently could not adapt to a adfluvial life history upon construction of dams on the mainstem Pend Oreille River (Scholz 2000 in Wydoski and Whitney 2003). Genetic analysis of resident cutthroat trout populations in WRIA 62 has shown that several tributaries support genetically distinct populations of westslope cutthroat trout (Shaklee and Young 2000). However diversity is limited in some subbasins due to introgression with non-native rainbow trout (M. Fairchild, USFS, pers. comm. 2004).

Figure C shows the current known general distribution of cutthroat trout in WRIA 62. This map is based on most recent WDFW, U.S. Forest Service (USFS), and Kalispel Natural Resource Department (KNRD) data, but may not reflect actual distribution as the entire watershed has not yet been surveyed. It is important to note that cutthroat trout are generally more abundant in the upper reaches of WRIA subbasins than the lower reaches due to competition with non-native eastern brook trout.

Factors which have contributed to the decline of westslope cutthroat trout include conversion of the Pend Oreille River from a riverine to a reservoir environment (Wydoski and Whitney 2003) through the construction and operation of three hydroelectric facilities (T. Shuhda, USFS, pers. comm. 2004), displacement from streams by non-native salmonids (T. Andersen, KNRD, pers. comm. 2004), human-made fish passage barriers, and habitat degradation (Wydoski and Whitney 2003) associated with forest management practices, fire, flood control, livestock grazing, road construction, and agriculture (T. Shuhda, USFS, pers. comm. 2004).

iii. Pygmy Whitefish

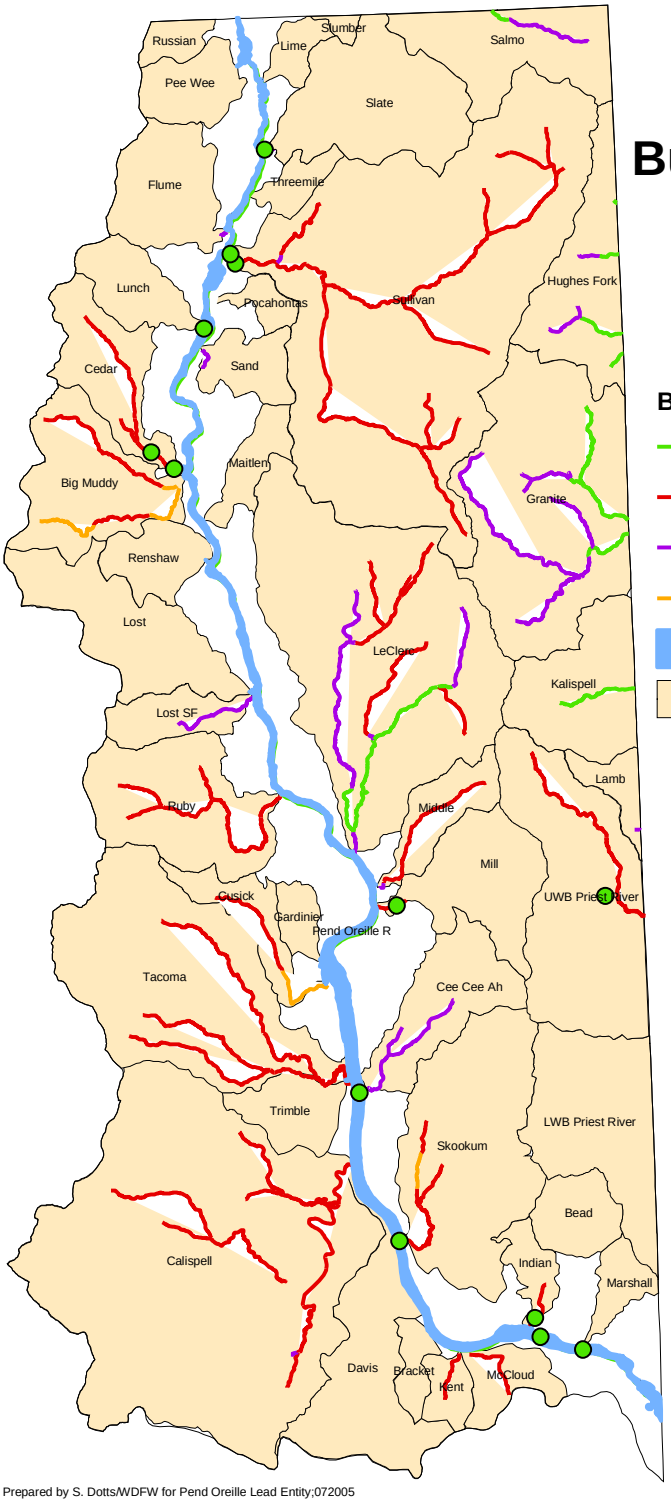
Pygmy whitefish were classified as a "Sensitive" species in Washington State in 1998. Historically, pygmy whitefish were found in 15 lakes in Washington, including three in WRIA 62 - Bead, Marshall, and Sullivan (Hallock and Mongillo 1998). Currently, pygmy whitefish are found in just nine Washington lakes, including two in WRIA 62 (Sullivan and Bead).

The abundance and productivity of pygmy whitefish in WRIA 62 lakes is unknown (Hallock and Mongillo 1998). During a recent study of of Sullivan Lake by Eastern Washington University (Nine and Scholz 2005) only one pygmy whitefish was collected. Additional asseessments should be conducted to determine abundance and productivity of pygmy whitefish in the Pend Oreille watershed (T. Shuhda, USFS, pers. comm. 2007). The diversity of WRIA 62 populations has been reduced as they are now found in only two of three lakes (i.e., Sullivan and Bead lakes) where they were historically present (Curt Vail, WDFW, pers. comm. 2004). The future of pygmy whitefish populations is dependent on maintenance of good water quality, spawning habitat, and prevention of predator introductions (Hallock and Mongillo 1998).

Figure D shows the current known distribution of pygmy whitefish in WRIA 62 (based on Hallock and Mongillo 1998).

Table 1
SALMONID PRESENT IN WRIA 62 SUBBASINS

SUBBASIN	Native Species				Non-Native Species				
	Bull Trout (threatened)	Cutthroat Trout	Pygmy Whitefish	Mountain Whitefish	Kokanee	Eastern Brook Trout	Brown Trout	Rainbow Trout	Lake Trout
Cedar	X	X				X	X	X	
Granite	X	X				X			
Hughes Fork	X	X				X			
Indian	X	X		X		X	X	X	
Kalispell	X	X				X			
LeClerc	X	X		X		X	X	X	
Mill	X	X		X		X	X	X	
Pend Oreille River	X	X		X		X	X	X	X
Salmo, South Fork	X	X						X	
Slate		X				X		X	
Sullivan	X	X	X	X	X	X	X	X	
Upper West Branch Priest River	X	X				X	X	X	
Calispell		X				X		X	
Cee Cee Ah		X		X		X	X		
Ruby		X				X	X	X	
Tacoma		X		X		X	X	X	
Bracket						X			
Davis		X			X	X	X	X	
Flume		X				X			
Kent						X			
Lamb		X				X			
Lost		X				X		X	
Lost, South Fork		X				X	X	X	
Lower West Branch Priest River	X	X				X		X	
Lunch	X	X		X		X	X	X	
Maitlen		X				X			
Marshall		X							
McCloud						X	X		
Middle		X				X			
Pee Wee		X				X			
Pocahontas		X						X	
Russian		X							
Sand		X		X		X		X	
Skookum		X		X		X	X	X	
Slumber		X				X			
Trimble		X				X			
Big Muddy		X				X	X	X	
Cusick						X		X	
Bead			X						
Renshaw						X			
Gardinier		X							
Lime									
Threemile						X		X	



Prepared by S. Dotts/WDFW for Pend Oreille Lead Entity;072005

Figure B

Bull Trout Distribution and Habitat Status

Legend

Individual or Multiple Bull Trout Observation

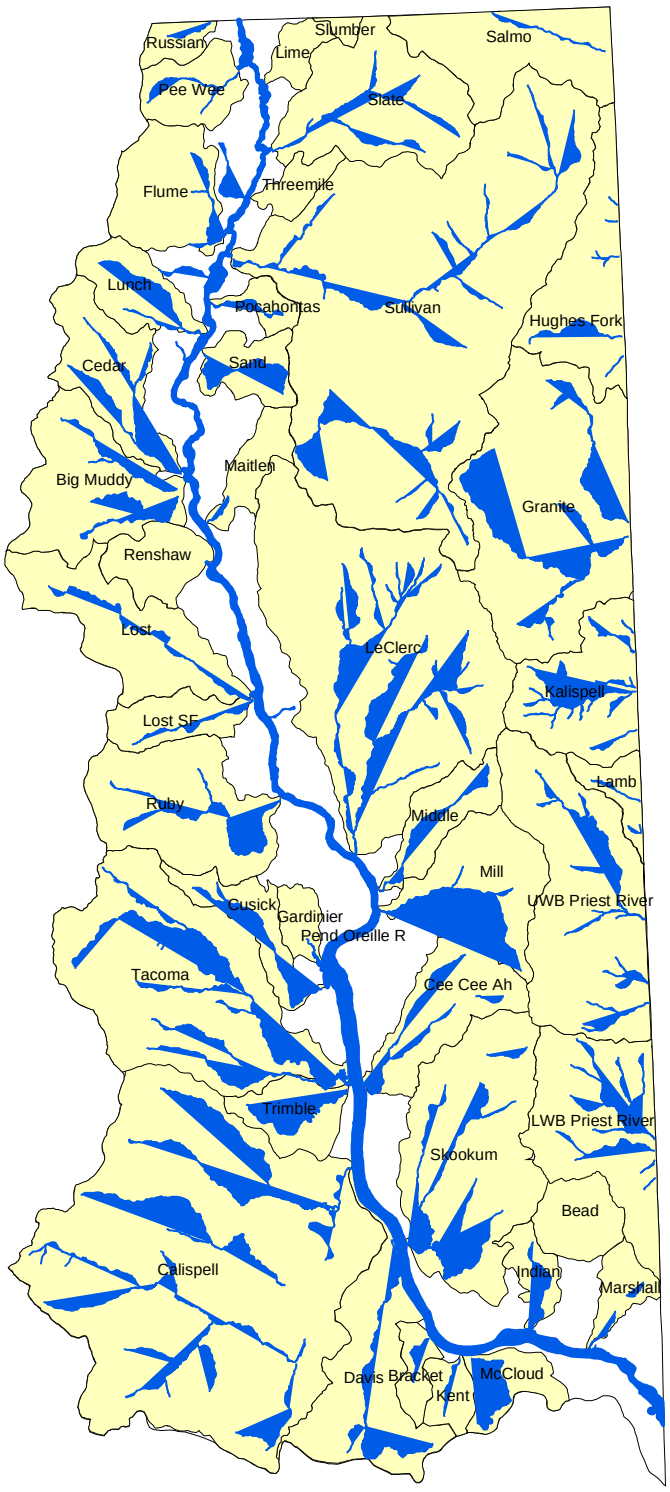
Bull Trout Habitat Status

- Occupied
- Recoverable
- Suitable
- Unknown
- Pend Oreille River
- Subbasin

This map is based on the Bull Trout Habitat Limiting Factors Report for WRIA 62 (WCC 2003) and more recent data provided by TAG.

Location of individual and/or multiple bull trout observations is estimated based on most recent data available. Additional individual observations of bull trout in the mainstem Pend Oreille River (Box Canyon Reservoir) have been documented, but are not mapped here due to lack of specific geographic reference.

1 inch equals 5.79 miles



Prepared by S. DottsWDFW for Pend Oreille Lead Entity; 072905

Figure C

Cutthroat Trout Distribution

Legend

- Cutthroat Trout Distribution
- Subbasin

Map based WDFW Salmon and Steelhead Habitat Inventory and Assessment Program 2005.

1 inch equals 5.79 miles

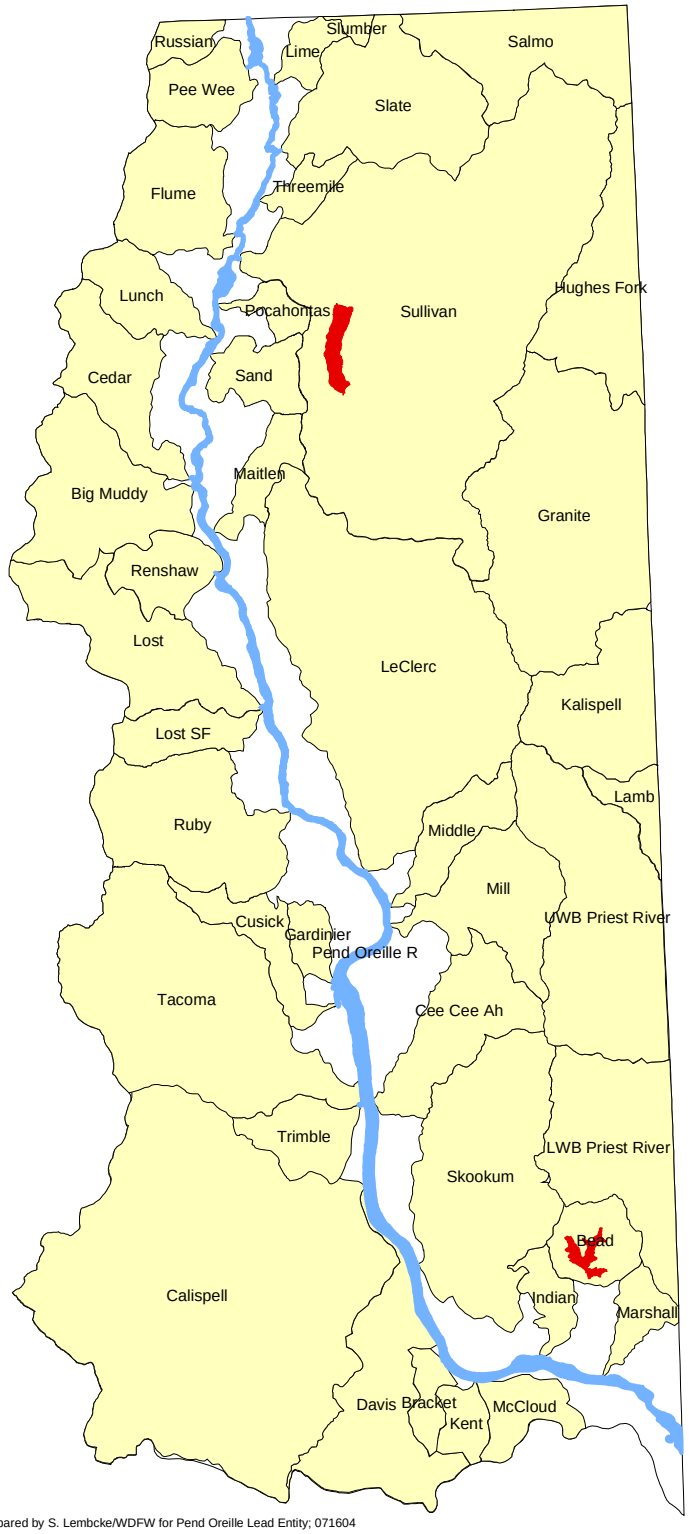


Figure D

Pygmy Whitefish Distribution

Legend

- Pygmy whitefish distribution
- Pend Oreille River
- Subbasin

Map based on Hallock and Mongillo 1998

1 inch equals 5.66 miles

C. STATUS AND DISTRIBUTION OF OTHER SALMONID SPECIES

The status and distribution of non-priority salmonids, both native and non-native, are described below.

i. Mountain whitefish

Mountain whitefish are classified as a "game species" by WDFW and are native to the Pend Oreille watershed. Mountain whitefish are plentiful in the Box Canyon Reach of the Pend Oreille River comprising 5.5 percent of nearly 50 thousand fish collected by electrofishing in 1988-89 (Wydoski and Whitney 2003). The species can be found throughout the mainstem Pend Oreille River and in the tributaries during spawning (WDFW internal communications). There is no information available regarding genetic diversity of this species.

ii. Eastern brook trout

Eastern brook trout are classified as a "game species" by WDFW and are not native to the Pend Oreille watershed. Eastern brook trout were introduced to the Pend Oreille River and its tributaries via hatchery planting. Intermittent stocking of hatchery brook trout continued into the 1990s (Bennett and Garret as cited in GEI Consultants 2004). Currently, brook trout are abundant and well distributed throughout the Pend Oreille watershed (WCC 2003). Their distribution overlaps throughout much of the historic range of bull trout and westslope cutthroat trout in the watershed, including portions of nearly all spawning and rearing streams (GEI Consultants 2004).

iii. Rainbow trout

Rainbow trout are classified as a "game species" by WDFW and are not native to the Pend Oreille watershed. Rainbow trout were first introduced to the Pend Oreille River and its tributaries via hatchery plantings in 1919 with over 226,000 rainbow trout planted in the Box Canyon Reach from 1935 to 1953. Catchable rainbow trout were also stocked in Granite Creek, but this practice was discontinued in 1982 (GEI Consultants 2004). Distribution of rainbow trout is extremely limited in the Pend Oreille River and tributaries. Today, only triploid (sterile) fish are stocked in the Pend Oreille River. This management strategy was established to minimize the possible negative effects of rainbow trout hybridization with native westslope cutthroat trout. Productivity and abundance of rainbow trout is unknown. Genetic analysis was conducted on rainbow trout populations by the USFS in Sullivan, Calispell, Sand, LeClerc, S.F. Lost, and Lost creeks between 1997 and 2002. The analysis detected allele characteristics in these populations from coastal rainbow trout (i.e., steelhead origin), interior redband trout, and westslope cutthroat trout.

iv. Brown trout

Brown trout are classified as a "game species" by WDFW and are not native to the Pend Oreille watershed. Brown trout were introduced to the Pend Oreille River via plantings in the 1890s from an original Scottish strain (Ashe and Scholz as cited in GEI Consultants 2004). Brown trout may be the most common adfluvial salmonid species present in the Pend Oreille River and its tributaries (GEI Consultants 2004).

v. Kokanee

Kokanee are classified as a "game species" by WDFW. Distribution of kokanee is limited to Sullivan Lake, Harvey Creek, Bead Lake, Davis Lake, and the mainstem Pend Oreille River. Genetic analysis conducted by Eastern Washington University in 2004 has shown that kokanee are descendant of the Lake Whatcom stock (C. Vail, pers. comm. 2005).

vi. Lake trout

Lake trout are classified as a "game species" by WDFW and are not native to the Pend Oreille watershed. In 1925, the U.S. Fish Commission first introduced lake trout into Lake Pend Oreille and the Priest Lake system in Idaho (GEI Consultants 2004). Currently, distribution is mainly limited to lakes, but they are occasionally found in the mainstem Pend Oreille River and are believed to be "fall-outs" from Lake Pend Oreille and Priest Lake in Idaho. Abundance, productivity, and genetic diversity are unknown.

VII. HABITAT LIMITING FACTORS and WATERSHED PROCESSES

It is unknown which watershed processes and habitat attributes or combination of attributes are most limiting bull trout in WRIA 62 (WCC 2003). However, several habitat factors are known to be significant in the decline of bull trout populations in WRIA 62: habitat degradation on the mainstem Pend Oreille River and within tributaries; human-made fish passage barriers into tributaries of the Pend Oreille River; non-native species introduction and management; and the construction and operation of three hydroelectric facilities on the mainstream Pend Oreille River (i.e., Boundary, Box Canyon, and Albeni Falls dams), which were constructed without fish passage facilities (WCC 2003).

An assessment of watershed processes limiting native salmonid recovery has not been undertaken in WRIA 62. However, an assessment of watershed processes is identified as the #2 WRIA-wide priority action and will be undertaken in the future as funding allows. This action may also be taken on an individual subbasin-basis as appropriate.

Table 1 provides a summary of prioritized habitat limiting factors, by subbasin, that affect priority salmonid species (i.e., bull trout, westslope cutthroat trout, pygmy whitefish) in WRIA 62 based on the Bull Trout Limiting Factors Report for WRIA 62 (WCC 2003), updated data provided by the TAG, as noted, and professional judgment of TAG members

The table also includes the following:

- Subbasin Priority – High or medium priority as described in Section VIII. "Priority Areas and Actions".
- USFWS Critical Habitat – Indicates if any part of the subbasin has been designated as "critical habitat" by the U.S. Fish and Wildlife Service.
- Limiting Factors (LF) Habitat – Indicates if the subbasin contains bull trout habitat that was designated as "occupied", "suitable", or "recoverable" in the Bull Trout Habitat Limiting Factors Report for WRIA 62 (WCC 2003) as shone on Figure B. "Occupied" habitat is that in which bull trout are known to occur based on observation of reproduction from 1980 to present. "Suitable" habitat is that which is currently suitable for bull trout, but unoccupied. "Recoverable" habitat is that which is potentially suitable for bull trout, but restoration efforts are necessary to upgrade the habitat to a "suitable" condition. Subbasins may have more than one type of habitat present in different reaches or tributaries within each subbasin (See Figure B).

For a more detailed description of current and historic habitat conditions and salmonid status and distribution refer to the Bull Trout Habitat Limiting Factors Report for WRIA 62 (WCC 2003).

Table 2

Summary of BULL TROUT HABITAT LIMITING FACTORS by Subbasin

HABITAT LIMITING FACTORS and PRIORITY

Numbered boxes indicate limiting factor presence and priority, with "1" being a higher priority limiting factor in that subbasin than "10". Unless otherwise indicated, all data is from the WRIA 62 Habitat Limiting Factors Report for Bull Trout (WCC 2003). Pink shaded boxes denote limiting factors which are undocumented but are suspected by the TAG.

Subbasin	POLE Priority	USFWS Critical Habitat	LF Habitat Types See figure B	Degraded riparian habitat	Embedded substrate/sedimentation	Channel complexity lacking	Degraded pool habitat	Altered channel morphology	Stream channel instability	Elevated stream temperature	Other water quality problem	Significant fish passage barriers	Other fish passage barriers	Non-native species competition	Development pressure	High road density	Dewatering	Undetermined – Data Lacking
Cedar	High	**Yes**	Occupied Recoverable		3					4[a]		1	5	2[b]				
Granite	High	**Yes**	Occupied Suitable	4	3			6		7			2	1		5		
Hughes Fork	High	**Yes**	Occupied Suitable		2					4				1		3		
Indian	High	**Yes**	Recoverable			3							2	1				
Kalispell	High	**Yes**	Occupied	3	4	7	8	5	9	10			2	1		6		
LeClerc	High	**Yes**	Occupied Recoverable Suitable	3	2	4				5[c]		9	7	1		6	8	
Mill	High	**Yes**	Recoverable	4	3		5			7			2	1		6		
Pend Oreille River	High	**Yes**	Occupied			5		6		3	2	1		4	7			
Salmo, South Fork	High	No	Occupied Suitable															
Slate	High	No	Suitable										2[d]	1				
Sullivan	High	**Yes**	Recoverable Suitable		6		5	3		4		2		1				7
Upper West Branch	High	No	Recoverable	2	6	3	4	5	8	7				1	10	9		
Calispell	Medium	**Yes**	Recoverable	4	5	10		9	7	6[b]		1	2	3		8		
Cee Cee Ah	Medium	No	Suitable		3	6	4			5			2	1		7		
Ruby	Medium	**Yes**	Recoverable	4	3		5			6			2	1				
Tacoma	Medium	**Yes**	Recoverable		3	4	5	6		7			2[e]	1		8		

[a]Ecology 1998; [b]KNRD and WDFW 1997; [c]Ecology 2004; [d]DNR internal data; [e]POCD unpublished data from 2003-04 barrier assessment

VIII. PRIORITY AREAS AND ACTIONS

A. PRIORITY AREAS

The TAG used a two-step approach to prioritize areas within WRIA 62 for salmonid protection and habitat improvement actions. Step One involved assigning a priority of "High", "Medium", or "Low" to each of the 43 subbasins within WRIA 62 using the following guidelines.

High priority sub-basins are those that:

1. have recent documented occurrence (i.e., since 1980, per WCC 2003 or other more recent sources) of ESA-listed species during some portion of their life (spawning, rearing, over-wintering, summer cold-water refugia, etc.);
2. have the capability to provide suitable conditions for ESA-listed species during some portion of their life cycle if habitat improvement activities are successful; and,
3. have no natural barriers for migratory bull trout to access suitable habitat.

Medium priority sub-basins are those that:

1. have historical documented occurrence (i.e., prior to 1980, per WCC 2003 or other more recent sources) of ESA-listed species during some portion of their life (spawning, rearing, over-wintering, summer cold-water refugia, etc.);
2. have the capability to provide suitable conditions for ESA-listed species during some portion of their life cycle if improvement activities are successful; and,
3. have no natural barriers for migratory bull trout to access suitable habitat.

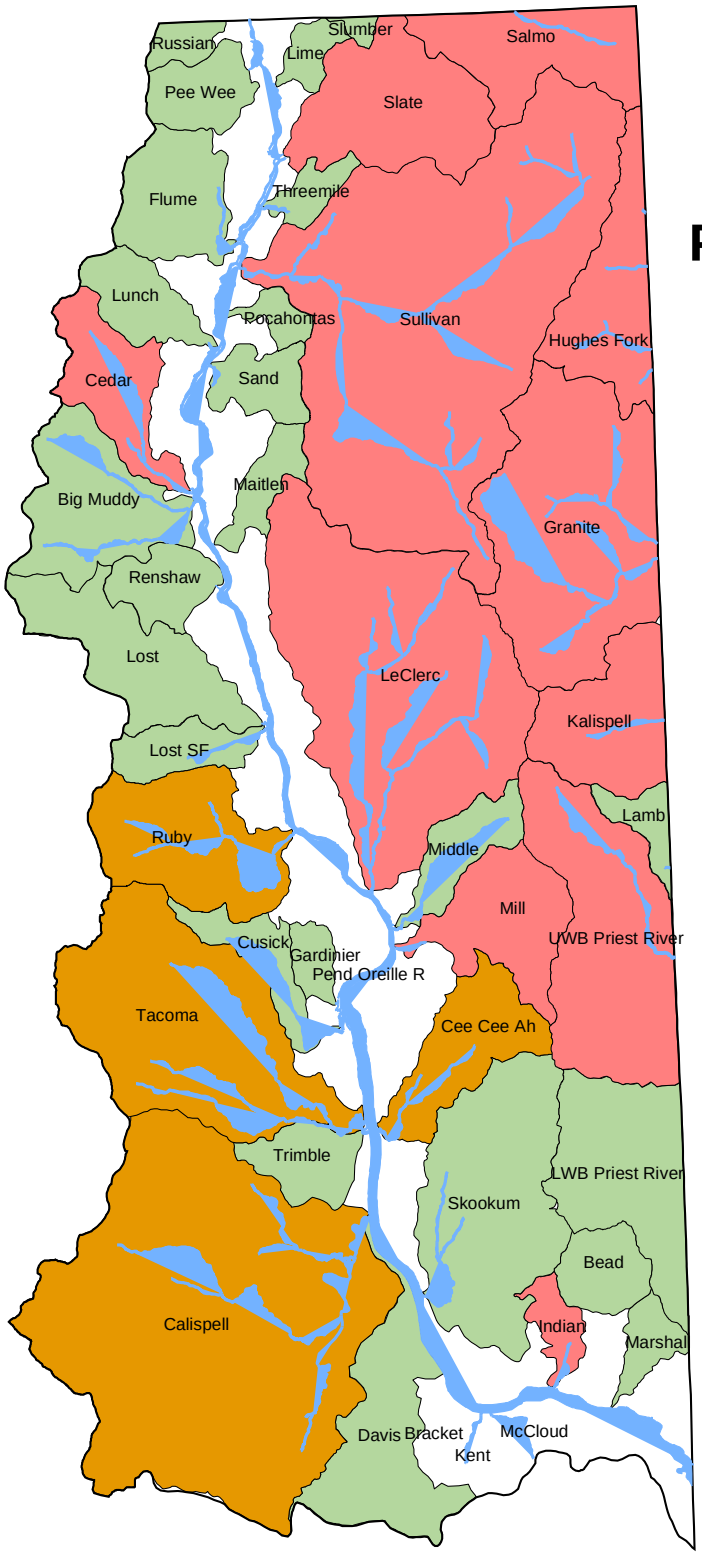
Low priority sub-basins are those that:

1. have no documented current or historic occurrence of ESA-listed species (per WCC 2003).

Prioritization resulted in 11 of the 43 subbasins receiving a "High" priority, 4 of the 43 receiving a "Medium" priority, and the remaining receiving a "Low" priority (Figure E).

Figure E

WRIA 62
Priority Subbasins



LEGEND

Bull Trout Habitat

SUBBASIN PRIORITY

- HIGH
- MEDIUM
- LOW

Prepared by S.Dotts/WDFW for Pend Oreille Lead Entity; 082905

1 inch equals 5.94 miles

During Step Two of the prioritization, "High" and "Medium" priority subbasins were ranked using seven additional criteria (see Appendix B for a detailed description of ranking criteria):

1. Current or historic habitat utilization by bull trout
2. Bull trout observations made within the last 10 years
3. Water temperature suitability
4. Amount of public versus private land
5. Current habitat condition
6. Presence of migration barriers
7. Restoration potential

Each criteria was assigned a value of 0 to 5, with 0 being the worst and 5 the best. This resulted in ranking of the "High" and "Medium" priority subbasins as follows:

Table 3 – Results of priority subbasin Ranking
HIGH PRIORITY SUBBASINS

Subbasin	Current or historic use	Sightings last 10 yrs	Water temp	Public vs. Private	Current habitat	Migration barriers	Restoration potential	Total Score	Rank
Granite	5	5	4	5	5	2[1]	5	31	1
South Fork Salmo	5	5	5	5	5	5	0[2]	30	2
Hughes Fork	5	5	4	5	4	2[1]	4	29	3
Cedar	5	2	5	5	4	3	4	28	4
Slate	3	2	5	5	4	5	2	26	5
LeClerc	5	5	3	3	2	4	2	24	6
Sullivan	3	2	4	5	2	4	3	23	7
Indian	3	2	5	3	3	1	4	21	8
Upper West Branch	3	2	3	5	3	2[1]	2	20	9
Mill	3	2	3[3]	2	2	5	2	19	10
Kalispell	2	0	3	5	3	2[1]	2	17	11

The mainstem of the Pend Oreille River is also considered to be a "High" priority subbasin for salmonid recovery but was not included in this evaluation because many of the evaluation criteria were not applicable.

