

**Lewis River Hydroelectric Projects Settlement Agreement
Aquatic Coordination Committee (ACC)
Meeting Agenda**

Date & Time: Thursday, November 13, 2014
9:00 a.m. – 12:00 p.m.

Place: Merwin Hydro Control Center
105 Merwin Village Court
Ariel, WA 98603

Contacts: Frank Shrier: (503) 320-7423

Time	Discussion Item
9:00 a.m.	Welcome <ul style="list-style-type: none"> ➤ Review Agenda and 10/9/14 Meeting Notes ➤ Comment & accept Agenda and 10/9/14 Meeting Notes
9:15 a.m.	Review of 2014/2015 Aquatic Fund Pre-proposals – Utilities comments
9:45 a.m.	Review/Discuss Final Plans for revised 2014 Haapa Habitat Enhancement Project – Phase I
10:00 a.m.	Study/Work Product Updates <ul style="list-style-type: none"> ○ Eulachon Consultation - Status ○ Woodland Release Ponds - Status ○ Hatchery Upgrades - Status ○ Hatchery and Supplementation Plan (5 yr. update) – Status ○ Acclimation Ponds - Status ○ Merwin Upstream Passage – Status & schedule ACC tour ○ Swift Floating Surface Collector – Status ○ Discussion about annual FSC maintenance and summer high temperatures ○ Low flow conditions – Status ○ Discussion of Merwin spillgate testing/ramp rates
10:15 a.m.	<ul style="list-style-type: none"> ➤ Next Meeting’s Agenda ➤ Public Comment Opportunity Note: all meeting notes and the meeting schedule can be located at: http://www.pacificorp.com/es/hydro/hl/lr.html#
10:30 a.m.	Safety ¹ discussion and prepare for field trip
10:45 a.m.	Adjourn and Depart for Merwin Fish Passage Tour

¹ Please bring rain gear, safety glasses, hard hat and sturdy or steel toe walking shoes– PacifiCorp will have 2 vehicles for transportation of up to 6 additional passengers. If you do not have safety glasses or a hard hat PacifiCorp can provide for you.

Join by Phone
+1 (503) 813-5252 [Portland, Ore.]
+1 (855) 499-5252 [Toll Free]

Conference ID: 5709805

FINAL Meeting Notes
Lewis River License Implementation
Aquatic Coordination Committee (ACC) Meeting
November 13, 2014
Ariel, WA

ACC Participants Present (13)

Erik Lesko, PacifiCorp Energy
 Kim McCune, PacifiCorp Energy
 Chris Karchesky, PacifiCorp Energy
 Frank Shrier, PacifiCorp Energy
 Adam Haspiel, USFS
 Baker Holden, USFS
 Peggy Miller, WDFW
 Michelle Day, NMFS
 Aaron Roberts, WDFW
 Eric Kinne, WDFW
 Pat Frazier, LCFRB
 Shannon Wills, Cowlitz Indian Tribe
 Pete Barber, LCFEG

Calendar:

December 11, 2014	ACC Meeting	Merwin Hydro
January 8, 2015	ACC Meeting	Merwin Hydro

Assignments from November 13, 2014 meeting		
McCune: Review the balance of the LWD Fund at present, notify the ACC and exhaust all LWD funds first for the 2014 Haapa Habitat Enhancement Project – Phase I before utilizing Aquatic funds.		Complete – 11/14/14

Assignments from October 9, 2014 meeting		
Karchesky/Shrier: PacifiCorp will proceed with fabrication of the flume for smolt release at Lewis River Hatchery.		Complete; ETA mid-December
Lesko: Contact the WDFW hatchery staff to discuss the timing of additional discussion with the ACC specific to releasing/holding the smolts.		Pending as of 12/11/14

Assignments from February 13, 2014 meeting		
Eric Kinne: Work on securing the 2012/2013 lower river coho abundance survey data and provide this information to Erik Lesko (PacifiCorp) for the 2013 H&S Annual Report. Lesko requires this data by February 28, 2014.		Pending – as of 12/11/14 data has not been received and will not be provided in the 2014 report. Awaiting BPA comments

Opening, Review of Agenda and Meeting Notes

Frank Shrier (PacifiCorp) called the meeting to order at 9:05 a.m. and reviewed the agenda and assignments. No additional topics have been added to the agenda.

The October 29, 2014 meeting notes were reviewed and approved at 9:15 am without change. The October 9, 2014 meeting notes were review and approved at 9:20 am with the following clarification on page 5 relating to the Swift Floating Surface Collector release of smolts, “Michelle Day (NMFS) expressed that she is worried about holding all of them and is supportive of holding some; but the appropriate percentage has not be determined since the discharge pipe that smolts will be traveling through is not intended for fish passage”.

McCune will finalize the October 9, 2014 and October 29, 2014 meeting notes for posting to the Lewis River website.

Review of 2014/2015 Aquatic Fund Pre-proposals – Utilities Comments

Shrier and Kim McCune (PacifiCorp) provided a cursory review of the Utilities’ comments specific to the three (3) following aquatic fund pre-proposals:

USDA Forest Service	Lewis River Side Channel 5
USDA Forest Service	Lewis River Mainstem Fish Habitat Restoration
LCFEG	North Fork Lewis River RM 13.5 Restoration Project, Phase II

See [Attachment A](#) - Lewis River Aquatic Fund Utilities Evaluation, dated 10/31/14 for more detail.

McCune informed the ACC attendees that they will have approximately thirty (30) days to submit their formal comments. McCune will email a reminder that comments will be due on or before December 9, 2014. On December 11, 2014 the ACC is expected to render a decision as to which Aquatic Fund projects will be selected for full proposal.

Review/Discuss Final Plans for revised 2014 Haapa Habitat Enhancement Project – Phase I

Pete Barber (LCFEG) provided a PowerPoint Presentation (see [Attachment B](#) for more detail) describing a revised scope for the North Fork Lewis River (RM 13.8-14.2) Haapa Habitat Enhancement Project – Phase I as follows:

- **Reduction in scope per TAC comment**

Postponed construction of side channel and off channel enhancement (Phase II) due to construction sequencing & site access issues.

- **Reduction in overall project cost**

Increase in project maintenance to ensure future project success (riparian restoration).

- **Reduction in ACC Funds \$75k to \$40k**
- **Increase in overall match/cost share from 21% to 34%**

The project will include, but not limited to, enhancing approximately 1,100 lineal feet of the main stem NF Lewis River channel margin habitat using large wood structures to benefit rearing juveniles and adult salmonids over a wide range of flows, and increasing hydraulic roughness of

12 acres of floodplain by adding large wood structures in addition to removing invasive plant species and under-planting 6.7 acres with +10k native riparian plantings.

McCune mentioned to the ACC attendees that this project is appropriate for use of the Large Woody Debris funds. Shannon Wills (Cowlitz Indian Tribe) communicated to the ACC attendees that the following Settlement Agreement provision below confirms use of these funds is the direction the ACC should take if this revised project is approved.

7.1 Large Woody Debris Program.

7.1.1 Funding. Within 180 days after Issuance of the New License for the Merwin Project and annually thereafter, PacifiCorp shall make available in a Tracking Account up to \$2,000, which may be disbursed to qualified entities to defray the costs of LWD transportation and placement in the Lewis River Basin (the "LWD Fund"). The unspent balance of the LWD Fund in any year shall be carried forward and made available in subsequent years, in addition to the annual amount of \$2,000. In addition, within 180 days after Issuance of the New License for the Merwin Project and annually thereafter, PacifiCorp shall contribute \$10,000 to the Aquatics Fund (Section 7.5) that will be earmarked for LWD projects in the mainstem of the Lewis River below Merwin Dam that benefit anadromous fish. If there are not sufficient LWD projects, or if the LWD program is suspended as provided in Section 7.1.4 below, PacifiCorp, at the request of the ACC, shall use the funds for other Aquatics Fund projects that benefit anadromous fish in the mainstem of the Lewis River below Merwin Dam and then for other projects in the Lewis River Basin below Merwin Dam. For any LWD project below Merwin Dam, PacifiCorp shall provide for the transportation of LWD at its own expense to a staging area provided by the entity or individual carrying out the project.

The ACC approved modification of the 2014 Haapa Habitat Enhancement Project that was originally approved for \$75,000 and proceed with issuing funds to LCFEG for the reduced amount of \$40,000, in accordance with the revised Proposal, Attachment C. In addition, the ACC has directed McCune to review the balance of the LWD Fund at present, inform the ACC, then exhaust all LWD funds first for the 2014 Haapa Habitat Enhancement Project – Phase I before utilizing Aquatic funds.

Study/Work Product Updates

Eulachon Consultation

Michelle Day (NMFS) communicated that she provided the document to NMFS General Counsel and is waiting for comments. The next step is for NMFS to submit its BiOp to the FERC; PacifiCorp will decide if the FERC final response is needed before project work can begin.

Woodland Release Ponds

On hold for Eulachon consultation; the construction schedule is currently August 2015. McCune submitted a formal extension letter to the FERC to extend to December 26, 2015.

Hatchery Upgrades:

Three projects remain as part of Schedule 8.7 of the Settlement Agreement.

Speelyai Hatchery Intake Modifications: DELAYED to 2015 due to additional permitting.

Merwin Hatchery PLC Ozone Upgrades: New PLC installation is substantially complete; automation checks are still needed; expect completion no later than December 31, 2014.

Lewis River Downstream Intake: Scheduled for completion by end of 2015 pending Eulachon BiOp by December 2014.

Hatchery and Supplementation Plan (H&S) –

The H&S subgroup met on November 7 to review the Utilities response to comments (from ACC 90 day review period) and make edits to the draft H&S Plan. A revised version of the plan was sent to the H&S subgroup reflecting comments from this meeting. Final comments from the Subgroup are due on or before November 26, 2014. PacifiCorp will submit the final document to the FERC on or before December 26, 2014.

The Annual Operating Plan (AOP) will be submitted to the H&S subgroup for comment during the week of November 17. A review meeting will be scheduled in December to finalize the AOP.

Acclimation Pond/Crab Creek Status

Received all permitting from the Forest Service; PacifiCorp completed an updated design and are almost ready to distribute the 90% design to the ACC, then PacifiCorp will submit the designs for county permitting. The project is moving forward to start construction July 2015.

Acclimation Pond/Muddy River

In response to low dissolved oxygen (DO) conditions experienced in the Muddy River Acclimation Pond last spring, PacifiCorp purchased a new high volume pressure pump to better clean the in-river water diffusors and hopefully increase flow to the pond. PacifiCorp plans to water up the Muddy River Pond earlier this year and monitor DO levels at least one month prior to placing fish into the pond.

