Nason Creek RM 3.7 – 4.7 Restoration

13th Round Funding Cycle

June 29, 2012

Anticipated Request from Tributary Committee:	**$ 60,000.00**
Anticipated Request from SRFB:	**$338,233.00**
Anticipated Total Request:	**$398,233.00**
Anticipated TOTAL Project Budget:	$398,233.00

SRFB/TRIB Proposal Checklist

Project Title: **NASON CREEK RM 3.7-4.7 RESTORATION**

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SUMMARY OF PROJECT CHANGES SINCE THE PRE-PROPOSAL AND RESPONSE TO COMMENTS

1. Actions Proposed

   Based upon feedback from Tributary Committee and SRFB review panel, the following elements have been revised in this proposal:

   - Large Wood Structures – two of the three large wood structures were removed from the proposal. This proposal includes one large wood structure in the mainstem of Nason Creek located near RM 3.75.
   - The 13 acre floodplain reconnection with culverts under SR 207 has been removed from this proposal and it is proposed as a separate proposal.
   - The beaver dam removal is no longer proposed. Oxbow enhancement actions will focus on changing flow and sediment deposition patterns by adding structure to the bed and banks through placement of large wood, brush bundles and vegetation.

2. Why not reconnect SR 207?

   Please read the description of project development in Section 3F of this proposal and the tables that summarize stakeholder input and project development. Preliminary feedback indicated that there may not be sufficient funds for a 10 – 20 million highway re-location. BPA has indicated that they are not willing to contribute more than 3 million and WSDOT does not have funds to contribute towards this project. Thus, preparation of this proposal is intended to help local reviewers and funders weigh biological benefit and cost of a suite of actions – including SR 207 re-location - that have been proposed in this reach of Lower Nason Creek.

NASON CREEK RM 3.7-4.7 RESTORATION

1. Project Overview

A. Describe the primary goal and objectives of this project. When answering this question please refer to chapter 4 of the *Stream Habitat Restoration Guidelines* for a definition of restoration goals and objectives. Link to *Stream Habitat Restoration Guidelines* wdfw.wa.gov/publications/pub.php?id=00043

There are three goals for this project:

1. Remove 0.64 acres of floodplain fill to restore natural channel processes such as improved activation of an existing side channel and enhanced floodplain connectivity.
2. Add instream diversity (large wood structure) to a channelized section of Nason Creek to increase activation of an existing side channel near RM 3.75
3. Alter flow and sediment deposition patterns in the 2007 oxbow by adding instream structure through placement of large wood, brush bundles, and vegetation.

B. Describe the location of the project in the watershed, including the name of the water body(ies), upper and lower extent of the project (if only a portion of the watershed is targeted), and whether the project occurs in the near-shore, estuary, main stem, tributary, off channel, or other location.

The proposed project is located in lower Nason Creek RM 3.7 - 4.6 (Figure 1). This section of Nason Creek flows north from Coles Corner adjacent to SR 207 in Chelan County. Nason Creek is a tributary to the Upper Wenatchee River.

C. Is the project located on state owned aquatic lands? Please refer to page 20 of this manual for information on state owned aquatic lands and who to contact at the Washington Department of Natural Resources for assistance.

No

D. Provide an overview of current project site conditions and the nature, source, and extent of salmon recovery problem(s) that the project will address. Include current and historic factors important to understanding the need for this project. Be specific – avoid general statements. When possible, list your sources of information by citing specific studies, reports, and other documents.

The project site is located adjacent to State Route (SR) 207 north of the junction with Highway 2 near Coles Corner. The fill removal work is located near RM 4.65, the large wood structure will be placed near RM 3.75, and the oxbow enhancement actions will occur in the upstream portion of the oxbow which joins Nason Creek near RM 3.9 (Figure 1).

In the triangular area located between Hwy 2, SR 207, and Nason Creek there is a large

floodplain wetland complex. A portion of this floodplain wetland area near RM 4.6 was filled to provide access to the Longview Timber property across the Creek. This fill area is approximately 0.6 acre and contains approximately 2,000 cubic yards of gravel and dirt fill (Figure 3). The bridge crossing over Nason Creek washed out during the 1990 flood and was not replaced. However, the river left bridge abutment remains in place (Photo 1). This proposal would remove these two fill areas.

When SR 207 was constructed in 1942, the highway cut off a section of the mainstem near RM 3.9 (Figure 4). A new channel was constructed along the west side of SR 207. This channelized section lacks structural diversity, however, there is an existing side channel near RM 3.75. This proposal aims to add some structural diversity to this channelized section of Nason Creek. Installation of the large wood structure will increase activation of this existing side channel.

In 2007, CCNRD installed two culverts under SR 207 to hydrologically reconnect the disconnected mainstem of Nason Creek. Since there was active spawning in the mainstem, the decision was made not to send too much flow into the historic oxbow. Thus, the culvert was sized or designed to convey approximately 10% of the high flow and 5% of the low conditions. At the time, the decision was made to reconnect the hydrology and not do any additional remedial actions in the historic oxbow. This would allow monitoring and adaptive management actions, if needed. Department of Ecology (DOE) and Yakama Nation (YN) have each monitored fish use in the oxbow and the results for adults and juveniles are summarized in the table below.