[1] There is no current barrier information available; a mid-value of 2 was assigned and will be reevaluated upon completion of a barrier inventory.
[2] There are no restoration activities currently required in this subbasin so a value of "0" is assigned.
[3] Current water temperature data is incomplete. Value will be reevaluated when new data becomes available.

Table 3 – Results of priority subbasin Ranking (continued)

MEDIUM PRIORITY SUBBASINS

Subbasin	Current or historic use	Sightings last 10 yrs	Water temp	Public vs. Private	Current habitat	Migration barriers	Restoration potential	Total Score	Rank
Cee Cee Ah	1	0	4	3	4	4	3	19	1
Tacoma	1	0	3	3	3	4	2	16	2
Calispell	1	0	3	3	2	4	1	14	3
Ruby	1	0	2	5	1	4	1	14	3

B. PRIORITY ACTIONS

Priority actions were determined for each of the "High" and "Medium" priority subbasins using information contained in the Bull Trout Limiting Factors Report for WRIA 62 (WCC 2003) and professional judgment of the TAG. Table 4 provides a description of each priority action by subbasin and reach. The table also provides the rationale behind the need for each priority action as well as the level of community support for each action as described in section VII. COMMUNITY ISSUES. Additionally, the table lists the species which will benefit from each action, the SRFB project type (i.e., assessment or restoration), and action priority. Action priority is a chronological ranking of the actions within each subbasin. It should not, however, be assumed that actions will occur in this order. A variety of factors including community support, landowner willingness, and funding will determine the order in which actions may be implemented.

Figures F-T are maps of priority actions within each "High" and "Medium" priority subbasin.

Priority subbasin ranking when combined with subbasin specific priority actions will focus the Salmonid Recovery Team project and sponsor solicitation efforts when developing the annual Pend Oreille Lead Entity habitat project list. Priority areas and actions will be updated as habitat and fish distribution assessments are completed, new data becomes available, and restoration actions are implemented.

Table 4 - PRIORITY ACTIONS and AREAS

Reach[4]	Species	Habitat Type Addressed	Project Type[5]	Actions/Need	Action Priority[6]	LF[7] Priority	Rationale	Community Support[8]	Project Status
WRIA-wide	Bull trout (threatened)	Spawning Rearing Migration	A	Determine bull trout distribution, abundance, and diversity using approved bull trout survey protocol	1	NA	Very little is known about bull trout distribution, abundance and diversity in the WRIA. Gaining a better understanding of these attributes will help the lead entity focus restoration actions. This is a critical data gap.	Moderate	Unfunded
WRIA-wide	Bull trout (threatened) WCT PWF[9] MWF	Spawning Rearing Migration	A	Identify and assess the watershed processes limiting salmonid habitat potential in WRIA 62.	2	NA	This assessment will help identify and prioritize watershed-scale restoration projects.	Moderate	Unfunded
WRIA-wide	Bull trout (threatened) WCT[10] MWF[11]	Spawning Rearing Migration	A	Evaluate instream flow needs for native salmonids in the mainstem Pend Oreille River and tributaries	3	NA	This assessment will help identify and prioritize streams for setting instream flow regulations in WAC. Sufficient water quantity is necessary all salmonid life stages.	Moderate	Partially funded through Watershed Planning
WRIA-wide	Bull trout (threatened)	Spawning	A	Identify areas of high surface to groundwater interchange	4	NA	This assessment will help identify for protection/restoration potential bull trout spawning/rearing reaches.	Low	Unfunded

[4] River Miles are estimated.
[5] A = Assessment Project; R = Restoration Project
[6] A sequential prioritization of action/need within subbasin
[7] LF = Limiting Factor (see Section VII for description)
[8] Values for Community Support are defined in Section X page 56
[9] PWF = pygmy whitefish
[10] WCT = Westslope cutthroat trout
[11] MWF = Mountain whitefish

Reach[4]	Species	Habitat Type Addressed	Project Type[5]	Actions/Need	Action Priority[6]	LF[7] Priority	Rationale	Community Support[8]	Project Status
WRIA-wide	Bull trout (threatened) WCT	Spawning Rearing	A	Identify any pollution sources that threaten or have the potential to threaten water quality and aquatic health	5	NA	This assessment will help identify and prioritize habitat restoration projects that will address water quality issues.	Moderate	Unfunded
WRIA-wide	Bull trout (threatened) WCT	Spawning Rearing	A	Review current USFS grazing allotment plans to determine means to reduce overutilization of riparian vegetation and stream habitat by livestock	6	NA	Overgrazing at isolated locations within riparian areas have destabilized streambanks (increasing sediment input), increased bankful width/depth ratios, eliminated or decreased riparian vegetation and shade. Changes to existing grazing operations would reduce grazing pressure and allow riparian vegetation to function properly.	Low	Unfunded
WRIA-wide	Bull trout WCT	Spawning Rearing	A	Identify lands for sale that lend themselves to conservation easement agreements or purchase	7	NA	This assessment will help identify and prioritize important salmonid habitat for protection under conservation agreement or purchase.	Moderate for easements; Low for acquisitions	Unfunded
PEND OREILLE MAINSTEM – High Priority Area (Figure F)									
Pend Oreille River (RM 90)	Bull trout (threatened) WCT	Migration	R	Restore fish passage at Albeni Falls Dam	1	1,2,3	Albeni Falls Dam prevents migration of adfluvial bull trout from Lake Pend Oreille, Idaho to spawning and rearing habitat in Washington. It also blocks passage to all designated bull trout critical habitat in the upper Pend Oreille/Priest drainage.	Moderate	Out of Scope
Pend Oreille River (RM 34)	Bull trout (threatened) WCT	Migration	R	Restore fish passage at Box Canyon Dam	2	1,2,3,5	Box Canyon Dam prevents migration of adfluvial bull trout from Lake Pend Oreille, Idaho	Moderate	Out of Scope

Reach[4]	Species	Habitat Type Addressed	Project Type[5]	Actions/Need	Action Priority[6]	LF[7] Priority	Rationale	Community Support[8]	Project Status
							to spawning and rearing habitat found from RM 17-34 in the Pend Oreille River. It also blocks passage to all designated bull trout critical habitat in the lower Pend Oreille drainage upstream to Albeni Falls Dam.		
Pend Oreille River (RM 17)	Bull trout (threatened) WCT	Migration	A	Assess need and feasibility of restoring upstream fish passage at Boundary Dam	3	1,2,3,5	Boundary Dam potentially prevents migration of adfluvial and fluvial bull trout from the Columbia and Salmo Rivers and Lake Pend Oreille. It also blocks passage to all designated bull trout critical habitat in the lower Pend Oreille drainage upstream to Box Canyon Dam.This is a critical data gap.	Moderate	Out of Scope
Pend Oreille River (all reaches)	Bull trout (threatened) WCT MWF	Migration Over-wintering	A	Identify the causes of river bank erosion along the mainstem Pend Oreille River	4	6,7	River bank erosion along the Pend Oreille River is resulting in degraded riparian habitat and water quality. The causes of erosion need to be confirmed and mitigated. This action has been identified as a high priority in the finalized Pend Oreille Watershed Management Plan.	High	Unfunded
Pend Oreille River (all reaches)	Bull trout (threatened) WCT MWF	Migration Over-wintering	R	Minimize river bank erosion along the mainstem Pend Oreille River	5	6,7	River bank erosion along the Pend Oreille River is resulting in degraded riparian habitat and water quality. This action has been identified as a high priority in the finalized Pend Oreille Watershed	High	Unfunded

Reach[4]	Species	Habitat Type Addressed	Project Type[5]	Actions/Need	Action Priority[6]	LF[7] Priority	Rationale	Community Support[8]	Project Status
							Management Plan.		
GRANITE SUBBASIN – High Priority Area #1 (Figure G)									
Granite Creek (subbasin-wide)	Bull trout (threatened) WCT	Migration	A	Identify and prioritize barriers for restoration of fish passage	1	2	A complete barrier assessment has been completed in those subbasins which drain to the Priest River/Lake. The assessment was needed to identify and prioritize barriers for removal.	Moderate	Completed (SRFB funded) See Appendix A
Granite (subbasin-wide)	Bull trout (threatened) WCT	Spawning Rearing	A	Conduct a subbasin-wide habitat assessment to identify and prioritize watershed problems limiting salmonids	2	2-7	This assessment would help identify and prioritize habitat restoration projects throughout the subbasin. This is a critical data gap.	Moderate	Funded (SRFB) See Appendix A
Tillicum Ck (RM 0-2.4) NF Tillicum (RM 0-1.5)	Bull trout (threatened) WCT	Spawning Rearing	A	Identify and prioritize for improvements those specific road segments that are contributing sediment to streams	3	2,3,5	Several road segments are in close proximity to streams. Relocating some of these road segments is not a viable option, however reconditioning the existing road will reduce sediment deliver to the streams. This will result in tangible benefits to all aquatic species. This is a critical data gap.	Moderate	Funded (SRFB) See Appendix A
Tillicum Ck (RM 0.4)	Bull trout (threatened) WCT	Spawning Rearing	R	Remove non-native fish species from above natural barriers to sustain isolated populations of native fish species	4	1	Non-native brook trout hybridize with bull trout and complete for habitat and resources with both WCT and bull trout.	Low	Out of Scope
Granite (subbasin-wide)	Bull trout (threatened) WCT	Migration	R	Replace or remove culverts which have been identified as fish passage barriers	5	2	These barriers prevent migration of adfluvial bull trout from Priest River/Lake into tributaries.	Moderate	See Appendix E

Reach[4]	Species	Habitat Type Addressed	Project Type[5]	Actions/Need	Action Priority[6]	LF[7] Priority	Rationale	Community Support[8]	Project Status
NF Granite (RM 1.7-4.3)[12]	Bull trout (threatened) WCT	Spawning Rearing	A R	Explore possible relocation of encroaching portions of USFS Rd. 302 out of the riparian area (about 6 miles); stabilize cut and fill slopes	6	2,4,5	This road, which runs immediately adjacent to the stream, is contributing sediment to the stream. Possible relocation or stabilization options should be explored.	Moderate	Unfunded
SF Granite (subbasin-wide)	Bull trout (threatened) WCT	Spawning Rearing Migration	R	Employ silvicultural methods to restore riparian forests through a combination of tree planting and non-commercial thinning	7	3,7	Large portions of Sema Ck. And SF Granite Ck burned in the 1920s and much of the riparian area has not fully recovered. Providing non-invasive riparian treatments would help to improve the rate or riparian recovery.	High	Unfunded
NF Granite (RM ___)	Bull trout (threatened) WCT	Rearing Migration	R	To address alterned stream morphology, install large physical habitat structures in the low-gradient meadow reaches	8	6	Placing large materials in this reach would help to maintain channel sinuosity, while also improving channel complexity.	High	Unfunded
SALMO SUBBASIN – High Priority Area #2									
HUGHES FORK SUBBASIN – High Priority Area #3 (Figure H)									
Huges Fork (subbasin-wide)	Bull trout (threatened) WCT	Migration	A	Identify and prioritize barriers for restoration of fish passage	1	2	A complete barrier assessment has been completed in those subbasins which drain to the Priest River/Lake. The assessment was needed to identify and prioritize barriers for removal.	Moderate	Completed (SRFB funded) See Appendix A
Hughes Fork (subbasin-wide)	Bull trout (threatened) WCT	Spawning Rearing	A	Conduct a subbasin-wide habitat assessment to identify and prioritize watershed problems limiting salmonids	2	2-4	This effort will help identify and prioritize habitat restoration projects throughout the subbasin. This is a critical data gap.	Low	Unfunded

[12] RM are estimated from Idaho – Washington border upstream.

Reach[4]	Species	Habitat Type Addressed	Project Type[5]	Actions/Need	Action Priority[6]	LF[7] Priority	Rationale	Community Support[8]	Project Status
Gold Creek drainage	Bull trout (threatened) WCT	Spawning Rearing	A	Identify and prioritize for corrections road segments that are contributing sediment to streams in high priority subbasins	3	2,3	Several road segments are in close proximity to streams. Relocating some of these road segments is not a viable option, however reconditioning the existing road will reduce sediment deliver to the streams. This will result in tangible benefits to all aquatic species. This is a critical data gap.	Moderate	Unfunded
Muskegon Ck (RM 0.4-1.2)[10]	Bull trout (threatened) WCT	Spawning Rearing Migration	R	Address road maintenance problems associated with USFS Rd. 1013	4	2,3	This road is contribution sediment to the stream	Moderate	Unfunded
NF Gold Creek	WCT	Spawning Rearing	R	Translocate native fish species to uninhabited areas above natural barriers to establish healthy resident populations of native fish species.	5	1	NF Gold Creek has excellent habitat above the natural barrier at the Idaho/Washington border and enough habitat to support a viable population of WCT.	MIR	Out of Scope
Hughes Fork (subbasin-wide)	Bull trout (threatened) WCT	Migration	A	Replace or remove culverts which have been identified as fish passage barriers	6	2	Barriers identified in this drainage are all located above natural barrier. They should be removed to restore connectivity for westslope cutthroat trout and resident bull trout, if present.	Moderate	See Appendix A
CEDAR SUBBASIN – High Priority Area #4 (Figure I)									
Cedar Creek (RM 1.8)	Bull trout (threatened) WCT	Migration	R	Restore fish passage at the Cedar Creek Dam	1	1,4	Cedar Creek Dam blocks approx. 12 miles of salmonid habitat including several miles of designated bull trout "critical habitat"	High	Completed (SRFB; USFWS; Ecology) See Appendix A
Cedar Creek (RM 1.0, 4.5)	Bull trout (threatened) WCT	Migration	R	Replace or remove culverts which have been identified as fish passage barriers	2	5	These barriers prevent migration of adfluvial bull trout from the mainstem	Moderate	Partially funded (USFWS,

Reach[4]	Species	Habitat Type Addressed	Project Type[5]	Actions/Need	Action Priority[6]	LF[7] Priority	Rationale	Community Support[8]	Project Status
							Pend Oreille River into the subbasin.		SRFB) See Appendix A
Cedar Creek (subbasin-Wide)	Bull trout (threatened) WCT	Spawning Rearing	R	Remove non-native fish species (brook, brown and rainbow trout)	3	2	Non-native brook trout hybridize with bull trout and complete for habitat and resources; non-native rainbow trout hybridize with native WCT trout and complete for habitat and resources with both WCT and bull trout. Brown trout compete for habitat and resources with both WCT and bull trout and are predators on these two species as well.	Low	Out of Scope
Cedar Creek (RM 3.6 – 4.6)	Bull trout (threatened) WCT	Spawning Rearing	R	Repair and maintain Cedar Creek Road (county) to reduce sediment input	4	3	Excessive soil input into streams can limit winter rearing and spawning habitat through the filling of pools and interstitial spaces within gravels and cobbles.	Moderate	Unfunded
Cedar Creek (RM 0-1.5)	Bull trout (threatened) WCT	Spawning Rearing	R	Restore streambank stability	5	3	Manipulation by stream adjacent landowners has resulted in unstable streambanks and a general lack of habitat complexity through this reach. Headcutting has also been observed..	Moderate	Unfunded
SLATE SUBBASIN – High Priority Area #5 (Figure J)									
Slate Creek (subbasin-wide)	Bull trout (threatened) WCT	Spawning Rearing	R	Remove non-native fish species (brook, brown and rainbow trout)	1	1	Non-native brook trout hybridize with bull trout and complete for habitat and resources; non-native rainbow trout hybridize with native WCT trout and complete for habitat	Low	Out of Scope

Reach[4]	Species	Habitat Type Addressed	Project Type[5]	Actions/Need	Action Priority[6]	LF[7] Priority	Rationale	Community Support[8]	Project Status
							and resources with both WCT and bull trout. Brown trout compete for habitat and resources with both WCT and bull trout and are predators on these two species as well.		
Slate Creek (subbasin-wide)	WCT	Migration	R	Replace or remove culverts which have been identified as fish passage barriers	2	2	These barriers prevent migration of WCT.	Moderate	See Appendix E
LECLERC SUBBASIN – High Priority Area #6 (Figure K)									
Leclerc Creek (subbasin-wide)	Bull trout (threatened) WCT	Spawning Rearing	R	Remove non-native fish species (brook, brown and rainbow trout)	1	1	Non-native brook trout hybridize with bull trout and complete for habitat and resources; non-native rainbow trout hybridize with native WCT trout and complete for habitat and resources with both WCT and bull trout. Brown trout compete for habitat and resources with both WCT and bull trout and are predators on these two species as well.	Low	Out of Scope
WB LeClerc (RM 0-2.0)	Bull trout (threatened) WCT	Spawning Rearing	R	Relocate, obliterate, and/or reconstruct road segments which are contributing sediment to streams	2	2,6	Excessive soil input into streams can limit winter rearing and spawning habitat through the filling of pools and interstitial spaces within gravels and cobbles.	Moderate	Partially Funded (SRFB) See Appendix A
MB LeClerc (RM 1.2-4)	Bull trout (threatened) WCT	Spawning Rearing	R	Riparian fencing and planting (approx. 4 miles)	3	3, 4,5	Riparian vegetation and stream channel are being over utilized by livestock. Riparian function to provide stream bank stability, shade, and in stream wood has been diminished	Moderate	Partially Funded (SRFB) See Appendix A
EB LeClerc (RM 0 – 4.2)	Bull trout (threatened)	Spawning Rearing	R	Install engineered log jams	4	4	Segments of the stream lack habitat complexity,	Moderate	Unfunded

Reach[4]	Species	Habitat Type Addressed	Project Type[5]	Actions/Need	Action Priority[6]	LF[7] Priority	Rationale	Community Support[8]	Project Status
WB LeClerc (RM 0 – 8.2)	WCT						particularly in the amount of instream wood needed for cover.		
LeClerc Creek (subbasin-wide)	Bull trout (threatened) WCT	Migration	R	Replace or remove culverts which have been identified as fish passage barriers	5	7	These barriers prevent migration of adfluvial bull trout from the mainstem Pend Oreille River into the subbasin.	Moderate	See Appendix E
EB LeClerc (RM 0.02) WB LeClerc (RM 0.02)	Bull trout (threatened) WCT	Rearing	R	Screen water diversions	6	1,7	These unscreened water diversions may be impacting juvenile fish by diverting them out of the stream channel.	High	Unfunded
WB LeClerc (RM 7.3)	Bull trout (threatened) WCT	Spawning Rearing	A R	Conduct a slope stabilization feasibility study at old Diamond Match Company mill site and implement actions necessary to restore habitat.	7	2	This site is a constant source of fine sediment that degrades downstream spawning and rearing habitat.	Moderate	Unfunded
WB LeClerc (RM 4.1)	Bull trout (threatened) WCT	Spawning Rearing Migration	A R	Conduct an assessment to determine causes of dewatering and identify and prioritize projects for instream flow restoration	8	7,8	This apparently natural seasonal barrier blocks access to 6 miles of salmonid habitat including designated bull trout "critical habitat".	Moderate	Unfunded
Leclerc Creek, West Branch (RM 7.3)	Bull trout (threatened) WCT	Migration	R	Remove the old Diamond Match Company log crib dam and restore upstream channel to proper form and function	9	9	This barrier blocks access to 11 miles of salmonid habitat including several miles of designated bull trout "critical habitat".	Moderate	Unfunded
SULLIVAN SUBBASIN – High Priority Area #7 (Figure L)									
Sullivan Creek (RM 3.25)	Bull trout (threatened) WCT	Migration	R	Remove Mill Pond Dam and restore upstream channel to proper form and function	1	2,4	This barrier blocks access to 28 miles salmonid habitat.	Low	Unfunded
Outlet Creek (RM 0.5)	Bull trout (threatened) WCT	Migration	R	Restore fish passage at Sullivan Lake Dam	2	2	This barrier blocks access to 16 miles and 1,251 acres (Sullivan Lake) of salmonid habitat.	Moderate	Unfunded
Sullivan Creek (subbasin-wide)	Bull trout (threatened) WCT	Spawning Rearing	R	Remove non-native fish species (brook, brown and rainbow trout), except kokanee	3	1	Non-native brook trout hybridize with bull trout and complete for habitat and resources; non-native	Moderate	Out of Scope

Reach[4]	Species	Habitat Type Addressed	Project Type[5]	Actions/Need	Action Priority[6]	LF[7] Priority	Rationale	Community Support[8]	Project Status
							rainbow trout hybridize with native WCT trout and complete for habitat and resources with both WCT and bull trout Brown trout compete for habitat and resources with both WCT and bull trout and are predators on these two species as well.. Kokanee are an important recreational fish in Sullivan Lake, which do not negatively impact bull trout populations and provide forage.		
Sullivan Creek (RM 2.8-3.2) Pass Creek (RM 2.6-5.1)	Bull trout (threatened) WCT	Spawning Rearing	R	Relocate, obliterate, and/or reconstruct road segments which are contributing sediment to streams	4	6	Excessive soil input into streams can limit winter rearing and spawning habitat through the filling of pools and interstitial spaces within gravels and cobbles.	Moderate	Unfunded
Sullivan Creek (RM 3.75-5.25)	Bull trout (threatened) WCT	Spawning Rearing	R	Install engineered log jams above Mill Pond Dam	5	3,5	This section of Sulllivan Creek lacks habitat complexity, particularly in the amount of instream wood needed for cover.	Moderate	Unfunded
Sullivan Creek (RM 0-3.25)	Bull trout (threatened) WCT	Spawning Rearing	R	Stabilize slopes below Mill Pond Dam	6	3	Steep slopes with drainage problems are a periodic source of fine sediment that degrades downstream spawning and rearing habitat.	Moderate	Unfunded
Sullivan Lake (RM 0.5 of Outlet Creek)	Bull trout (threatened)	Spawning Rearing Migration	A	Determine the biological effects of current and alternative management of lake water levels on bull trout life histories above and below the dam	7	7	Existing unnatural flow regime in lower Sullivan Creek, lack of littoral area in Sullivan Lake and possibly aggradation of lower Harvey Creek are results of present hydroelectric project (i.e.,	Moderate	Unfunded

Reach[4]	Species	Habitat Type Addressed	Project Type[5]	Actions/Need	Action Priority[6]	LF[7] Priority	Rationale	Community Support[8]	Project Status
							Sullivan Lake Dam). This is a critical data gap.		
Sullivan Lake	Pygmy whitefish	Spawning Rearing	A	Assess habitat factors limiting pygmy whitefish in lake	8	7	Pygmy whitefish are a state "sensitive" species and long term viability needs to be assured to keep it from being listed under ESA. This is a critical data gap.	MIR	Unfunded
Sullivan Creek (Subbasin-wide)	Bull trout (threatened) WCT	Spawning Rearing	R	Restore habitat complexity	9	3,5,6	Upper Sullivan Creek had extensive riparian harvest and wood pulled out of the steam in the 1960-70s. Lower Sullivan Creek lacks spawning material and instream wood due to interception by Mill Pond Dam. Habitat complexity must be improved to provide appropriate spawning and rearing habitat for bull trout and other salmonids.	Moderate	Partially Funded (PUD)
INDIAN SUBBASIN – High Priority Area #8 (Figure M)									
Indian Creek (RM 0.1 and 0.8)	Bull trout (threatened) WCT	Migration	R	Replace or remove culverts which have been identified as fish passage barriers	1	2	These barriers prevent migration of adfluvial bull trout from the mainstem Pend Oreille River into the subbasin.	High	Partially funded (SRFB, FFFPP) See Appendix E
Indian Creek (RM 0-1)	Bull trout (threatened) WCT	Migration Rearing	R	Screen water diversions	2	2	These unscreened water diversions may be impacting juvenile fish by diverting them out of the stream channel.	Moderate	Completed (SRFB) See Appendix A
Indian Creek (RM 0-0.5)	Bull trout (threatened) WCT	Migration	R	Restore fish passage below first water diversion where landscaping is impacting fish migration	3	2	These barriers prevent migration of adfluvial bull trout from the mainstem Pend Oreille River into Indian Creek.	High	Completed (SRFB) See Appendix

Reach[4]	Species	Habitat Type Addressed	Project Type[5]	Actions/Need	Action Priority[6]	LF[7] Priority	Rationale	Community Support[8]	Project Status
									A
Indian Creek (RM 0-2.3)	Bull trout (threatened) WCT	Spawning Rearing	R	Conduct instream habitat enhancement to increase stream channel complexity and improve recruitment of spawning gravels	4	3	Recent habitat surveys indicate low large woody debris, pool, and spawning gravel abundance.	High	Partially Funded (SRFB)
Indian Creek (subbasin-wide)	Bull trout (threatened) WCT	Spawning Rearing	R	Remove non-native fish species (brook,brown and rainbow trout)	5	1	Non-native brook trout hybridize with bull trout and complete for habitat and resources; non-native rainbow trout hybridize with native WCT trout and complete for habitat and resources with both WCT and bull trout. Brown trout compete for habitat and resources with both WCT and bull trout and are predators on these two species as well.	Moderate /Low	Out of Scope
UPPER WEST BRANCH PRIEST RIVER SUBBASIN – High Priority Area #9 (Figure N)									
Upper West Branch Priest River (subbasin-wide)	Bull trout (threatened) WCT	Migration	A	Identify and prioritize barriers for restoration of fish passage	1		A complete barrier assessment has been completed in those subbasins which drain to the Priest River/Lake. The assessment was needed to identify and prioritize barriers for removal.	Moderate	Completed (SRFB funded) See Appendix A
Upper West Branch Priest River (subbasin-wide)	Bull trout (threatened) WCT	Spawning Rearing	R	Remove non-native fish species (brook trout and rainbow trout)	2	1	Non-native brook trout hybridize with bull trout and complete for habitat and resources; non-native rainbow trout hybridize with native WCT trout and complete for habitat and resources with both WCT and bull trout.	Very Low	Out of Scope
UWB Priest River (subbasin-wide)	Bull trout (threatened) WCT	Migration	R	Replace or remove culvert which have been identified as fish passage barriers.	3	2	These barriers prevent migration of adfluvial bull trout from Priest	Moderate	See Appendix E

Reach[4]	Species	Habitat Type Addressed	Project Type[5]	Actions/Need	Action Priority[6]	LF[7] Priority	Rationale	Community Support[8]	Project Status
							River/Lake and the mainstem Pend Oreille River into tributaries.		
UWB Priest River (RM 14.2-15.9) Goose Creek (RM 4.4-5.0)	Bull trout (threatened) WCT	Spawning Rearing Migration	R	Employ silvicultural methods to restore riparian forests through a combination of tree planting and non-commercial thinning	4	2,4,7,8	Many riparian areas along these streams, since being harvested and splash-dammed in the 1920s have not yet recovered to fully-functioning riparian forests that provide inputs of large diameter, decay-resistant LWD and adequate shading.	Moderate	Unfunded
UWB Priest River (subbasin-wide)	Bull trout (threatened) WCT	Spawning Rearing	R	To address the lack of channel complexity, install physical habitat structures that complement current geomorphic features, but employ a "soft" design approach	5	3,4,5,8	Segments of the stream lack habitat complexity, particularly in the amount of instream wood needed for cover.	Low	Unfunded
UWB Priest River (RM 5.1-8.0)[10] Consalus Ck (RM 0.2-1.0)[10] Unnamed trib to Consalus (RM 0-0.8)	Bull trout (threatened) WCT	Spawning Rearing	R	Relocate, obliterate, and/or reconstruct road segments which are contributing sediment to streams	6	6,9	Several road segments are in close proximity to streams. Relocating some of these road segments is not a viable option, however reconditioning the existing road will reduce sediment deliver to the streams. This will result in tangible benefits to all aquatic species.	Low	Unfunded
Galenack (RM 0.8 – 2.0)	Bull trout (threatened) WCT	Spawning Rearing	R	Address road maintenance problems associated with USFS Rds. 312, 659, 1089, 333, 1137, 460, 1090, 1075 and abandoned road network in the headwaters	7	5,6,9	Portions of these roads are contributing sediment to the streams within the subbasin. The increased sediment adversely impacts aquatic habitat.	Low	Unfunded
UWB Priest River (RM 14.2-15.9)	Bull trout (threatened) WCT	Spawning Rearing	R	To address elevated stream temperatures, plant 3-5 year-old native trees and shrubs along degraded portions of the abandoned grazing	8	2,5,7,8	Past and current grazing in this subbasin have contributed to poor thermal conditions and highly embedded	Moderate	Unfunded

Reach[4]	Species	Habitat Type Addressed	Project Type[5]	Actions/Need	Action Priority[6]	LF[7] Priority	Rationale	Community Support[8]	Project Status
				allotment and employ low-cost, "soft" bioengineering techniques for bank stability			substrate		
MILL SUBBASIN – High Priority Area #10 (Figure O)									
Mill Creek (subbasin-wide)	Bull trout (threatened) WCT	Spawning Rearing	A	Identify and prioritize for correction, road segments that are contributing sediment to streams	1	3,6	High road density (active and abandoned), numerous stream crossings, and segments located within the riparian area have contributed to very high levels of instream sediment. This is a critical data gap.	High	Unfunded
Mill Creek (subbasin-wide)	Bull trout (threatened) WCT	Spawning Rearing	R	Remove non-native fish species (brook, brown and rainbow trout)	2	1	Non-native brook trout hybridize with bull trout and complete for habitat and resources; non-native rainbow trout hybridize with native WCT trout and complete for habitat and resources with both WCT and bull trout. Brown trout compete for habitat and resources with both WCT and bull trout and are predators on these two species as well.	Very Low	Out of Scope
Mill Creek (subbasin-wide)	Bull trout (threatened) WCT	Migration	R	Replace culverts that are fish passage barriers	3	2	These barriers prevent migration of adfluvial bull trout from the mainstem Pend Oreille River into the subbasin.	High	Unfunded
Mill Creek (RM 1.4-7.7) Nola Creek (RM 0-0.9)	Bull trout (threatened) WCT	Spawning Rearing	R	Restore stream channel complexity especially pool habitat	4	3,5	Lack of large woody debris due to historical harvest of riparian area timber has resulted in a deficiency in pool habitat.	High	Unfunded
Mill Creek (subbasin-wide)	Bull trout (threatened) WCT	Spawning Rearing	R	Restore degraded riparian habitat	5	4,7	Past and current land management/use practices in this subbasin have contributed to poor thermal condition	High	Unfunded