Merwin Fish Collection Facility and General Operations ([Attachment D](#))

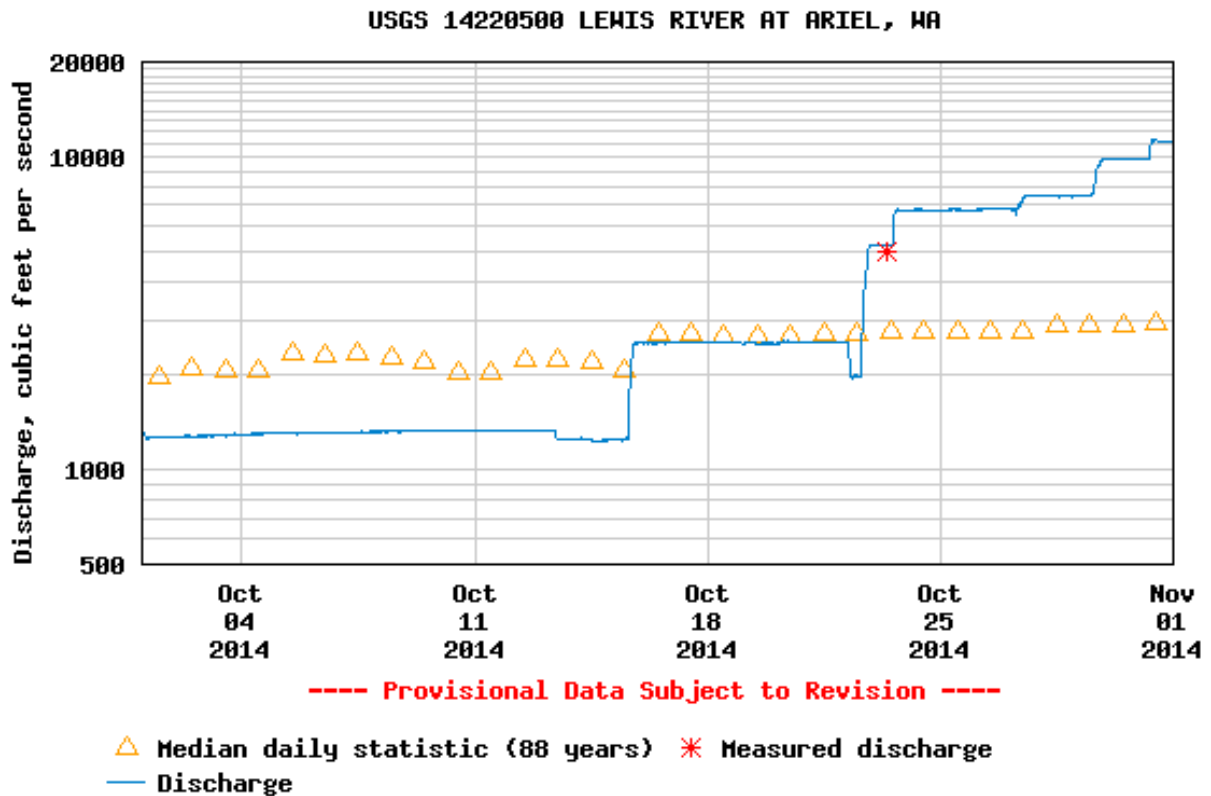
During the month of October, a total 11,121 fish were captured at the Merwin Fish Collection Facility; the majority (81%) of these fish were early run coho (n = 8,980). Of the 8,980 early run coho collected, 93 were wild fish that were previously captured at the Merwin fish collection facility and marked in addition to two late wild run coho; these fish were returned to the lower river. A total 667 hatchery summer steelhead were captured and of these 116 were fish that were previously captured at the collection facility. Eight wild summer steelhead and seventy-eight wild fall Chinook were captured and returned to the lower river. All coded wire tagged (CWT) coho, hatchery summer steelhead, and adipose clipped fall Chinook were transported to Lewis River Fish Hatchery and processed by WDFW. In addition, other species collected in October included cutthroat trout (n=17), sockeye salmon (n=19), and resident rainbow trout (n = 61).

To date, spring Chinook (n=934), early run coho (n=12,042), late run coho (n=1,156) and fall Chinook (n=363) have been captured at the Merwin Fish Collection Facility this year. The Merwin Fish Collection Facility was not in operation on October 27th and October 28th due to a mechanical failure of the fish lift and conveyance system. The trap was put back into operation October 29th, 2014.

The Auxiliary Water Supply (AWS) system, which can boost attraction flow up to 400 cfs, was operated daily except for on October 30th and 31st, when turbines were shut down for inspection. The Ladder Water Supply (LWS) was operated daily throughout the month of October.

River flow below Merwin Dam ranged between approximately 1,280 cfs to 11,300 cfs during October. One spill event occurred on October 27th, 2014.

Discharge, cubic feet per second



Karchesky (PacifiCorp) also informed the ACC attendees that another outage is scheduled for 11/25 – 11/26/2014 for maintenance and modifications. PacifiCorp will continue to keep the ACC advised.

Upstream Transport

A total 981 early run coho were collected from the Merwin fish trap in October and transported upstream of Swift Dam. In addition, one cutthroat trout greater than 13 inches was also transported upstream in October. To date, a total 1,033 (452 m: 581 f) BWT winter steelhead, 9,179 early run coho (4,788 m: 4,217 f: 174 Jack), and 19 cutthroat trout exceeding 13 inches in length have been transported and released into the headwaters of Swift Reservoir for 2014.

Swift Floating Surface Collector

The FSC was turned off on August 29th, 2014 for annual maintenance followed by contracted work scheduled throughout the month of September. The FSC was put back into service on October 9th, 2014. A total of 520 fish were collected during the month of October. The majority (52 percent) of these fish were coho smolts (n=271), followed by Chinook smolts (n=236), juvenile steelhead (n=6), hatchery rainbow trout (n=4), cutthroat trout (n=2), and bull trout

(n=1). One juvenile bull trout was captured and returned back to Swift Reservoir along with four hatchery rainbow trout.

Karchesky (PacifiCorp) reminded the ACC that we are entering the season of inclement weather especially up on Swift Reservoir. While PacifiCorp is committed to operating both the Swift FSC and Merwin Fish Trap daily, priority will be given to the safety of our staff and equipment. If conditions at any time become unsafe for operation, PacifiCorp will suspend daily transport efforts until conditions improve. PacifiCorp will continue to keep the ACC advised of any outages due to inclement weather.

Low Flow Conditions – Status

The reduction to 1,200cfs approved by the Low Flow Committee really helped to maintain reservoir levels until we got to the big push of rain.

Shrier conducted a safety discussion in preparation for the tour and McCune provided all attendees the needed hard hats and safety glasses. All attendees were wearing steel toe shoes.

<11:00 a.m. meeting adjourned and departed for Merwin Fish Passage Tour>

Agenda items for November 13, 2014

- Review November 13, 2014 Meeting Notes
- 2014/2015 Aquatic Fund Pre-proposals – **ACC Decision Required**
- Annual FSC Maintenance and Summer High Temperatures Discussion
- Study/Work Product Updates

Public Comment

None

Other

Peggy Miller (WDFW) requested PacifiCorp provide the 2014 ACC/TCC Annual Report Appendices earlier, if possible, so as to provide more time for review of certain reports and plans. McCune indicated she will do all she can to accommodate this request.

Next Scheduled Meetings

December 11, 2014	January 8, 2015
Merwin Hydro Control Center	Merwin Hydro Control Center
Ariel, WA	Ariel, WA
9:00 a.m. – 3:00pm	9:00 a.m. – 3:00pm

Meeting Handouts & Attachments

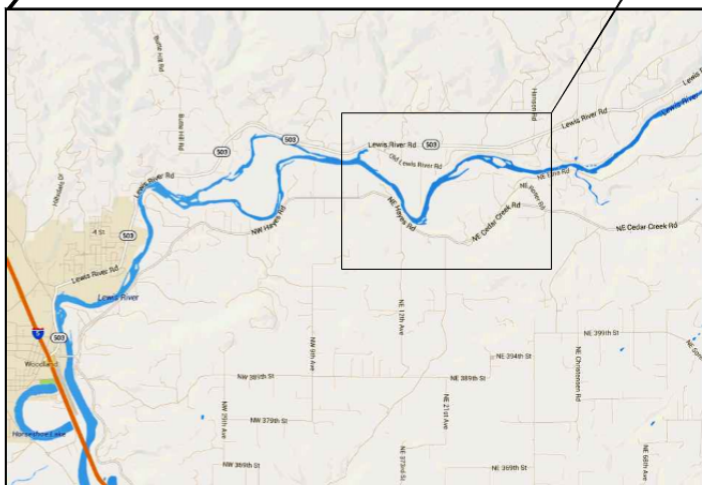
- Notes from 10/9/14 and 10/29/14
- Agenda from 11/13/14
- **Attachment A** - Lewis River Aquatic Fund Utilities Evaluation, dated 10/31/14
- **Attachment B** - North Fork Lewis River (RM 13.8-14.2) Haapa Habitat Enhancement Project – Phase I Power Point Presentation, dated November 13, 2014

- **Attachment C** – Revised 2014 Haapa Habitat Enhancement Project – Phase I, dated October 27, 2014
- **Attachment D** – Merwin Adult Trap Fish Facility Report – October 2014

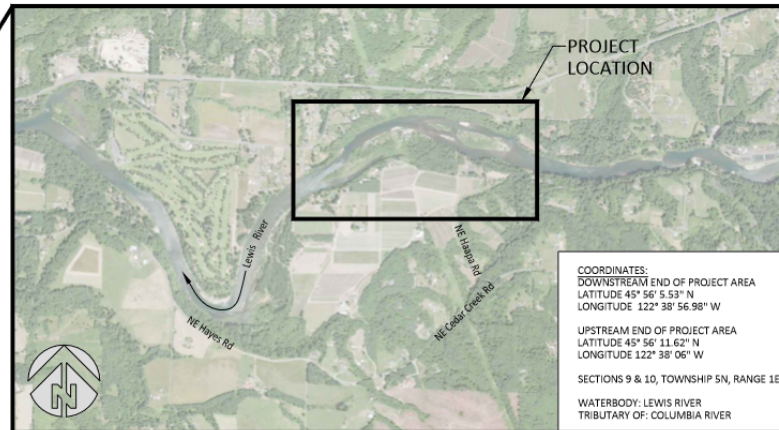
Lewis River Aquatic Fund - Utilities' Evaluation of 2014/2015 Project Proposals