Table 1: Nason Creek 2007 Oxbow Monitoring Data (DOE 2010)

Species	2007 (pre-project)	2008	2010*
Steelhead	16	193	2698
Chinook	20	314	1275

*Number includes 1621 fish counted on August 5, 2010

So the oxbow is currently providing fish habitat, however, USFS fisheries biologists and CCNRD staff think that the habitat could be enhanced for the following reasons:

1. During the time that the oxbow was disconnected from the mainstem, a large beaver dam formed approximately ¾ of the way downstream in the oxbow. This beaver dam appears to be no longer active, however, it limits habitat function for listed species. Thus, there is approximately 1,000 foot long pond that lacks structure for rearing and spawning habitat. For example, it lacks overhanging vegetation at the edges, it lacks submerged wood, and the bottom sediments accumulated when it was disconnected and the sediment covers the stream bed gravels. At the upper and lower limits of the oxbow, there are a few hundred feet where stream bed gravels are exposed and the system functions as a flow-through system. Spring Chinook have been observed to spawn at the upper end of the oxbow (Maier and Goodridge 2011).
2. The width and depth of the oxbow are adequate to convey mainstem flows, however, this area conveys a portion of the mainstem flow. Without the beaver dam, this would be a flow-through channel and the edges would vegetate with native shrubs, willows,

and cottonwood trees. However, instead, the flows spread out across the width of the oxbow and pond lily grows in the shallow inundated areas. Photo 2 depicts spring conditions in the oxbow.

E. Provide a detailed description of the proposed project, including project size, scope, design, and how it will address the problem(s) described above. Describe specific restoration methods and design elements you plan to employ.

1. Fill Removal

Action 1 proposes to remove a former bridge abutment and an existing parking area that encroach on the floodplain. This bridge was washed out during the 1990 flood and the remaining bridge abutments consist of rip-rap and sediment (Photo 1). Removing the 450 cubic yards (0.04 acre) of bridge abutment fill will enhance activation of a nearby side channel (Figure 3). Fill removal for the bridge abutment will be accessed from the north side of Nason Creek through Longview Timber property. The 1,700 square feet of disturbed slopes will be restored with staked erosion control fabric, seeding, and planting native riparian trees and shrubs.

The area of fill currently used as a parking lot will be removed and disposed of offsite. Access to remove the 2,000 cubic yards of parking lot fill (0.6 acre) will be from an existing pull-out from SR 207 (Figure 3). Equipment will work back from the edges of the fill towards SR 207. Once the native floodplain material is exposed, this area will be seeded and planted with native shrubs similar to the adjacent floodplain area. The preliminary design for both floodplain fill removal areas will be limited to simple plan view and cross section drawings of existing and proposed conditions sufficient to obtain local, state, and federal permits. These designs will be routed for stakeholder review, and then moved to final design while permits are being obtained for construction.

Fill removal from the former bridge abutment will increase activation of an existing side channel. Fill removal from the parking area will increase floodplain connectivity.

2. Large Wood Structure

Action 2 proposes to install a large wood structures near RM 3.75 (Figure 1). The large wood structure RM 3.7 would add instream complexity and increase the extent and duration of inundation in an existing side channel. The final location, size, and architecture of the large wood structures would designed with stakeholder review and opportunities for feedback. Detailed preliminary designs would be prepared for permit submittal, and then moved to final design while permits were being obtained for construction. Placement of a large wood structure near RM 3.75 will add instream complexity and increase activiation of an existing side channel.

3. Oxbow Enhancements

This proposal is to install large wood, brush bundles, and vegetation to add structure to the oxbow channel and to make some wider areas narrower. In some areas, the placement of large wood and brush bundles will locally alter flow dynamics, sediment deposition patterns, and create scour to initiate depositional areas on the edges of the oxbow. This will create slightly higher areas on the edges of the oxbow that can be planted to increase vegetation structure at the waters edge. This will add edge complexity and overhanging vegetation as well as instream

cover to improve fish rearing habitat.

The total number of wood pieces to be installed will be determined in design, however, the budget specifies 20 pieces of wood with rootwads that are 24' long with 24" diameter. Engineered plans would specify the placement of 10-20 pieces of wood. The wood would be staged in one of four locations and flown in by helicopter to minimize access disturbance (Figure 5). If the staging area can be secured on private property (locations C or D), then the traffic control line item in the budget may not be needed. However, if wood is staged at locations A or B, then traffic control will be required as the helicopter flies over SR 207 to deliver the wood. All wood, brush bundles, and vegetation will be placed by hand with a WCC work crew. We do not anticipate the need for earth moving equipment or any vegetation clearing to complete the oxbow enhancements.

F. If restoration or acquisition will occur in phases or is part of a larger recovery strategy, describe the goal of the overall strategy, explain individual sequencing steps, and which of these steps is included in this application.

This project is not proposed to occur in phases. This project will occur following a suite of high priority actions in Nason Creek that have been identified from the Nason Creek Tributary Assessment and subsequent Reach Assessments. This project was originally identified in the Kahler Reach Assessment (USBR 2009) and through subsequent site-specific alternatives analysis, reach scale geomorphic evaluation, and stakeholder review and input. Project identification, prioritization, and watershed scale sequencing is further described in Section 2 below.

