Habitat Conservation Plan Tributary Funds/SRFB 12th Round

Douglas PUD: Wells

Chelan PUD: Rock Island

Chelan PUD: Rocky Reach

2011 GENERAL SALMON HABITAT PROGRAM PRE-PROPOSAL

PROJECT SPONSOR INFORMATION

Sponsor:	Chelan County Natural Resources Department
Contact Person:	Mike Kaputa
Address:	316 Washington St, Suite 401
City, State Zip Code:	Wenatchee, WA 98801
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PROJECT TITLE

Peshastin Forest Service Road System Improvement

PROJECT SUMMARY (300 word maximum)

The objective of the Peshastin Forest Service Road System Improvement project is to reduce road-related impacts to aquatic habitat in the Peshastin sub-watershed of the Wenatchee River where there are over 300 miles of roads and road densities are greater than 2.5 mi/sq. mi. Studies suggest that road densities >1.7 mi/sq. mi. result in negative impacts to fish (Quigley and Arbelbide 1997). Almost 60% of the existing Peshastin road system is at a moderate to high risk to aquatic habitat based on floodplain interaction, erosion potential, and road/stream connectivity (USFS 2010). Impacts and risks from roads range from floodplain constriction and migration barriers to altered hydrology and sediment loading. This project would result in 28 miles of essential roads being improved and storm-proofed and 20 miles of additional storage and decommissioning of nonessential, high-risk roads. This project is being completed in conjunction with 20 miles of additional road decommissioning being completed under the USFS Legacy Roads Program. In total, this would result in up to a 35% reduction in road-related aquatic risk and an almost 70% reduction in road density. Peshastin Creek is identified as a Category 2 watershed and road work is identified as a priority action for Peshastin Creek in the Implementation Schedule for the Upper Columbia Spring Chinook Salmon and Steelhead Recovery Plan (UCSRB 2007, schedule updated 2009). Road system improvements would primarily benefit all life stages of steelhead but also listed bull trout and spring Chinook. Peshastin Creek is a Minor Spawning area for listed spring Chinook, a Major Spawning area for listed steelhead, and it is a core area for listed bull trout (UCRTT 2008). Road system improvement is targeted at addressing limiting habitat diversity and quality. Planning and permitting will occur in 2011- 2012 and implementation is expected in summer 2012 and 2013.

PROJECT BUDGET

Anticipated Request from Tributary C	Committee:	\$ 120,000
Anticipated Other Contributions/Ma	tches:	\$ 100,000
Anticipated TOTAL Project Budget		\$ 370,000

PROJECT DESCRIPTION

1. Project Overview

a) List the primary project objectives, such as how this project will improve or maintain habitat conditions and habitat forming processes.

The primary objective of this project is to reduce the overall aquatic risk from the road system in the Peshastin watershed and to address site-specific threats to listed fish species and their habitat. Activities to accomplish this include watershed-wide road decommissioning, storage, and stormproofing. Reduction in total road miles and improvement to the remaining road system will result in reduced sediment loading, improved hydrologic connectivity, improved fish passage, reduced landslide and road failure risk, enhanced floodplain connectivity and bank stability, fewer channel restrictions, improved riparian condition, improved channel structure, and improved water quality throughout the watershed. This work is part of a larger project across the Okanogan-Wenatchee National Forest, and recently in the Peshastin watershed, to reduce the impacts of the USFS road system. Watershed-wide improvements such as these will result in an enhanced capability of the Peshastin sub-watershed to support all life stages of Chinook, steelhead, and bull trout. They will especially benefit steelhead, which use a majority of the watershed for extended periods of time.

b) Briefly state the nature, source, and extent of the problem that the project will address, including the primary causes of the problem (threats), not just the symptoms. Explain how achieving the project objectives will help solve the problem.

The Peshastin watershed has high road-related aquatic risks due to its chronic road instability (due to slope and hydrology), high road density, close proximity of roads to streams, and the high natural surface erosion and related sedimentation level in the watershed. Based on the Minimum Roads Assessment that the USFS completed in 2010 (USFS 2010) there are over 287 miles of USFS system roads in Peshastin watershed. This has resulted in a total road density of >2.5 mi./sq. mi. of roads which is well above the threshold value for aquatic risk set by recent studies (e.g. Quigley and Arbelbide 1997). The analysis also found that 19% of Peshastin roads are in floodplains (total 165 miles of the road system). Erosion potential was also analyzed and >75% have a moderate to high erosion potential (total of 226 miles). The majority (82% or 247 miles) of the road system was interconnected with the stream network (based on drainage area). The analysis concluded that when road segments had more than two of these risks associated with it then it was a high risk to aquatic habitat and fish. This totaled >75% of the road system (based on mileage). These road segments are impacting habitat attributes such as channel and floodplain structure, water quality, riparian condition, hydrology, and bank and slope stability. The watershed is currently listed on the Clean Water Act 303d list for temperature and instream flow and past habitat assessments have found impaired fine sediment. Some roads with high risk in the system have minimal opportunity for improvement (Highway 97), however, there are opportunities to reduce or eliminate risk throughout most of the road system through decommissioning, storage, and stormproofing of USFS roads.