Reach[4]	Species	Habitat Type Addressed	Project Type[5]	Actions/Need	Action Priority[6]	LF[7] Priority	Rationale	Community Support[8]	Project Status
KALISPELL SUBBASIN – High Priority Area #11 (Figure P)									
Kalispell (subbasin-wide)	Bull trout (threatened) WCT	Migration	A	Identify and prioritize barriers for restoration of fish passage	1	2	A complete barrier assessment has not been completed in those subbasins which drain to the Priest River/Lake. An assessment is needed to identify and prioritize barriers for removal. This is a critical data gap.	Moderate	Completed (SRFB) See Appendix A
Kalispell (subbasin-wide)	Bull trout (threatened) WCT	Spawning Rearing	R	Remove non-native fish species (brook, brown and rainbow trout)	2	1	Non-native brook trout hybridize with bull trout and complete for habitat and resources; non-native rainbow trout hybridize with native WCT trout and complete for habitat and resources with both WCT and bull trout.	Low	Out of scope
Kalispell (subbasin-wide)	Bull trout (threatened) WCT	Migration Rearing	R	Replace or remove culverts which have been identified as fish passage barriers	3	2	These barriers prevent migration of adfluvial bull trout from the mainstem Pend Oreille River into the subbasin.	Moderate	See Appendix E
Kalispell Cr (RM 2.6-2.9) [10]	Bull trout (threatened) WCT	Spawning Rearing	R	Re-establish riparian vegetation (esp. conifers) in riparian zones along stream between Pable and Hungry Creeks	4	3,5,7,8, 9,10	Historical land use practices have altered the riparian zone. Reestablishing the riparian zones will jump start natural succession of these sites and will more quickly provide large woody debris and shading to streams.	Moderate	Partially Funded (SRFB)
Kalispell Cr (RM 0-0.9 and 3.5-4.1)[10] Hungry Ck (RM 0.6-1.4) Diamond Cr	Bull trout (threatened) WCT	Spawning Rearing	R	Relocate portions USFS Rds. 308, 657, and 2119 out of the riparian area	5	3,4,6	These roads, which run immediately adjacent to the stream, are contributing sediment to the stream. Opportunities exist to relocate those portions of the roads which are most adversely	Moderate	Partially Funded (Rd. 308 – by BPA)

Reach[4]	Species	Habitat Type Addressed	Project Type[5]	Actions/Need	Action Priority[6]	LF[7] Priority	Rationale	Community Support[8]	Project Status
(RM 0.3-1.1 and 2-2.7) [10]							impacting aquatic resources.		
Kalispell (subbasin-wide)	Bull trout (threatened) WCT	Spawning Rearling Migration	R	To address the lack of channel complexity, install physical habitat structures that complement current geomorphic features, but employ a "soft" design approach. This would also improve pool habitat.	6	3,5,8,9	Granitic geology of this subbasin produces a primarily sandy-bottomed stream. Past fires, salvage logging, railroad and road construction have altered channel complexity through the elimination of large-diameter, decay-resistant wood. Until riparian forests are restored, artificial supplements will be required.	Moderate	Partially Funded (SRFB)
Hungry Cr (RM 0-0.6) Deerhorn (RM 1.2-2.0)	Bull trout (threatened) WCT	Spawning Rearing	R	Address road maintenance problems associated with USFS Rds. 308, 2119, 2120, and 2513	7	4,6	Portions of these roads are contributing sediment to the streams with the subbasin. The increased sediment adversely impacts aquatic habitat.	Moderate	Partially Funded (Rd. 308 – by BPA)
CEE CEE AH SUBBASIN – Medium Priority Area #1 (Figure Q)									
CeeCeeAh (subbasin-wide)	Bull trout (threatened) WCT	Spawning Rearing	A	Identify and prioritize for correction, road segments that are contributing sediment to streams	1	3,6	High road density (active and abandoned), numerous stream crossings, and segments located within the riparian area have contributed to very high levels of instream sediment. This is a critical data gap.	Moderate	Unfunded
CeeCeeAh (subbasin-wide)	Bull trout (threatened) WCT	Spawning Rearing	R	Remove non-native fish species (brook, brown and rainbow trout)	2	1	Non-native brook trout hybridize with bull trout and complete for habitat and resources; non-native rainbow trout hybridize with native WCT trout and complete for habitat and resources with both WCT and bull trout. Brown trout compete for	Low	Out of Scope Partially Funded (BPA)

Reach[4]	Species	Habitat Type Addressed	Project Type[5]	Actions/Need	Action Priority[6]	LF[7] Priority	Rationale	Community Support[8]	Project Status
							habitat and resources with both WCT and bull trout and are predators on these two species as well.		
CeeCeeAh Ck (subbasin-wide)	Bull trout (threatened) WCT	Migration	R	Replace culverts that are fish passage barriers	3	2	These barriers prevent migration of adfluvial bull trout from the mainstem Pend Oreille River into the subbasin or restrict movement of resident WCT above natural barrier	Moderate	Partially Funded (SRFB) See Appendix E
CeeCeeAh Ck (RM 0-9.4) Browns Ck (RM 0-3.7)	Bull trout (threatened) WCT	Spawning Rearing	R	Restore habitat complexity esp. pool habitat	4	4,6	Relatively recent habitat surveys indicate low large wood debris, pool, and spawning gravel abundance.	Moderate	Unfunded
CeeCeeAh Ck (RM 0-9.4) Browns Ck (RM 0-3.7)	Bull trout (threatened) WCT	Spawning Rearing	R	Reestablish riparian vegetation along stream reaches; construct livestock exclusion fences	5	5		Moderate	Unfunded
TACOMA SUBBASIN – Medium Priority Area #2 (Figure R)									
Tacoma Crk (RM 8.1-9.3 and 12.2-15.5) Little Tacoma (RM 0.7-1.5)	Bull trout (threatened) WCT	Spawning Rearing	R	Relocate, obliterate, and/or reconstruct road segments which are contributing sediment to streams	1	3,8	Excessive soil input into streams can limit winter rearing and spawning habitat through the filling of pools and interstitial spaces within gravels and cobbles.	Moderate	Unfunded
Tacoma Creek (subbasin-wide)	Bull trout (threatened) WCT	Spawning Rearing	R	Remove non-native fish species (brook, brown and rainbow trout)	2	1	Non-native brook trout hybridize with bull trout and complete for habitat and resources; non-native rainbow trout hybridize with native WCT trout and complete for habitat and resources with both WCT and bull trout. Brown trout compete for habitat and resources with both WCT and bull trout	Moderate	Out of Scope

Reach[4]	Species	Habitat Type Addressed	Project Type[5]	Actions/Need	Action Priority[6]	LF[7] Priority	Rationale	Community Support[8]	Project Status
							and are predators on these two species as well.		
Tacoma Crk (subbasin-wide)	Bull trout (threatened) WCT	Migration	R	Replace or remove culverts which have been identified as fish passage barriers	3	2	These barriers prevent migration of adfluvial bull trout from the mainstem Pend Oreille River into the subbasin.	Moderate	Partially Funded (SRFB) See Appendix E
Tacoma Creek (subbasin-wide)	Bull trout (threatened) WCT	Spawning Rearing	R	Conduct instream habitat enhancement to increase stream channel complexity and stability and improve recruitment of spawning gravels	4	4,5,6	Excessive soil input into streams can limit winter rearing and spawning habitat through the filling of pools and interstitial spaces within gravels and cobbles. Limited instream wood also limits pool formation.	High	Unfunded
Tacoma Creek (subbasin-wide)	Bull trout (threatened) WCT	Spawning Rearing	R	Reestablish riparian vegetation along stream reaches; construct livestock exclusion fences	5	7	Riparian vegetation and stream channel are being overutilized by livestock. Riparian function to provide streambank stability, shade, and instream wood has been diminished.	High	Unfunded
CALISPELL SUBBASIN – Medium Priority Area #3 (Figure S)									
Calispell Creek (RM 0)	Bull trout (threatened) WCT	Migration	R	Restore fish passage at the Calispell Pumps	1	1	This barrier, which is located at the mouth, blocks access to approx. 13 miles of salmonid habitat including several miles of designated bull trout critical habitat.	High	Unfunded
Calispell Creek (RM 6)	Bull trout (threatened) WCT	Migration	R	Restore fish passage to Calispell Lake at the Duck Club Dam	2	2	This barrier blocks access to 22 miles of salmonid habitat including several miles of designated bull trout critical habitat.	High	Unfunded
Winchester Creek (RM 1.9)	Bull trout (threatened) WCT	Migration	R	Restore fish passage (completed) and properly screen water diversion	3	2	These barriers prevent migration of adfluvial/resident bull	Moderate	Partially funded (LIP)

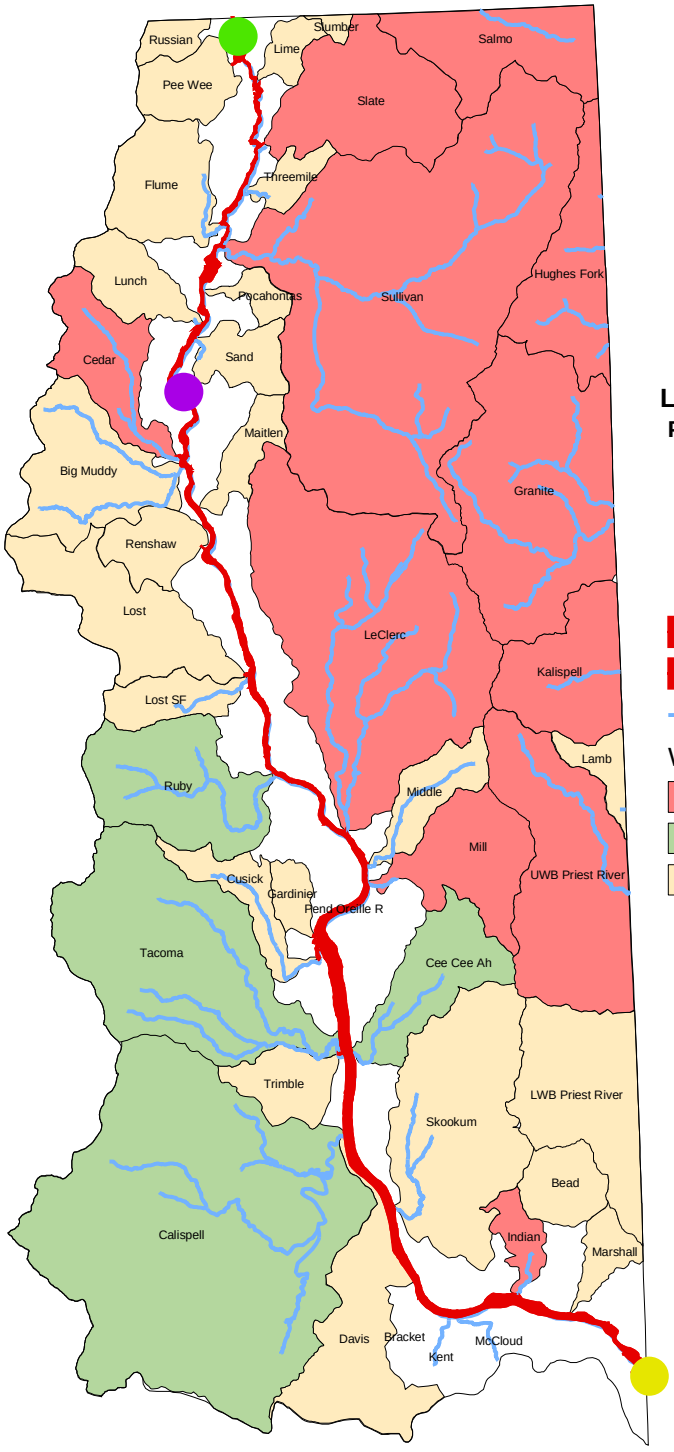
Reach[4]	Species	Habitat Type Addressed	Project Type[5]	Actions/Need	Action Priority[6]	LF[7] Priority	Rationale	Community Support[8]	Project Status
				structure at Duck Club Dam			trout into the Winchester Creek drainage.		
Calispell (subbasin-wide)	Bull trout (threatened) WCT	Spawning Rearing	R	Remove non-native fish species (brook,brown and rainbow trout)	4	3	Non-native brook trout hybridize with bull trout and complete for habitat and resources; non-native rainbow trout hybridize with native WCT trout and complete for habitat and resources with both WCT and bull trout. Brown trout compete for habitat and resources with both WCT and bull trout and are predators on these two species as well.	Low	Out of Scope
Calispell Creek (subbasin-wide)	Bull trout (threatened) WCT	Spawning Rearing	A	Conduct assessment of road impacts to in stream habitat throughout subbasin	5	4,8	High road density (active and abandoned), numerous stream crossings, and segments located within the riparian area have contributed to very high levels of instream sediment.	Moderate	Unfunded
Calispell Creek (subbasin-wide)	Bull trout (threatened) WCT	Migration	R	Replace or remove culverts which have been identified as fish passage barriers	6	2	These barriers prevent migration of adfluvial bull trout from the mainstem Pend Oreille River into the subbasin.	Moderate	Partially Funded (BPA) See Appendix E
Calispell Ck (RM 0-5.6 and 11-11.5) Winchester (RM 2.7-5.4) Smalle Ck (RM 0-5.2) EF Smalle (RM 0-1.6)	Bull trout (threatened) WCT	Spawning Rearing	R	Restore riparian habitat	7	3,6	Diking, urban/residential development, crop production, and grazing have impacted the lower reaches of these streams by reducing or eliminating riparian cover.	Moderate	Unfunded
NF Calispell	Bull trout	Spawning	R	Restore riparian habitat in	8	3,6	Relatively recent habitat		Unfunded

Reach[4]	Species	Habitat Type Addressed	Project Type[5]	Actions/Need	Action Priority[6]	LF[7] Priority	Rationale	Community Support[8]	Project Status
(RM 1.7-2.2 and 7.4-9.6) Tenmile Ck (RM 0-0.8) MF Calispell (RM 1.3-3.5) Unnamed trib to MF Calispell (RM 0-0.8)	(threatened) WCT	Rearing		upland areas where cattle grazing and timber harvest have altered density and composition			surveys indicate extensive bank erosion and lack of riparian vegetation in upland meadow stystems.	High	
Winchester Creek (RM 2.1-2.7)	Bull trout (threatened) WCT	Spawning Rearing	R	Restore floodplain connectivity on lower reaches of stream.	9	9	Dikes constructed to decrease flooding have limited floodplain connectivity.	Moderate	Unfunded
Winchester (RM 2.7-7.0) Smalle Ck (RM 3.7-6.0) EF Smalle (RM 0-2.5)	Bull trout (threatened) WCT	Spawning Rearing	R	Conduct instream habitat enhancement to increase stream channel complexity and stability and improve recruitment of spawning gravels	10	7,10	Relatively recent habitat surveys indicate low large wood debris, pool, and spawning gravel abundance.	High	Unfunded
RUBY SUBBASIN – Medium Priority Area #4 (Figure T)									
Ruby Creek (subbasin-wide)	Bull trout (threatened) WCT	Spawning Rearing	R	Remove non-native fish species (brook,brown and rainbow trout)	1	1	Non-native brook trout hybridize with bull trout and complete for habitat and resources; non-native rainbow trout hybridize with native WCT trout and complete for habitat and resources with both WCT and bull trout. Brown trout compete for habitat and resources with both WCT and bull trout and are predators on these two species as well.	Very Low	Out of Scope
Ruby Creek (subbasin-wide)	Bull trout (threatened) WCT	Migration	R	Replace or remove culverts which have been identified as fish passage barriers	2	2	These barriers prevent migration of adfluvial bull trout from the mainstem Pend Oreille River into	Moderate	See Appendix E

Reach[4]	Species	Habitat Type Addressed	Project Type[5]	Actions/Need	Action Priority[6]	LF[7] Priority	Rationale	Community Support[8]	Project Status
							the subbasin.		
Ruby Creek (RM 0.2-1.1) Little Ruby (RM 0-0.6)	Bull trout (threatened) WCT	Spawning Rearing	R	Relocate, obliterate, and/or reconstruct road segments which are contributing sediment to streams	3	3	Excessive soil input into streams can limit winter rearing and spawning habitat through the filling of pools and interstitial spaces within gravels and cobbles.	Low	Unfunded
Ruby Creek (RM 4.4-5.0)	Bull trout (threatened) WCT	Spawning Rearing	R	Fence riparian areas to exclude livestock	4	4,5	Riparian vegetation and stream channel are being overutilized by livestock. Riparian function to provide streambank stability, shade, and instream wood has been diminished.	Low	Unfunded
Ruby Creek (subbasin-wide)	Bull trout (threatened) WCT	Spawning Rearing Over-wintering	R	Restore habitat complexity esp. pool habitat	5	5	Excessive soil input into streams can limit winter rearing and spawning habitat through the filling of pools and interstitial spaces within gravels and cobbles. Limited instream wood also limits pool formation.	Moderate	Unfunded

Figure F

Pend Oreille Mainstem
PRIORITY ACTIONS



Legend

Priority, Action

- 1, Restore fish passage at Albeni Falls Dam
- 2, Restore fish passage at Box Canyon Dam
- 3, Assess feasibility to restore fish passage @ Boundary Dam
- 4, Identify causes of river bank erosion
- 5, Minimize river bank erosion
- Bull Trout Habitat

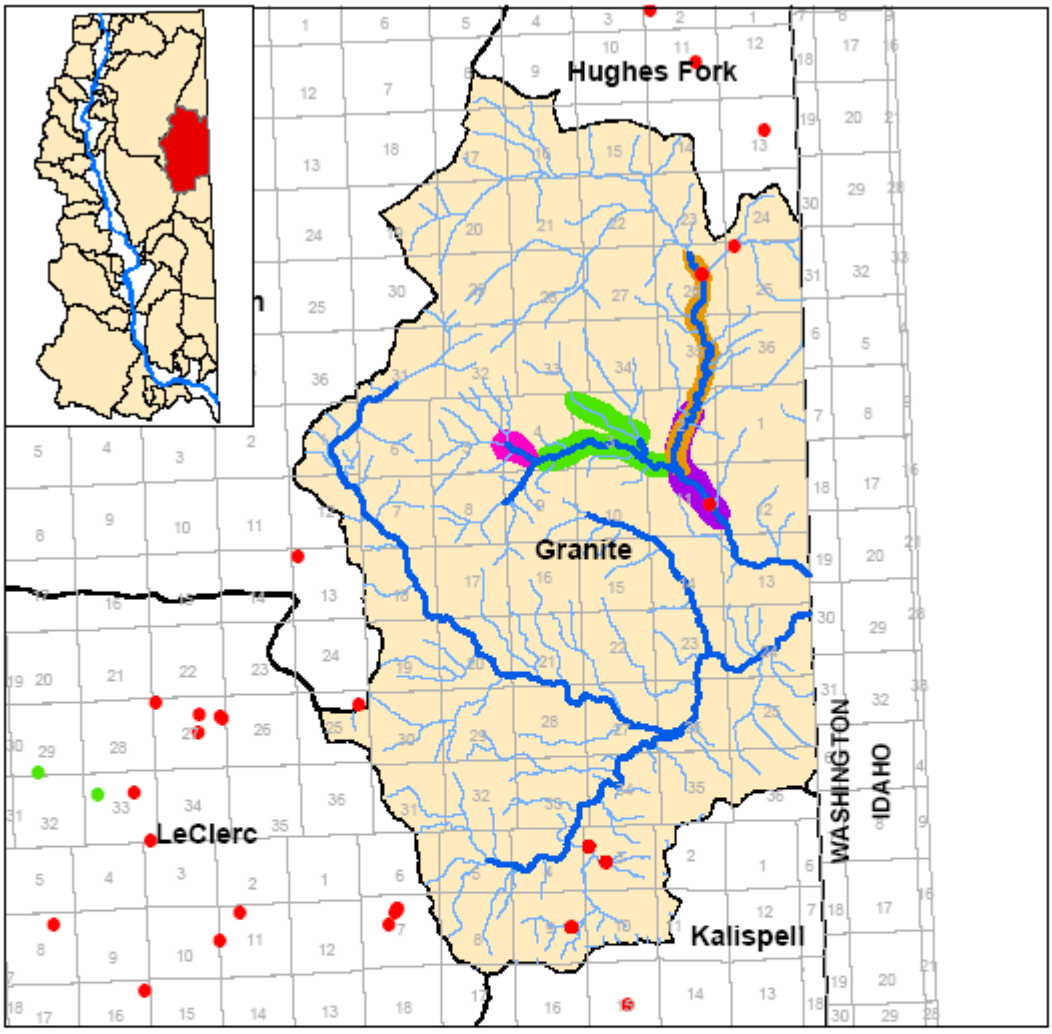
WRIA 62 Subbasin - PRIORITY

- HIGH
- MEDIUM
- LOW

While the Pend Oreille mainstem was ranked as a high priority subbasin and has a list of priority actions, the scope of those actions are outside the range of SRFB funding, but are mapped here to acknowledge that the actions must be addressed before bull trout recovery can be reached in the Pend Oreille watershed.

1 inch equals 5.94 miles

Prepared by S. Dotts/WDFW for Pend Oreille Lead Entity; 082905



Legend

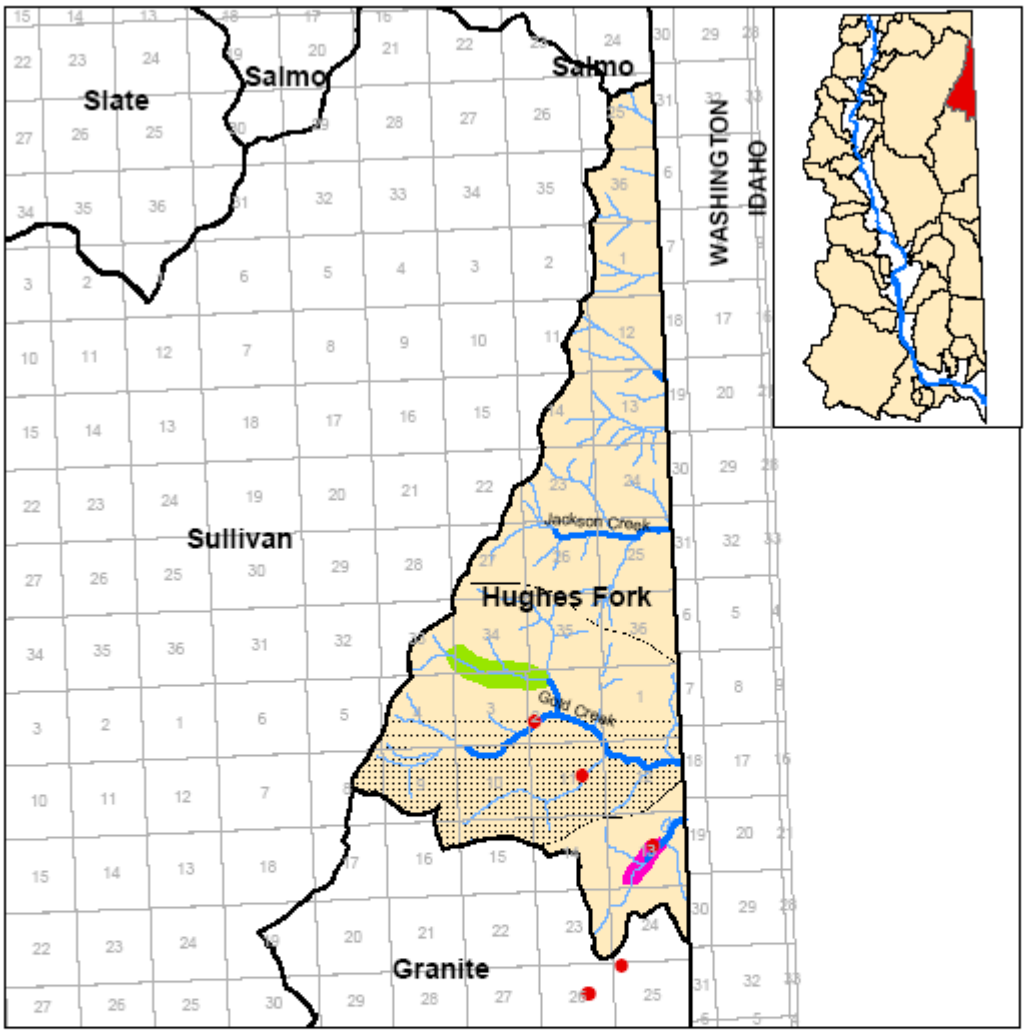
- 1, Identify and prioritize fish passage barriers for removal
- 2, Conduct habitat assessment
- 3, Identify and address road maintenance problems
- 4, Remove non-native species
- 6, Relocate road out of riparian area
- 8, Improve altered morphology with instream structure
- 5, Replace/remove culverts
- 7, Restore riparian forests
- Bull Trout Habitat
- Streams
- Section
- Subbasin Boundary

Prepared by S. Dotta/WDFW for Pend Oreille Lead Entity; 081507

Figure G

Granite Subbasin
PRIORITY ACTIONS
High - #1

0 0.5 1 2 3 4 Miles



Legend

- Subbasin Boundary
- Section
- Bull Trout Habitat
- Streams
- 1, Identify and prioritize fish passage barriers for removal
- 2, Conduct habitat assessment
- 3, Identify and address road maintenance problems
- 4, Address road maintenance problems
- 5, Translocate native fish to uninhabited area
- 6, Replace/Remove culvert barriers

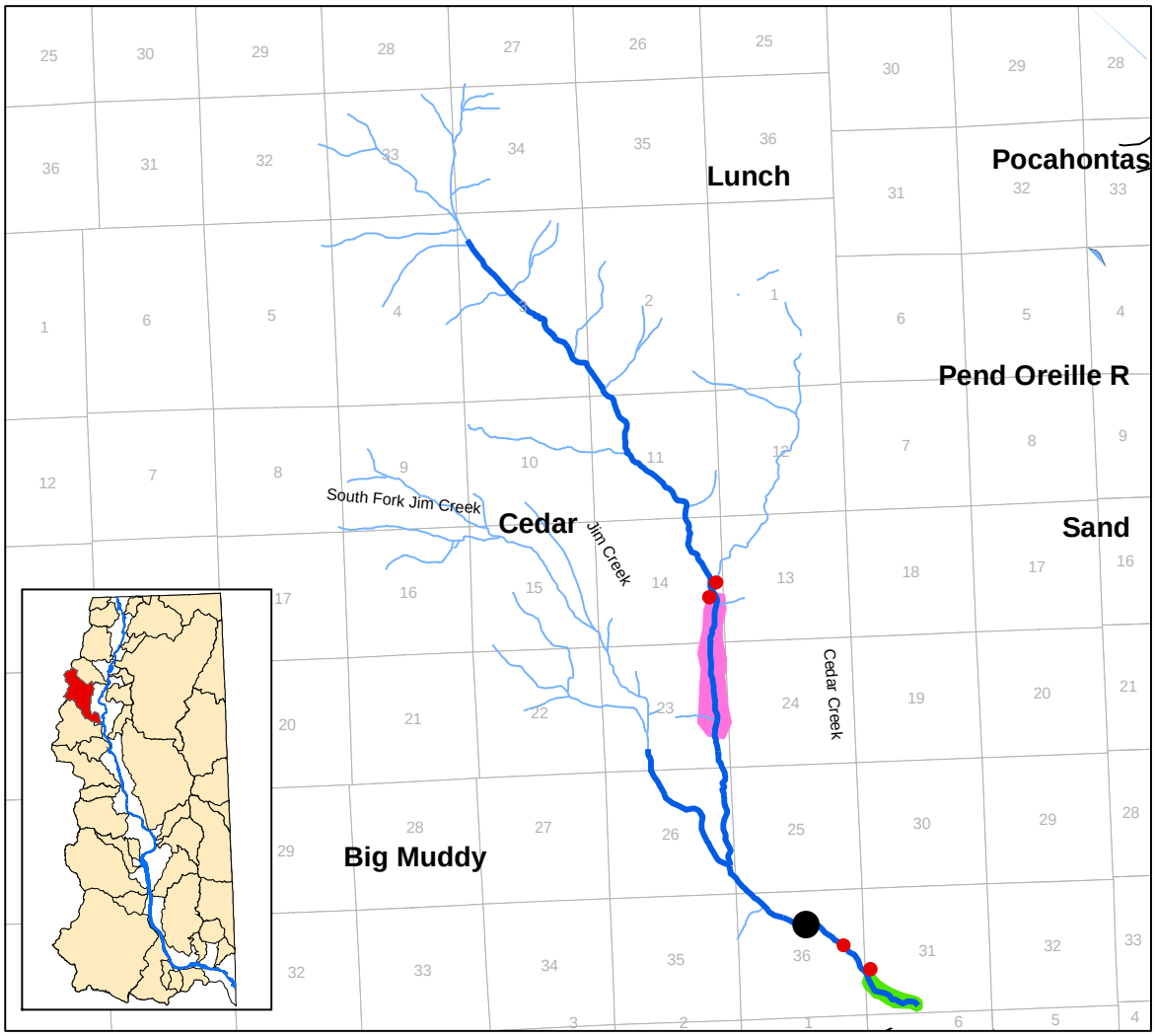
Prepared by S. Dotta/WDFW for Pend Oreille Lead Entity, 081507

Figure H

Hughes Fork Subbasin
PRIORITY ACTIONS

High - #3

0 0.5 1 2 3 4 Miles



Legend

- 1, Remove Cedar Creek Dam to restore fish passage
- 2, Replace/remove culvert barriers
- 3, Remove non-native fish
- 4, Repair and maintain Cedar Creek Rd (county)
- 5, Restore streambank stability
- Bull Trout Habitat
- Stream
- Pend Oreille River
- Subbasin Boundary
- Section