G. Describe the 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.

CCNRD would conduct implementation monitoring for one to two years (if funded) to ensure that project elements installed (large wood, brush bundles, and riparian plantings) continue to meet the project objectives. If adaptive management actions are needed, CCNRD would work with project partners to secure funding and implement those actions. USFS is the landowner so they would provide the long-term stewardship of the project areas. CCNRD will continue to work with YN to monitor fish use in the 2007 oxbow.

H. Has any part of this project previously been reviewed or funded by the SRFB? If yes, please provide the project name and SRFB project number If the project was withdrawn from funding consideration or not awarded SRFB funding, please describe how the current proposal differs from the original.

PRISM project # 10-1788 was for the final design and permitting of the N1 Nason Creek floodplain reconnection. This proposal was submitted to SRFB when CCNRD was working on the alternatives analysis for project actions in this reach. The final proposal did not score highly because reviewers wanted to pursue the feasibility of SR 207 relocation. The project was an alternate for funding and the SRFB review panel comments were as follows: While

relocating Highway 207 may be the ideal alternative from a fish habitat perspective, it is hard to imagine this alternative being considered in the near future.

2. Salmon Recovery Context

Describe the fish resources present at the site and targeted by this project.

Table 2: Fish Species Present

Species	Life History Present	Current Population Trend	ESA? (Y/N)	Life History Target
Steelhead	Egg, juvenile, adult	Stable	Y	Juvenile rearing
Spring Chinook	Egg, juvenile, adult	Stable	Y	Adult high flow refuge, juvenile rearing, and adult spawning
Bull trout	Adult	stable	Y	Adult (migratory)

B. Discuss how this project fits within your regional recovery plan or local lead entity strategy to restore or protect salmonid habitat in the watershed (i.e., does the project address a priority action, occur in a priority area, or target priority fish species?).

The Upper Columbia Region Biological Strategy (UCRTT 2008) and the Recovery Plan (UCSRB 2007) have identified Nason Creek as the top priority for habitat restoration in the Wenatchee subbasin. Nason Creek has a high potential to increase salmonid abundance and productivity, therefore, the restoration of ecosystem function through the reconnection of off-channel habitats and floodplain is a priority. Within Nason Creek, side-channel and/or off-channel reconnection is a Tier 1 action and top priority for addressing limiting habitat factors, improving channel function, and the recovery and long-term viability of salmonids in Nason Creek (USBR 2009).

The specific actions outlined in this proposal were identified from the following sources:

- The removal of floodplain fill was identified as projects KOZ19 and KOZ20 in the USBR Kahler Reach Assessment (2009).
- Actions proposed to enhance existing conditions in the 2007 oxbow developed by working with USFS Fisheries Biologist Greer Maier.
- Installation of a large wood structure near RM 3.7 was recommended as part of a geomorphic reach analysis completed by Cardno-Entrix (2012).

C. Explain why it is important to do this project now instead of at a later date. Consider its sequence relative to other needs in the watershed and the current level and imminence of risk to habitat in your discussion.

As described in Section 2B above, Nason Creek is identified as a high priority for restoration actions as part of the Recovery Plan. The highest priority floodplain reconnection projects are currently in progress at Upper White Pine and Lower White Pine. Thus, restoration actions in

Lower Nason Creek are intended to follow the priority sequence in this watershed.

In addition to following the prioritization or sequence outlined, restoration actions also need to occur when there are willing landowners. Currently, USFS is interested in the restoration actions proposed in this area. In addition, Longview Timber has indicated they are willing to provide access for the bridge abutment removal. Currently, Longview Timber has almost 30,000 acres of land for sale in Chelan County so it is important to work with a current willing landowner.

The actions outlined in this proposal would not preclude future re-location of SR 207. In fact, these actions might be considered as part of that proposal if it were implemented in the future. However, they can be implemented now to gain the immediate habitat benefits and they would remain effective with or without the SR 207 road prism in it's current location.

3. Design and Implementation Questions for Restoration Projects

   A. Will the project design be (or has it been) developed by a licensed professional engineer? If your project will not be designed by a professional engineer, please describe the qualifications and experience of your project design team.

Draft design drawings, fill calculations, and cost estimates have been prepared by a licensed professional engineer. The project will be designed by a licensed professional engineer.

   B. Describe your experience managing this type of project. Please describe other projects where you have successfully used a similar approach.

CCNRD has completed two large projects in Lower Nason Creek in 2007 and 2009. In both of these projects, CCNRD worked with WSDOT and USFS to address numberous issues associated with this stream and road corridor. In addition, CCNRD has managed several side channel reconnection projects on the mainstem Wenatchee that involved in-water work such as fill removal and placement of large wood structures.

   C. Please describe who will provide construction management for the project.

Alan Schmidt, Habitat Project Manager for CCNRD will provide construction management oversight for this project. Alan has a total of 30 years of construction management experience working for CCNRD, Chelan County Public Works, and WSDOT.