c) Identify the fish resources/impacted species (species and life-history stages present, unique populations) and habitat conditions (including limiting factors) that will be affected by this project.

Peshastin Creek supports several listed and unlisted salmonid species including listed spring Chinook, steelhead, and bull trout as well as redband and cutthroat trout. Road system improvements would primarily benefit all life stages of steelhead but also listed bull trout and spring Chinook. Steelhead are the most widespread in the subbasin and are known users of the mainstem of Peshastin Creek, Tronson Creek, and Mill Creek and are thought to use all other tributaries in the watershed that are accessible. A resident bull trout population occurs in Ingalls Creek and migratory bull trout have been found to occur in the mainstem of Peshastin Creek, Ingalls Creek, and Etienne Creek as well. Spring Chinook occur in low numbers in Lower Peshastin and lower Ingalls Creek. Redband and cutthroat trout are primarily in the Etienne Creek drainage. All life stages of these species occur in Peshastin Creek and utilize existing fish habitat for spawning, rearing, and migration. Several habitat conditions and associated limiting factors have been identified in Peshastin Creek which are influenced by road-related effects. These include flow and hydrologic function, water quality, pool depth and frequency, riparian condition, floodplain connectivity, and embeddedness (UCRTT 2008; Andonaegui 2001). Improving and/or removing road structure and condition will lead to improved hydrology and floodplain connectivity, improved fish passage, reduced aggradation and therefore improved flow and water quality, increased pool depth and frequency, improved and more stable riparian forest, and improved substrate condition for spawning and rearing.

d) Discuss how this project fits within the Upper Columbia Recovery Plan (i.e., does the project address a priority action, occur in a priority area, or target priority fish species?).

Peshastin Creek is identified as a significant subwatershed for recovery in both the Upper Columbia Region Biological Strategy (UCRTT 2008) and the Upper Columbia Recovery Plan (UCSRB 2007). Peshastin Creek is considered a Minor Spawning area for listed spring Chinook, a Major Spawning area for listed steelhead, and is a core area for listed bull trout (UCRTT 2008). It is identified as a Category 2 watershed in the Recovery Plan and one of the overall short-term objectives for habitat in the plan was to restore natural sediment delivery processes by improving road networks (UCSRB 2007). In addition road system improvements address several restoration actions identified for Peshastin Creek and the Wenatchee watershed. These include re-establishing connectivity, increase stream flow and water quality, increase habitat diversity and quality and restore riparian vegetation. More recently, road work is identified in Peshastin Creek as a priority action in the Implementation schedule for the Upper Columbia Spring Chinook Salmon and Steelhead Recovery Plan (UCSRB 2007, schedule updated 2009).

2. Project Design

a) Describe the location of the proposed project.

The Peshastin Roads project is targeted at roads throughout the Peshastin watershed (except in the roadless Ingalls Creek subbasin). Peshastin Creek is a tributary to the Wenatchee River, entering the Wenatchee downstream of the town of Peshastin at about River Mile 20. The latitude and longitude is from approximately 120°25' W to 120°30' W and 47°35' N to 47°15' N.

b) Briefly describe the project design and how it will be implemented. Describe the extent of the project and restoration methods.

This project has been split into two phases. Phase I of the project started with the USFS Minimum Road Assessment in 2010 (USFS 2010) and has continued in 2011 as a USFS NEPA process to identify roads for decommissioning based on this assessment. Phase I also includes implementation of road decommissioning funded by the USFS Legacy Road Restoration Program. Implementation of the first 10 miles of decommissioning will commence in 2011 and it will continue in 2012 with another 10 miles of decommissioning.