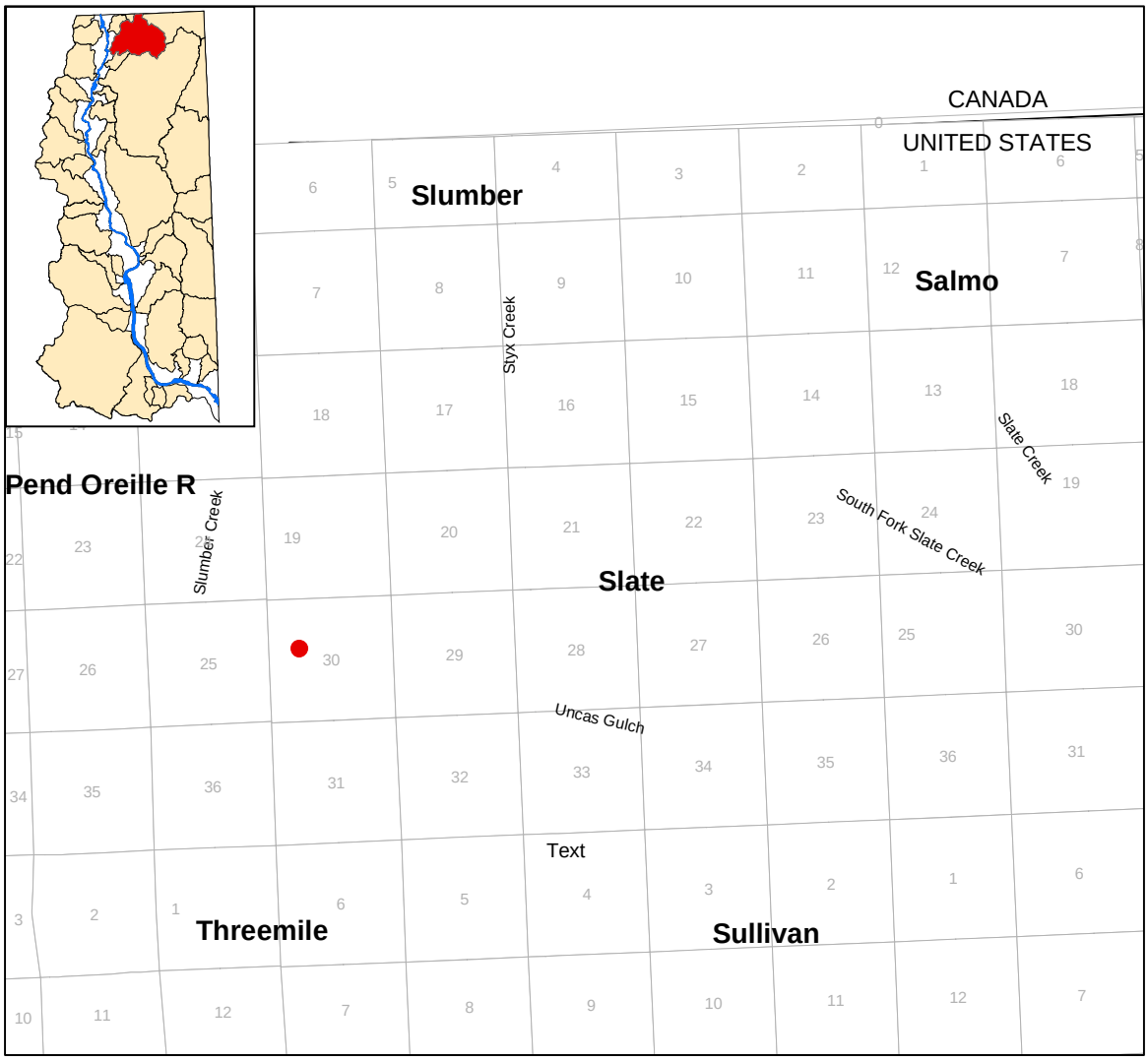
Prepared by S. Dotts/WDFW for Pend Oreille Lead Entity; 092205

Figure I

Cedar Subbasin
PRIORITY ACTIONS

High - #4

Miles
0 0.45 0.9 1.8 2.7 3.6



Legend

- 1, Remove non-native fish
- 2, Replace culvert barriers
- Bull Trout Habitat
- Stream
- Pend Oreille River
- Subbasin Boundary
- Section

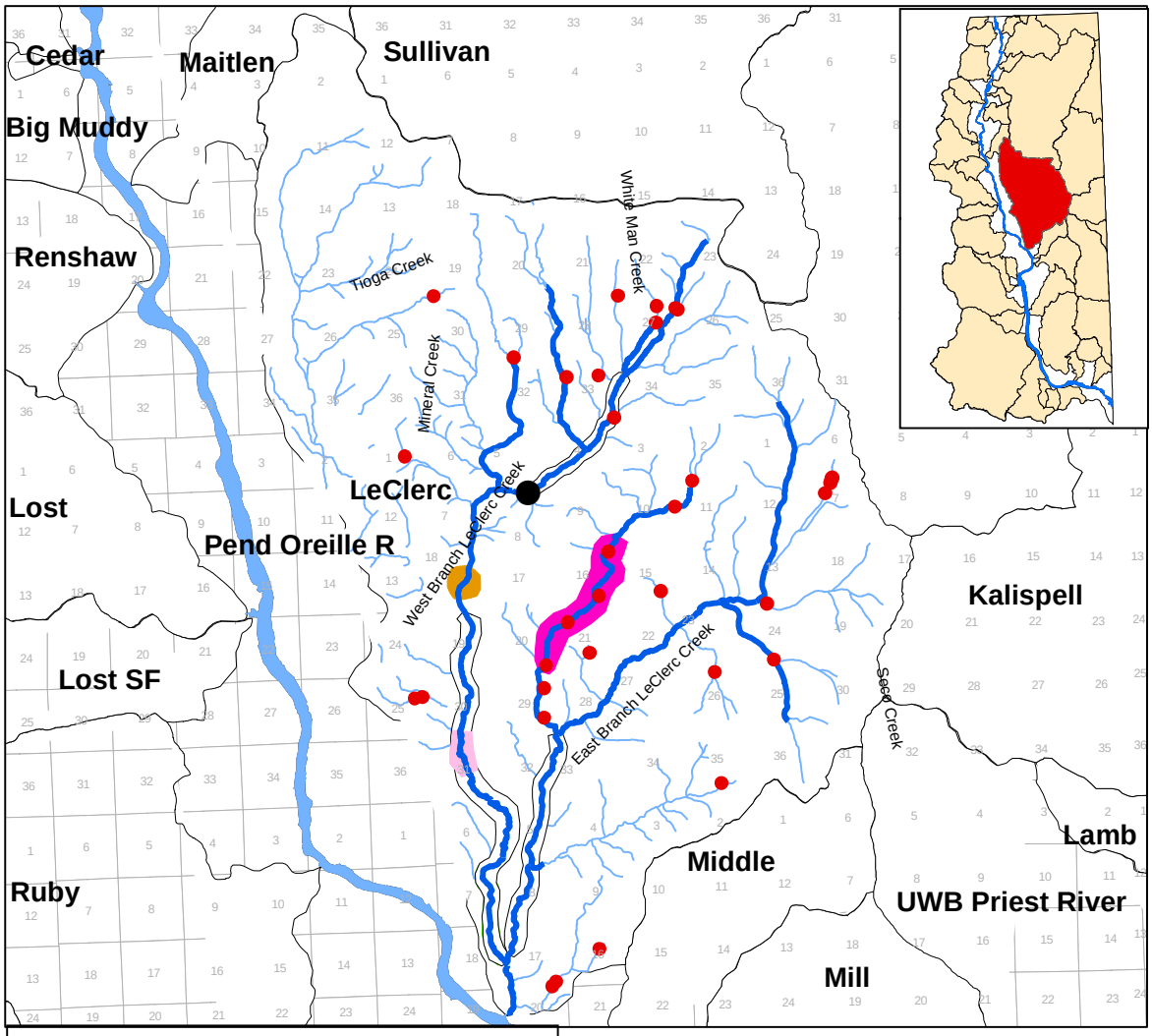
Prepared by S. Dotts/WDFW for Pend Oreille Lead Entity; 051705

Figure J

Slate Subbasin
PRIORITY ACTIONS

High - #5

Miles
0 0.45 0.9 1.8 2.7 3.6



Legend

- 1, Remove non-native fish
- 2, Relocate, obliterate, or reconstruct road segments
- 3, Riparian planting and fencing
- 4, Install engineered log jams
- 6, Conduct slope stabilization feasibility study
- 7, Determine causes of dewatering
- 5, Replace/remove culvert barriers
- 8, Remove log crib dam to restore fish passage
- Bull Trout Habitat
- Stream
- Pend Oreille River
- Subbasin Boundary
- Section

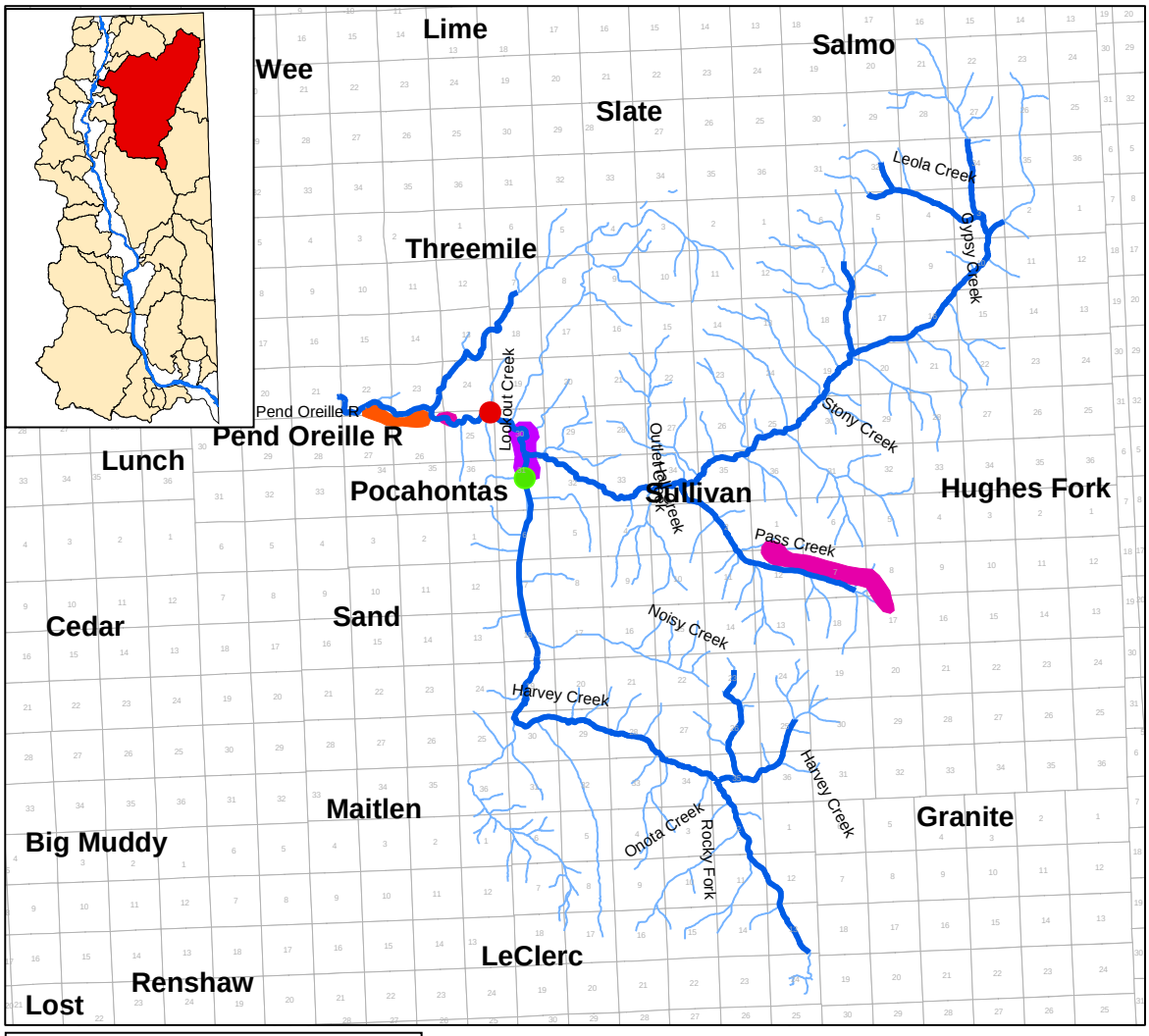
Figure K

LeClerc Subbasin
PRIORITY ACTIONS

High - #6

0 1 2 4 6 8 Miles

Prepared by S. Dotts/WDFW for Pend Oreille Lead Entity; 092205



Legend

Priority, Action

- 1, Restore fish passage at Mill Pond Dam
- 2, Restore fish passage at Sullivan Lake Dam
- 3, Remove non-native fish
- 4, Relocate, obliterate, or reconstruct road segments
- 5, Install engineered log jams
- 6, Stablize slopes
- 7, Assess biological effects of lake management
- 8, Assess habitat limiting factors for Pygmy Whitefish
- 9, Restore habitat complexity
- Bull Trout Habitat
- Stream
- Pend Oreille River
- Section
- Subbasin Boundary

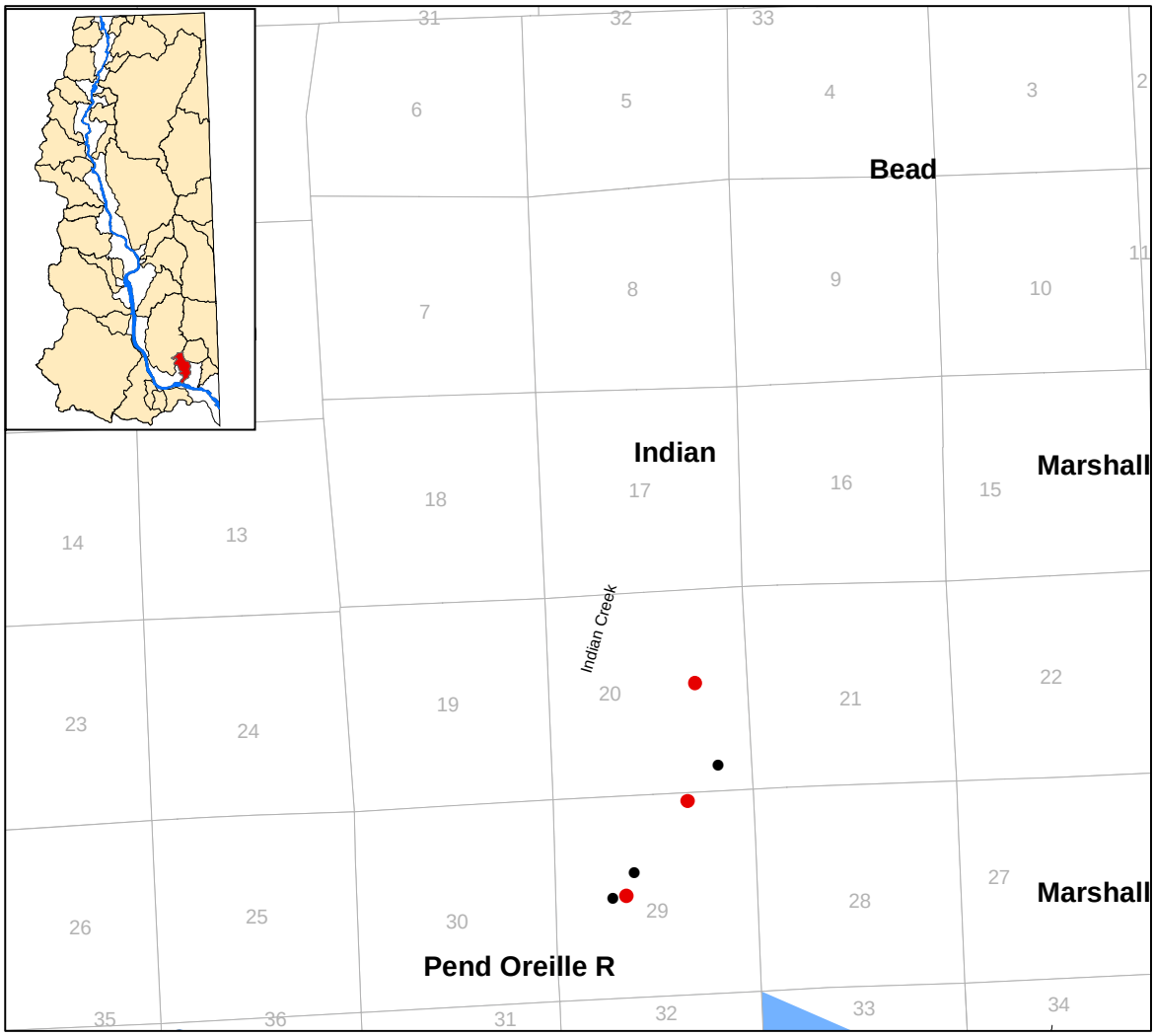
Prepared by S. Dotts/WDFW for Pend Oreille Lead Entity; 092205

Miles
0 1.5 3 6 9 12

Figure L

Sullivan Subbasin
PRIORITY ACTIONS

High - #7



Legend

- 1, Replace/remove culvert barriers
- 2, Screen water diversions
- 3, Restore fish passage at weirs
- 4, Instream habitat enhancement
- 5, Remove non-native fish
- Bull Trout Habitat
- Stream
- Pend Oreille River
- Subbasin Boundary
- Section

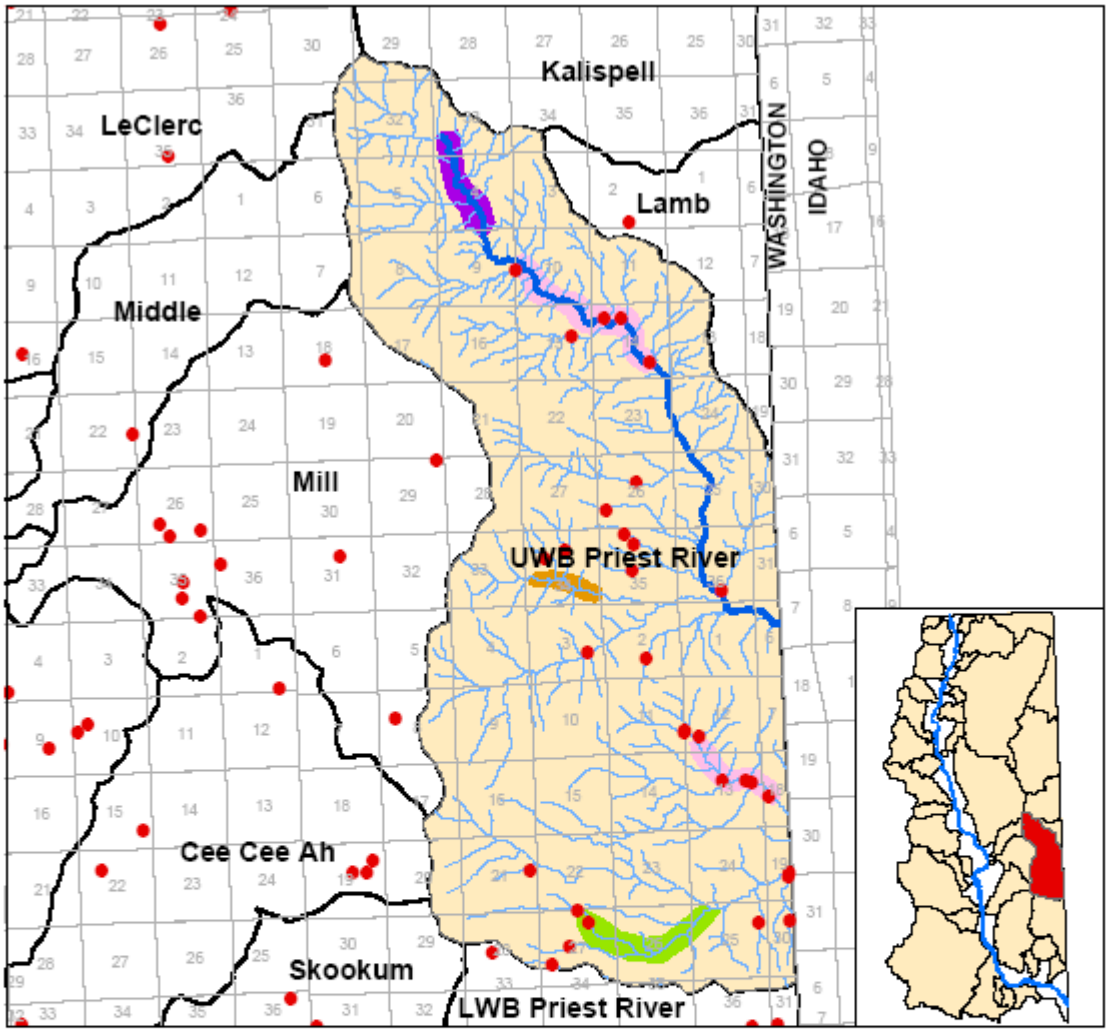
Prepared by S. Dotts/WDFW for Pend Oreille Lead Entity; 092205

Figure M

Indian Subbasin
PRIORITY ACTIONS

High - #8

0 0.3 0.6 1.2 1.8 2.4 Miles



Legend

- 1, Identify and prioritize fish passage barriers for removal
- 2, Remove non-native fish
- 3, Remove/replace culvert barriers
- 4, Restore riparian forests
- 6, Relocate, obliterate, or reconstruct road segments
- 7, Address road maintenance problems
- 8, Restore riparian vegetation and bank stability
- 5, Improve channel complexity with instream structures
- Bull Trout Habitat
- Streams
- Section
- Subbasin Boundary

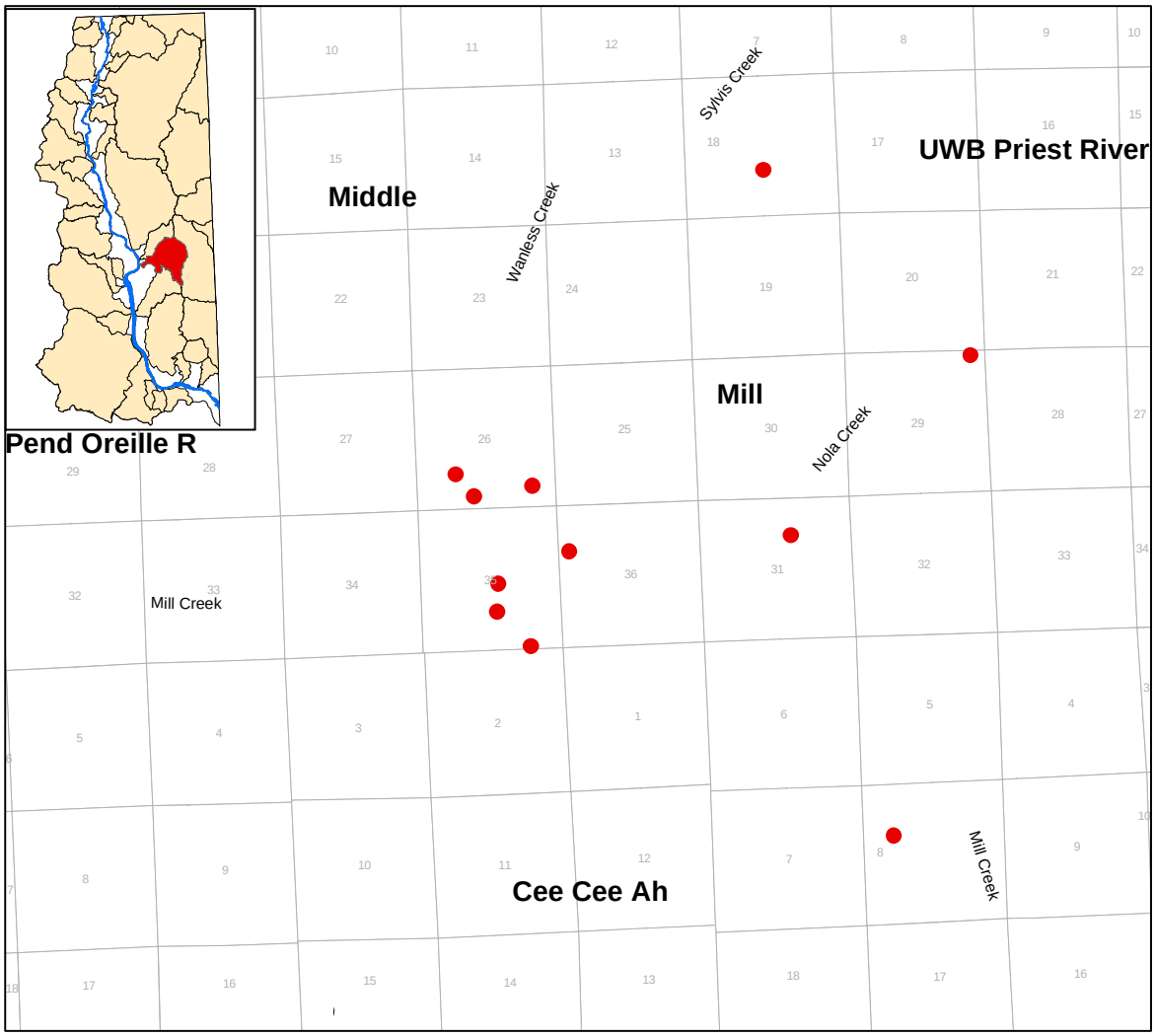
Prepared by S. Dotta/WDFW for Pend Oreille Lead Entity; 081507

Figure N

Upper West Branch Priest River Subbasin **PRIORITY ACTIONS**

High - #9

0 0.5 1 2 3 4 Miles



Legend

- 1, Conduct assessment of road impacts
- 2, Remove non-native fish
- 3, Replace/remove culvert barriers
- 4, Restore stream channel complexity
- 5, Restore degraded riparian habitat
- Bull Trout Habitat
- Stream
- Pend Oreille River
- Subbasin Boundary
- Section

Figure O

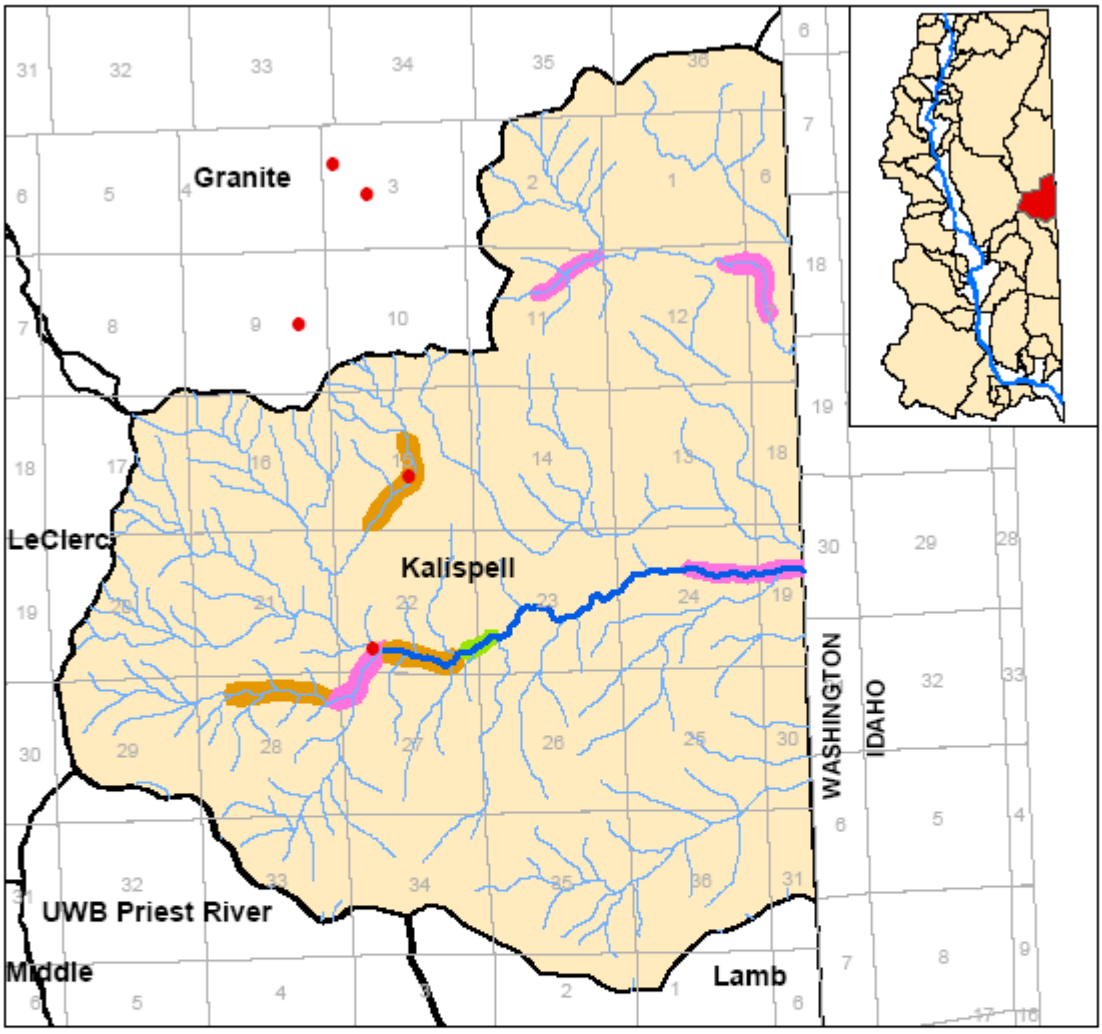
Mill Subbasin

PRIORITY ACTIONS

High - #10

Miles
0 0.45 0.9 1.8 2.7 3.6

Prepared by S. Dotts/WDFW for Pend Oreille Lead Entity; 092205



Legend

- Bull Trout Habitat
- Streams
- Section
- Subbasin Boundary
- 1, Identify and prioritize fish passage barriers for removal
- 2, Remove non-native fish species
- 3, Remove/replace culvert barriers
- 4, Re-establish riparian vegetation
- 5, Relocate road out of riparian area
- 7, Address road maintenance problems
- 6, Improve channel complexity with habitat structures