   D. The design process for restoration projects is expected to follow that described in Appendix D1-4. If your process differs from those expectations, please describe your process and how it differs. This includes projects where you intend to follow a "design-build" process. Please describe the design and construction process you intend to follow.

This project will follow the design process outlined in Appendix D1-4.

E. As-built drawings must be prepared if changes are made to the final design during construction and if the sponsor is using a design-build construction approach. Describe how you anticipate documenting as-built conditions.

As-built drawings will be prepared upon completion of construction.

F. Describe other approaches, opportunities, and design alternatives that were considered to achieve the project's objectives and why the preferred alternative was selected.

CCNRD has been working with USFS, WSDOT, Wenatchee Habitat Subcommittee, USBR, and RTT to identify and prioritize actions in Lower Nason Creek RM 3.3 – 4.6. CCNRD completed an alternatives analysis that identified 6 alternative actions to improve habitat in this reach.

1. Re-locate SR 207 and reconnect 74 acres of floodplain
2. Build a causeway to span the 13 acre disconnected floodplain
3. Build two bridges to hydrologically reconnect the 13 acre floodplain
4. Install one or two culverts under SR 207 to reconnect the 13 acre floodplain
5. Install large wood structures in Nason Creek
6. No action

During RTT review of this document in January 2011, the RTT voted to pursue feasibility of Highway 207 re-location as the highest priority alternative and reconnection of the 13 acre floodplain with one or two culverts as the second option. The highway re-location feasibility study completed in April 2012 identified costs of 6 alternative highway locations that ranged in cost from 10-20+ million.

The following comments are from the April 2012 RTT meeting notes:

> A general question was posed to the RTT: whether the cost of the project is worth the potential biological benefit. Discussion ensued and some felt outright that the cost was too excessive for potentially little biological benefit. Others were interested in seeing additional information, and how the modeling team determined biological benefit. Others would be more encouraged if the WSDOT would cost share on this project, and it was suggested that the cost of continuing to fix the road in the vicinity be part of the analysis. It was decided that the CCNRD should move forward with development of the pre-proposal, and consider all of the information and input that was discussed. After the pre-proposal is developed, the RTT would be able to offer additional input on the proposal.

The pre- proposal and this final proposal to reconnect the N1 floodplain provide a suite of actions that could be implemented at a lower cost while addressing limiting factors in Lower Nason Creek. The Alternatives Analysis (CCNRD 2011) and the SR 207 Relocation Feasibility Study (CCNRD 2012) are available online through habitat work schedule: http://hwsconnect.ekosystem.us/Project.aspx?sid=290&id=15026

G. Have members of the community, recreational user groups, adjacent

landowners, or others been contacted about this project? Describe any public safety or other concerns about the project raised from these contacts and how those concerns were or will be addressed.

Stakeholder outreach has been part of the development of the alternatives analysis and the SR 207 Feasibility Study. Stakeholder contacts are documented in both of those reports and those summary tables are attached at the end of this proposal. In summary, the SR 207 relocation options meet WSDOT (AASHTO) safety standards, however, WSDOT does not have funds to contribute towards re-location of SR 207. CCNRD has presented the SR 207 relocation options to the RTT and it appears that there may not be sufficient funding for highway re-location without a significant contribution from WSDOT. WSDOT has indicated that they do not have funding to contribute to this project. BPA has indicated that they do not have more than 3 million to contribute towards this project. Thus, it seems unlikely that SR 207 will have sufficient funds to be implemented.

4. Project Development

A. Explain how the project's cost estimates were determined.

Cost estimates were prepared by a consulting engineer, CCNRD construction manager, and CCNRD staff based upon costs for implementation of similar projects.

B. Include a Partner Contribution Form (Appendix J), when required, from each partner outlining the partner's role and contribution to the project. Refer to Section 3 of this manual for information on when a Partner Contribution Form is required.

USFS is the main project partner and their landowner acknowledgement form serves as their commitment to this project.

C. List all landowner names. If the proposed project occurs on land not owned by the grant applicant, attach a signed Landowner Acknowledgement Form (Appendix K) in PRISM, when applicable, from each landowner acknowledging that his or her property is proposed for SRFB funding consideration. Refer to Section 3 of this manual for information on when a Landowner Acknowledgement Form is required.

USFS and Longview Timber are the two landowners within the project area. The landowner acknowledement form from USFS is attached. March correspondence with Longview Timber indicated they are willing to allow access and bridge abutment removal. Their signed landowner acknowledgement form will be included with the final proposal in PRISM.

5. Tasks and Schedule

A. List and describe the major tasks and time schedule you will use to complete the project.

PROJECT TIMELINE

Item/Milestone	Outcome	Target Date (Month/Year)
Design	Contracting	January 2013
	30% Design drawings	February – March 2013
	Stakeholder review/comment	March 2013
	Permit ready plan view and cross section drawings	April – June 2013
Permitting	Permit preparation and submittal	July 2013
	Permit authorization and bid	December 2013
Construction	Bid	Spring 2014
	Construction	Summer 2014
	Planting	Fall 2014
Close-out	Adaptive management and implementation monitoring	Summer 2015 and 2016

6. Constraints and Uncertainties

   A. Each project should include an adaptive management approach that provides for contingency planning. State any constraints, uncertainties, possible problems, delays, or unanticipated expenses that may hinder completion of the project. Explain how you will address these issues as they arise and their likely impact on the project.