No.	Applicant	Project Title	Project Schedule	Benefit	Bull Trout	Project Partners	Funding	Cost Share?	Consistency with Fund Objectives	Selected for Utilities for Full-Proposal - Y or N	Comments - Utilities
	USDA Forest Service	Lewis River Side Channel 5	2015/2017	Restore approx 800' of side channel habitat; create approx 10 complex structures within side channel; provide quality rearing and overwinter habitat; provide benefit to juvenile coho and steelhead trout, with some benefit to Chinook salmon. Channel will act as refugia from high flows in the mainstem Lewis River.	No	Gifford Pinchot National Forest, Mt. St. Helens Institute	\$ 82,000.00	Yes	1 Benefit Recovery Y 2 Support reintro. Y 3 Enhance habitat Y	Y	Somewhat concerned as to how the side channel will be kept functional and not fill in as it has in the past. How will the FS control potential sediment input from all the road work and skidding? (Erik) Recent inspections of the proposed side channels and area upstream of the proposed project through coho carcass surveys reveals a system with inadequate spawning substrate (primary substrate is bedrock, large/medium cobble and angular rock). As we continue to fund projects to enhance rearing habitat, spawnable habitat should be included with these types of projects in the upper most reaches that lack adequate gravels to realize the benefits of these rearing enhancement projects. Are there plans to add gravels at a later date? The benefits of gravel supplementation would improve spawning and increase the net benefit of the project by having fry/smolt produced upstream or in the side channels actually use the cover provided. Side channels in the lower portion of the Lewis (downstream of Curly Creek) appear to contain adequate gravels and are the key spawning area for coho. (Mark) Does not support gravel introduction. How will the FS control potential sediment input from all the road work and skidding? Is this project intended to scour out a deeper channel? If so please explain how and what the expected outcome will be. (Erik) see response to proposal #1. This is a long-term project. It's nice to see the timeline but are the ACC funds allocated across that timeline, paid in full up front or paid upon completion of construction? Cowlitz PUD: Suggest eliminating the proposed clearing of 2 acres of scotch broom. (Erik) Also propose deleting the scotch broom removal portion - benefits to fish species from this action is insignificant.
1	USDA Forest Service	Lewis River Mainstem Fish Habitat Restoration	2015/2017	Restore approx. 1,000' of Lewis River mainstem habitat; create approx. 20 complex structures within the project area; each structure will create a pool for overwintering and summer rearing habitat; benefit to juvenile coho and steelhead trout, with some benefit to adult/junvenile Chinook. Structures will facilitate gravel sorting, increasing spawning opportunities.	No	Gifford Pinchot National Forest, Mt. St. Helens Institute	\$ 57,000.00	Yes	1 Benefit Recovery Y 2 Support reintro. Y 3 Enhance habitat Y	Y	
2	Lower Columbia Fish Enhancement Group	North Fork Lewis River RM 13.5 Restoration Project, Phase II	2015/2019	Final restoration phase will maximize salmonid productivity by eliminating known stranding areas and crating a total of 1,850' of low flow side channel; increase fish access to the 2,800' side channel; enhance 1,500' of mainstem margin rearing conditions. benefit to Chinook, coho, chum and steelhead habitat.	No	Interfluve, Larch Mtn Corrections, Sam and Joan Kysar, DNR Aquatic Lands, WA SRFB	\$ 72,000.00	Yes	1 Benefit Recovery Y 2 Support reintro. Y 3 Enhance habitat Y	Y	
3							\$ 211,000.00				
							Totals	\$ 211,000.00			
							Total non-bull trout Funds	\$ 211,000.00			
							Bull Trout Funds	\$ -			
Fund Objectives:											
1. Benefit fish recovery throughout the North Fork Lewis River, priority to federal ESA-listed species											
2. Support the re-introduction of anadromous fish throughout the basin											
3. Enhance fish habitat in the Lewis River Basin, with priority given to North Fork Lewis River											

NORTH FORK LEWIS RIVER - HAAPA FISH HABITAT RESTORATION PROJECT CLARK COUNTY, WASHINGTON FINAL DESIGN - JUNE 17, 2014



VICINITY MAP
NOT TO SCALE



SITE MAP
NOT TO SCALE

COORDINATES:
DOWNSTREAM END OF PROJECT AREA
LATITUDE 45° 56' 5.53" N
LONGITUDE 122° 38' 56.98" W
UPSTREAM END OF PROJECT AREA
LATITUDE 45° 56' 11.62" N
LONGITUDE 122° 38' 06" W
SECTIONS 9 & 10, TOWNSHIP 5N, RANGE 1E
WATERBODY: LEWIS RIVER
TRIBUTARY OF: COLUMBIA RIVER

SHEET LIST

- 1 Cover Sheet, Index and Vicinity Map
- 2 General Notes
- 3 Erosion Control Typical Details and Notes
- 4 Existing Conditions and Ownership
- 5 Proposed Conditions, Access and Project Components
- 6 Side Channel and Backwater Sequencing and Erosion Control
- 7 Side Channel Plan and Profile
- 8 Side Channel Cross Sections and Groundwater Channel Profile
- 9 Side Channel Inlet Plan and Details
- 10 Backwater Channel Enhancement
- 11 Backwater Channel Enhancement Cross Sections
- 12 Backwater Channel Enhancement Large Wood Typical Details
- 13 Mainstem River Bank Enhancement
- 14 LWD Typical Details
- 15 Typical Beaver Dam Structure
- 16 Wetland Impacts
- 17 Riparian Enhancement
- 18 Riparian Enhancement Typical Details
- 19 Floodplain Roughness



NO.	BY	DATE	REVISION DESCRIPTION

DF DRAWN	MM,JE CHECKED	GJ CHECKED
MM APPROVED	6/17/14 DATE	13-02-01 PROJECT

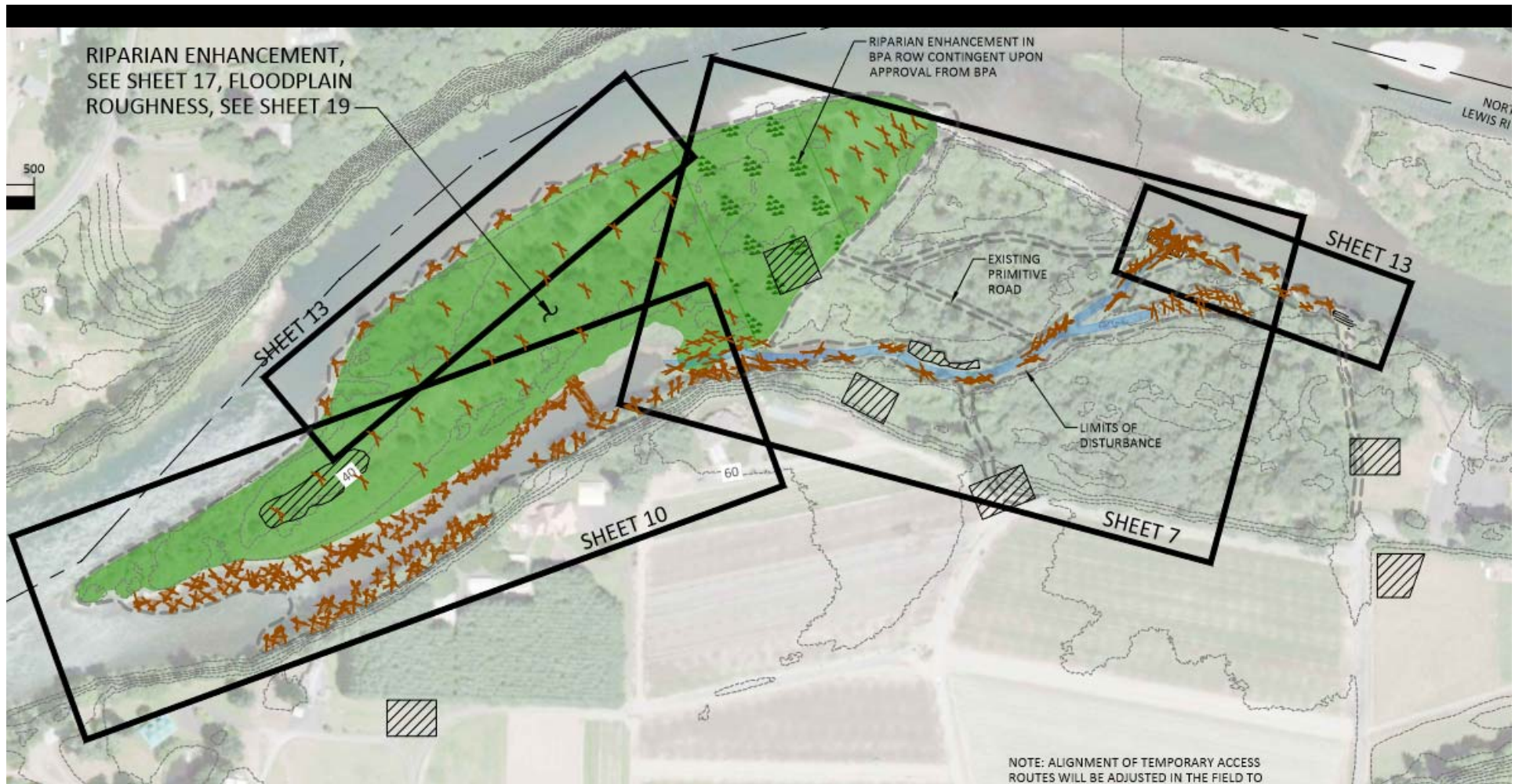
Lower Columbia Fish Enhancement Group
North Fork Lewis River - Haapa
Fish Habitat Restoration Project