Prepared by S. Dotta/WDFW for Pend Oreille Lead Entity, 081507

Figure P

Kalispell Subbasin
PRIORITY ACTIONS
High - #11

0 0.3 0.6 1.2 1.8 2.4 Miles

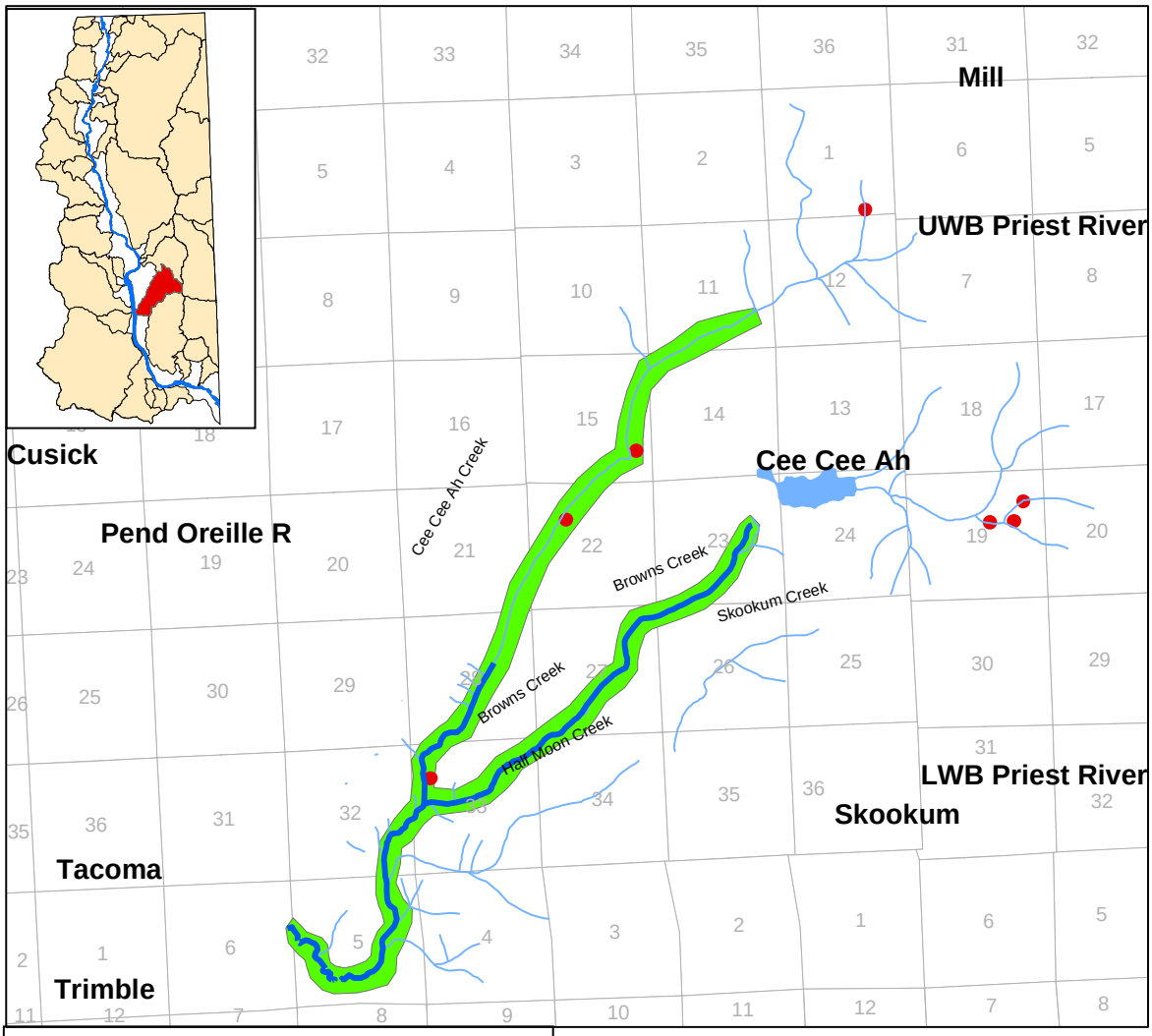


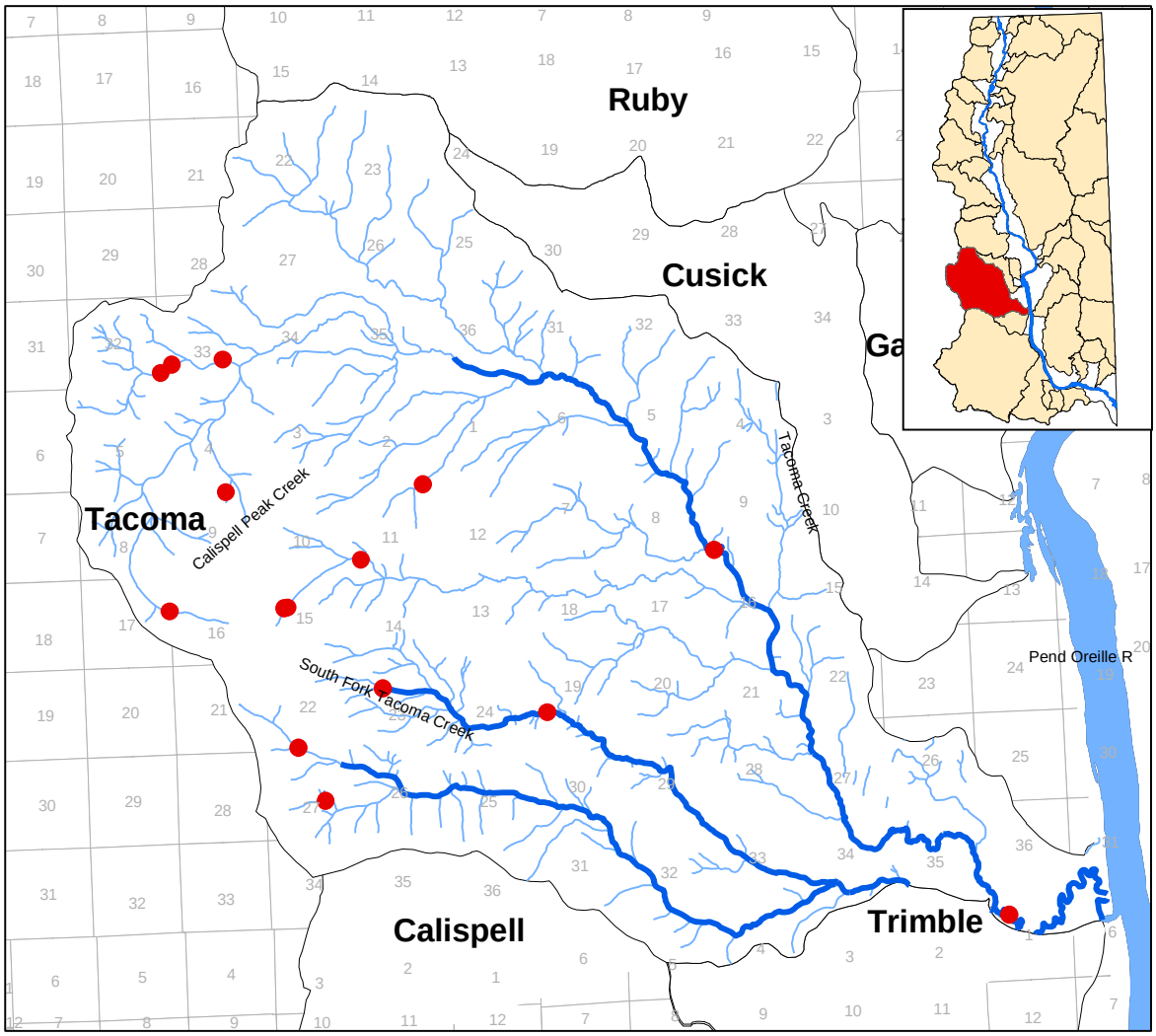
Figure Q

Cee Cee Ah Subbasin

PRIORITY ACTIONS

Medium - #1

Prepared by S. Dotts/WDFW for Pend Oreille Lead Entity;092205



Legend

- 1, Relocate, obliterate, or reconstruct road segments
- 2, Non-native fish removal
- 3, Replace/remove culvert barriers
- 4, Conduct instream habitat enhancement
- 5, Reestablish riparian vegetation
- Bull Trout Habitat
- Stream
- Pend Oreille River
- Subbasin Boundary
- Section

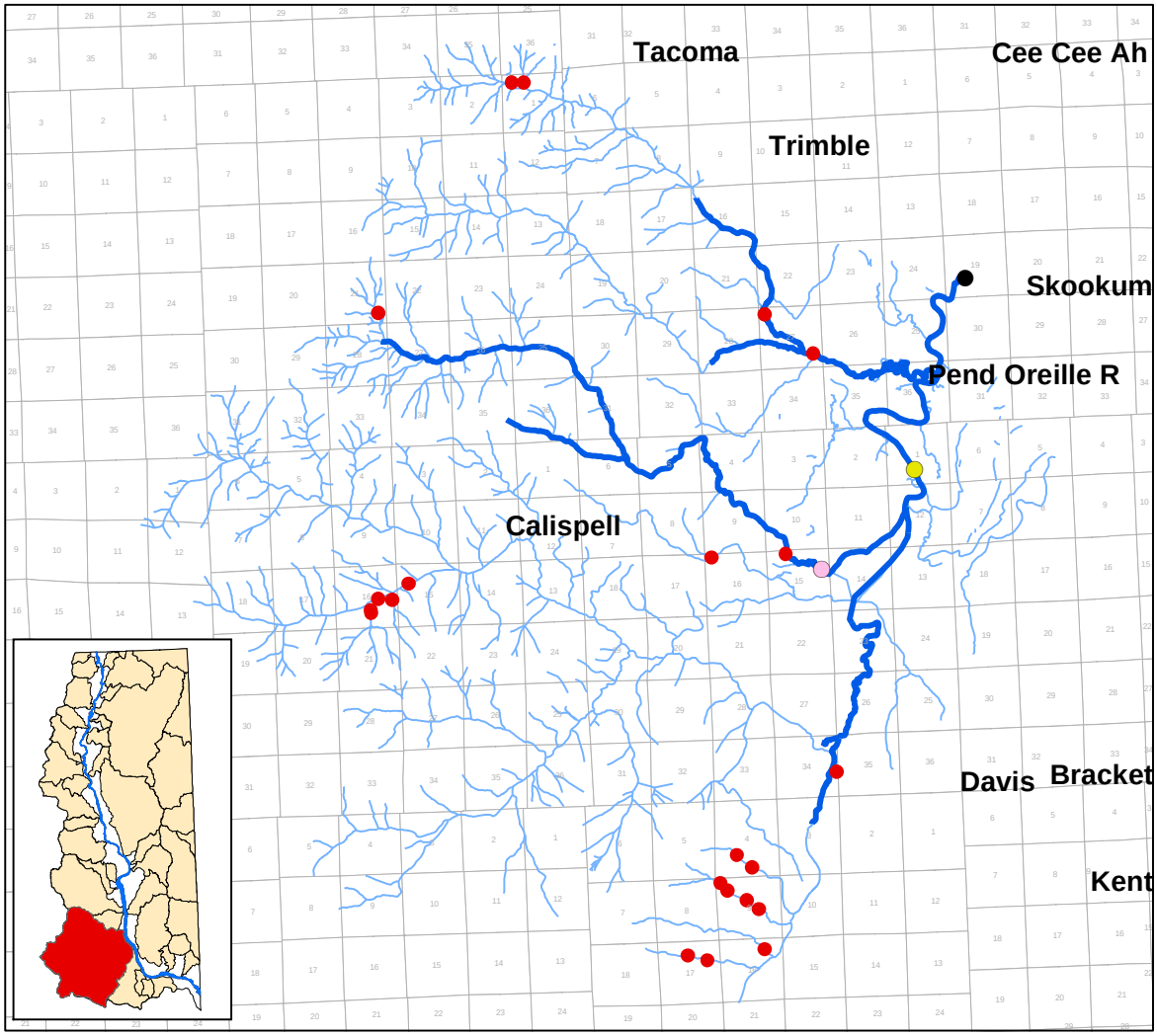
Prepared by S. Dotts/WDFW for Pend Oreille Lead Entity; 092205

Figure R

Tacoma Subbasin
PRIORITY ACTIONS

Medium - #2

0 0.5 1 2 3 4 Miles



Legend

Priority, Action

- 1, Restore fish passage at Calispell Pumps
- 2, Restore fish passage at Duck Club Dam
- 3, Restore fish passage at Dumb Duck Club Dam
- 4, Remove non-native fish
- 5, Conduct assessment of road impacts
- 6, Remove/replace culvert barriers
- 7, Riparian restoration
- 8, Restore upland riparian vegetation
- 9, Restore floodplain connectivity
- 10, Restore instream habitat
- Bull Trout Habitat
- Section
- Stream
- Calispell Lake
- Pend Oreille River
- Subbasin Boundary

Figure S

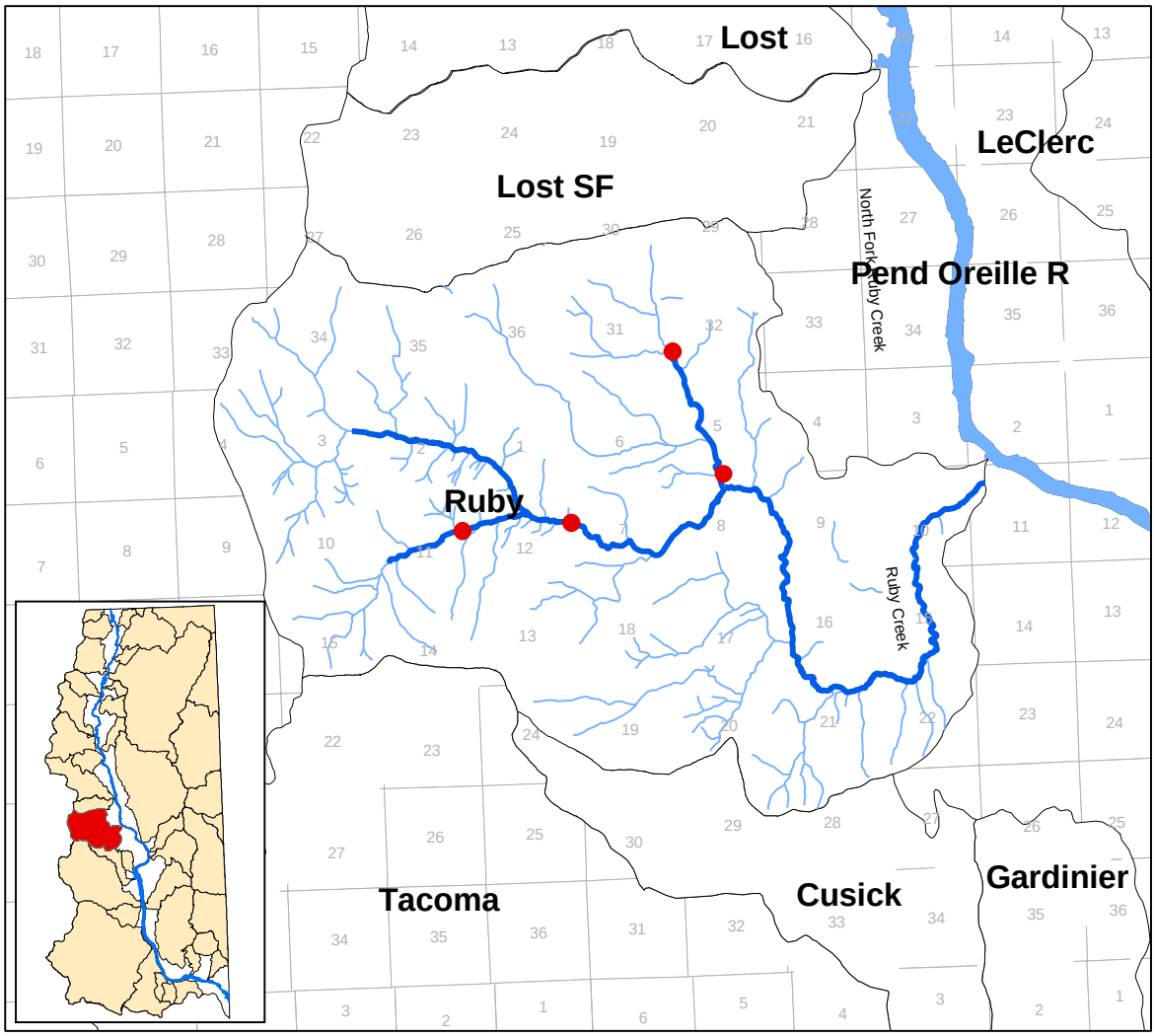
Calispell Subbasin

PRIORITY ACTIONS

Medium - #3

0 1 2 4 6 8 Miles

Prepared by S. Dotts/WDFW for Pend Oreille Lead Entity; 092205



Legend

- 1, Non-native fish removal
- 2, Replace/remove culvert barriers
- 3, Relocate, obliterate, or reconstruct road segments
- 4, Fence riparian area
- 5, Restore habitat complexity and pool habitat
- Bull Trout Habitat
- Stream
- Pend Oreille River
- Subbasin Boundary
- Section

Prepared by S. Dotts/WDFW for Pend Oreille Lead Entity;092205

Figure T

Ruby Subbasin

PRIORITY ACTIONS

Medium - #4

Miles
0 0.5 1 2 3 4

IX. PROJECT EVALUATION AND RANKING CRITERIA

The Salmon Recovery Act provides an annual opportunity for the Pend Oreille Lead Entity to submit a list of salmonid habitat protection and improvement projects to the Salmon Recovery Funding Board (SRFB) for funding consideration. The SRFB is authorized by the Washington Legislature to fund projects that are targeted at salmonid recovery activities and projects statewide.

Criteria were developed by the Pend Oreille Salmonid Recovery Team to evaluate and rank projects for submittal to the SRFB. The criteria strive to integrate science with community goals and objectives. The Pend Oreille Salmonid Recovery Team will use a two-step approach to evaluate and rank projects.

For the first step, the TAG will use a consensus-based approach to evaluate individual projects for benefit to salmonids and certainty of success based how well the project meets the following criteria (see Appendix C for details). Project evaluations will be provided to the CAG to be considered during project ranking.

Benefit to Salmonids

- Does the project addresses high priority habitat features and/or watershed processes?
- Is the project located in a high priority subbasin?
- Has the project been identified through a documented habitat assessment?
- Does the project address multiple species or unique populations of salmonids essential for recovery or ESA-listed species or non-listed species primarily supported by natural spawning?
- Does the project address an important life history stage or habitat types?
- Does the project have a low cost relative to the predicted benefits?

Certainty of Success

- Is project scope appropriate to meet its goals and objectives?
- Is project consistent with proven scientific methods?
- Is project in correct sequence and independent of other actions being taken first?
- Does project address a high potential threat to salmonid habitat?
- Does the project clearly describe and fund stewardship of the area/facility for more than 10 years?
- Is the project landowner willing to have the project done on property?
- Can the project be successfully implemented or are there constraints which may limit project success?

In the second step, the CAG will use a consensus-based approach to rank each project based on evaluation provided by the TAG and the following criteria (see Appendix D for details).

- What is the projects current level of local community support?
- How well will the project help promote community support for the overall salmonid recovery effort in WRIA 62?
- How well does the project proposal address the socioeconomic concerns identified by the strategy?
- Is the project a justifiable use of public funds?

The POSRT will submit the final prioritized project list to the SRFB for funding consideration. The SRFB will make its funding decision based on an evaluation of the quality of this strategy document and how well the project list addresses the priorities and actions identified in this strategy. A technical review of individual projects on the list will also be done by the SRFB to verify that the projects are technically sound.

X. COMMUNITY ISSUES

A. LANDOWNER SUPPORT

The primary level of community support evaluation when considering any project or proposed action is landowner support. Each project must have full support of the landowner before being ranked by the CAG for submission to the SRFB in the Habitat Project list. A great deal of effort, by members of both Citizens and Technical advisory groups and Lead Entity staff, has and will continue to focus on acquiring this landowner commitment for priority actions during the development of each habitat project list in accordance with the technical guidance provided in this strategy.

B. ASSESSING COMMUNITY SUPPORT AND CONCERN

In addition to acquiring individual landowner support for specific projects, the level of community support and concern for the priority actions and areas was evaluated. Considering the level of community interest, issues and concerns about priority actions are often different depending on the subbasin for which those actions are proposed, CAG members surveyed landowners within each high and medium priority subbasin as well as WRIA-wide to identify the level community support for each action on the Priority Actions and Areas Table (Table 4). As well as identifying the current level of community support present for each action in each subbasin, a number of general socioeconomic issues and concerns were identified through the surveys and citizens group members. The identified issues and concerns include a recovery and or protection action's affect on the following:

- Local industry and landowner ability to avoid undue economic hardship by sustaining adequate use of natural resources
- Continued outdoor recreation, hunting and fishing opportunities
- Continued resource-based economic activity (logging, farming and mining)
- Retaining the rural character of the land
- Preservation of flood control
- Further restricting access to public lands

In the column labeled "Community Support" on the Priority Actions and Areas Table (Table 4) each action was given a value of: high, moderate, low or very low; or more information required (MIR). These values are defined as:

- **High:** action in the specified area has strong community support with little or no identified community concern
- **Moderate:** action in the specified area has support from the majority of the community with a minority of the community concerned
- **Low:** action in the specified area has support from the minority of the community
- **Very Low**: action in the specified area has little or no identified community support with a strong level of community concern.
- **More Information Required:** actions recently proposed which require future evaluation.

The value given for level of **Community Support** does not include the portion of the public that is indifferent or oblivious to the process. This approach was taken by the CAG so a project sponsor would not over estimate the actual level community support for a given action or under estimate the possible need for education or promotion of that action.

Actions identified as having "high or moderate" community support are actively promoted to project sponsors and when sponsored are prioritized, by the CAG, both on their current level of community support and their ability to develop support for the salmonid recovery process in the future (see Appendix D).

C. BUILDING COMMUNITY SUPPORT

The Citizens Advisory Group supports, develops and conducts public outreach through community education projects and partnerships designed to build community support for priority salmonid habitat protection and restoration projects in the Lead Entity Area. The CAG applied for and received funding to support these outreach efforts in 2005 and again in 2007.

Since 2005, outreach efforts have included:

- Surveys: Two landowner surveys to assess understanding of citizens in the watershed about the need for recovery efforts and willingness of landowners to allow access for project implementation. The first survey focused on stream front landowners in specific subbasins, and the second focused on assessing the level of support and areas of concerns of randomly selected Pend Oreille County citizens. Survey results are being used to prioritize areas needing educational outreach as well as to assist the CAG in ranking future projects.
- Brochures: A program information brochure was produced to assist with CAG member recruitment and to enhance community awareness of recovery efforts. A project solicitation brochure was also produce describing types of eligible projects as well as testimony from landowners about successful projects.
- Logo Contest: A Pend Oreille Salmonid Recovery Team logo contest was conducted through area schools, and artwork by a local high school student was selected for the conceptual logo design. The logo was incorporated into a Fish Identification Card design to enhance visibility of the Recovery Team.

- Fish Identification Cards: 2000 folding Fish ID cards were produced for distribution throughout the watershed through fishing license and supply vendors, as well as community and school education events. The cards include detailed information and descriptions of six varieties of trout found in the watershed, highlighting the current status of bull trout and westslope cutthroat trout, and are designed to fit in fish license holders or tackle boxes. The cards also include the POSRT logo and contact information.

These products continue to be included in ongoing and future outreach efforts.

The 2007 POSRT Citizen Fish Habitat Partnership outreach program places an emphasis on community partnerships to enhance outreach effectiveness and increase dissemination of recovery goals, objectives and specific project information. This program will provide forums for both adult and youth education, and will create enjoyable and entertaining opportunities for volunteer stewardship activities, bringing together citizens with diverse points of view to create common ground and incentives for habitat protection and community support of recovery efforts. Specific goals of the program are:

- Increase and maintain community awareness of successful past salmonid recovery and enhancement projects, as well as those in progress and proposed, through an annual community bus tour and picnic, inviting citizens, landowners, federal, state and local officials, tribal representatives and funders.
- Conduct public forums on the Recovery Team's habitat restoration strategy, current recovery efforts and specific projects. A special effort will be made to reach farmers, ranchers, small acreage landowners and timber harvesters with speakers from within these fields to share success stories, best practices, and bull trout recovery solutions from around the Northwest, including Idaho and Montana.
- Increase public awareness of the need for salmonid recovery through a series of arts-science events, such as fish recovery documentary movie showings, a photography contest and exhibit of fish habitat and recovery project sites, an artist-scientist collaboration resulting in artistic creations and an exhibit related to fish habitat restoration, and hands-on youth education projects.
- Provide education and recruit citizen participants to the CAG by participating as a primary partner in the Pend Oreille Rain Garden Challenge. This project brings together community partners and citizen volunteers to address non-point pollution sources of stormwater runoff and sediment in the Pend Oreille River Watershed, focusing on bull trout critical habitat areas, lake and streamside communities, and urban settings which deposit to the Pend Oreille River. The Rain Garden project will support habitat restoration through creation of bio-retention swales with native plants and riparian buffer plantings, involving three demonstration sites and numerous private landowner raingardens.
- Increase public response to annual project solicitation through the promotion of the above activities.

D. PRIORITIES FOR COMMUNITY SUPPORT ACTIONS

In general actions with low community support will be prioritized for support building activities based on subbasin priority, the rank of an action within a priority subbasin, and the ability of the

activity to achieve long and short term goals of the Strategy. Prioritized low support actions will be promoted though continual educational events including: guest speakers at local public and Recovery Team CAG meetings and field trips for project sponsors, landowners and citizens to past project sites of similar actions or in adjacent subbasins.

The Lead Entity will actively promote sponsorship of habitat improvement actions in areas enjoying higher levels of community support which are similar to those priority actions in areas with low community support including:

- Pilot studies and priority actions located in adjacent subbasins which have similar limiting factors
- Priority actions on public lands (i.e. with landowner support) within a low community support, high priority subbasin addressing limiting factors similar to those present on the privately owned reaches.

Projects currently believed to be able to promote public support will include or address one of the following:

- Project focuses on priority areas currently supporting known populations of bull trout
- Project increases or maintains access to public lands
- Project encompasses the last (final) recommended recovery action(s) in the subbasin

As the first step to achieve a higher level of understanding of the community support and concerns regarding priority actions in priority areas, the CAG produced a survey for water front landowners with questions relating specifically to actions proposed in their subbasin. Results of that survey were used to:

- place a level of public and or landowner support on each action currently recommended in each priority area
- refine the list of educational events and activities
- identify additional areas of community support, at the subbasin level, for priority habitat improvement activities
- enhance the knowledge of the current community representatives as to public support for newly proposed projects.

An additional survey was conducted of residents WRIA wide to complete the picture of community support and concern for actions suggested in this strategy.

XI. SUMMARY

This revision of the Pend Oreille Lead Entity Salmonid Recovery Team Strategy includes answers to the SRFB request for a unified vision of future salmonid habitat conditions, short and long-term goals needed to reach that vision. This strategy also includes a list of prioritized actions and areas for habitat improvement and protection of priority ESA listed species to guide future project sponsors, landowners and SRFB funding in reaching each goal. This Strategy

includes the most current scientific and community information available, describing the most efficient method of improving native salmonid habitat and will be implemented and updated continually to insure successful habitat restoration is achieved.

XII. REFERENCES CITED

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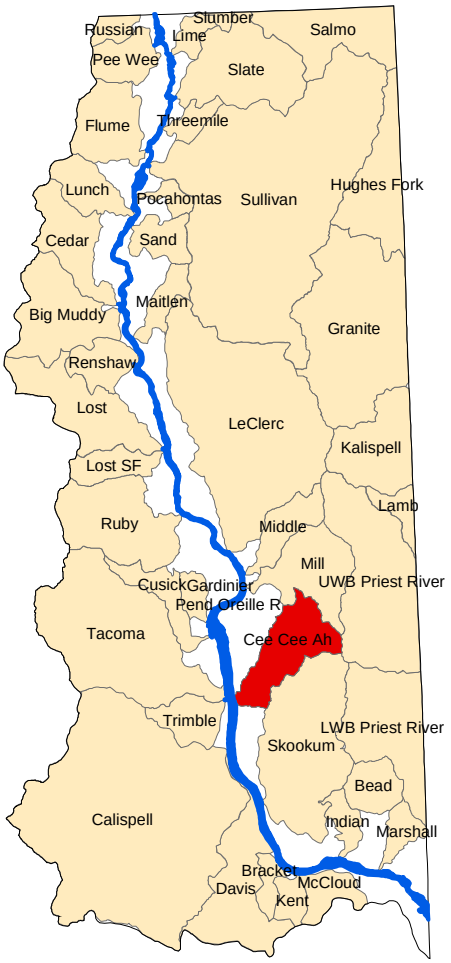
APPENDIX A

Summary of SRFB Funded Projects
in
WRIA 62

Cee Cee Ah Creek
Fish Passage Restoration



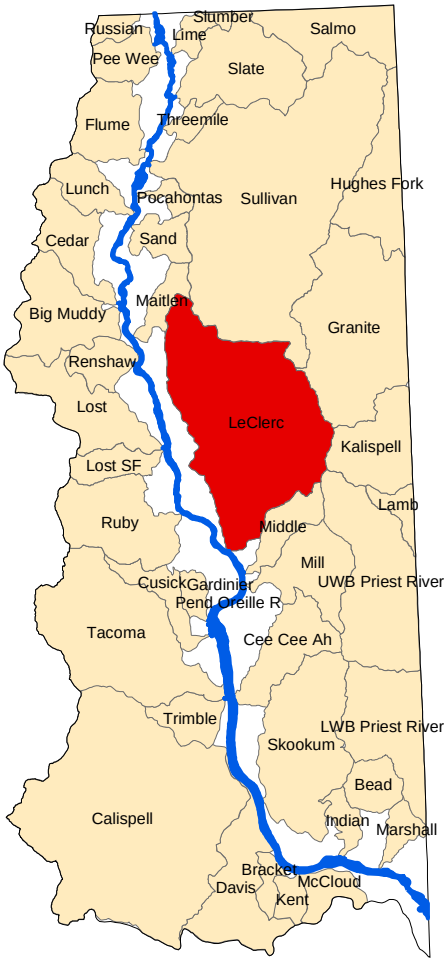
FUNDING SOURCE	AMOUNT
Salmon Recovery Funding Board	76,589
Local Match	76,823
TOTAL PROJECT COST:	**$ 152,412**
YEAR FUNDED:	1999
STATUS:	**Completed**

BEFORE

AFTER

This project was funded by the SRFB in 1999 to restore fish passage in Cee Cee Ah Creek at the LeClerc Road crossing. The existing double culvert was a velocity barrier for native fish migrating upstream at spring high flows. A 24' span, 32' wide, 6' high concrete modular arch was installed. Habitat enhancements in conjunction with the project included log and boulder placement for velocity refuge and cover. The project was a joint effort between the Pend Oreille County Public Works and Kalispel Tribe.