As described above, CCNRD has worked extensively with stakeholders to develop this project. As constraints or uncertainties arise, we will continue to work with stakeholders to address them.

REFERENCES:

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

Cardno-Entrix. 2012. Geomorphic Assessment of Lower Nason Creek from RM 3.3 to 4.6. Technical Memorandum. Prepared for the CCNRD. Wenatchee, WA. February 14, 2012. 23p. Available online at http://hwsconnect.ekosystem.us/Project.aspx?sid=290&id=15026

CCNRD. 2012. Nason Creek RM 3.3 – 4.6 Feasibility Study. Available online at http://hwsconnect.ekosystem.us/Project.aspx?sid=290&id=15026

CCNRD. 2011. Nason Creek N1/KDIZ3 Alternatives Analysis. Available online at http://hwsconnect.ekosystem.us/Project.aspx?sid=290&id=15026

Department of Ecology (DOE) 2010. Nason Creek (Chelan County) Oxbow Reconnection Monitoring. Page 26. Available online at http://hwsconnect.ekosystem.us/project.aspx?sid=290&id=1888&stat=on

Maier, Greer and Goodridge, Jennifer. September 2011. Field observations in the 2007 oxbow.

Upper Columbia Regional Technical Team (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.

U.S. Bureau of Reclamation (USBR). 2009. Kahler Reach Assessment, Chelan County, Washington. Technical Service Center, Denver, CO. and Pacific Northwest Regional Office, Boise, ID. March 2009.

U.S. Bureau of Reclamation (USBR). 2008. Nason Creek Tributary Assessment, Chelan County, Washington. Technical Service Center, Denver, CO. and Pacific Northwest Regional Office, Boise, ID. March 2009.

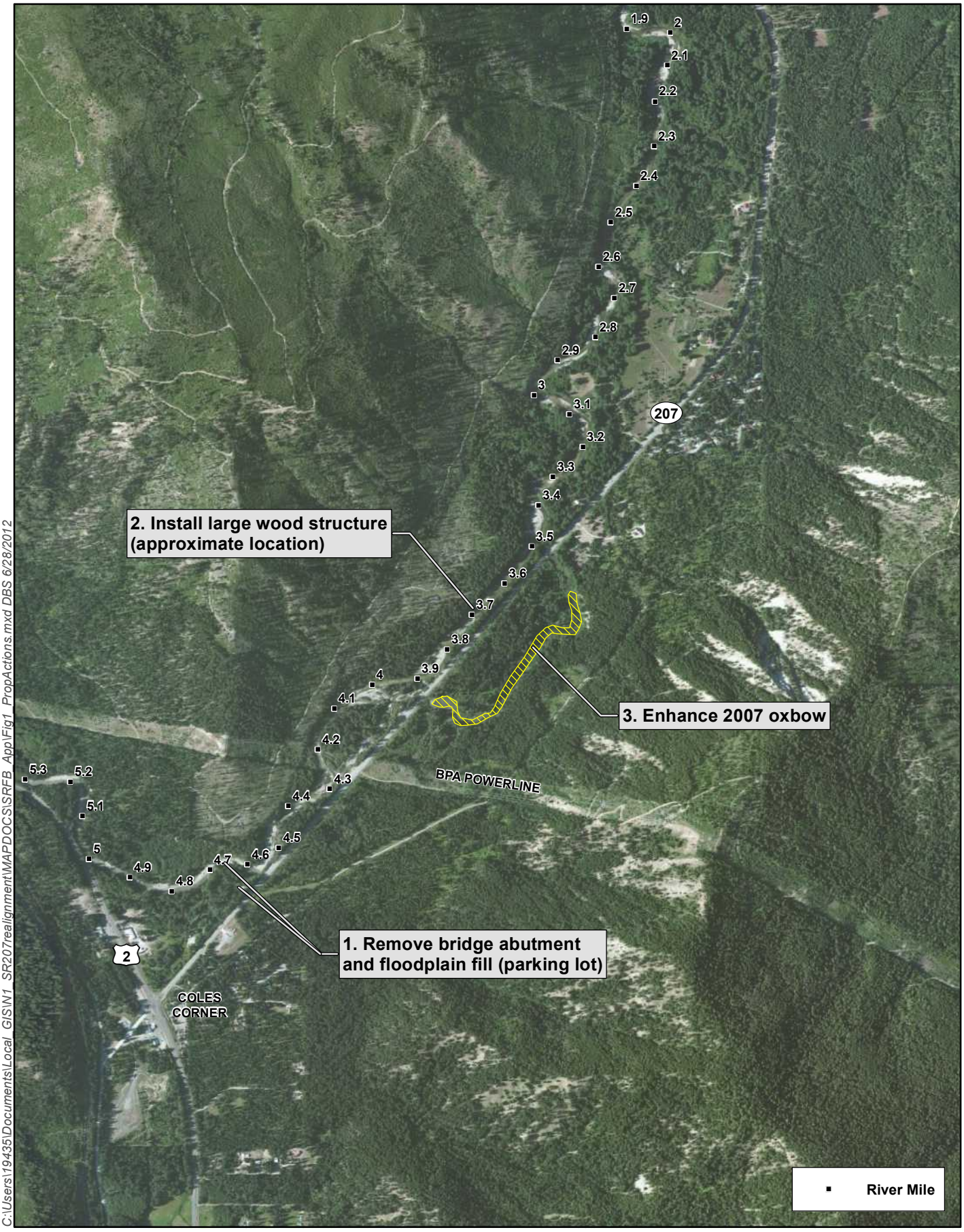
USBR. 2011. Lower Nason Creek Assessment of Geomorphic and Ecologic Indicators, Nason Creek, Wenatchee Subbasin. Chelan County, Washington. Pacific Northwest Regional Office, Boise, ID. March 2011.