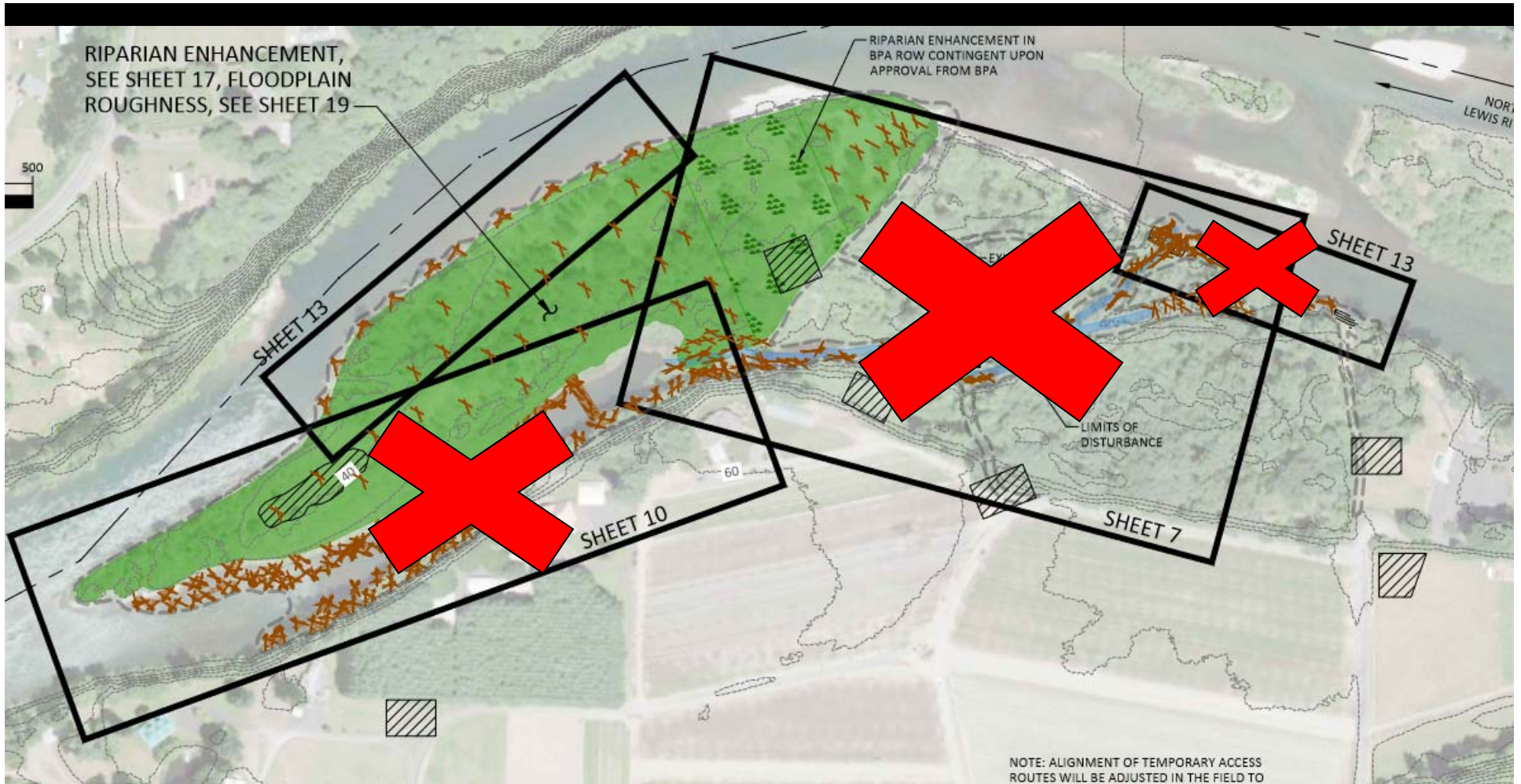
COVER SHEET, INDEX
AND VICINITY MAP

SHEET
1 OF 19

North Fork Lewis River (RM 13.8-14.2) Haapa Habitat Enhancement Project – Phase I LCFEG - Final Presentation – Nov. 13, 2014



- Component #1 Side Channel Construction**
- Component #2 Off Channel Enhancement**
- Component #3 Main stem Margin Habitat Complexity**
- Component #4 Floodplain roughness/Riparian Enhancement**



~~Component #1 Side Channel Construction~~

~~Component #2 Off Channel Enhancement~~

Component #3 Main stem Margin Habitat Complexity

Component #4 Floodplain roughness/Riparian Enhancement

Haapa Phased Approach

- Reduction in scope per TAC comment

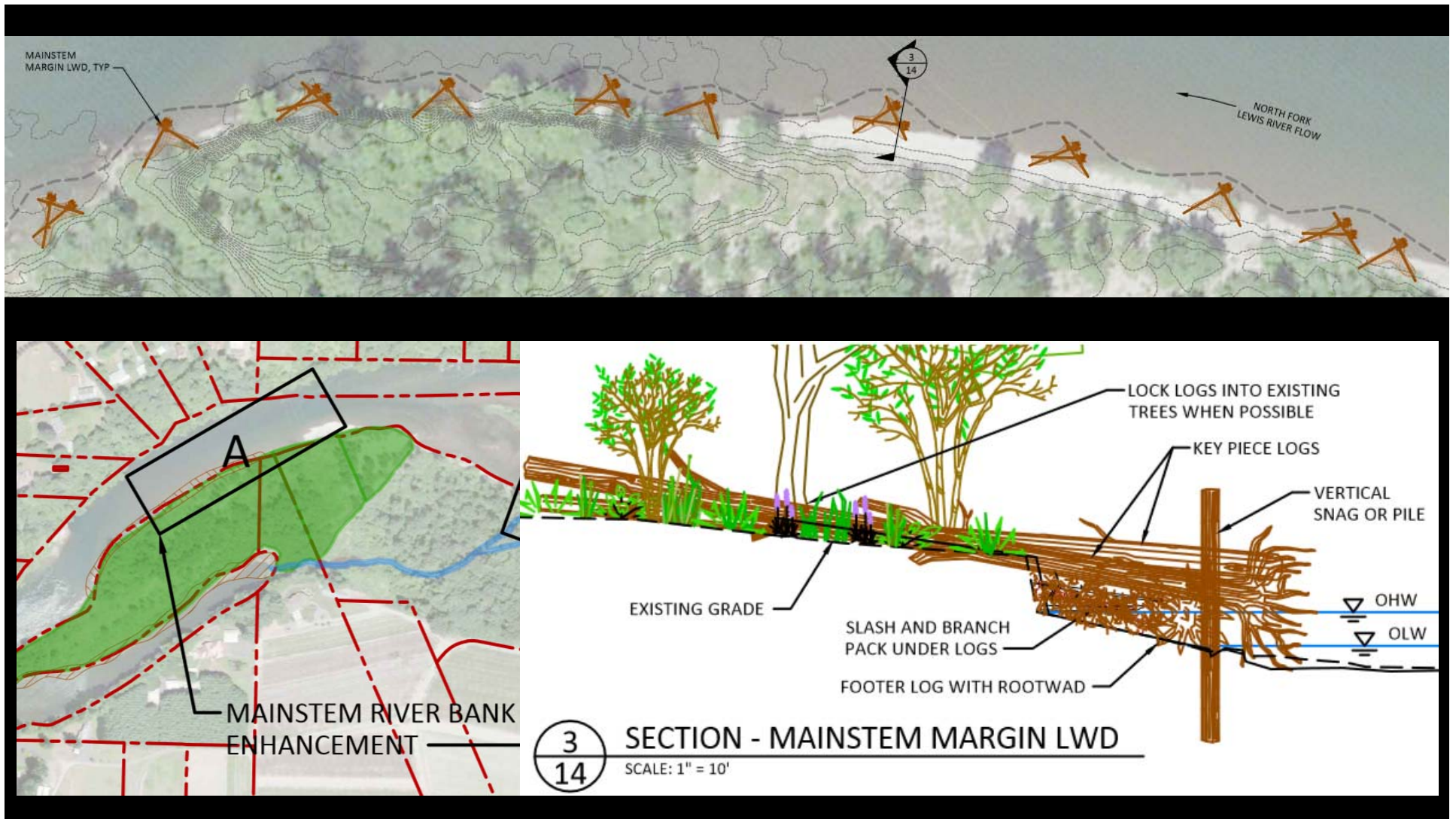
Postponed construction of side channel and off channel enhancement (Phase II) due to construction sequencing & site access issues.

- Reduction in overall project cost

Increase in project maintenance to ensure future project success (riparian restoration).

- Reduction in ACC Funds \$75k to \$40k

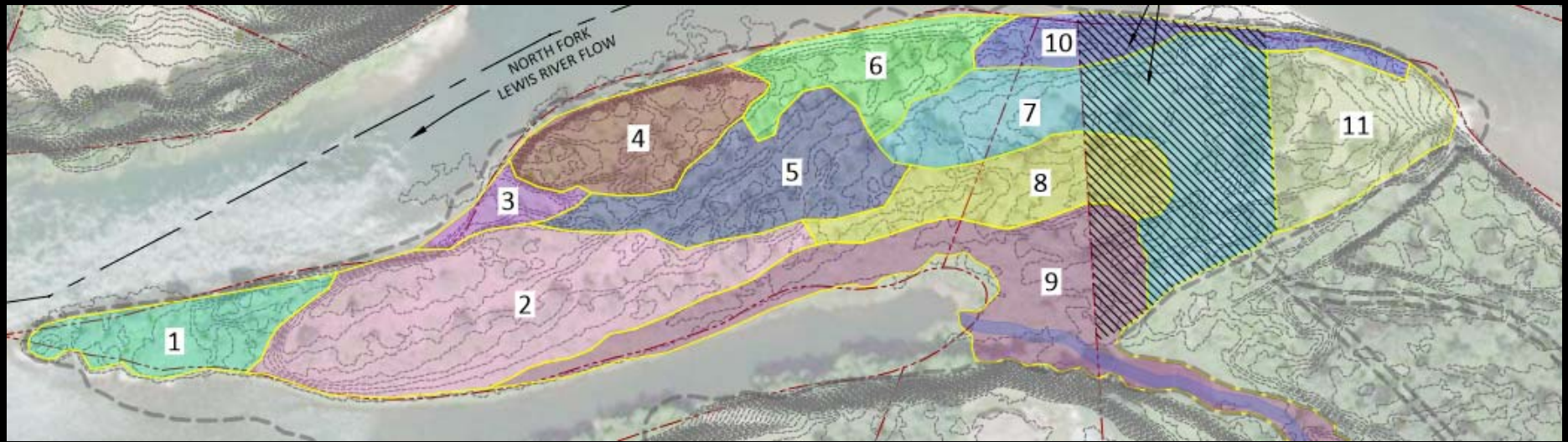
- Increase in *overall* match/cost share from 21% to 34%



Component #3 Main stem Margin Habitat Complexity

Enhance > 1,100 lineal feet of the main stem NF Lewis River channel margin habitat using large wood structures to benefit rearing juveniles and adult salmonids over a wide range of flows.





Component #4 Floodplain Roughness/Riparian Enhancement
Increase hydraulic roughness of 12 acres of floodplain by adding large wood structures in addition to removing invasive plant species and under-planting 6.7 acres with +10k native riparian plantings.