East Branch LeClerc Road Abandonment Project

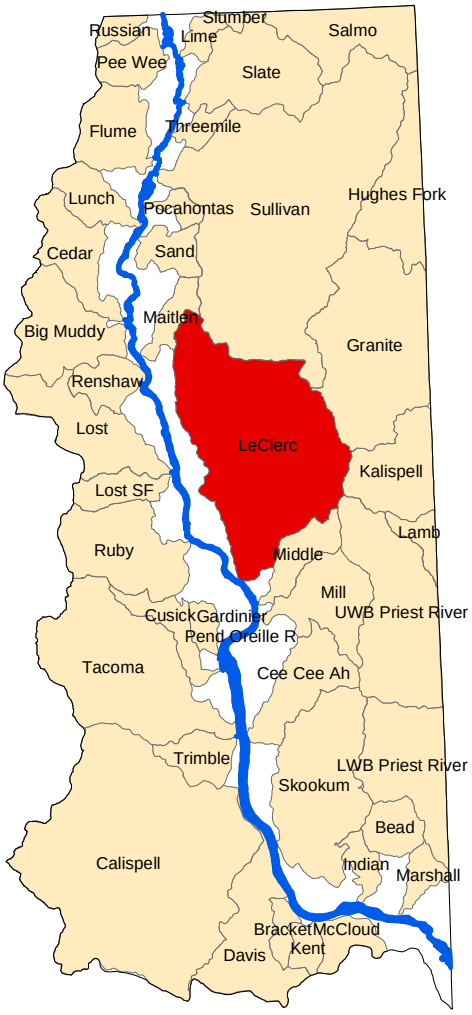


FUNDING SOURCE	AMOUNT
Salmon Recovery Funding Board	202,000
Federal Highway Administration	57,000
Pend Oreille County P.U.D. #1	120,295
Colville National Forest	280,000
Kalispel Tribe	2,000
TOTAL PROJECT COST:	**$ 661,295**
YEAR FUNDED:	2001
STATUS:	**Active**

BEFORE

AFTER

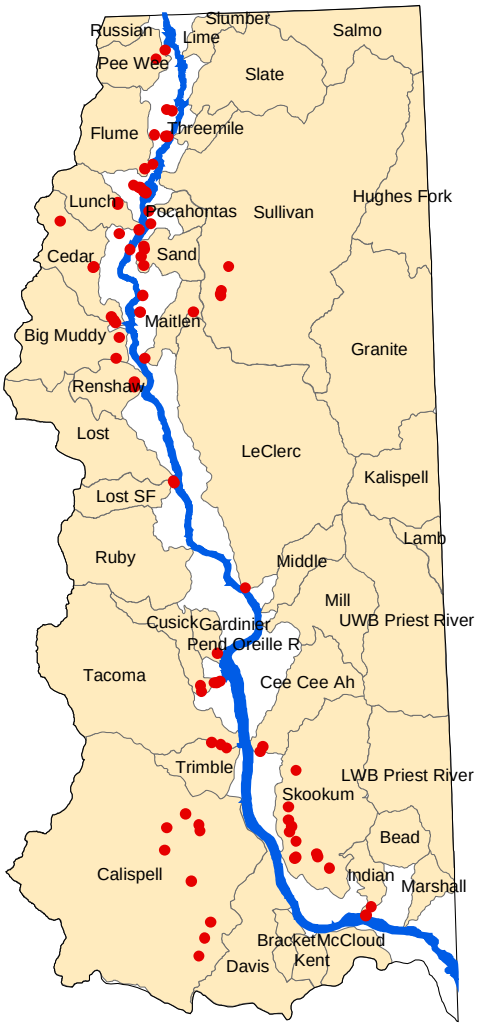
The LeClerc Creek drainage is a documented spawning and rearing stream for bull and cutthroat trout. It is one of the streams within WIRA 62 that has the potential for contributing to species recovery. In 1996, Stimson Lumber Co. completed a watershed assessment of this drainage and identified approximately two miles of cost share road on US Forest Service (USFS) land that contributed excessive sediment to the stream. In 1999, the USFS completed phase one of the project by constructing a new road on USFS land upslope of the riparian road to be abandoned. To date, the Kalispel Tribe and the USFS have successfully rehabilitated approximately 1.5 miles of the abandoned road, including stabilization of a large mass wasting site associated with the abandoned road. Original contours were reestablished eliminating the old roadbed and the area was re-vegetated. This included the restoration of aquatic and terrestrial habitat as well as improved hydrology.



Middle Branch LeClerc Creek Bull Trout Project

FUNDING SOURCE	AMOUNT
Salmon Recovery Funding Board	39,993
Local Match	12,720
TOTAL PROJECT COST:	**$ 52,713**
YEAR FUNDED:	2001
STATUS:	**Partially Completed – Funds returned to SRFB**

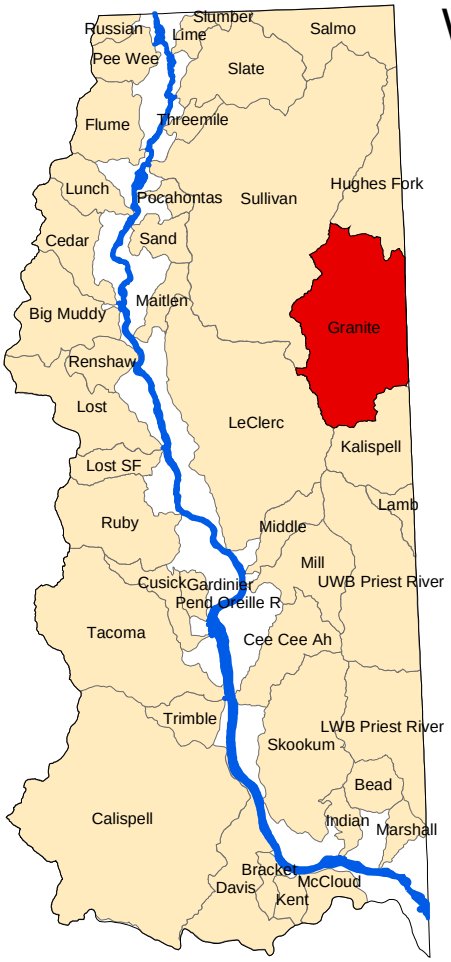
LeClerc Creek, a tributary to Box Canyon Reservoir on the Pend Oreille River, is one of only a few streams where successful bull trout reproduction has been documented in WRIA 62. Lack of spawning and over-wintering habitat, high summer water temperatures, and competition from non-native eastern brook are limiting factors to the persistence of the species in the LeClerc subbasin. This project has replanted and fenced overgrazed riparian areas along the Middle Branch of LeClerc Creek improving spawning and overwintering habitat and improving water temperatures. Proposed use of antimycin to remove non-native fish from the Middle Branch has been postponed and funds for this part of the project have been returned to the SRFB.



Pend Oreille Barrier Survey

FUNDING SOURCE	AMOUNT
Salmon Recovery Funding Board	221,000
Local Match	39,000
TOTAL PROJECT COST:	**$ 260,000**
YEAR FUNDED:	2002
STATUS:	**Completed**

In 2003 and 2004, the Pend Oreille Conservation District surveyed over 50 miles of stream in WRIA 62 and identified 115 fish passage barriers. In 2004, the Kalispel Tribe, a project partner, determine fish species composition and densities above and below these barriers. The barriers will then be prioritized for correction and new potential SRFB projects will be generated to remove these barriers and restore fish passage for threatened bull trout and other species. This was the first comprehensive fish passage barrier survey to be completed on private lands in WRIA 62 and is an integral part of restoring bull trout to the Pend Oreille watershed.

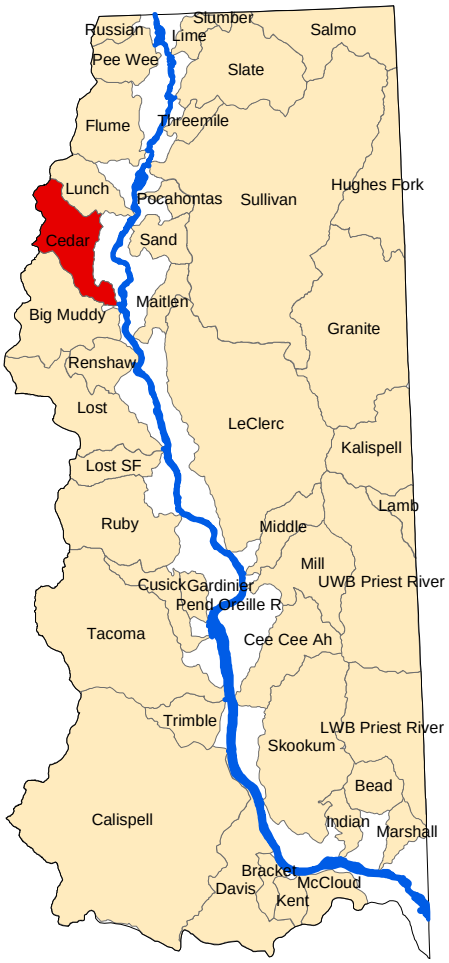


Willow Creek Aquatic Restoration

FUNDING SOURCE	AMOUNT
Salmon Recovery Funding Board	189,772
Local Match	36,755
TOTAL PROJECT COST:	**$ 226,527**
YEAR FUNDED:	2002
STATUS:	**Active**

This project will improve salmonid habitat in the N.F. Granite Creek and Willow Creek drainages through decommissioning 8.4 miles of unstable U.S. Forest Service roads. Road problems include: a chronic source of sediment to the streams from mass wasting, undersized and plugged relief culverts, non-functioning ditchlines, and culverts blocking fish passage. Budget reductions have prevented adequate road maintenance. The N.F. Granite Creek drainage supports adfluvial bull trout and resident westslope cutthroat trout. Direct benefits to native salmonids from this project will be protection and enhancement of existing spawning/rearing habitat. Fish habitat will be improved by restoring habitat connectivity and by removing the failing road system that is delivering sediment to the channel.

O'Donnell Fish Passage Restoration



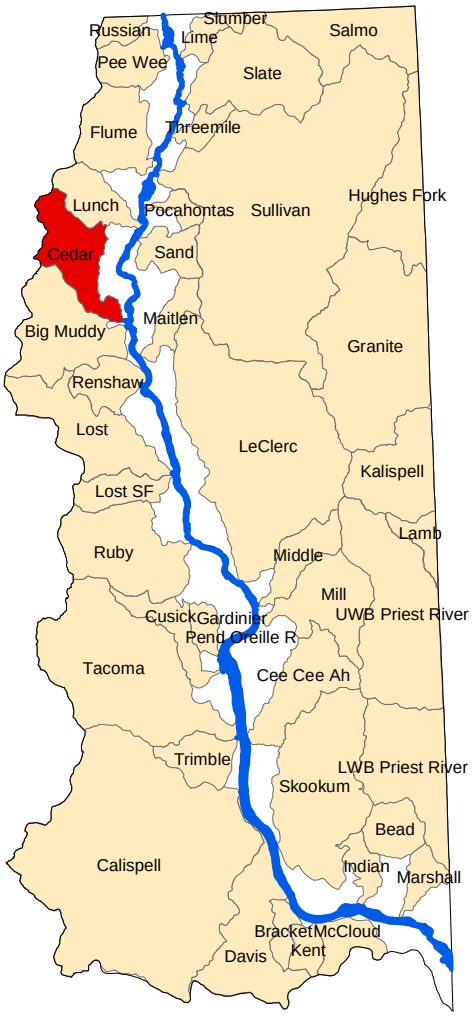
FUNDING SOURCE	AMOUNT
Landowner Incentive Program	49,517
Partners for Fish and Wildlife	73,600
Landowner match (in-kind)	880
WDFW match (in-kind)	3,000
POCD match (in-kind)	4,800
TOTAL PROJECT COST:	**$131,797**
YEAR FUNDED:	2004
STATUS:	**Completed**

BEFORE

AFTER

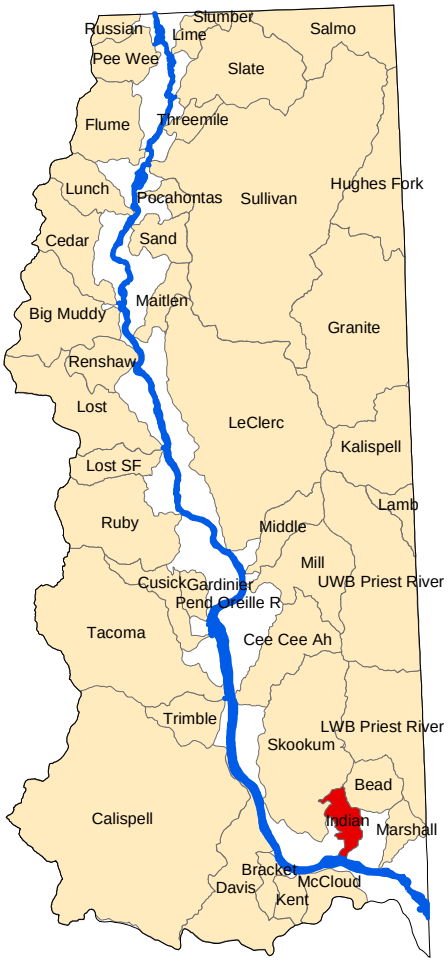
This project restored fish passage to about 1 mile of Cedar Creek, a tributary to the Pend Oreille River. Two significant partial passage barriers were removed, a culvert barrier (photo above) and an old log crib dam. The stream channel was reconstructed and instream channel complexity improved with the installation of an engineered log jam. Native riparian vegetation was planted to restore shade and cover to the stream channel. This project is part of a large watershed-scale effort to completely restore fish passage to Cedar Creek, a high priority subbasin in the Pend Oreille Lead Entity area and a stream recently designated by the USFWS as bull trout Critical Habitat.

Cedar Creek
Fish Passage Restoration



FUNDING SOURCE	AMOUNT
Salmon Recovery Funding Board	810,455
Local Match	174,538
TOTAL PROJECT COST:	**$ 984,993**
YEAR FUNDED:	2004
STATUS:	**Completed**

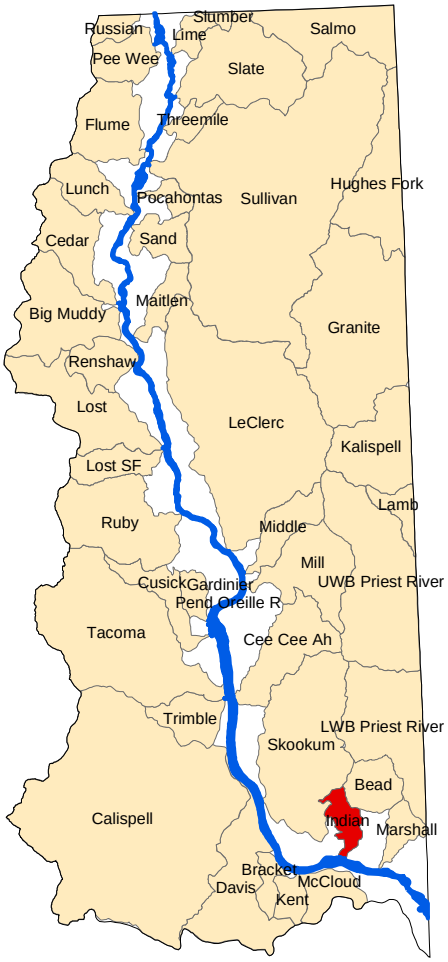
The Cedar Creek Fish Passage Restoration Project restored fish passage to approximately 12 miles of native salmonid habitat, including several miles of federally designated Critical Habitat for bull trout, a threatened species under the Endangered Species Act. The project restored stream channel form and function, including wood and sediment transport, substantially reduced and/or eliminated point-source water quality problems, restored riparian and floodplain cover, and eliminated risk to public health and safety from potential dam failure.



Indian Creek
Fish Passage Restoration

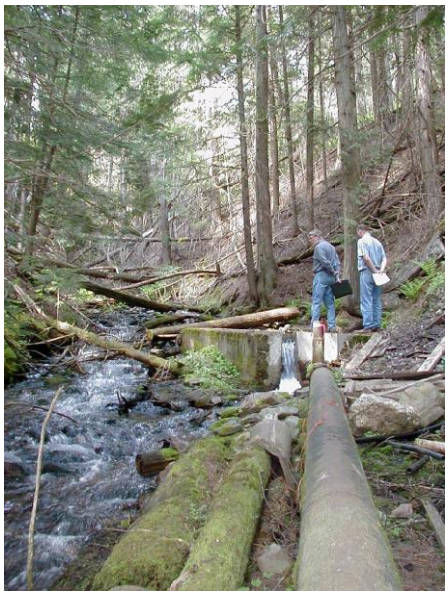
FUNDING SOURCE	AMOUNT
Family Forest Fish Passage Prog.	85,975
Landowner Incentive Program	13,886
Sponsor/Landowner Match	2,000
TOTAL PROJECT COST:	**$ 101,861**
YEAR FUNDED:	2005
STATUS:	**Active**

This project will restore fish passage for bull trout (ESA threatened) and westslope cutthroat trout to Indian Creek, a tributary to the Pend Oreille River. Three fish passage barriers will be removed and access to about two miles of habitat will be restored.



Indian Creek Diversion Screening

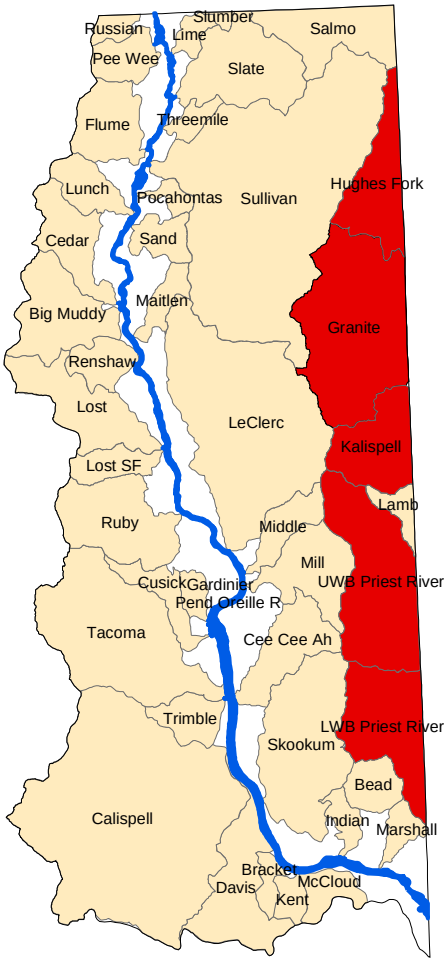
FUNDING SOURCE	AMOUNT
Salmon Recovery Funding Board	113,735
Landowner Incentive Program	29,874
Local Match	1,160
TOTAL PROJECT COST:	**$ 144,769**
YEAR FUNDED:	2005
STATUS:	**Active**



This project will reduce mortality of fry, juvenile and adult salmonids, including ESA-listed bull trout, caused by water withdrawl and diversion from Indian Creek. Three insufficiently screened water diversions will be screened to meet WDFW and USFWS screening requirements. The project will also improve fish passage at one of the diversions, which currently functions as a partial fish passage barrier. Water quantity in Indian Creek will be increased by improving diversion efficiency. One of the diversions currently utilizes an inefficient open ditch conveyance which will be converted to a pipe conveyance.

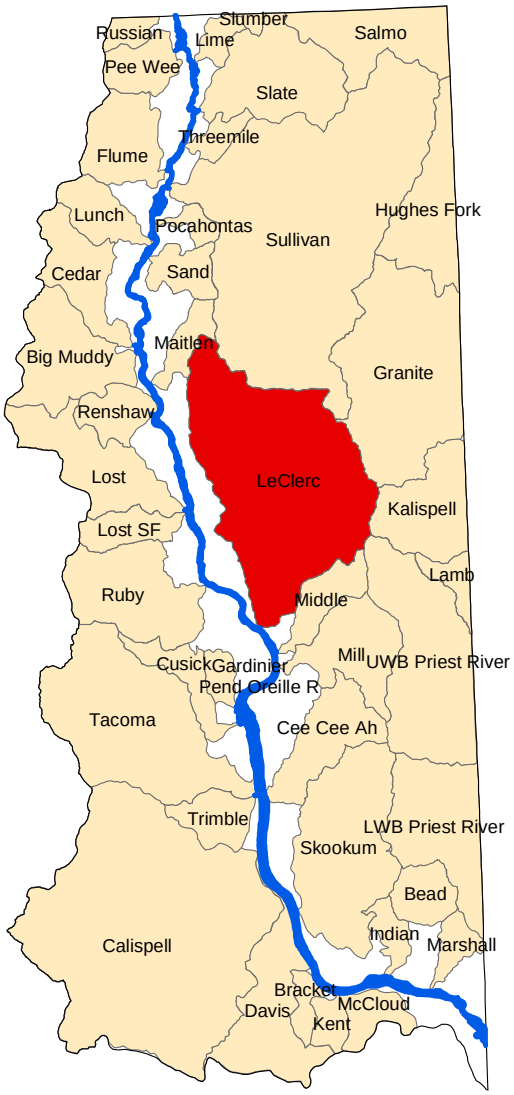
This project is identified in the Pend Oreille Lead Entity strategy as the #2 “priority action” in the Indian Creek subbasin, a “hight priority area” in WRIA 62. The project will occur in conjunction with other Indian Creek fish passage improvements currently underway through funding from the Family Forest Fish Passage and Landowner Incentive programs.

Priest Basin Barrier Assessment



FUNDING SOURCE	AMOUNT
Salmon Recovery Funding Board	85,563
Local Match	20,282
TOTAL PROJECT COST:	**$ 105,845**
YEAR FUNDED:	2005
STATUS:	**Active**

This project will identify fish passage barriers, utilize priority habitat indexing (to quantify available habitat and its quality) and rank barriers for correction (using WDFW Priority Indexing). Conceptual design will be provided for the top five prioritized barriers. This is a cooperative project between the Pend Oreille Conservation District and the Idaho Panhandle National Forest that will assess 100+ miles of stream and well over an estimated 150 road-based stream crossings within the Priest River portion of the Pend Oreille watershed. The Forest Service has completed a culvert inventory within the portions of these subbasins that occur in Idaho. This coordinated effort will meet data needs for both WDFW and the Forest Service. The project will assess streams on public and private lands, from the state border upstream to the limits of fish distribution.

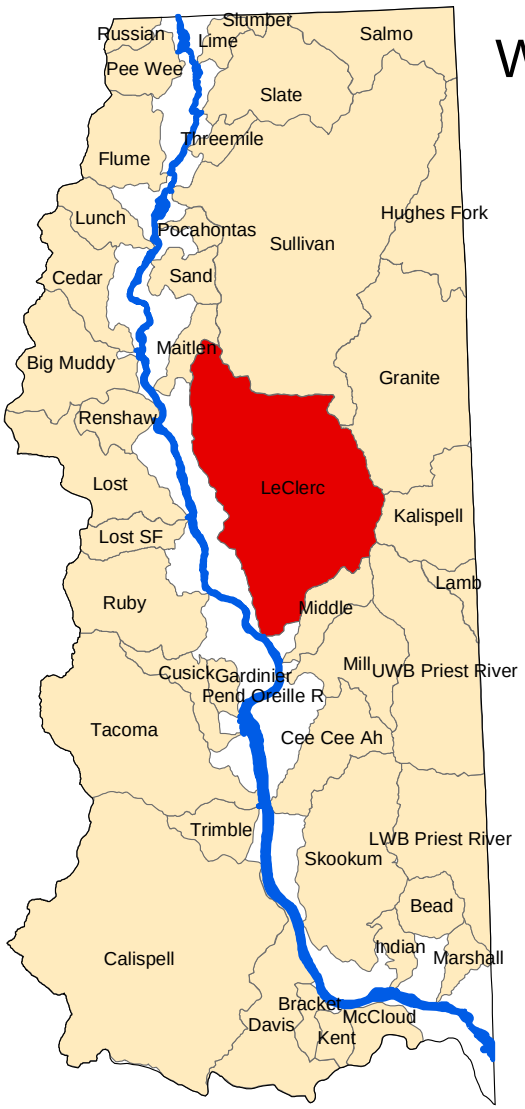


Mineral Creek Passage Project

FUNDING SOURCE	AMOUNT
Salmon Recovery Funding Board	85,650
Local match	19,000
TOTAL PROJECT COST:	**$ 104,650**
YEAR FUNDED:	2006
STATUS:	**Active**

An impassable culvert will be replaced with a bottomless arch on Forest Service Rd. 1936 on Mineral Creek in T37N, R44E, SW ¼, NW1/4, Sec 33. Replacing this culvert would create new access for bull trout, westslope cutthroat trout and other native species to approximately 2 miles of suitable spawning and rearing habitat. Another benefit of the project is the restoration of stream channel form and function to a 100+ foot section of Mineral Creek above the present culvert that is presently smaller than the bankful width of the stream. l

Mineral Creek is a tributary to the West Branch Le Clerc Creek which is a tributary to Le Clerc Creek, a tributary to the Pend Oreille River in northeast Washington (WRIA 62). Historically, migratory bull trout from Lake Pend Oreille migrated down the Pend Oreille River and spawned and reared in tributaries to the river such as Le Clerc Creek. Le Clerc Creek is one of only two watersheds in the Washington portion of WRIA 62 that has recent successful spawning of bull trout. Historically, there were no barriers, in the watershed prior to historic log flume and relatively recent road construction.

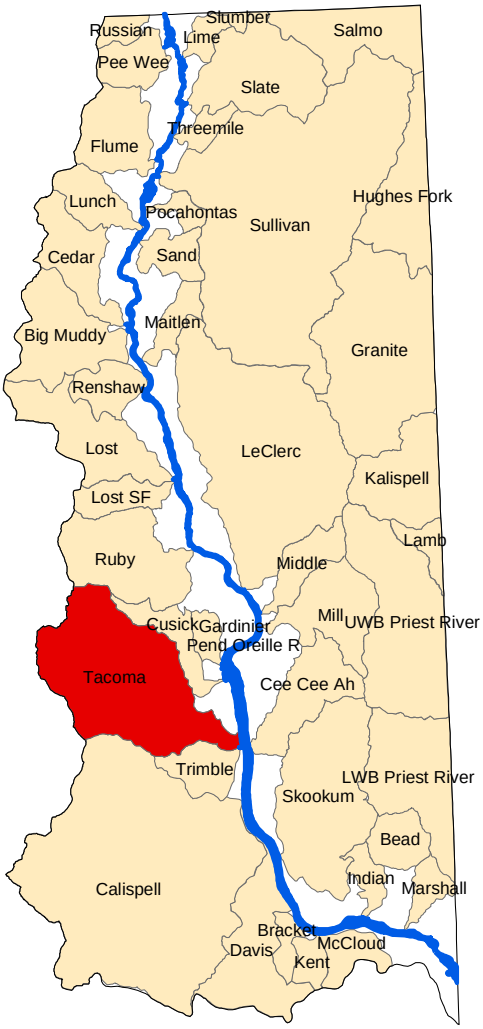


Whiteman Creek Passage Project

FUNDING SOURCE	AMOUNT
Salmon Recovery Funding Board	82,275
Local match	14,575
TOTAL PROJECT COST:	**$ 96,850**
YEAR FUNDED:	2006
STATUS:	**Active**

Impassable twin culverts will be replaced with a bottomless arch on Forest Service Rd. 1936 on Whiteman Creek in T37N, R44E, SE ¼, SW1/4, Sec 29. Replacing these culverts would create new access for bull trout, westslope cutthroat trout and other native species to approximately 2 miles of suitable spawning and rearing habitat. Another benefit of the project is the restoration of stream channel form and function to a 150+ foot section of Whiteman Creek above the present culvert that is presently a depositional area for waters backed up by culverts of insuff-icient size for high flow periods.

Whiteman Creek is a tributary to the West Branch Le Clerc Creek which is a tributary to Le Clerc Creek, a tributary to the Pend Oreille River in northeast Washington (WRIA 62). Historically, migratory bull trout from Lake Pend Oreille migrated down the Pend Oreille River and spawned and reared in tributaries to the river such as Le Clerc Creek. Le Clerc Creek is one of only two watersheds in the Washington portion of WRIA 62 that has recent successful spawning of bull trout. Historically, there were no barriers, in the watershed prior to historic log flume and recent road construction.

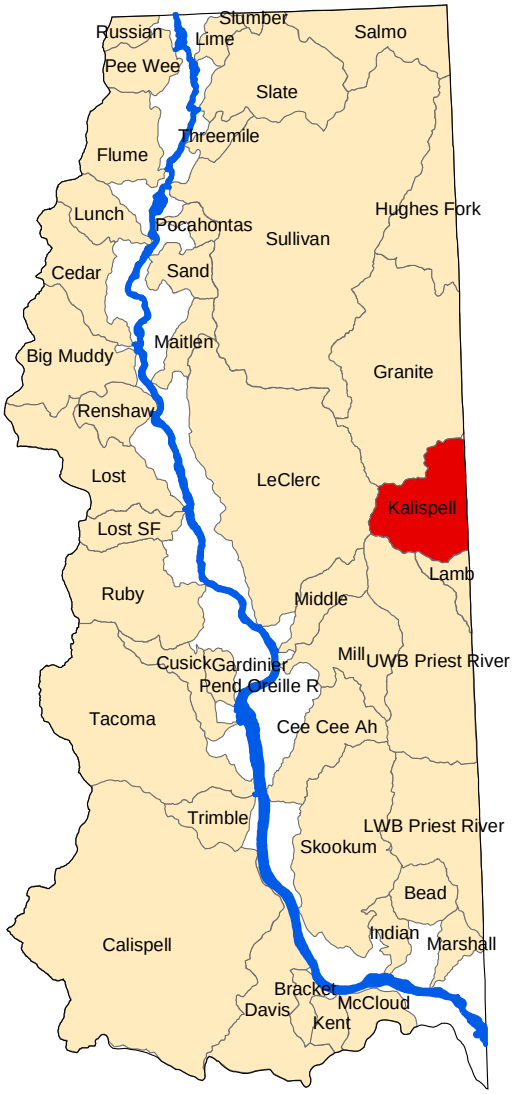


South ForkTacoma Creek Passage Project

FUNDING SOURCE	AMOUNT
Salmon Recovery Funding Board	145,647
Local match	25,703
TOTAL PROJECT COST:	**$ 171,350**
YEAR FUNDED:	2005
STATUS:	**Active**

This project will replace a pipe arch culvert with a bottomless arch on a Forest Service road on the NF of the SF of Tacoma Creek in WRIA 62, restoring fish passage for bull trout, westslope cutthroat trout and other native species to approx. 3 miles of suitable spawning and rearing habitat. The project will also restore stream channel form and function to a 100' section of stream above the present fish passage barrier.