Table 9: Summary of Community Involvement, Stakeholder, and Technical Review (From the CCNRD 2011 Alternatives Analysis Report)

Meeting	Date (2010)	Attendees/Notes
Wenatchee Habitat Sub-committee	Monthly April-Sept, November presentation	Monthly project status updates have been provided to the Wenatchee Watershed Action Team which consists of agency staff, interested public, and watershed planning unit members. At the November 17 meeting, the results of the alternatives analysis were presented and attendees were asked to provide comments on the alternatives.
WA Dept. of Transportation	May 6, October 6, December 1 and 22	Meetings with WSDOT regional planners and maintenance staff have indicated that WSDOT would support any of the draft alternatives, however, they do not have funds (or unfunded staff time) to contribute towards this project.
US Forest Service	May 4, May 15, October 4, January 6	Meetings with USFS staff have indicated that the USFS Nason Creek watershed action plan identifies restoration of stream processes as the highest priority. Therefore, USFS supports the road re-location (Alternative 1). USFS can seek funds for project development and permitting, however, they would need project partners to provide financial support for project construction.
Design Team	June 15	Provided a detailed project overview to agency staff and potential future funders including WA Dept. of Fish and Wildlife, Yakama Nation, Upper Columbia Salmon Recovery Board, US Bureau of Reclamation, and US Fish and Wildlife Service
Longview Timber	June 22	Met with Steve Tift, Longview Timber who expressed support for the project, however, the County GIS layer property boundaries are incorrect. Longview only owns the land west of Nason Creek and SR 207. Depending upon the final design plans and staging area locations, they may not be a landowner within the project area.
Salmon Recovery Funding Board (SRFB) Project Tour	June 23	SRFB review panel members, Regional Technical Review Team members, and Citizens Advisory Committee members visited the site and expressed interest in consideration of one additional project alternative, SR 207 relocation. This design alternative will be added to the alternatives analysis for consideration.
Regional Technical Team	July 7, December 17, January 12	July 7 presentation included a project overview and Q/A session with the SRFB review panel members and Regional Technical Team members. Written feedback from both groups indicated that the downstream connection or road relocation will likely be the recommended alternatives. On December 8, RTT members were provided a summary of project alternatives for review and the results of the alternatives analysis were presented on January 12.
Salmon Recovery Funding Board Review Panel	July and October	SRFB provided the following review comments: While relocating Highway 207 may be the ideal alternative from a fish habitat perspective, it is hard to imagine this alternative being considered in the near future.

Table 10. Summary of Community Involvement, Stakeholder, and Technical Review for the development of the SR 207 Nason Creek Feasibility Study (red text indicates edits for this proposal)

Meeting	Date (2011)	Attendees/Notes
Wenatchee Habitat Sub-committee	Monthly updates, August presentation	Monthly project status updates have been provided to the Wenatchee Watershed Action Team which consists of agency staff, interested public, and watershed planning unit members. At the August 17 meeting, the SR 207 relocation alternatives were presented.
WA Dept. of Transportation	April 22, June 15 and 29, Sept 6 and 12, March 26	The 2011 office and field meetings with WSDOT regional planners and engineers, Olympia CED office, and maintenance staff have focused on review of the SR 207 relocation options since 2010 meetings covered review of the other 5 alternatives. WSDOT prefers alternatives 1 – 4 due to the steeper slopes and possible avalanche hazards associated with alternatives 5 and 6. WSDOT does not have funding to contribute towards this project.
US Forest Service	April 1 and 22, June 9, 15, and 29, Sept 12 and 15, October 4	USFS owns the majority of the land for the SR 207 relocation alternative. Therefore, office and field meetings with USFS staff focused on reviewing the SR 207 relocation options to determine whether or not this alternative would be consistent with forest plan documents and designations. USFS has indicated that restoring natural stream processes in Nason Creek is a high priority for this watershed. Thus, the USFS Wenatchee River Ranger District supports working collaboratively with other stakeholders to explore in greater detail options for relocation of HWY 207.
BPA	Sept. 27 memo and October 13 meeting, May 8, 2012	Coordination with BPA engineering department has been to evaluate the construction feasibility of the SR 207 relocation options. On October 13, CCNRD provided a detailed project update to BPA fish and wildlife staff who funded the SR 207 feasibility study as part of the CCNRD-BPA Wenatchee habitat complexity contract. A May 8 2012 email from BPA indicated that they would not contribute more than 3 million towards SR 207 relocation and that level of contribution would need to be towards a project with high biological benefit.
CPUD	June 29	A June 29th meeting with CPUD, USFS, and WSDOT staff discussed utility lines within the SR 207 alignment
Private Landowners	March 25, April 12, 19, 28, May 7, June 10, 16, 23 and 24, July 26, October 26	These dates represent phone calls, emails, letters, meetings, and/or field visits with private landowners in the project area and community members in the Nason Creek watershed. Future correspondence with landowners and the community will be necessary to select a preferred alternative.
Regional Technical Team	January 12 and September 14, 2011 and April 11, 2012	The results of the 2010 alternatives analysis were presented on January 12, 2011. The RTT voted to further investigate the feasibility of the SR 207 relocation. On September 14, RTT was updated on the project status with the road relocation alternative alignments and they provided feedback on how to analyze the biological benefit of this project. The biological benefit analysis has been made available to RTT members for review to determine if there is sufficient benefit to support the costs of SR 207 re-alignment.