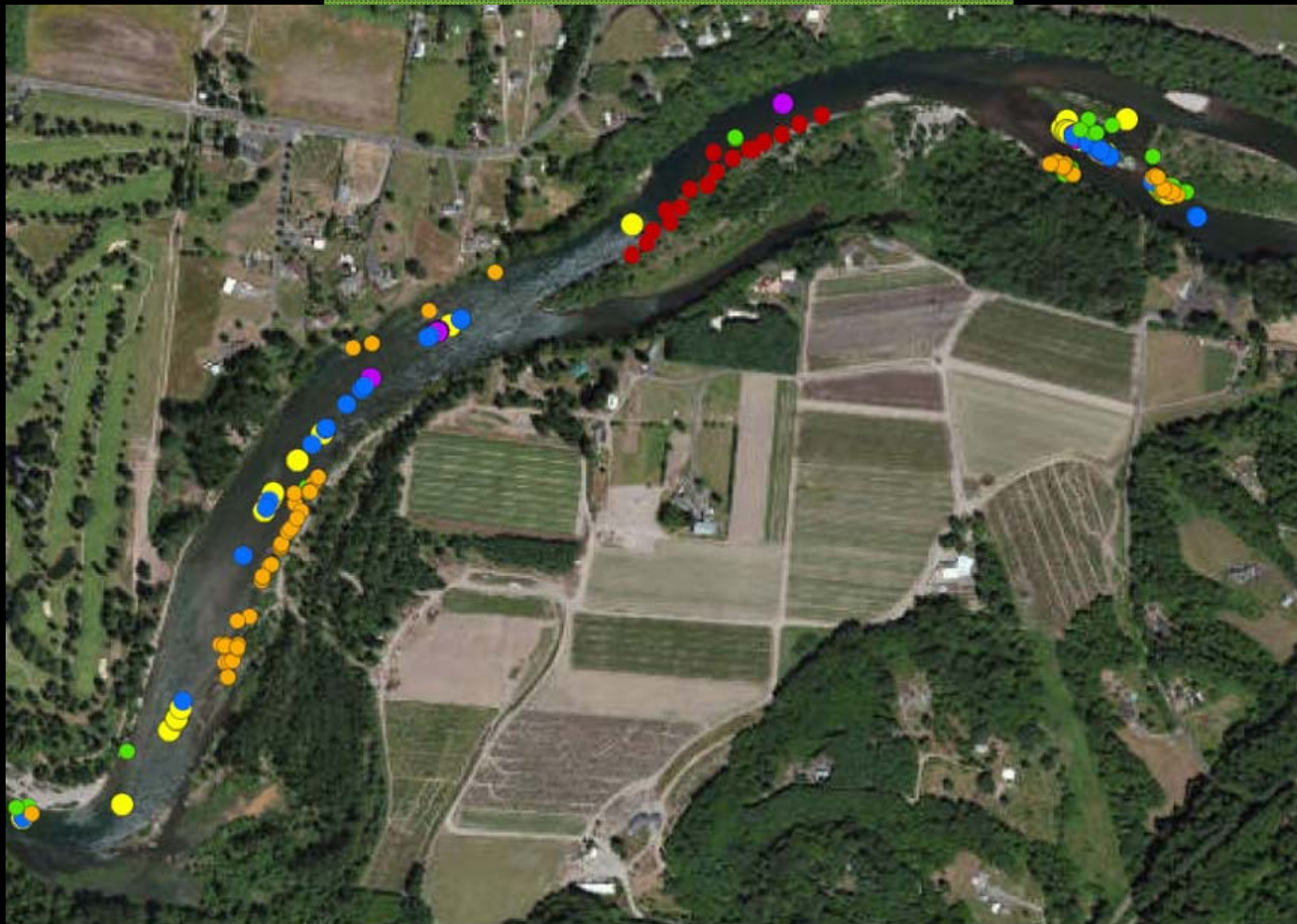
Budget

- Total Request \$442,980
- SRFB Request \$292,460 (Funded)
- Match/Cost Share \$150,520 (34%)

Haapa Phase I Project

- **Secured access to fill 500 gallon tanks**
- **Coordination with Clark Parks**
- **\$40k PacifiCorp ACC funds as match**
- **Final designs and permitting documents complete**
- **Benefit winter steelhead, Coho, Fall chinook and Chum salmon**

QUESTIONS?



Lewis River, WA

- Steelhead 2008
- Steelhead 2009
- Steelhead 2010
- Steelhead 2011
- Steelhead 2012
- Steelhead 2016



0 0.1 0.2 0.4 0.6 0.8 Miles
1:13,000

PROPOSAL FORM

Lewis River Aquatic Fund

Revised
10-27-14

1. Project Title:

Haapa Habitat Enhancement Project – Phase I

2. Project Manager:

Peter Barber, Lower Columbia Fish Enhancement Group (LCFEG)

3. Identification of problem or opportunity to be addressed

The aquatic and riparian habitat conditions of the North Fork (NF) Lewis River has been heavily impacted by past clearing and snagging, past gravel mining, residential development, blockage of large wood transport due to hydro-electric dams, and flow regulation (Inter-Fluve et al 2008, historic aerial photo analysis, and site visits). These cumulative impacts have reduced wood loading, reduced channel complexity, reduced the development of side-channels and off-channels, and have reduced habitat-forming processes (e.g. floods) necessary for creating and maintaining complex habitats. Native riparian vegetation is impaired and affected by invasive species including Himalayan blackberry, scotch broom, and Japanese knotweed. The main stem margin is generally composed of uniform habitat with little cover or complexity.

Restoration of this area has been recommended as part of multiple previous reports including the large wood study (Inter-Fluve et al. 2008) and the LCFRB habitat assessment (R2 Resource Consultants 2004). Previous large wood enumeration study (Inter-Fluve et al. 2008) documented very low wood quantities, in particular, few large key pieces required to initiate log jam formation in the Lewis River. Similar results for LWD quantities were obtained as part of re-licensing studies (WTS-3 Relicensing Report, PacifiCorp, 2004a) and only 3 “key” pieces throughout the entire 3-mile reach in which the project area is located. Stream habitat surveys and other analyses conducted by R2 Resource Consultants (2004) documented the following impaired habitat conditions in this reach (Lewis 5):

- 1.) Loss of bar and connected side channel habitat,
- 2.) Poor shade condition ratings,
- 3.) Lack of pools or pool tail-outs (0%)
- 4.) Low large wood quantities (< 14 pieces per mile)

The completion of the 2013-14 SRFB Haapa Habitat Enhancement project (#12-1165) has created the final design to address these limiting factors in a two phased approach. During the design process, an inter-disciplinary oversight team consisting of private landowners (Kysar & Loomis) as well as representatives from Washington Department of Fish and Wildlife (WDFW), LCFRB, Clark County, PacifiCorp, Washington Department of Natural Resources (WDNR), and Bonneville Power Administration (BPA). Interfluve collected topographic and bathymetry survey design data via ground and boat-based

surveys and developed hydraulic models, in addition to site and aerial photo analysis to identify geomorphic trends in the study area to determine appropriate restoration actions and future potential modes of channel adjustment in the reach. LCFEG and Interfluve hosted a final workgroup meeting April 3rd, 2014 and selected the four of the seven project components to develop the final design plans. The Haapa Habitat Restoration Phase I is the first phase of restoration at this site and addresses two of the four project components in the recently completed final design.

This proposal requests \$40,000 of ACC funds to implement the Phase I of the Haapa Habitat Restoration project which has been funded by SRFB for \$292,460 starting Dec. 2014. This project is located in reach Lewis 5, which is a Tier 1 (highest priority) reach in the Lower Columbia Salmon Recovery and Fish & Wildlife Subbasin Plan (LCFRB 2010) and is home to ESA listed populations of Chinook, Chum, Coho, and winter Steelhead. Due to construction sequencing and ensuring site access for riparian plant maintenance, this first phase of construction will involve accessing a 12 acre peninsula to enhance 1,100 feet of NF Lewis margin habitat and restoring 6.7 acres of floodplain riparian habitat. The previous (#12-1165) Haapa final design plans include all the necessary permitting applications, bid documents, and construction estimate to implement this project. The surrounding landowners have expressed their excitement to see the implementation of these designs.

4. Background

Provide information related to how this project fits into greater watershed objectives and any previously collected information at the project site (e.g. fish surveys, habitat delineation, etc)

The proposed Haapa Habitat Restoration Phase I project site is located between RM 13.8 & 14.2 of the NF Lewis River. The 6.7 acres of a floodplain peninsula and 1,100 feet of main stem margin habitat is contained within reach Lewis 5 and listed as high priority Tier 1 reach identified in the Lower Columbia Salmon Recovery and Fish & Wildlife Subbasin Plan (LCFRB 2010). The site is downstream of the canyon reach, which is highly productive for Chinook spawning. The project area encompasses the main channel and property owned by WDFW, DNR State Owned Aquatic Lands (SOAL), BPA and private landowners (Loomis, Kysar). The 6.7 acre project site is covered with invasive non-native plant species, which severely limits the recolonization, by native plant communities. The main stem channel margin of the peninsula is composed of uniform habitat with little structure to provide cover or velocity refuge for juvenile salmonid species. A relic flood overflow channel currently connects the main stem to the backwater channel, but is only activated during high water events.

The SRFB Haapa Habitat Enhancement Design project has focused upon addressing these limiting factors. During the design process, an inter-disciplinary oversight team has convened to provide guidance and to ensure that landowners and managers are involved throughout project development. Site and aerial photo analysis was used to identify geomorphic trends in the study area, which will help to determine appropriate restoration actions and future potential modes of channel adjustment in the reach. Hydrologic analysis identified historic flow levels for analysis/modeling based on relevance to fish usage, risks to property, and geomorphic changes over time. A 1-D hydraulic model has been developed to evaluate flow hydraulics under existing and proposed conditions. The

final project design has been completed since June 6th, 2014 and will focus on achieving the restoration objectives and creating and enhancing habitat that has been lost through past and on-going human uses.

5. Project Objective(s)

State the objectives of your proposal including how the project is consistent with Aquatics Fund objectives and recovery plans. Clearly describe the biological benefits and expected outcome of your project. Describe the technical basis for the objectives including the identification of any supporting technical references. Identify biological metrics to help quantify the benefit of the project.

The Haapa Habitat Restoration final design was developed with considerations of the restoration objectives, known constraints, habitat limiting factors, stakeholder input, regulations, safety, and feasibility. A total of seven restoration components were identified and evaluated during Haapa design workgroup meetings. Each component had the potential to be implemented individually; however, some components were enhanced and offered additional benefits if paired with others. During the final workgroup meeting, four of the seven design components were selected and finalized. Of the four select project components, project staff decided to create two succinct treatment phases due to construction access limitations. For example, site access would be severely limited if the side channel was constructed during the first phase, therefore cutting off future excavator/vehicle traffic to the peninsula for riparian maintenance and margin LWD placement. Therefore, we are proposing the Haapa Habitat Restoration Phase I project and secured SRFB funding to complete component #3 and #4.

Funded SRFB – #14-1339 Haapa Habitat Restoration Phase I Objectives:

Component 3. Main Channel Margin Wood Placement: As described in previous sections, historical modifications to both the aquatic and upland habitats have reduced the delivery of large wood into the NF Lewis River. The purpose of placement of margin LWD along 1,100ft of the main stem NF Lewis, will reduce the flow velocity and create habitat complexity suitable for rearing juveniles, with a focus placed on benefitting to age 0 Fall Chinook. Secondary benefits include increase gravel sorting, scour pools, increased habitat diversity, adult holding/refuge, and increased spawning activity (as observed downstream at the Kysar project site). Furthermore, proposed margin LWD placement locations have been selected to avoid areas with existing shallow gravel bars that are known to be high use areas for transient rearing age 0 juvenile fall chinook. The selected construction contractor will create an access road to the lower end of the peninsula and place simple 2-3 log or rootwad structures paired with slash per the #12-1165 SRFB Haapa Habitat Enhancement Phase I final design. Log structures will be secured to vertical piles driving greater than 15ft into the river bed. DOC crews will drill holes through the piles and into the adjoining log or rootwad. Crew will cut a 1” zinc coated threaded steel rod and secure the log ‘pin’ on each end with a 1” nut and oversize flat washer. A minimum of eleven log complexity structures will be placed along the 1,100 ft project reach.