The NF of the SF of Tacoma Creek is a tributary to Tacoma Creek, a tributary to the Pend Oreille River in northeastern Washington. Historically, bull trout from Lake Pend Oreille migrated down the Pend Oreille River and spawned and reared in tributaries to the Pend Oreille River such as Tacoma Creek. Historically there were no fish passage barriers in the Tacoma Creek subbasin except for an impassible falls on Calispel Peak Creek, another tributary to Tacoma Creek. The remainder of the subbasin, including the project area, was accessible to bull trout prior to road construction.

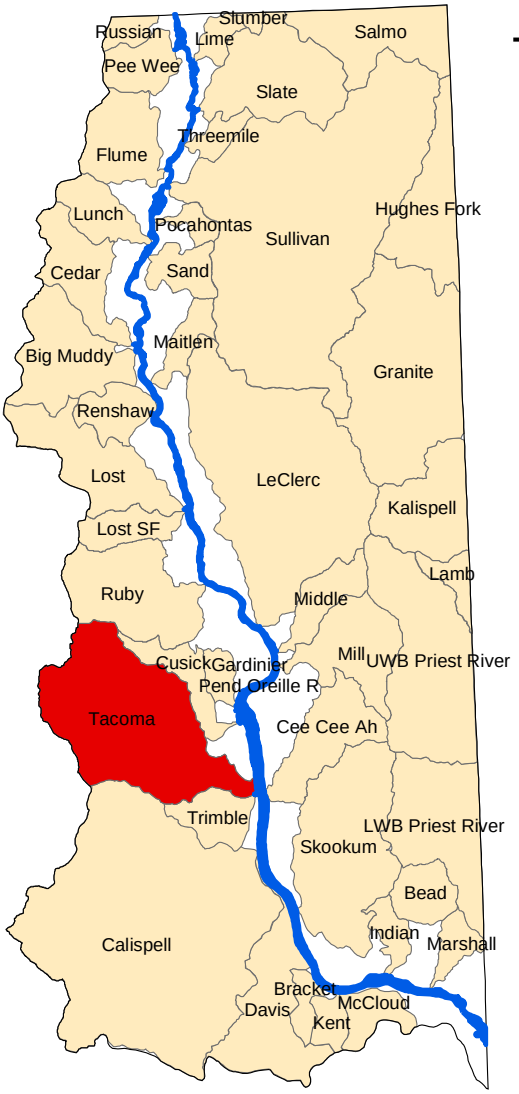


Hungry-Deer Watershed Restoration

FUNDING SOURCE	AMOUNT
Salmon Recovery Funding Board	161,547
Local match	34,056
TOTAL PROJECT COST:	**$ 195,603**
YEAR FUNDED:	2006
STATUS:	**Active**

The Hungry-Deer Watershed Restoration project is part of a larger ecosystem-based aquatic restoration effort, which includes a concurrent project funded by BPA to restore adjacent bull trout habitat in the Kalispell subbasin. Jointly the projects will compliment and enhance the effectiveness of each other.

Objectives of the project are to: 1) Remove 6.3 miles unstable, abandoned roads that ar chronically delivering sediment to streams within the Kalispell subbasin; 2) Stabilize all soils disturbed during construction with seeding, mulching, and fertilizing; 3) Chemically treat noxious weed infestations both pre- and post-project implementation, and 4) Improve in-stream habitat for salmonids by replacing large wood complexes and groupings at 21 locations throughout the project area.



Tacoma Creek Passage Project

FUNDING SOURCE	AMOUNT
Salmon Recovery Funding Board	343,102
Local match	60,548
TOTAL PROJECT COST:	**$ 403,650**
YEAR FUNDED:	2005
STATUS:	**Active**

This project will replace an impassable culvert with a bridge or bottomless arch on a Pend Oreille County road on Tacoma Creek, restoring fish passage for bull trout, westslope cutthroat trout, and other native species to 14 miles of suitable spawning and rearing habitat in a subbasin which contains designated critical habitat for bull trout, a threatened species under ESA. The project will also restore stream channel form and function to a 300'+ section of Tacoma Creek in the project area.

Tacoma Creek is a tributary to the Pend Oreille River in northeastern Washington (WRIA 62). Historically, bull trout from Lake Pend Oreille migrated down the Pend Oreille River and spawned and reared in tributaries to the river such as Tacoma Creek. Historically there were no barriers to bull trout migration except for an impassable falls on Calispell Peak Creek, a tributary to Tacoma Creek upstream of the project area. The remainder of the Tacoma Creek subbasin was accessible to bull trout prior to road construction.

APPENDIX B

RANKING CRITERIA FOR "HIGH" AND "MEDIUM" PRIORITY SUBBASINS

The following criteria were used to rank the "High" and "Medium" priority subbasins within WRIA 62. A score between 0 (worst) and 5 (best) was assigned to each subbasin based on how well it met the criteria. "High" and "Medium" priority subbasins were ranked separately.

1. Current or historic habitat utilization

As per Bull Trout Habitat Limiting Factors Report for WRIA 62 (WCC 2003), are bull trout currently or historically documented to be utilizing the subbasin for multiple life stages (i.e., spawning/rearing, overwintering, foraging, migration, thermal refuge)?

5 Bull trout currently use available habitat within the subbasin for three or more of the listed life stages
4 Bull trout currently use available habitat within the subbasin for at least two of the above life stages
3 Bull trout currently use available habitat within the subbasin for at least one of the above life stages
2 Bull trout historically use available habitat within the subbasin (documented reference)
1 Bull trout historically used available habitat within the subbasin (anecdotal reference)
0 No current of historic utilization of habitat within subbasin by bull trout

2. Sightings within last 10 years

As per the Bull Trout Habitat Limiting Factors Report for WRIA 62 (WCC 2003), within the last 10 years have bull trout been observed within the subbasin?

5 Bull trout recruitment, reproduction/spawning has occurred within the last 10 years
2 Individual bull trout have been observed (no evidence of recruitment, spawning, etc.)
0 No recent (i.e., within 10 years) observations of bull trout have been made

3. Water temperature

Based on the upper limits for life strategies and season of use by bull trout, such as incubation and overwintering habitats, the subbasin provides:

5 Temperatures seasonally suitable for all life stages of bull trout more than 80% of the year
4 Temperatures seasonally suitable for all life stages of bull trout for 60-80% of the year
3 Temperatures seasonally suitable for all life stages of bull trout for 40-60% of the year
2 Temperatures seasonally suitable for all life stages of bull trout for 20-40% of the year
1 Temperatures seasonally suitable for all life stages of bull trout for less than 20 % of the year

4. Amount of public vs. private ownership

Public land has a higher likelihood of protection and restoration than lands in private ownership. What percentage of subbasin is in public ownership (i.e., federal, state, tribal)?:

5 public ownership > 90%
4 public ownership 71-90%
3 public ownership 51-70%
2 public ownership 31-50%
1 public ownership 10-30%
0 public ownership < 10%

5. Current habitat conditions

Scores for current habitat condition (including stream gradient, substrate, channel complexity, and embeddedness levels) in each subbasin were based on TAG review of current documentation and group discussion. Best professional judgment of TAG member was then used to assign a score of 0-5 to each subbasin, with 0 being the worst and 5 the best.

6. Migration barriers

Scores where assigned to each subbasin based on the ratio of barriers to river mile of designated bull trout habitat (per WCC 2003). In subbasins where a barrier assessment has not been conducted or current barrier status is unknown, a score of "2" was assigned and will be reevaluated upon completion of a barrier inventory within the subbasin.

5 No barriers
4 0.01-0.25 barriers/mile of bull trout habitat
3 0.26-0.5 barriers/mile of bull trout habitat
2 0.51-1.0 barriers/mile of bull trout habitat
2 1.01-1.5 barriers/mile of bull trout habitat
1 >1.50 barriers/mile of bull trout habitat

7. Restoration potential

Scores were based on the level of difficulty and benefit of improving habitat within each subbasin to support a recovered bull trout population. The criteria for scoring restoration potential includes the overall current habitat characteristics (as in #5 above), as well as, current and/or historic information on bull trout distribution (as in #1 and #2 above). The ranking score ranged from 0 to 5, with 0 being the worst and 5 the best.

- Benefit is defined as the ability of the sub-basin, when habitat is improved, to achieve Endangered Species Act bull trout recovery unit goals.
- Difficulty is defined as the technical difficulty of completing all suggested habitat improvement activities in the subbasin.

APPENDIX C

Pend Oreille Lead Entity TAG
TECHNICAL EVALUATION
SRFB 5th Round Project Applications

Project Name: _____

Project Sponsor: _____

Using the form below, the TAG will use a consensus-based approach to evaluate each individual project application for benefit to native salmonids and certainty of success. The TAG will then assign an overall evaluation score of HIGH, MEDIUM, or LOW to each project for "benefit" and "certainty". Project evaluation will be used by the CAG in the final project ranking process.

Category *(descriptions below)*	**Evaluation** *(check one)*			**Explain Evaluation**
	High	**Medium**	**Low**	
BENEFIT TO SALMONIDS				
Watershed processes and habitat features				
Areas and actions				
Scientific				
Species				
Life history				
Costs				
CERTAINTY OF SUCCESS				
Appropriate				
Approach				
Sequence				
Threat				
Stewardship				
Landowner				
Implementation				

OVERALL EVALUATION				
Benefit to salmonids				
Certainty of success				

CRITERIA DESCRIPTIONS BY CATEGORY

BENEFIT TO SALMONIDS

Category	Criteria	Evaluation
Watershed Processes and Habitat Features	Project addresses multiple high priority habitat limiting factors and/or watershed processes that significantly protects or limits the salmonid productivity in the area. **For acquisition projects only:** More than 60% of the total project area is intact habitat, or if less than 60%, project must be a combination that includes habitat restoration. **For assessment projects only**: The project is crucial to understanding watershed processes, is directly relevant to project development or sequencing, and will clearly lead to new projects in high priority subbasins.	HIGH
	Project addresses a single priority habitat limiting factors and/or watershed processes that significantly protects or limits the salmonid productivity in the area. **For acquisition projects only:** 40-60% of the total project area is intact habitat, or if less than 40-60%, project must be a combination that includes restoration. **For assessment projects only:** The project will lead to new projects in medium or higher priority subbasins but may not alter the sequence of priority actions in the subbasin. Project is independent of other key conditions being addressed first.	MEDIUM
	Project will not address an important habitat condition in the area	LOW
Areas and Actions	Project will address a high priority action in a high priority subbasin. **For assessment projects only**: The project will fill an important data gap in a high priority subbasin.	HIGH
	Project may be an important action but in a medium priority subbasin. **For assessment projects only**: The project fills an important data gap, but is in a medium priority subbasin.	MEDIUM
	Project addresses a lower priority action or will occur in a low priority subbasin.	LOW
Scientific	Project is identified through a documented habitat assessment or Limiting Factors Report.	HIGH
	Project is identified through scientific opinion.	MEDIUM
	Project is unclear or lacks scientific information about the problem being addressed.	LOW
Species	Project addresses multiple priority species or unique populations of salmonids essential for recovery or ESA-listed fish species or non-listed populations primarily supported by natural spawning. Fish use has been documented.	HIGH
	Project addresses one or more priority species or unique populations of salmonids or non-listed populations primarily supported by natural spawning. Fish use has been documented.	MEDIUM
	Project addresses species of a lower priority. Fish use may have not been documented.	LOW
Life History	Project addresses two or more life history stages or habitat types that limits the productivity of the salmonid species in the area.	HIGH
	Project addresses less than two life history stages or habitat types that limits the productivity of the salmonid species in the area.	MEDIUM
	Project is unclear about the salmonid life history being addressed.	LOW
Costs	Project has a low cost relative to the predicted benefits for the project type in that location.	HIGH
	Project has a reasonable cost relative to the predicted benefits for the project type in that location.	MEDIUM
	Project has a high cost relative to the predicted benefits for that particular project type in that location.	LOW

CERTAINTY OF SUCCESS

Category	Criteria	Evaluation
Appropriate	Project scope is highly appropriate to meet its goals and objectives.	HIGH
	Project scope is moderately appropriate to meet its goals and objectives.	MEDIUM
	Project scope is unclear as to how the goals and objectives will be met.	LOW
Approach	Project is consistent with proven scientific methods. **For assessment projects only:** Assessment methodology will effectively address an information/data gap or lead to implementation of prioritized projects within 1-2 years on completion.	HIGH
	Project uses scientific methods that may have been tested, but the results are incomplete. **For assessment projects only:** Assessment method will effectively address an information/data gap or lead to implementation of prioritized projects within 3-5 years on completion.	MEDIUM
	Project uses methods that have not been tested or proven to be effective in past uses.	LOW
Sequence	Project is in the correct sequence and is independent of other actions being taken first.	HIGH
	Project is dependent on other actions being taken first that are outside the scope of this project.	MEDIUM
	Project may be in the wrong sequence with other actions.	LOW
Threat	Project addresses a high potential threat to salmonid habitat.	HIGH
	Project addresses a moderate threat to salmonid habitat.	MEDIUM
	Project addresses a low potential for a threat to salmonid habitat.	LOW
Stewardship	Project clearly demonstrates and funds stewardship of the area or facility.	HIGH
	Project clearly demonstrates, but does not fund, stewardship of the area or facility.	MEDIUM
	Project does not describe or fund stewardship of the area or facility.	LOW
Landowner	Landowners are willing to have work done.	HIGH
	Landowners may have been contacted and are likely to allow work to be done.	MEDIUM
	Landowner willingness to have work done is unknown.	LOW
Implementation	Project actions are ready to take place and have no known constraints to successful implementation.	HIGH
	Project may have some known constraints to successful implementation.	MEDIUM
	Project actions are not ready to take place and have several constraints to successful implementation.	LOW

APPENDIX D

Pend Oreille Lead Entity CAG
PROJECT RANKING CRITERIA
SRFB 5th Round Project Applications

Project Name: _____
Project Sponsor: _____

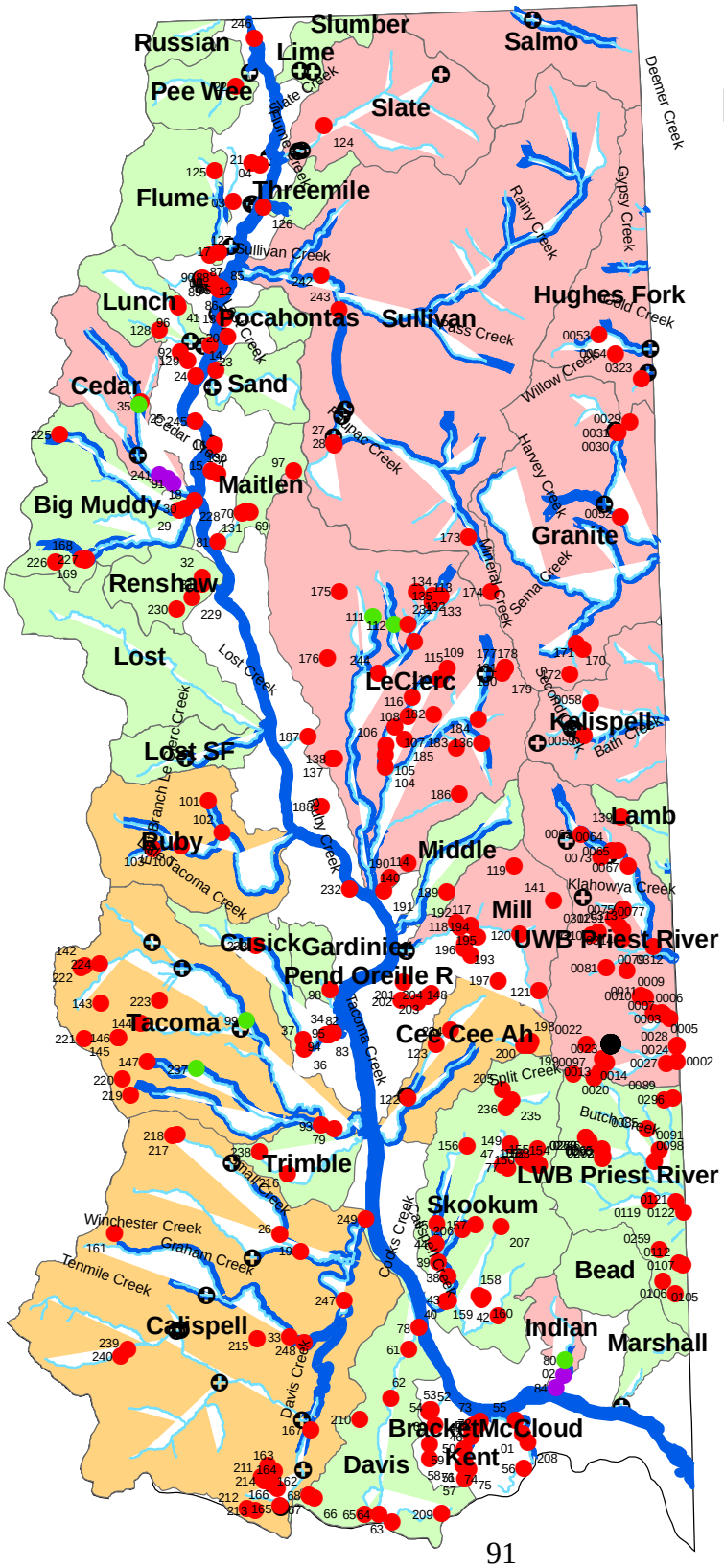
The CAG will together, utilizing a consensus-based approach as described in the team bylaws, rank each project application based on the criteria below. Total scores for each project will be tabulated by the Pend Oreille Lead Entity to determine the ranked order of each individual project on the project list. If two projects receive the same ranking, the CAG will use a consensus-based approach to determine which project should receive a higher ranking. **This project must have full landowner support and achieve a medium or higher rating of for both "Benefit to Salmonids" and "Certainty of Success" by the TAG (see Appendix C) before being ranked by the CAG for submission to the SRFB, unless otherwise noted in the comments section below.**

Criteria	Ranking	Score
Using the TAG evaluation of the project's benefit to salmonids, rate how well this proposal addresses subbasin priority limiting factors and actions identified in the strategy.	High……Medium……..Low 5 4 3 2 1 0	
Using the TAG evaluation of the project's benefit to salmonids rate how well this proposal addresses subbasin priority species and areas identified in the strategy.	High……Medium……..Low 5 4 3 2 1 0	
Using the TAG evaluation of the project's certainty of success rate the proposal's ability to address the priority areas habitat limiting factors.	High……Medium……..Low 10 9 8 7 6 5 4 3 2 1 0	
Rate the project's current level of local community support.	High……Medium……..Low 10 9 8 7 6 5 4 3 2 1 0	
Rate how well will the project help promote community support for the overall salmonid recovery effort in WRIA 62.	High……Medium……..Low 10 9 8 7 6 5 4 3 2 1 0	
Rate how well the project proposal addresses the socioeconomic concerns identified by the strategy.	High……Medium……..Low 10 9 8 7 6 5 4 3 2 1 0	
Rate whether the project is a justifiable use of public funds.	High……Medium……..Low 10 9 8 7 6 5 4 3 2 1 0	
	TOTAL SCORE **Total possible points = 60**	

Comments:

FIGURE U

Fish Passage Barriers in WRIA 62



Legend

Culvert Barrier

- Barrier
- Funded for Removal
- Removed
- Natural Barrier

Cutthroat Trout Distribution

Bull Trout Habitat

Subbasin

Subbasin and Priority

- HIGH
- MEDIUM
- LOW

Data Sources:

1. Bull trout habitat based on Bull Trout Habitat Limiting Factors Report (WCC 2003)
2. Cutthroat trout distribution based on WDFW data; Fish Program – Brian McTeague
3. Barrier data from Pend Oreille Conservation District, Forest Service, and WDFW
4. Subbasin prioritization from Strategy for Protection and Improvement of Native Salmonid Habitat in WRIA 62 (Pend Oreille Salmonid Recovery Team 2007)

1 inch equals 6.75 miles

Prepared by S. Dotts, WDFW 081507

APPENDIX E

Priority Culvert Barriers for Removal and/or Replacement

ID	RANK[13]	PRIORITY[14]	STATUS[15]	SUBBASIN[16]	CREEK	DATA SOURCE[17]	RIVER MILE	MILES BLOCKED	OWNER[18]	FISH ABOVE[19]	FISH BELOW	BLOCKAGE
227			Unfunded	Big Muddy	Muddy, Big	DNR	6.24	0.21	UNKWN	WCT	WCT	Barrier
228			Unfunded	Big Muddy	Muddy, Big	USFS	0.10	9.77	STATE	WCT	WCT, BT, RBT, MWF	Barrier
169			Unfunded	Big Muddy	Muddy, Big	DNR	6.29	0.16	STATE	WCT	WCT	Barrier
226			Unfunded	Big Muddy	Muddy, Big, Tributary	USFS	1.41	NA	USFS	UNKNOWN	WCT	Barrier
168			Unfunded	Big Muddy	Muddy, Big, Tributary	DNR	0.17	NA	STATE	UNKNOWN	WCT	Barrier
30			Unfunded	Big Muddy	Muddy, Little	POCD	0.16	7.32	UNKWN	EBT, RBT, WCT	EBT, RBT, WCT, BT, MWF	Unknown
29			Unfunded	Big Muddy	Muddy, Little	POCD	0.381	7.10	CNTY	EBT, RBT, WCT	EBT, RBT, WCT, BT, MWF	Barrier
225			Unfunded	Big Muddy	Muddy, Little, Tributary	USFS	0.08	NA	USFS	UNKNOWN	UNKNOWN	Barrier
54			Unfunded	Bracket	Bracket	POCD	1.20	1.50	UNKWN	EBT	EBT	Barrier
53			Unfunded	Bracket	Bracket	POCD	1.30	1.40	UNKWN	EBT	EBT	Barrier
52			Unfunded	Bracket	Bracket	POCD	1.38	1.32	UNKWN	EBT	EBT	Barrier
60			Unfunded	Bracket	Bracket	POCD	1.98	0.72	UNKWN	EBT	EBT	Barrier
59			Unfunded	Bracket	Bracket, Tributary	POCD	0.12	NA	UNKWN	UNKNOWN	EBT, WCT	Barrier
239	21	8	Unfunded	Calispell	Calispell, North Fork	USFS	9.74	3.42	USFS	UNKNOWN	RBT, EBT, WCT	Barrier
240	NA	NA	Unfunded	Calispell	Calispell, North Fork, Tributary	USFS	.08	NA	USFS	UNKNOWN	RBT, EBT, WCT	Barrier
165	11	9	Unfunded	Calispell	Calispell, South Fork	DNR	3.97	1.86	STATE	WCT(natural block DS????)	WCT(blockage to non-natives YES/NO?)	Unknown
166	NA	NA	Unfunded	Calispell	Calispell, South Fork, Tributary	DNR	0.64	NA	STATE	UNKNOWN	UNKNOWN	Unknown
164	NA	NA	Unfunded	Calispell	Calispell, South Fork, Tributary	DNR	0.91	NA	STATE	UNKNOWN	UNKNOWN	Unknown
163	NA	NA	Unfunded	Calispell	Calispell, South Fork, Tributary	DNR	1.21	NA	STATE	UNKNOWN	UNKNOWN	Unknown
162	NA	NA	Unfunded	Calispell	Calispell, South Fork, Tributary	DNR	1.53	NA	STATE	UNKNOWN	UNKNOWN	Unknown
167	NA	NA	RMAP	Calispell	Calispell, South Fork, Tributary	DNR	.09	NA	LFL	UNKNOWN	WCT	Unknown
213	NA	NA	RMAP	Calispell	Calispell, South Fork, Tributary	DNR	1.20	NA	LFL	UNKNOWN	WCT	Barrier

[13] Rank is based on criteria found in Appendix F.
[14] Priority for removal and/or replacement by individual subbasin.
[15] Status of culvert for removal or replacement. RMAP = Culvert will be removed/replaced under a Road Maintenance and Abandonment Plan; Application = Funding is being sought
[16] Subbasins shaded gray are low priority subbasins; all others are either high or medium priority.
[17] DNR = Washington Department of Natural Resources; POCD = Pend Oreille Conservation District; USFS = Colville National Forest; UNKWN = Unknown
[18] Denotes ownership of culvert. STATE = State of Washington; LFL = Large Forest Landowner; SFL = Small Forest Landowner; NFL = Non-forest Landowner; CNTY = Pend Oreille County; USFS = Colville National Forest; UNKWN = Unknown ownership
[19] EBT = Eastern brook trout; RBT = Rainbow trout; WCT = Westslope cutthroat trout; BT = Bull trout; MWF = Mountain whitefish; PWF = Pygmy whitefish; BRT = Brown trout; KOK = Kokanee

ID	RANK	PRIORITY	STATUS	SUBBASIN	CREEK	DATA SOURCE	RIVER MILE	MILES BLOCKED	OWNER	FISH ABOVE	FISH BELOW	BLOCKAGE
214	NA	NA	RMAP	Calispell	Calispell, South Fork, Tributary	DNR	1.26	NA	LFL	UNKNOWN	UNKNOWN	Barrier
211	NA	NA	RMAP	Calispell	Calispell, South Fork, Tributary	DNR	1.43	NA	LFL	UNKNOWN	UNKNOWN	Barrier
212	NA	NA	RMAP	Calispell	Calispell, South Fork, Tributary	DNR	1.55	NA	LFL	UNKNOWN	WCT	Barrier
215	NA	NA	Unfunded	Calispell	Calispell, Tributary	DNR	3.0	NA	STATE	UNKNOWN	EBT	Barrier
210	NA	NA	Unfunded	Calispell	Calispell, Tributary	DNR	3.51	NA	STATE	UNKNOWN	UNKNOWN	Barrier
19	36	5	Unfunded	Calispell	Smalle	POCD	4.021	7.16	CNTY	EBT, WCT	EBT, WCT	Barrier
26	36	5	Unfunded	Calispell	Smalle, East Fork	POCD	1.037	6.74	CNTY	EBT, WCT	EBT, WCT	Barrier
218	4	10	RMAP	Calispell	Smalle, East Fork	DNR	7.59	0.19	LFL	UNKNOWN	WCT	Barrier
217	NA	NA	RMAP	Calispell	Smalle, East Fork, Tributary	DNR	0.09	NA	LFL	UNKNOWN	EBT	Barrier
33	36	5	Funded	Calispell	Winchester	POCD	1.816	14.41	CNTY	EBT, WCT, RBT	EBT, WCT	Barrier
161	NA	NA	RMAP	Calispell	Winchester, Tributary	DNR	0.52	NA	LFL	UNKNOWN	EBT	Unknown
91	62	1	Removed	Cedar	Cedar	DNR	1.20	11.12	SFL	EBT, RBT, WCT, BT	BT, EBT, RBT, BRT, WCT	Barrier
18	52	2	Removed	Cedar	Cedar	POCD	1.48	10.84	SFL	EBT, RBT, WCT, BT	BT, EBT, RBT, BRT, WCT	Barrier
35	49	3	Application	Cedar	Cedar	POCD	4.91	6.16	SFL	WCT, RBT, EBT	BT, EBT, RBT, BRT, WCT	Barrier
25	33	4	Unfunded	Cedar	Lost Lake	POCD	0.10	2.22	SFL	WCT, RBT, EBT	BT, EBT, RBT, BRT, WCT	Barrier
199	NA	NA	Unfunded	Cee Cee Ah	Browns, Tributary	DNR	0.08	NA	UNKWN	UNKNOWN	BRT	Barrier
200	NA	NA	Unfunded	Cee Cee Ah	Browns, Tributary	DNR	0.14	NA	UNKWN	EBT	EBT	Barrier
198	NA	NA	Unfunded	Cee Cee Ah	Browns, Tributary, Tributary	DNR	0.49	NA	UNKWN	EBT	BRT,EBT	Barrier
122	45	4	Unfunded	Cee Cee Ah	Cee Cee Ah	USFS	3.08	0.11	USFS	EBT	BRT, EBT	Barrier
123	24	7	Unfunded	Cee Cee Ah	Cee Cee Ah	USFS	5.50	2.92	USFS	EBT	EBT	Barrier
234	21	8	Unfunded	Cee Cee Ah	Cee Cee Ah	USFS	6.32	2.10	USFS	WCT	BRT	Barrier
197	NA	NA	Unfunded	Cee Cee Ah	Cee Cee Ah, Tributary	DNR	0.49	NA	UNKWN	UNKNOWN	UNKNOWN	Barrier
233			Unfunded	Cusick	Cusick	USFS	7.56	3.53	USFS	WCT	EBT, WCT	Barrier
95			Unfunded	Cusick	Cusick	DNR	1.49	9.60	UNKWN	EBT, WCT	BT, RBT, MWF	Unknown
34			Unfunded	Cusick	Cusick	POCD	1.55	9.54	UNKWN	EBT, WCT	EBT, WCT	Unknown
94			Unfunded	Cusick	Cusick	UNKWN	1.69	9.40	UNKWN	EBT, WCT	EBT, WCT	Barrier
82			Unfunded	Cusick	Cusick	POCD	1.74	9.35	UNKWN	EBT, WCT	EBT, WCT	Barrier
83			Unfunded	Cusick	Cusick	POCD	1.80	9.29	UNKWN	EBT, WCT	EBT, WCT	Unknown
36			Unfunded	Cusick	Cusick	POCD	2.92	8.17	UNKWN	EBT, WCT	EBT, WCT	Barrier
37			Unfunded	Cusick	Cusick	POCD	3.29	7.80	UNKWN	EBT, WCT	EBT, WCT	Barrier
64			Unfunded	Davis	Davis	POCD	1.56	3.29	UNKWN	UNKNOWN	UNKNOWN	Barrier
63			Unfunded	Davis	Davis	POCD	1.81	3.04	UNKWN	UNKNOWN	UNKNOWN	Barrier
78			Unfunded	Davis	Davis	POCD	2.00	14.00	UNKWN	UNKNOWN	UNKNOWN	Barrier
61			Unfunded	Davis	Davis	POCD	3.24	12.76	UNKWN	EBT	EBT	Barrier
62			Unfunded	Davis	Davis	POCD	5.50	10.50	UNKWN	EBT	EBT	Barrier