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ICF INTERNATIONAL

Figure 1
Proposed Actions
Nason Creek RM 3.5 - 4.7 Reach-Based Restoration

Photo 1

Photo 2

Photos 1 and 2. Photo 1 depicts the bridge abutment fill that encroaches into the Nason creek floodplain. Photo 2 depicts conditions in the 2007 oxbow (photo taken June 2012); note the ponded conditions which extend approximately 1,000 feet through the oxbow.

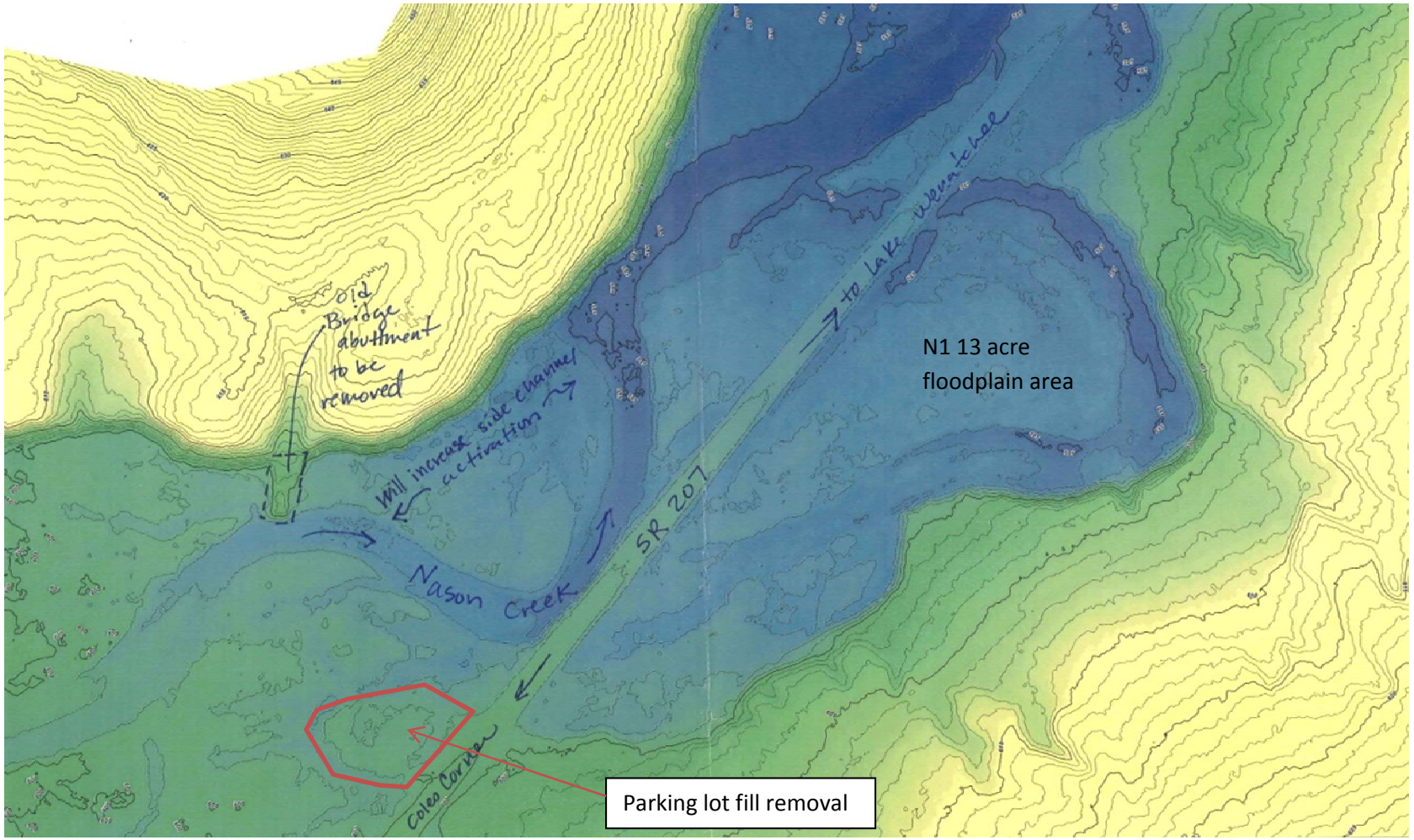

Figure 3: Floodplain fill removal. The bridge abutment fill removal will increase the activation of a downstream side channel. The parking lot fill removal will remove fill so that this area is inundated more frequently.