Component 4. Floodplain Roughness and Riparian Enhancement: The riparian restoration of 6.7 acres of peninsula located on the western portion of the NF Lewis floodplain. This site is composed of a mixed community of native species and exotic invasive species such as Scotch Broom, Reed Canary Grass, and Japanese Knotweed. Riparian restoration will include noxious weed removal (both mechanical and herbicide) in areas currently dominated by invasive species and within the disturbance limits of the project. During the spring of 2015, DOC crews will mechanically removal of Scotch broom bushes will use of a weed wrench to pull the entire plant from the ground with minimal disturbance. As the same time, blackberry thickets will be mechanically cleared and the new growth will be sprayed by a licensed herbicide applicator during the Fall. LCFEG plans to coordinate with Clark County Parks and Jeff Wittler, Environmental Resource Manager with Clark County Public Utility District to aggressively treat clusters of Japanese knotweed. Project staff and DOC crews will continue this noxious weed eradication effort for a 3 year duration of the project. Prior to replanting the project site, excavators will access the project site during the summer to place floodplain roughness wood, consisting of single or paired logs anchored to vertical piles or to the surrounding riparian forest. We expect a surge of new Scotch broom starts due to the disturbance by the excavators. Correction crews will continue to remove new Scotch broom starts the following fall/winter during replanting activities. The replanting plan will focus on planting early successional tree and shrub species that will survive in a floodplain with high levels of gravel, cobbles and sand. Floodplain roughness (LWD) logs will also be paired with riparian restoration activities, to create depositional shadows to recruit aggradation of fine sediments, in addition to providing hydraulic protection during high flows. Plant installation will be conducted by DOC crews and each tree/shrub will be protected from beavers with a mesh tube and double staked to the ground. We propose to plant heavily behind floodplain logs since they will offer protection from floods and provide additional moisture and shade during the summer period. LCFEG will direct water/maintenance DOC crews bi-weekly during the summer to ensure is high survival rate. Clark County Parks and nearby Lewis River tree farm have agreed to allow LCFEG access to their water resources. LCFEG will fill two 500-gallon drums paired with a rented two inch trash pump to increase water pressure. Supervised DOC crews will utilized hoses with splitters also fitted with water brake (diffusers) to water each tree/shrub for a designated time/depending upon species and canopy cover. During periods of extended hot/drought-like conditions, crews will water the trees once per week, otherwise we plan to water all 9,820 native trees once every two weeks. The implementation of this component will enhance long-term riparian functions including shade, future wood recruitment, and floodplain stability.

In the future, LCFEG plans to secure funding for Haapa Habitat Restoration Phase II to complete the following:

Component 1. Side-Channel Creation: Excavate 1,186 ft side-channel and provide 23,800 square feet of complex perennial side channel habitat.

Component 2. Backwater Channel Enhancement: Placement of LWD to enhance five acres of backwater habitat.

The Haapa Habitat Enhancement Project will restore critical habitat to benefit ESA-listed salmonids in one of the highest priority reaches in the lower NF Lewis River. This project addresses the Lewis River Aquatic Fund priorities #1 & #3 and has high restoration potential for multiple salmonid populations, including fall Chinook, coho, steelhead, and chum.

Priority 1: *Benefit fish recovery throughout the North Fork Lewis River, with priority to Federal ESA-listed species.*

&

Priority 3: *Enhance fish habitat in the Lewis River Basin-, with priority given to the North Fork Lewis River.*

NF Lewis Fish Benefits:

Chinook – Primary habitat objective is to increase the quantity and quality of shallow margin juvenile rearing habitat consisting of low depths and velocities along gently sloping gravel banks. Provide adult holding habitat in the form of main stem cover. Addressing Chinook spawning is less a focus because most spawning occurs upstream; however, increasing the suitable depth, velocity, and substrate will yield some benefit to the creation of future spawning habitat.

Chum – Provide adult holding habitat in the form of main stem cover. Log margin structures may provide some opportunity for chum spawning and early rearing.

Coho – Enhance juvenile rearing and adult habitat by increasing main stem cover and habitat diversity, via margin LWD placement and providing a source for future LWD input due to riparian enhancement.

Steelhead – Enhance main channel juvenile rearing habitat cover, adult spawning habitat (gravel sorting), and adult holding cover via pool creation/velocity refuge with margin LWD placement and providing a source for future LWD input due to riparian enhancement.

The implementation of the Haapa restoration project will contribute to the recovery of these species by increasing the amount and quality of rearing habitat, including pool quantity and quality, rearing cover and flood refugia, and spawning habitat availability. The project builds upon past success after placement of 1,500ft of LWD complexity structures just downstream of the proposed Haapa project site and observing an immediate fish utilization/response. This project will address the limiting habitat factors in the NF Lewis and create/enhance in-stream habitat to benefit high priority ESA-listed salmon and steelhead populations.

6. Tasks

State the specific actions which must be taken to achieve the project objectives.

Task 1: Finalize Design. Complete final designs and prepare permit applications (including HPA, USACE, and DNR Right of Entry). COMPLETE

Task 2: Secure Construction Funding: LCFEG plans to submit the Haapa Habitat Enhancement project to SRFB during 2014. We strongly believe this project will be selected for SRFB funding during 2015. COMPLETE

(Contingent upon securing SRFB funds) SECURED 12/2014

Task 3: Contracting. Selection of the construction contractor to implement the final designs created by the Haapa Habitat Enhancement Design project (#12-1165). Inter-Fluve and LCFEG will provide construction oversight.

Task 4: Project implementation, Dec 2014 – March 2015. Permitting/Landowner access agreement (BPA & WDFW). Secure signed landowner agreement forms and submit all relevant permitting applications for summer of 2015 construction. Acquire bare root tree stock, plant into containerized pots and grow in LCFEG's greenhouse. Begin mechanical/physical removal of noxious weed species, specific to blackberry and scotch broom. Begin herbicide injection treatment into clusters of Japanese knotweed.

Task 5: April – June 2015. Contracting/Material Acquisition. Selection of the construction contractor per Haapa Habitat Enhancement Design project (#12-1165). Collection/ stockpile of LWD. Continue Scotch broom removal.

Task 6: August – September 2015. Phase I: Main stem LWD placement. Inter-Fluve and LCFEG will provide construction oversight, Larch DOC crews will secure log structure.

Task 7: October 2015 – February 2016. Riparian planting component; containerized plant installation and continued invasive plant removal, herbicide application. Second round of bare root trees planted and grown in LCFEG's greenhouse.

Task 8: July – September 2016. Maintenance of LWD structures as needed. Summer watering schedule, bi-weekly.

Task 9: October 2016 – February 2017. Final riparian planting component; containerized plant installation and continued invasive plant removal, herbicide application. Follow-up riparian enhancement maintenance. (If needed) Third round of bare root trees planted and grown in LCFEG's greenhouse.

Task 10: July – September 2017. Maintenance of LWD structures as needed. Summer watering schedule, bi-weekly.

Task 11: October 2017 – February 2018. Final plant installation (if needed) and continued invasive plant removal, herbicide application. Follow-up riparian enhancement maintenance.

Task 12: March – June 2018. As-built design if needed, final project report.

Warning signage will be placed at the Haapa Boat launch in addition to boating warning signs both upstream and downstream of the project site.

7. Methods

Describe methods to be used. When using Best Management Practices (BMPs) identify sources of BMPs and how they will protect resource values.

Methods for design and construction have and will follow established protocols that have a proven track record for successfully improving habitat conditions in the Lewis River Basin and in the Lower Columbia Region as a whole. Design, engineering and construction techniques, as well as benefits of proposed enhancements for fish habitat, are well-documented (e.g. Washington Stream Habitat Restoration Guidelines). The project sponsor (LCFEG) and project consultant (Inter-Fluve) have an extensive experience designing these types of enhancement features and successfully placed and secured 15 log complexity structures less than a ½ mile downstream. We expect to hire a contractor with tracked excavators and haul trucks to implement the final designs for the project. Access for construction will occur from the NE 434th roadway and the Clark County Haapa Boat Launch. Any areas disturbed by construction will be re-planted with native riparian species and follow accepted stream restoration and engineering standards, best management practices and guidelines (e.g. Saldi-Caromile et al. 2004).

8. Specific Work Products

Identify specific deliverable results of the project. Project managers will be required to provide status updates with submission of project invoices.

Benefits of project will be increased number pools, habitat complexity/diversity, increased spawning and rearing habitat associated with LWD placement, floodplain roughness and riparian plantings. We expect to see an increased number of juvenile Chinook, Coho and steelhead occupying the new complex habitat additions similar to the results observed after the RM 13.5 main stem was treated with LWD complexity structures.

Deliverables:

- 1) Final Design packages, Design narrative report
- 2) Permits
- 3) Construction, placement of >110 pieces of wood
- 4) As-built drawings
- 5) Tech memo of monitoring results

Habitat Enhancement Deliverables:

- 1) Placement > 10 main stem margin complexity log structures, create a minimum of 8 new pools.
- 2) Floodplain roughness and riparian enhancement = 172,240 ft²
- 3) Increase in observed juvenile and adult fish use/productivity near LWD structures

9. Project Duration

- a. Identify project duration.
2015 – December 2018

b. Provide a detailed project schedule to include:

Task 1: Dec 2014 – March 2015. Permitting/Landowner access agreement (BPA & WDFW). Secure signed landowner agreement forms and submit all relevant permitting applications for summer of 2015 construction. Acquire bare root tree stock, plant into containerized pots and grow in LCFEG's greenhouse. Begin mechanical/physical removal of noxious weed species, specific to blackberry and scotch broom. Begin herbicide injection treatment into clusters of Japanese knotweed.

Task 2: April – June 2015. Contracting/Material Acquisition. Selection of the construction contractor per Haapa Habitat Enhancement Design project (#12-1165). Collection/ stockpile of LWD. Continue Scotch broom removal.

Task 3: August – September 2015. Phase I: Main stem LWD placement. Inter-Fluye and LCFEG will provide construction oversight, Larch DOC crews will secure log structures.

Task 4: October 2015 – February 2016. Riparian planting component; containerized plant installation and continued invasive plant removal, herbicide application. Second round of bare root trees planted and grown in LCFEG's greenhouse.

Task 5: July – September 2016. Maintenance of LWD structures as needed. Summer watering schedule, bi-weekly.

Task 6: October 2016 – February 2017. Final riparian planting component; containerized plant installation and continued invasive plant removal, herbicide application. Follow-up riparian enhancement maintenance. (If needed) Third round of bare root trees planted and grown in LCFEG's greenhouse.

Task 7: July – September 2017. Maintenance of LWD structures as needed. Summer watering schedule, bi-weekly.

Task 6: October 2017 – February 2018. Final plant installation (if needed) and continued invasive plant removal, herbicide application. Follow-up riparian enhancement maintenance.

Task 7: March – June 2018. As-built design if needed, final project report.