ID	RANK	PRIORITY	STATUS	SUBBASIN	CREEK	DATA SOURCE	RIVER MILE	MILES BLOCKED	OWNER	FISH ABOVE	FISH BELOW	BLOCKAGE
209			RMAP	Davis	Davis	DNR	4.29	0.56	LFL	UNKNOWN	UNKNOWN	Barrier
58			Unfunded	Davis	Davis, Tributary	POCD	2.38	NA	UNKWN	UNKNOWN	EBT	Barrier
66			Unfunded	Davis	Deer	POCD	1.49	NA	UNKWN	UNKNOWN	UNKNOWN	Barrier
67			Unfunded	Davis	Deer	POCD	1.69	NA	UNKWN	UNKNOWN	UNKNOWN	Barrier
68			Unfunded	Davis	Deer	POCD	1.70	NA	UNKWN	UNKNOWN	UNKNOWN	Barrier
65			Unfunded	Davis	Deer	POCD	1.75	NA	UNKWN	EBT	EBT	Barrier
17			RMAP	Flume	Flume	POCD	1.086	4.45	LFL	EBT	EBT	Barrier
127			RMAP	Flume	Flume, South Fork	DNR	0.39	0.53	LFL	UNKNOWN	UNKNOWN	Unknown
125			Unfunded	Flume	Flume, Tributary	USFS	0.11	NA	USFS	UNKNOWN	UNKNOWN	Barrier
98			Unfunded	Gardinier	Gardiner	DNR	1.62	0.66	UNKWN	UNKNOWN	UNKNOWN	Unknown
174	NA	NA	RMAP	Granite	Granite, South Fork, Tributary	DNR	2.66	NA	LFL	UNKNOWN	UNKNOWN	Barrier
170	?	?	RMAP	Granite	Tobasco	DNR	0.37	1.09	LFL	UNKNOWN	UNKNOWN	Barrier
172	NA	NA	RMAP	Granite	Tobasco	DNR	1.99	NA	LFL	UNKNOWN	UNKNOWN	Barrier
171	NA	NA	RMAP	Granite	Tobasco, Tributary	DNR	0.20	NA	LFL	UNKNOWN	UNKNOWN	Barrier
02	NA	NA	Funded	Indian	Indian	POCD	0.98	3.85	LFL	EBT	EBT, RBT, BT, BRT	Barrier
84	NA	NA	Removed	Indian	Indian	UNKWN	0.4	4.43	LFL	BT, EBT, BRT, WCT, RBT	BT, EBT, BRT, WCT, RBT	Barrier
80	59	1	Application	Indian	Indian	POCD	1.75	3.08	SFL	EBT	EBT	Barrier
73			Unfunded	Kent	Kent	POCD	0.31	2.55	UNKWN	EBT	EBT	Barrier
72			Unfunded	Kent	Kent	POCD	0.39	2.47	UNKWN	EBT	EBT	Barrier
71			Unfunded	Kent	Kent	POCD	0.48	2.38	UNKWN	EBT	EBT	Unknown
48			Unfunded	Kent	Kent	POCD	0.62	2.24	UNKWN	EBT	EBT	Unknown
74			Unfunded	Kent	Kent	POCD	2.26	0.6	UNKWN	EBT	EBT	Barrier
76			Unfunded	Kent	Kent	POCD	2.32	0.54	UNKWN	EBT	EBT	Barrier
57			Unfunded	Kent	Kent	POCD	2.87	0.01	UNKWN	EBT	EBT	Barrier
46			Unfunded	Kent	Kent	POCD	1.12	1.74	SFL	EBT	EBT	Barrier
50			Unfunded	Kent	Kent, Tributary	POCD	0.05	NA	UNKWN	EBT	EBT	Barrier
51			Unfunded	Kent	Kent, Tributary	POCD	0.08	NA	UNKWN	EBT	EBT	Barrier
49			Unfunded	Kent	Kent, Tributary	POCD	0.12	NA	UNKWN	EBT	EBT	Barrier
75			Unfunded	Kent	Kent, Tributary	POCD	0.18	NA	UNKWN	EBT	EBT	Barrier
139			RMAP	Lamb	Lamb	DNR	2.19	0.11	LFL	UNKNOWN	UNKNOWN	Unknown
186	NA	NA	RMAP	LeClerc	Fourth of July	DNR	3.63	NA	LFL	UNKNOWN	WCT, BT, BRT,EBT	Barrier
184	43	3	RMAP	LeClerc	LeClerc, East Branch, Tributary	DNR	0.16	1.09	LFL	UNKNOWN	RBT, WCT, BT, BRT, EBT	Barrier
183	41	4	RMAP	LeClerc	LeClerc, East Branch, Tributary	DNR	1.13	0.07	LFL	UNKNOWN	RBT, WCT, BT, BRT, EBT	Barrier
177	NA	NA	Unfunded	LeClerc	LeClerc, East Branch, Tributary	DNR	1.77	NA	UNKWN	UNNOWN	RBT, WCT, BT, BRT, EBT	Barrier
182	NA	NA	RMAP	LeClerc	LeClerc, East Branch, Tributary	DNR	0.66	NA	LFL	UNKNOWN	RBT, WCT, BT, BRT, EBT	Barrier

185	NA	NA	RMAP	LeClerc	LeClerc, East Branch, Tributary	DNR	1.05	NA	LFL	UNKNOWN	RBT, WCT, BT, EBT	Barrier
179	NA	NA	RMAP	LeClerc	LeClerc, East Branch, Tributary	DNR	1.54	NA	LFL	UNKNOWN	RBT, WCT, BT, BRT, EBT	Barrier
178	NA	NA	RMAP	LeClerc	LeClerc, East Branch, Tributary	DNR	1.73	NA	LFL	UNKNOWN	RBT, WCT, BT, BRT, EBT	Barrier
180	NA	NA	RMAP	LeClerc	LeClerc, East Branch, Tributary	DNR	1.80	NA	LFL	UNKNOWN	RBT, WCT, BT, BRT, EBT	Unknown
181	NA	NA	RMAP	LeClerc	LeClerc, East Branch, Tributary	DNR	1.82	NA	LFL	UNKNOWN	RBT, WCT, BT, BRT, EBT	Unknown
ID	**RANK**	**PRIORITY**	**STATUS**	**SUBBASIN**	**CREEK**	**DATA SOURCE**	**RIVER MILE**	**MILES BLOCKED**	**OWNER**	**FISH ABOVE**	**FISH BELOW**	**BLOCKAGE**
104	56	1	Unfunded	LeClerc	LeClerc, Middle Branch	USFS	0.38	5.74	USFS	UNKNOWN	RBT, WCT, BT, BRT, EBT	Barrier
105	46	2	Unfunded	LeClerc	LeClerc, Middle Branch	USFS	0.94	5.18	USFS	UNKNOWN	RBT, WCT, BT, BRT, EBT	Barrier
106	43	3	Unfunded	LeClerc	LeClerc, Middle Branch	USFS	1.40	4.72	USFS	UNKNOWN	RBT, WCT, BT, BRT, EBT	Barrier
107	40	5	Unfunded	LeClerc	LeClerc, Middle Branch	USFS	2.23	3.89	USFS	UNKNOWN	RBT, WCT, BT, EBT	Barrier
108	37	6	Unfunded	LeClerc	LeClerc, Middle Branch	USFS	2.87	3.24	USFS	UNKNOWN	RBT, WCT, BT, BRT, EBT	Barrier
116	31	8	Unfunded	LeClerc	LeClerc, Middle Branch	USFS	3.78	2.34	USFS	UNKNOWN	RBT, WCT, BT, BRT, EBT	Barrier
110	22	11	Unfunded	LeClerc	LeClerc, Middle Branch	USFS	5.25	0.87	USFS	UNKNOWN	RBT, WCT, BT, BRT, EBT	Barrier
109	20	13	Unfunded	LeClerc	LeClerc, Middle Branch	USFS	5.83	0.29	USFS	UNKNOWN	RBT, WCT, BT, BRT, EBT	Barrier
191	NA	NA	Unfunded	LeClerc	LeClerc, Tributary	DNR	0.47	NA	STATE	UNKNOWN	UNKNOWN	Barrier
140	NA	NA	Unfunded	LeClerc	LeClerc, Tributary	DNR	0.66	NA	STATE	UNKNOWN	UNKNOWN	Unknown
190	NA	NA	Unfunded	LeClerc	LeClerc, Tributary	DNR	1.01	NA	STATE	UNKNOWN	UNKNOWN	Barrier
114	NA	NA	Unfunded	LeClerc	LeClerc, Tributary	USFS	1.10	NA	STATE	UNKNOWN	UNKNOWN	Barrier
115	36	7	Unfunded	LeClerc	LeClerc, West Branch	USFS	11.82	9.22	USFS	WCT,BRT	RBT, WCT, BT, BRT, EBT	Barrier
134	21	21	RMAP	LeClerc	LeClerc, West Branch	DNR	14.04	0.65	LFL	WCT(non-native Blockage)	RBT, WCT, BT, BRT, EBT	Unknown
231	21	21	Unfunded	LeClerc	LeClerc, West Branch, Tributary	USFS	0.33	0.66	USFS	WCT(non-native Blockage)	RBT, WCT, BT, BRT, EBT	Barrier
135	NA	NA	RMAP	LeClerc	LeClerc, West Branch, Tributary	DNR	0.04	NA	LFL	UNKNOWN	RBT, WCT, BT, BRT, EBT	Unknown
138	NA	NA	RMAP	LeClerc	LeClerc, West Branch, Tributary	DNR	0.75	NA	LFL	UNKNOWN	WCT, BT, EBT	Unknown
137	NA	NA	RMAP	LeClerc	LeClerc, West Branch, Tributary	DNR	0.89	NA	LFL	UNKNOWN	WCT, BT	Unknown
176	NA	NA	RMAP	LeClerc	LeClerc, West Branch, Tributary	DNR	1.60	NA	LFL	UNKNOWN	WCT, BT, BRT, EBT	Barrier
112	30	9	Unfunded	LeClerc	Mineral	USFS	1.35	2.52	USFS	UNKNOWN	RBT, WCT, BT, BRT, EBT	Barrier
113	30	9	Unfunded	LeClerc	Saucon	USFS	0.98	2.19	USFS	UNKNOWN	RBT, WCT, BT, BRT, EBT	Barrier
133	26	10	Unfunded	LeClerc	Saucon	DNR	1.29	1.88	UNKWN	UNKNOWN	RBT, WCT, BT, BRT, EBT	Unknown
132	NA	NA	RMAP	LeClerc	Saucon, Tributary	DNR	0.12	NA	LFL	UNKNOWN	RBT, WCT, BT, BRT, EBT	Unknown
136	46	2	RMAP	LeClerc	Second	DNR	1.35	1.79	LFL	UNKNOWN	RBT, WCT, BT, BRT, EBT	Unknown
175	NA	NA	RMAP	LeClerc	Tioga	DNR	2.62	NA	LFL	UNKNOWN	WCT, BT, BRT, EBT	Barrier
111	43	3	Unfunded	LeClerc	Whiteman	USFS	2.72	1.44	USFS	UNKNOWN	RBT, WCT, BT, BRT, EBT	Barrier
128			RMAP	Lunch	Lunch	DNR	2.85	1.34	LFL	UNKNOWN	UNKNOWN	Unknown
96			Unfunded	Lunch	Sweet	DNR	1.45	3.48	UNKWN	UNKNOWN	UNKNOWN	Unknown
23			Unfunded	Lunch	Sweet	POCD	0.494	7.89	STATE	EBT, WCT, RBT	EBT, WCT, RBT, BRT,MWF, BT	Barrier
41			Unfunded	Lunch	Sweet	POCD	1.553	3.38	SFL	UNKNOWN	UNKNOWN	Barrier

ID	RANK	PRIORITY	STATUS	SUBBASIN	CREEK	DATA SOURCE	RIVER MILE	MILES BLOCKED	OWNER	FISH ABOVE	FISH BELOW	BLOCKAGE
81			Unfunded	Maitlen	Maitlen	POCD	0.40	1.49	UNKWN	UNKNOWN	UNKNOWN	Barrier
69			Unfunded	Maitlen	Maitlen	POCD	2.29	NA	UNKWN	UNKNOWN	UNKNOWN	Barrier
97			Unfunded	Maitlen	Maitlen	DNR	4.88	NA	UNKWN	UNKNOWN	UNKNOWN	Unknown
70			Unfunded	Maitlen	Maitlen	POCD	0.27	NA	SFL	UNKNOWN	UNKNOWN	Barrier
131			Unfunded	Maitlen	Maitlen, Tributary	DNR	0.61	NA	SFL	UNKNOWN	UNKNOWN	Unknown
55			Unfunded	McCloud	McCloud	POCD	1.16	4.68	UNKWN	EBT	EBT	Barrier
01			Unfunded	McCloud	McCloud	POCD	2.12	3.72	UNKWN	EBT	EBT	Barrier
56			Unfunded	McCloud	McCloud	POCD	3.80	2.04	UNKWN	UNKNOWN	UNKNOWN	Barrier
208			RMAP	McCloud	McCloud	DNR	2.51	3.33	LFL	EBT	EBT	Barrier
189			Unfunded	Middle	Middle, South Fork	DNR	1.22	NA	STATE	WCT	WCT	Barrier
120	21	2	Unfunded	Mill	Mill	USFS	5.4	3.32	USFS	EBT	UNKNOWN	Barrier
192	21	1	RMAP	Mill	Mill	DNR	3.00	6.76	LFL	EBT	UNKNOWN	Barrier
121	6	4	Unfunded	Mill	Mill	USFS	7.9	0.82	USFS	UNKNOWN	EBT	Barrier
118	NA	NA	Unfunded	Mill	Mill, Tributary	USFS	0.17	NA	USFS	EBT	UNKNOWN	Barrier
194	NA	NA	Unfunded	Mill	Mill, Tributary	DNR	0.56	NA	STATE	EBT	UNKNOWN	Barrier
193	NA	NA	RMAP	Mill	Mill, Tributary	DNR	0.67	NA	LFL	EBT	UNKNOWN	Barrier
196	NA	NA	RMAP	Mill	Mill, Tributary	DNR	0.90	NA	LFL	EBT	UNKNOWN	Barrier
195	NA	NA	RMAP	Mill	Mill, Tributary	DNR	1.26	NA	LFL	EBT	UNKNOWN	Barrier
141	NA	NA	RMAP	Mill	Nola	DNR	2.13	NA	LFL	UNKNOWN	UNKNOWN	Unknown
119	NA	NA	Unfunded	Mill	Sylvis	USFS	2.74	NA	STATE	UNKNOWN	UNKNOWN	Barrier
117	6	3	Unfunded	Mill	Wanless	USFS	0.04	1.0	USFS	EBT	UNKNOWN	Barrier
22			Unfunded	Pee Wee	Pee Wee	POCD	1.263	5.32	CNTY	EBT, WCT	EBT	Barrier
03			Unfunded	Pend Oreille	Beaver	POCD	1.139	2.42	SFL	UNKNOWN	UNKNOWN	Barrier
130			Unfunded	Pend Oreille	Exposure	DNR	0.84	NA	SFL	UNKNOWN	UNKNOWN	Unknown
15			Unfunded	Pend Oreille	Exposure	POCD	0.551	NA	CNTY	UNKNOWN	UNKNOWN	Barrier
85			Unfunded	Pend Oreille	Linton	DNR	0.18	0.93	UNKWN	UNKNOWN	UNKNOWN	Barrier
86			Unfunded	Pend Oreille	Linton	DNR	0.21	0.90	UNKWN	UNKNOWN	UNKNOWN	Barrier
87			Unfunded	Pend Oreille	Linton	DNR	0.34	0.77	UNKWN	UNKNOWN	UNKNOWN	Barrier
88			Unfunded	Pend Oreille	Linton	DNR	0.38	0.73	UNKWN	UNKNOWN	UNKNOWN	Barrier
89			Unfunded	Pend Oreille	Linton	DNR	0.76	0.35	UNKWN	UNKNOWN	UNKNOWN	Barrier
90			Unfunded	Pend Oreille	Linton	DNR	1.07	0.04	UNKWN	UNKNOWN	UNKNOWN	Barrier
08			Unfunded	Pend Oreille	Linton	POCD	0.422	0.69	STATE	UNKNOWN	EBT	Barrier
09			Unfunded	Pend Oreille	Linton	POCD	0.674	0.44	CNTY	UNKNOWN	EBT	Barrier
10			Unfunded	Pend Oreille	Linton	POCD	0.715	0.40	CNTY	UNKNOWN	EBT	Barrier
11			Unfunded	Pend Oreille	Linton	POCD	0.788	0.32	CNTY	UNKNOWN	EBT	Barrier

12			Unfunded	Pend Oreille	Linton	POCD	1.10	0.01	CNTY	UNKNOWN	EBT	Barrier
05			Unfunded	Pend Oreille	Linton	POCD	0.25	0.86	CITY	EBT	EBT, BRT, RBT	Barrier
06			Unfunded	Pend Oreille	Linton	POCD	0.330	0.78	CITY	EBT	EBT, BRT, RBT	Barrier
07			Unfunded	Pend Oreille	Linton	POCD	0.383	0.73	CITY	UNKNOWN	EBT, BRT, RBT	Barrier
201			RMAP	Pend Oreille	Loop	DNR	0.45	NA	LFL	UNKNOWN	UNKNOWN	Barrier
24			Unfunded	Pend Oreille	Lost	POCD	0.168	1.10	STATE	WCT	WCT, BRT	Barrier
129			RMAP	Pend Oreille	Lost	DNR	0.92	0.34	LFL	WCT	WCT	Unknown
92			RMAP	Pend Oreille	Lost	DNR	1.41	NA	LFL	UNKNOWN	WCT	Unknown
16			Unfunded	Pend Oreille	Mickey	POCD	0.255	NA	CNTY	UNKNOWN	UNKNOWN	Unknown
ID	**RANK**	**PRIORITY**	**STATUS**	**SUBBASIN**	**CREEK**	**DATA SOURCE**	**RIVER MILE**	**MILES BLOCKED**	**OWNER**	**FISH ABOVE**	**FISH BELOW**	**BLOCKAGE**
232			Unfunded	Pend Oreille	Unnamed Tributary	USFS	0.15	NA	UNKWN	UNKNOWN	UNKNOWN	Barrier
188			Unfunded	Pend Oreille	Unnamed Tributary	DNR	0.47	NA	UNKWN	UNKNOWN	UNKNOWN	Barrier
187			RMAP	Pend Oreille	Unnamed Tributary	DNR	1.50	NA	LFL	UNKNOWN	UNKNOWN	Barrier
202			RMAP	Pend Oreille	Unnamed Tributary	DNR	3.06	NA	LFL	UNKNOWN	UNKNOWN	Barrier
148			RMAP	Pend Oreille	Unnamed Tributary	DNR	3.66	NA	LFL	UNKNOWN	UNKNOWN	Unknown
203			RMAP	Pend Oreille	Unnamed Tributary	DNR	4.12	NA	LFL	UNKNOWN	UNKNOWN	Barrier
204			RMAP	Pend Oreille	Unnamed Tributary	DNR	4.29	NA	LFL	UNKNOWN	UNKNOWN	Barrier
04			Unfunded	Pend Oreille	Whiskey Gulch	POCD	0.607	NA	SFL	EBT	EBT	Barrier
21			Unfunded	Pend Oreille	Wolf	POCD	1.21	NA	UNKWN	UNKNOWN	UNKNOWN	Barrier
20			Unfunded	Pend Oreille	Wolf	POCD	0.356	NA	CNTY	UNKNOWN	UNKNOWN	Barrier
13			Unfunded	Pocahontas	Pocahontas	POCD	0.344	3.40	CNTY	WCT	WCT	Barrier
32			Unfunded	Renshaw	Diamond	POCD	0.252	NA	STATE	UNKNOWN	UNKNOWN	Unknown
229			Unfunded	Renshaw	Renshaw	USFS	1.89	NA	UNKWN	UNKNOWN	UNKNOWN	Barrier
230			Unfunded	Renshaw	Renshaw	USFS	2.67	NA	UNKWN	UNKNOWN	UNKNOWN	Barrier
31			Unfunded	Renshaw	Renshaw	POCD	1.121	NA	STATE	UKNOWN	UNKNOWN	Unknown
100	53	1	Unfunded	Ruby	Ruby	DNR	9.32	5.20	UNKWN	WCT, EBT	WCT, EBT	Unknown
103	30	3	Unfunded	Ruby	Ruby, Little	USFS	0.71	1.3	USFS	WCT	WCT	Barrier
102	43	2	Unfunded	Ruby	Ruby, North Fork	USFS	0.13	1.52	USFS	WCT, EBT	WCT	Barrier
101	26	4	Unfunded	Ruby	Ruby, North Fork	USFS	1.66	0.01	USFS	WCT(non-native Blockage)	WCT, EBT	Barrier
14			Unfunded	Sand	Sand	POCD	0.455	6.26	UNKWN	WCT	EBT, RBT	Barrier
158			Unfunded	Skookum	Cooks, Tributary	DNR	0.13	NA	STATE	EBT	EBT	Unknown
207			RMAP	Skookum	Cooks, Tributary	DNR	0.14	NA	LFL	EBT	EBT	Barrier
159			Unfunded	Skookum	Sandwich	DNR	0.20	NA	STATE	EBT	EBT	Unknown
160			Unfunded	Skookum	Sandwich	DNR	0.32	NA	STATE	EBT	EBT	Unknown
40			Unfunded	Skookum	Skookum	POCD	1.33	27.57	UNKWN	WCT	BT, BRT, MWF	Barrier
43			Unfunded	Skookum	Skookum	POCD	1.58	14.86	UNKWN	WCT	WCT	Barrier

ID	RANK	PRIORITY	STATUS	SUBBASIN	CREEK	DATA SOURCE	RIVER MILE	MILES BLOCKED	OWNER	FISH ABOVE	FISH BELOW	BLOCKAGE
38			Unfunded	Skookum	Skookum	POCD	3.27	13.17	UNKWN	WCT	WCT	Unknown
39			Unfunded	Skookum	Skookum	POCD	4.17	5.77	UNKWN	WCT	WCT	Barrier
44			Unfunded	Skookum	Skookum	POCD	4.88	5.06	UNKWN	WCT	WCT	Barrier
45			Unfunded	Skookum	Skookum	POCD	5.67	4.27	UNKWN	WCT	WCT	Barrier
155			RMAP	Skookum	Skookum, Little	DNR	1.53	NA	LFL	UNKNOWN	UNKNOWN	Unknown
77			Unfunded	Skookum	Skookum, Little, Tributary	POCD	0.13	NA	UNKWN	UNKNOWN	UNKNOWN	Barrier
150			RMAP	Skookum	Skookum, Little, Tributary	DNR	0.04	NA	LFL	UNKNOWN	UNKNOWN	Unknown
151			RMAP	Skookum	Skookum, Little, Tributary	DNR	0.28	NA	LFL	UNKNOWN	UNKNOWN	Unknown
152			RMAP	Skookum	Skookum, Little, Tributary	DNR	0.45	NA	LFL	UNKNOWN	UNKNOWN	Unknown
153			RMAP	Skookum	Skookum, Little, Tributary	DNR	0.65	NA	LFL	UNKNOWN	UNKNOWN	Unknown
154			RMAP	Skookum	Skookum, Little, Tributary	DNR	0.69	NA	LFL	UNKNOWN	UNKNOWN	Unknown
236			Unfunded	Skookum	Skookum, North Fork	USFS	7.39	NA	USFS	UNKNOWN	UNKNOWN	Barrier
47			Unfunded	Skookum	Skookum, North Fork	POCD	4.78	1.72	UNKWN	UNKNOWN	UNKNOWN	Barrier
149			Unfunded	Skookum	Skookum, North Fork	DNR	5.72	0.78	UNKWN	UNKNOWN	UNKNOWN	Unknown
206			Unfunded	Skookum	Skookum, North Fork	DNR	0.61	NA	SFL	UNKNOWN	UNKNOWN	Barrier
205			Unfunded	Skookum	Skookum, North Fork, Tributary	DNR	0.38	NA	UNKWN	UNKNOWN	UNKNOWN	Barrier
157			RMAP	Skookum	Skookum, North Fork, Tributary	DNR	1.16	NA	LFL	UNKNOWN	UNKNOWN	Unknown
42			Unfunded	Skookum	Skookum, South Fork	POCD	3.80	2.57	UNKWN	UNKNOWN	UNKNOWN	Barrier
156			Unfunded	Skookum	Skookum, Tributary	DNR	0.05	NA	UNKWN	UNKNOWN	UNKNOWN	Unknown
235			Unfunded	Skookum	Split	USFS	0.30	1.75	USFS	UNKNOWN	UNKNOWN	Barrier
124	13	2	Unfunded	Slate	Slumber	UNKWN	0.27	0.18	UNKWN	UNKNOWN	UNKNOWN	Unknown
173	NA	NA	RMAP	Sullivan	Harvey, Tributary	DNR	0.20	NA	LFL	UNKNOWN	EBT, WCT, RBT, BRT, BT, PWF, KOK	Barrier
27	36	1	Unfunded	Sullivan	Paupac	POCD	0.228	3.45	CNTY	WCT	EBT, WCT, RBT, BRT, BT, PWF, KOK	Unknown
28	36	1	Unfunded	Sullivan	Paupac	POCD	0.323	3.36	CNTY	WCT	EBT, WCT, RBT, BRT, BT, PWF, KOK	Unknown
144	7	4	RMAP	Tacoma	Calispell Peak	DNR	5.40	0.01	LFL	UNKNOWN	WCT, BRT, EBT	Unknown
146	NA	NA	RMAP	Tacoma	Calispell Peak	DNR	6.43	NA	LFL	UNKNOWN	WCT, BRT, EBT	Unknown
145	NA	NA	RMAP	Tacoma	Calispell Peak	DNR	6.46	NA	LFL	UNKNOWN	WCT, BRT, EBT	Unknown
79	59	1	Unfunded	Tacoma	Tacoma	POCD	4.09	34.58	NFL	EBT, BRT, WCT, RBT	EBT, BRT, WCT, RBT, EBT	Barrier
99	49	2	Application	Tacoma	Tacoma	USFS	11.5	5.12	CNTY	RBT, WCT, BRT	RBT, WCT, BRT, EBT	Barrier
237	36	3	Application	Tacoma	Tacoma	USFS	4.26	1.78	UNKWN	WCT	WCT, BRT, EBT	Barrier
221	NA	NA	RMAP	Tacoma	Tacoma	DNR	22.47	NA	LFL	UNKNOWN	WCT, BRT, EBT	Barrier
147	NA	NA	RMAP	Tacoma	Tacoma, North Fork of South Fork	DNR	6.42	NA	LFL	UNKNOWN	WCT, BRT, EBT	Unknown
93	49	2	Removed	Tacoma	Tacoma, South Fork	DNR	0.40	13.66	UNKWN	BRT	WCT, BRT, EBT	Barrier
220	NA	NA	RMAP	Tacoma	Tacoma, South Fork	DNR	9.38	NA	LFL	UNKNOWN	WCT, BRT, EBT	Barrier
219	NA	NA	RMAP	Tacoma	Tacoma, South Fork, Tributary	DNR	1.0	NA	LFL	UNKNOWN	WCT, BRT, EBT	Barrier

224	NA	NA	RMAP	Tacoma	Tacoma, Tributary	DNR	0.20	NA	LFL	UNKNOWN	WCT, BRT, EBT	Barrier
142	NA	NA	RMAP	Tacoma	Tacoma, Tributary	DNR	0.85	NA	LFL	UNKNOWN	EBT	Unknown
143	NA	NA	RMAP	Tacoma	Tacoma, Tributary	DNR	0.89	NA	LFL	UNKNOWN	WCT, BRT, EBT	Unknown
222	NA	NA	RMAP	Tacoma	Tacoma, Tributary	DNR	1.00	NA	LFL	UNKNOWN	WCT, BRT	Barrier
223	NA	NA	RMAP	Tacoma	Tacoma, Tributary	DNR	1.27	NA	LFL	UNKNOWN	WCT, BRT, EBT	Barrier
126			Unfunded	Threemile	Threemile	DNR	0.15	NA	UNKWN	UNKNOWN	UNKNOWN	Barrier
238			Unfunded	Trimble	Trimble	USFS	7.04	0.1	USFS	UKNOWN	EBT	Barrier
216			Unfunded	Trimble	Trimble	DNR	5.45	1.69	SFL	EBT	UNKNOWN	Barrier

APPENDIX F

Pend Oreille Salmonid Recovery Team

BARRIER PRIORITIZATION MATRIX

1. How many miles of additional salmonid habitat will be opened up as a result of the project?

   0.1-0.5 miles = 3 points
   0.6-1.0 miles = 5 points
   1.1-1.5 miles = 7 points
   1.6-2.0 miles = 10 points
   2.1-2.5 miles = 14 points
   2.6-3.0 miles = 17 points
   >3.0 miles = 20 points

2. Point totals for priority salmonid species (i.e., bull trout, westslope cutthroat trout, pygmy whitefish) that would utilize the habitat upstream from the barrier location assuming all downstream barriers are removed.

   Cutthroat present = 5 points
   Pygmy whitefish present = 5 points
   Bull trout present = 10 points

   20 points possible. All three priority salmonid species would include bull trout, westslope cutthroat trout, and pygmy whitefish. Since bull trout are listed under ESA as "threatened", any project involving bull trout will receive twice as many points (i.e., bull trout presence counts as 10 points).

3. Habitat quality of the area upstream of project site (based on best available data).

   Use "current habitat" rating score x 3 (from Table 2 in lead entity strategy)

4. Are there barriers below the project site (barrier in question)? Are they barriers that we can do something about?

15 points =	If there are no barriers below the project site
5 points =	If there is one barrier below the project site
2 points =	If there are two barriers below the project site
0 points =	If it is not known whether or not there are downstream barriers
(-1) points =	If there are three barriers below the projects site
(-4) points =	If there are four or more barriers below the project site
(-5) points =	If there are significant man-made barriers (e.g., dams, dikes) downstream of site
(-10) points =	If there are natural barriers below the project site

5. Does barrier currently block upstream/downstream passage of exotic fish species, preventing access to native fish populations?
   a. Yes = Proceed with scoring, but note as "EXOTIC" in Appendix E Table
   b. No = Proceed with scoring