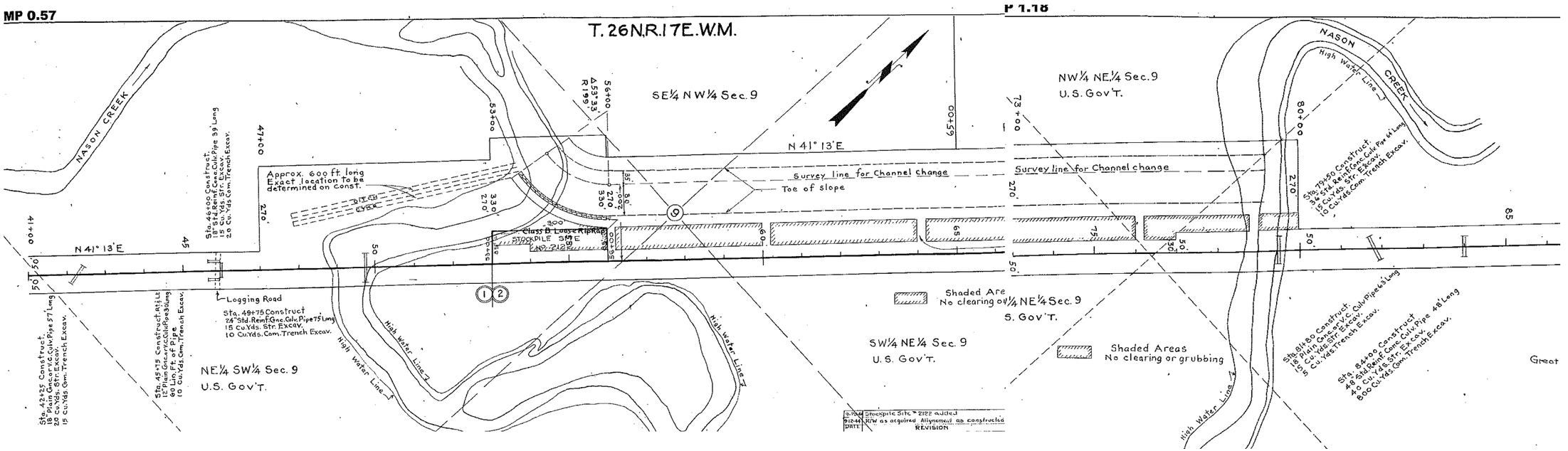

Figure 4: SR 207 Relocation plans in the vicinity of the 2007 Nason Oxbow Reconnection. Maps provided by WSDOT.

Nason Oxbow Estimate of Cost

Item	Price
Mobilization	$6,000
Preparation Log Storage Area	$2,000
Habitat Logs (20 with rootwad 24-in Diam. 24-ft Length)	$12,000
Traffic Control (Log Storage Area West of Highway)	$2,500
Helicopter Transport of Logs	$7,000
SPCC Plan	$1,000
WCC Crew	$3,700
Brush Bundles (Fascine)	$2,500
Revegetation	$2,500
Washington State Sales Tax (8.1%)	$3175
TOTAL	**$42,375**

\\Powervault2\nr\plans\My Documents\A-Habitat\A-Projects\2012 Projects\McKenzie Ditch\Nason Creek Helicopter Estimate.dwg

Design:
Drawn by:
Project Inspector:
Survey Crew:
Plot Date: 6/25/2012

REVISIONS		
Date:	Description:	Made by:
As-Built Date:		by:

Chelan County
Natural Resource Department
316 Washington Street, Suite 401
Wenatchee, Washington, 98801
Phone: (509) 667-6567
Website: www.co.chelan.wa.us

Nason Creek
Oxbow Enhancement

Helicopter Log Transport
Estimate of Cost

Sheet n of n *C.R.P. nnn*

Landowner Information

Name of Landowner: US Forest Service

Landowner Contact Information:

☒ Mr. ☐ Ms. Title: District Ranger, Wenatchee River Ranger District

First Name: Jeff Last Name: Rivera

Contact Mailing Address: 600 Sherbourne, Leavenworth, WA 98826

Contact E-Mail Address: jrivera02@fs.fed.us

Property Address or Location: **Nason Creek RM 3.5 – 4.7**

1. US Forest Service (Landowner or Organization) is the legal owner of some of the 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.

Landowner Signature

03MAY12
Date

Project Sponsor Information

Project Name: Nason Creek RM 3.5 – 4.7 Reach Based Restoration

Project Applicant Contact Information: Mike Kane

☒ Mr. Title: Natural Resources Specialist, Chelan County Natural Resources Department

First Name: Mike Last Name: Kane

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

E-Mail Address:mike.kane@co.chelan.wa.us