10. Permits and Authorizations

Identify any applicable permits and resource surveys required for project. Please include timeline for obtaining and any action taken to-date. Applicant will be responsible for securing all such necessary permits.

On-the-ground (dirt moving) projects will be required to be in compliance with Sections 401 and 404 of the Clean Water Act, Sections 7 and 10 of the Endangered Species Act, and the

National Historic Preservation Act of 1966, as well as Department of the Interior regulations on hazardous substance determinations. Project site surveys may be required in order to comply with these and other regulations. Obtain permission of all owners of land used for access to and completion of, the project. Landowner(s) must sign PacifiCorp's consent and release form prior to finalization of a Funding Agreement with PacifiCorp.

The Haapa Habitat Enhancement project will require the following permitting documents; USACE NWP 27, DAHP, WDFW HPA and landowner agreements with two private and four governmental agency landowners.

11. Matching Funds and In-kind Contributions

Request: \$40,000 ACC Fund

\$110,520 LCFEG (in-kind)

\$292,460 SRFB (Funded 12/2014)

12. Peer Review of Proposed Project

This proposal is the product of a design proposal reviewed and approved for funding by numerous resource professionals on behalf of the Lower Columbia Fish Recovery Board and Salmon Recovery Funding Board (SRFB).

13. Budget

See Attached

14. Photo Documentation (Per National Marine Fisheries Service's Biological Opinion for Relicensing of the Lewis River Hydroelectric Projects):

Monitoring procedures will be developed collaboratively with Inter-fluve. Reporting of results will be done using ACC protocols (if existing), or standard SRFB protocols which include a final as-built report and photo summary.

15. Insurance. All qualifying applicants shall comply with PacifiCorp's insurance requirements set forth in Appendix E. The policy limits are deemed sufficient by PacifiCorp for project activities involving significant risk, including placement of large woody debris in navigable waterways, and are presumed to be sufficient for all activities likely to be funded under this RFP.

Should applicant's insurance program not meet these requirements, bid pricing should include any additional costs applicant would incur to comply with these requirements.

Attachment 2

ACC Questions/Comments:

Does this project address any invasive weed issues that may be on site?

Yes. We propose to restore of more than five acres of the western floodplain that includes property ownership by WDFW, Loomis, Kysar, Clark Parks, and BPA. Invasive species have established a foothold in the area and are continuing to spread. Invasives include

Scotch broom (*Cytisus scoparius*), Himalayan blackberry, reed canary grass (*Phalaris arundinacea*), and Japanese knotweed (*Fallopia japonica*). We are planning to mechanically clear the noxious weed species, apply herbicide treatment during the fall and replant with native species. Placement of floodplain roughness features (LWD) will be pair with dense riparian planting to create vegetated islands during bank full flood events. We believe controlling invasives and re-establishing a native vegetation community is an important component of this project and will support long-term ecological processes and future LWD/habitat formation.

Are landowner agreements in place?

LCFEG and Inter-Fluve Inc. have been collaborating with Federal, state and private landowners during the development of the Haapa Habitat project designs. We have received landowner right of entry forms from BPA, Clark County Parks, and WDFW and coordinated heavily with the private landowners, Loomis and Kysar. We will not pursue landowner agreements until the final design has been completed.

Project should include total cost. Difficult to evaluate this project due to lack of true project designs. Inclusion of professional grade designs would assist in understanding the project and potentially support for funding request.

We have updated the project designs and completed a professional grade 90% design, including a cost estimate.

Supportive of all components with the exception of No. 1 and No. 2. The benefits of these two components should be detailed out and have data to support expenditures.

At this time - We are no longer requesting restoration funding for these two components.

Component 1. Side-Channel Creation: The proposed 1,186 ft side-channel will create 23,800 square feet of complex habitat – a habitat type that the NF Lewis no longer creates itself due to past gravel removal, interruption of bedload transport, lack of large log jams, peak flow disturbance due to flow regulation and associated feedback with channel processes. Side channel construction and excavation totals (therefore cost) are minimal due to utilizing a relic flood over flow channel depression that was located during ground based surveys. The flow-through side-channel is expected to be used by coho (spawning and rearing), winter steelhead (rearing), Chinook (transient rearing along the margins of a flow-through channel), and chum (spawning).

Component 2. Backwater Channel Enhancement: Currently, the backwater is adjacent to a steep armored bank on the left side, and a gradual natural bank on the right side. Although existing conditions provide velocity refuge from the main channel, there is very little cover, habitat complexity associated with LWD, or refuge from avian predators. Large wood placements would consist of accumulations/jams of approximately 3 – 5 pieces per structure, loaded with slash (limbs/brush) to provide overhead cover, interstitial spaces for micro habitats, and to provide complexity to the existing margin habitat. There is fish access to this backwater habitat year-round, however there is a large opportunity to greatly improve habitat conditions for both summer rearing and winter flood refuge to primarily benefit rearing coho and steelhead juveniles.

Placing LWD in the main stem Lewis seems risky. Does the project create a boating hazard?

The margin LWD placements have been designed to provide the habitat complexity and suitable rearing habitat during low flow that would historically been provided by naturally occurring LWD in the system. The proposed LWD margin wood placement locations have been selected to avoid areas with high levels of recreational boat traffic. LCFEG and Inter-Fluve have been monitoring similar types of LWD complexity structures less than a mile downstream at our recently (2012) completed RM 13.5 side channel. We have monitored these structures to ensure they do not become boating hazards. Furthermore, monitoring efforts have documented high numbers of adult and juvenile salmonids occupying the new habitat.

Will the expected benefits be sustainable over the long term. Concerned about the long term stability of the back channel.

The multi-faceted purpose of the design criteria defined project elements to ensure goals and objectives are achieved, and considered/addressed landowner constraints and concerns. The deliverables of the Haapa design implores habitat restoration techniques that have been proven to be successful in the creation and enhancement of fish habitat, per the RM 13.5 Ksyar side channel & main stem margin LWD treatment just downstream. The project components/objectives have been developed based on site visits, and extensive topographic survey, LiDAR analysis, geomorphic analysis, and hydraulic modeling. The evaluation of the site during the design development leads us to believe this project will remain stable and function as designed in a variety of hydrological scenarios.

Insurance Requirements

1. INSURANCE

Without limiting any liabilities or any other obligations of [CONTRACTOR], [CONTRACTOR] shall, prior to commencing the Project, secure and continuously carry with insurers having an A.M. Best Insurance Reports rating of A-:VII or better the following insurance coverage:

1.1 Workers' Compensation. [CONTRACTOR] shall comply with all applicable Workers' Compensation Laws and shall furnish proof thereof satisfactory to PacifiCorp prior to commencing the Project.

All Workers' Compensation policies shall contain provisions that the insurance companies will have no right of recovery or subrogation against PacifiCorp, its parent, divisions, affiliates, subsidiary companies, co-lessees, or co-venturers, agents, directors, officers, employees, servants, and insurers, it being the intention of the parties that the insurance as effected shall protect all parties.

1.2 Employers' Liability. Insurance with a minimum single limit of \$1,000,000 each accident, \$1,000,000 disease each employee, and \$1,000,000 disease policy limit.

1.3 Commercial General Liability. The most recently approved ISO policy, or its equivalent, written on an occurrence basis, with limits not less than \$1,000,000 per occurrence/ \$2,000,000 general aggregate (on a per location and/or per job basis) bodily injury (with no exclusions applicable to injuries sustained by volunteers working or participating in the Project) and property damage, including the following coverages:

- a. Premises and operations coverage
- b. Independent contractor's coverage
- c. Contractual liability
- d. Products and completed operations coverage
- e. Coverage for explosion, collapse, and underground property damage
- f. Broad form property damage liability
- g. Personal and advertising injury liability, with the contractual exclusion removed
- h. Sudden and accidental pollution liability, if appropriate
- i. Watercraft liability, either included or insured under a separate policy

1.4 Business Automobile Liability. The most recently approved ISO policy, or its equivalent, with a minimum single limit of \$1,000,000 each accident for bodily injury and property damage including sudden and accidental pollution liability, with respect to [CONTRACTOR]'s vehicles whether owned, hired or non-owned, assigned to or used in the performance of the Project.

1.5 Umbrella Liability. Insurance with a minimum limit of \$4,000,000 each occurrence/aggregate where applicable to be provided on a following form basis in excess of the coverages and limits required in Employers' Liability insurance, Commercial General Liability insurance and Business Automobile Liability insurance above. [CONTRACTOR] shall notify PacifiCorp, if at any time their minimum umbrella limit is not available during the term of this Agreement, and will purchase additional limits, if requested by PacifiCorp.

1.6 In addition to the requirements stated above any and all parties providing underground locate, engineering, design, or soil sample testing services including [CONTRACTOR], subcontractor and all other independent contractors shall be required to provide the followings insurance:

Professional Liability: [CONTRACTOR] (or its contractors) shall maintain Professional Liability insurance covering damages arising out of negligent acts, errors or omissions committed by [CONTRACTOR] (or its contractors) in the performance of this Agreement, with a liability limit of not less than \$1,000,000 each claim. [CONTRACTOR] (or its subcontractors of any tier) shall maintain this policy for a minimum of two (2) years after completion of the work or shall arrange for a two (2) year extended discovery (tail) provision if the policy is not renewed. The intent of this policy is to provide coverage for claims arising out of the performance of work or

services contracted or permitted under this Agreement and caused by any error, omission for which the [CONTRACTOR] its subcontractor or other independent contractor is held liable.

Except for Workers' Compensation insurance, the policies required herein shall include provisions or endorsements naming PacifiCorp, its affiliates, officers, directors, agents, and employees as additional insureds.

To the extent of [CONTRACTOR]'s negligent acts or omission, all policies required by this Agreement shall include provisions that such insurance is primary insurance with respect to the interests of PacifiCorp and that any other insurance maintained by PacifiCorp is excess and not contributory insurance with the insurance required hereunder, provisions that the policy contain a cross liability or severability of interest clause or endorsement, and that [CONTRACTOR] shall notify PacifiCorp immediately upon receipt of notice of cancellation, and shall provide proof of replacement insurance prior to the effective date of cancellation. No required insurance policies, except Workers' Compensation, shall contain any provisions prohibiting waivers of subrogation. Unless prohibited by applicable law, all required insurance policies shall contain provisions that the insurer will have no right of recovery or subrogation against PacifiCorp, its parent, affiliates, subsidiary companies, co-lessees, agents, directors, officers, employees, servants, and insurers, it being the intention of the Parties that the insurance as effected shall protect all parties.

A certificate in a form satisfactory to PacifiCorp certifying to the issuance of such insurance shall be furnished to PacifiCorp prior to commencement of the Project by [CONTRACTOR] or its volunteers or contractors. If requested, [CONTRACTOR] shall provide a copy of each insurance policy, certified as a true copy by an authorized representative of the issuing insurance company, to PacifiCorp.