This grant is seeking funds for Phase II of this work, which was not covered under the existing Legacy Roads funding provided by the USFS. It includes implementation of roads identified for decommissioning under Phase I and planning and implementation of 38 miles of road storage and stormproofing throughout the watershed. Phase I and II of the project will overlap in space and time across over 63,000 roaded acres in Peshastin watershed. The scope of the proposed Phase II project will occur throughout the watershed on numerous USFS roads. Seven roads in Five-Mile, Tronson, Camas, Ruby, Scotty, and the mainstem Peshastin subwatersheds have been identified for stormproofing based on aquatic risk factor. Over 100 roads have been identified for storage and decommissioning and from this list those with the highest aquatic risk for listed species will be targeted for Phase II implementation. Almost all major tributaries in the Peshastin watershed will benefit from decommissioning, stormproofing, and/or storage in Phase II.

Restoration methods are USFS standards for road improvement, stormproofing, storage and decommissioning and include such improvement strategies as road relocation (in some cases), culvert replacement, rolling dips, ditch clearing and re-contouring, rut removal, establishing drainage from roadways, waterbars, and road surfacing. Storage generally involves waterbars, removing culverts, pulling unstable fills, and hydrologically disconnecting the roadway. Decommissioning goes one step further to remove the road prism if needed and reestablish floodplain connectivity (in the case of roads in the floodplain). Each road will be assigned individual prescriptions to reduce aquatic risk.

c) Describe the scale and size of the project, and its proximity to protected, functioning, or restored habitats. If available, please provide quantitative estimates on scale and size (e.g., acres of riparian habitat, kilometers of fencing, etc.).

The Peshastin Roads Project is a large-scale restoration project at the 5th field watershed scale. The Peshastin watershed is a Category 2 watershed meaning that it represents a significant watershed that is a stronghold for one or more fish species but has some level of fragmentation (UCRTT 2008). Some areas in the upper watershed are considered functional and protected (under public USFS management), while the lower reaches are primarily private and unprotected and suffer from water quality and quantity issues. Road work throughout the watershed will benefit the mainstem Peshastin as well as most major tributaries including the Mill, Ruby, Camas, Shaser, and Tronsen Creeks. Given that most of the Upper and Lower Peshastin Creek subwatershed will benefit, a total of 63,211 acres (98 mi²) will be targeted for decreased road density and road system improvement to reduce aquatic risks.

d) Briefly describe the monitoring plan, long-term stewardship, and maintenance obligations for the project or acquired land. For acquisition and combination projects, identify any planned use of the property, including upland areas.

Along with compliance monitoring to ensure prescriptions have been followed as planned, some level of effectiveness monitoring will be implemented by the USFS. Sediment monitoring sites are already established in the Peshastin watershed and additional sites will be established to determine any project-level effects on sedimentation. Additional monitoring could include natural levels of riparian establishment and floodplain re-connection (for decommissioned stream-side roads).

3. Project Development

a) List the individuals and methods used to identify the project and its location.

The development of this project has been and will continue to be a collaborative NEPA process which involves both internal interdisciplinary USFS analysis and scoping as well as public involvement through scoping and alternative development and analysis. Private landowners such as Longview

Fiber have also been engaged to identify additional USFS roads that access private land and are no longer needed.

b) Explain how the cost estimates for the project were determined.

Cost estimates are based on past decommissioning, storage, and stormproofing projects on USFS roads. The USFS Engineering program provided average project costs per mile for each project type and these were used to estimate overall project costs.

c) List all landowner names. Include a signed Landowner Acknowledgement Form (available on the SRFB Web site) from each landowner acknowledging that their property is proposed for Tributary Committee funding consideration.

All roads being targeted for this work are USFS road on USFS managed lands.

d) List the project partners that will contribute towards the proposed project and define their contribution.

Chelan County Natural Resource Dept. - Project Sponsor and will assist with the local County coordination, community outreach, user groups outreach, adjacent landowner outreach, and private landowner coordination such as Longview Fiber.

USFS- Land Manager and Co-Sponsor- The USFS has received funding and started implementing Phase I of this project. This includes planning for all road decommissioning for Phase I and II and implementation of 20 miles of decommissioning in the Peshastin watershed. Total USFS contributions for this work are \$100,000 from the USFS Legacy Roads Restoration Program.