[CONTRACTOR] shall require subcontractors who perform work at the Project to carry liability insurance (auto, commercial general liability and excess) workers' compensation/employers' or stop gap liability and professional liability (as required) insurance commensurate with their respective scopes of work. [CONTRACTOR] shall remain responsible for any claims, lawsuits, losses and expenses including defense costs that exceed any of its subcontractors' insurance limits or for uninsured claims or losses.

PacifiCorp does not represent that the insurance coverage's specified herein (whether in scope of coverage or amounts of coverage) are adequate to protect the obligations [CONTRACTOR], and [CONTRACTOR] shall be solely responsible for any deficiencies thereof.

RESTORATION

See SRFB Manual 5 for additional information regarding allowable costs.

			OVERALL PROJECT	GRANT REQUEST	MATCH			
			<i>Budget must account for all costs to complete the project</i>	<i>Enter only the amount of the grant request</i>	<i>The Grant Request and Match should equal the total project cost and Budget Check cell should be 0. Sponsors must account for all sources and types of match need to complete the project.</i>			
Category	Qty	Rate	Amount	Amount	Match	Source (Grant, Cash, Materials, Labor, Volunteers, etc)	Type (Federal, State or Local?)	Match used in PRISM? (Yes/No)
Mobilization and demobilization	1	\$10,000	\$ 10,000	\$ 10,000	\$ -			
Site Access Measures	1	\$10,000	\$ 10,000	\$ 10,000	\$ -			
Dewatering and environmental protection measures	1	\$3,000	\$ 3,000	\$ 3,000	\$ -			
LWD- logs & rootwads + install	110	\$600	\$ 66,000	\$ 36,000	\$ 30,000	Grant/Cash	Local - PacifiCorp ACC Fund	Yes
LWD- Racking wood/slash	10	\$1,000	\$ 10,000	\$ 5,000	\$ 5,000	Grant/Cash	Local - PacifiCorp ACC Fund	Yes
LWD- Wood pile logs	160	\$200	\$ 32,000	\$ 27,000	\$ 5,000	Grant/Cash	Local - PacifiCorp ACC Fund	Yes
Misc. Project Materials	1	\$15,000	\$ 15,000	\$ 15,000	\$ -			
Misc. rented tools and equipment repair	1	\$10,000	\$ 10,000	\$ 10,000	\$ -			
Riparian plants- rooted Dee pot Willow/Dogwood	2,000	\$1.05	\$ 2,100	\$ 1,200	\$ 900	Materials	Local - LCFEG	Yes
Riparian plants, T-1 One gallon containerized	9,820	\$2.50	\$ 24,550	\$ 11,000	\$ 13,550	Materials	Local - LCFEG	Yes
Riparian plants- Native live-cuttings Willow sp.	3,840	\$0.81	\$ 3,110	\$ -	\$ 3,110	Materials	Local - LCFEG	Yes
Potting Soil	70	\$40	\$ 2,800	\$ 2,800	\$ -			
Licensed Herbicide applicator	4	\$900	\$ 3,600	\$ 3,600	\$ -			
Roots Terra-sorb absorbant	4	\$400	\$ 1,600	\$ 1,600	\$ -			
Planting supplies (stakes, tubes)	9,820	\$3	\$ 29,460	\$ 29,460	\$ -			
Satellite Phone - DOC crew/contact Larch mtn	5	\$600	\$ 3,000	\$ 3,000	\$ -			
STotal			\$ 226,220	\$ 168,660	\$ 57,560			
Contract Labor								
Labor- LCFEG Construction Mgmt.	120	\$65	\$ 7,800	\$ 7,800				
Labor- LCFEG Crew Supervision	83	\$300	\$ 24,900	\$ 24,900				
Labor- DOC Contract/officer	83	\$200	\$ 16,600	\$ 16,600				
Labor- Donated (DOC Larch Mtn Crew)	6,640	\$14	\$ 92,960	\$ -	\$ 92,960	Labor	Local - LCFEG/Larch	yes
STotal			\$ 142,260	\$ 49,300	\$ 92,960			
Permits and Surveys								
BPA Right of Entry LURR application	1.00	\$ 4,500.00	\$ 4,500	\$ 4,500				
STotal			\$ 4,500	\$ 4,500	\$ -			
Section Total			\$ 372,980	\$ 222,460	\$ 150,520			
A&E								
Audit, Accounting, Project Management	1	\$ 70,000	\$ 70,000	\$ 70,000	\$ -			
A&E maximum allowed		\$ 111,894.12		\$ -				
A&E validation		41,894						
GTOTAL			\$ 442,980	\$ 292,460	\$ 150,520			

Lewis River Fish Passage Report

October 2014

Merwin Fish Collection Facility and General Operations

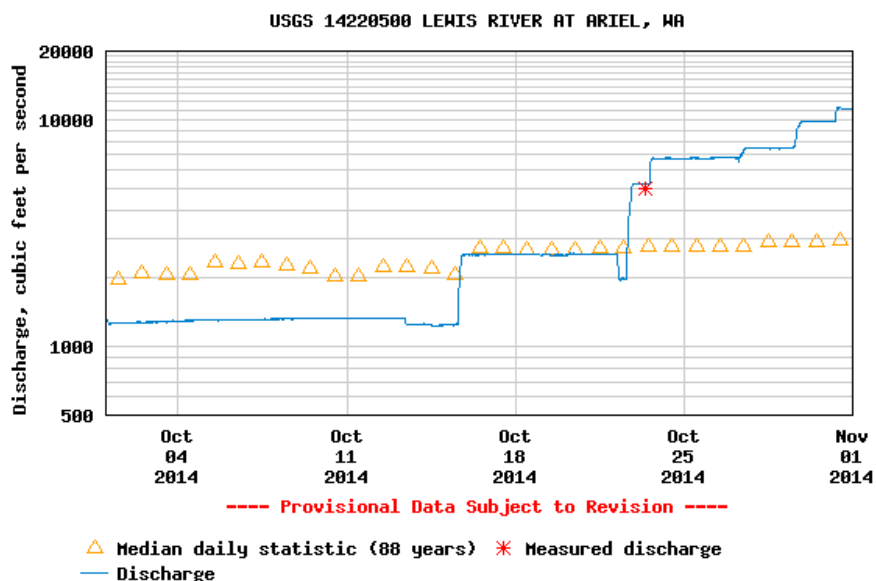
During the month of October, a total 11,121 fish were captured at the Merwin Fish Collection Facility; the majority (81%) of these fish were early run coho (n = 8,980). Of the 8,980 early run coho collected, 93 were wild fish that were previously captured at the Merwin fish collection facility and marked in addition to two late wild run coho; these fish were returned to the lower river. A total 667 hatchery summer steelhead were captured and of these 116 were fish that were previously captured at the collection facility. Eight wild summer steelhead and seventy-eight wild fall Chinook were captured and returned to the lower river. All coded wire tagged (CWT) coho, hatchery summer steelhead, and adipose clipped fall Chinook were transported to Lewis River Fish Hatchery and processed by WDFW. In addition, other species collected in October included cutthroat trout (n=17), sockeye salmon (n=19), and resident rainbow trout (n = 61).

To date, spring Chinook (n=934), early run coho (n=12,042), late run coho (n=1,156) and fall Chinook (n=363) have been captured at the Merwin Fish Collection Facility this year. The Merwin Fish Collection Facility was not in operation on October 27th and October 28th due to a mechanical failure of the fish lift and conveyance system. The trap was put back into operation October 29th.

The Auxiliary Water Supply (AWS) system, which can boost attraction flow up to 400 cfs, was operated daily except for on October 30th and 31st, when turbines were shut down for inspection. The Ladder Water Supply (LWS) was operated daily throughout the month of October.

River flow below Merwin Dam ranged between approximately 1,280 cfs to 11,300 cfs during October. One spill event occurred on October 27th, 2014.

Discharge, cubic feet per second



Upstream Transport

A total 981 early run coho were collected from the Merwin fish trap in October and transported upstream of Swift Dam. In addition, one cutthroat trout greater than 13 inches was also transported upstream in October. To date, a total 1,033 (452 m: 581 f) BWT winter steelhead, 9,179 early run coho (4,788 m: 4,217 f: 174 Jack), and 19 cutthroat trout exceeding 13 inches in length have been transported and released into the headwaters of Swift Reservoir for 2014.

Swift Floating Surface Collector

The FSC was turned off on August 29th, 2014 for annual maintenance followed by contracted work scheduled throughout the month of September. The FSC was put back into service on October 9th, 2014. A total of 520 fish were collected during the month of October. The majority (52 percent) of these fish were coho smolts (n=271), followed by Chinook smolts (n=236), juvenile steelhead (n=6), hatchery rainbow trout (n=4), cutthroat trout (n=2), and bull trout (n=1). One juvenile bull trout was captured and returned back to Swift Reservoir along with four hatchery rainbow trout.

Fish Facility Report
Swift Floating Surface Collector
October 2014

Day	Coho		Chinook		Steelhead			Cutthroat			Bull Trout			Planted Rainbow	Total
	fry	smolt	fry	smolt	fry	smolt	kelt	fry	< 13 in	> 13 in	fry	< 13 in	> 13 in		
01															
02															
03															
04															
05															
06															
07															
08															
09															
10	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2
11	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
12	0	3	0	1	0	0	0	0	0	0	0	0	0	2	6
13	0	2	0	0	0	0	0	1	0	0	0	0	0	0	3
14	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3
15	0	1	0	5	2	0	0	0	0	0	0	0	0	0	8
16	0	1	0	4	0	0	0	0	0	0	0	1	0	0	6
17	0	3	0	6	0	0	0	0	0	0	0	0	0	0	9
18	0	0	0	8	0	0	0	0	0	0	0	0	0	1	9
19	0	1	0	3	0	0	0	0	0	0	0	0	0	0	4
20	0	1	0	5	0	0	0	0	0	0	0	0	0	0	6
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	7	0	5	0	0	0	0	0	0	0	0	0	0	12
23	0	8	0	7	0	0	0	0	0	0	0	0	0	0	15
24	0	9	0	11	0	1	0	0	0	0	0	0	0	0	21
25	0	16	0	9	0	0	0	0	0	0	0	0	0	0	25
26	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
27	0	48	0	61	0	0	0	0	0	0	0	0	0	0	109
28	0	44	0	49	0	0	0	0	0	0	0	0	0	1	94
29	0	29	0	20	0	1	0	0	0	0	0	0	0	0	50
30	0	62	0	9	0	2	0	0	1	0	0	0	0	0	74
31	0	34	0	28	0	0	0	0	0	0	0	0	0	0	62

Monthly 0 271 0 236 2 4 0 1 1 0 0 1 0 4 **520**
Annual 1520 6400 0 1143 3 516 6 150 733 3 0 4 2 643 **11123**

The FSC was turned off on August 29th, 2014 for annual maintenance and was back in service on October 9th, 2014.



Monday, November 3rd, 2014