PROJECT TIMELINE

<u>Phase 1</u>

Item/Milestone	Outcome	Target Date (Month/Year)	
NEPA decision and ESA	Planning, design, and	August 2011	
consultation for 50 miles of	permitting for all		
decommissioning	decommissioning work		
Begin implementation of	Decommission first 10 miles of	November 2012	
Phase I decommissioning	USFS roads		
Finish implementation of	Decommission 10 miles of	November 2012	
Phase I decommissioning	USFS roads		

Phase 2 (to	be	funded	by	this	grant	request)
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Item/Milestone	Outcome	Target Date (Month/Year)	
Implement Phase II	Decommission 10 miles of	August 2012	
decommissioning under	USFS roads		
existing plans and permits			
(from Phase I)			
NEPA decision and ESA	Planning, design, and	July 2012	
consultation for 28 miles of	permitting for all		
stormproofing and 10 miles	stormproofing and storage		
of road storage	work		
Implement Phase II	Stormproof 28 miles and store	November 2013	
stormproofing and storage	10 miles of USFS roads		

DETAILED PROJECT BUDGET

Item	Cost/unit	Units	SRFB Fund Request	Trib. Fund Request	USFS Legacy Road Funds
NEPA and ESA planning and permitting 2011 & 2012	\$30,000/yr.	2	\$30,000		\$30,000
Road decommissioning	\$3,500/mi.*	30	\$17,500	\$17,500	\$70,000
Road storage	\$1,100/mi.	10	\$5 <i>,</i> 500	\$5,500	
Road stormproofing	\$5,500/mi.*	28	\$77,000	\$77,000	
Community outreach and education			\$20,000	\$20,000	
Total			\$150,000	\$120,000	\$100,000

*Estimates for decommissioning and storage are based on averages from past USFS roads projects. Depending on the specific requirements of each road to fully reduce aquatic, road-related risks (e.g. culvert replacement, road relocation, etc.), this estimate could be high or low. Therefore, more or less than the target mileage could be completed with these dollar amounts but they should provide an estimate of expected outcomes.

PROPOSED PROJECT COST: \$370,000

References:

Andonaegui, C. 2001. Salmon, Steelhead and Bull Trout Habitat Limiting Factors for the Wenatchee Subbasin (WRIA 45) and Portions of WRIA 40 within Chelan County (Squilchuck, Stemilt and Colockum Drainages). Washington State Conservation Commission.

Quigley, T.M. and S.J. Arbelbide. 1997. An assessment of ecosystem components in the interior Columbia Basin and portions of the Klamath and Great Basins. U.S. Dept. of Agriculture, Forest Service, Pacific Northwest Research Station. Portland, OR.

UCRTT. 2008 A Biological Strategy to Protect and Restore Salmonid Habitat in the Upper

Columbia Region. April 30, 2008. Available online at http://www.ucsrb.com/resources.asp.

UCSRB. 2007 Upper Columbia Salmon Recovery Board's Upper Columbia Spring Chinook Salmon and Steelhead Recovery Plan. August 2007. Available online at http://www.ucsrb.com/plan.asp or http://www.ucsrb.com/UCSRP%20Final%209-13-2007.pdf.

USFS. 2010. Unpublished data. Peshastin Minimum Roads Analysis- Upper Peshastin, Lower Peshastin, and Ingalls Creek Watershed. December 2010. Available by request from the Wenatchee River Ranger District, Leavenworth, WA.



Figure 1. Map showing Peshastin watershed and proposed road treatments. Actual roads targeted are subject to change through USFS NEPA process.



Figure 2. Washout of USFS road in the Peshastin watershed during the winter of 2011. This type of wash-out is typical each year throughout the watershed and can cause high sediment loading in streams (USFS photo).



Figure 3. Ditch avulsion on a USFS road system in the Peshastin watershed during the winter of 2009. These types of drainage issues are common throughout the watershed and contribute to chronic erosion to streams (USFS photo).

Appendix K: Landowner Acknowledgement Form

Landowner Information

Name of Landowner: US Forest Service

Landowner Contact Information:

Mr. K. Ms. Title: Acting District Ranger_USFS WRRD First Name: Marcen Last Name: Hanson Contact Mailing Address: 600 Shorborne Ave, leavenworth, unt 98826 Contact E-Mail Address: mhanfon efs. fed. us

Property Address or Location:

- 1. US Forest Service (Landowner or Organization) is the legal owner of property described in this grant application.
- 2. I am aware that the project is being proposed on my property.
- 3. If the grant is successfully awarded, I will be contacted and asked to engage in negotiations.
- 4. My signature does not represent authorization of project implementation.

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Landowner Signature

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Project Sponsor Information

Project Name: Peshastin Minimum Roads Analysis Stormproofing

Project Applicant Contact Information:

M Ms. Mr. Title: Natural Resource Specialist

First Name: Jennifer Last Name: Goodridge

Mailing Address:316 Washington Street, Suite 401, Wenatchee, WA 98801

E-Mail Address:Jennifer.goodridge@co.chelan.wa.us

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