

2007 Final Annual Report – Lewis River Aquatic Fund Projects

Lewis River Hydroelectric Projects FERC Nos. 935, 2071, 2111, 2213



Submitted by PacifiCorp Energy and Public Utility District
No. 1 of Cowlitz County



April 9, 2007

Introduction

This 2007 Final Annual Report prepared by PacifiCorp Energy and the Public Utility District No. 1 of Cowlitz County, Washington (“Cowlitz PUD”) (collectively the “Utilities”) is provided to the Lewis River Settlement Agreement Parties to fulfill the reporting requirement in Article 7.5.3.2 (5) of the Settlement Agreement (SA). This report identifies the actions and selection of Aquatic Resource Projects (Resource Projects) to be funded from the Lewis River Aquatic Fund established under terms of the SA (Article 7.5, see Appendix A). Although the funding process was managed by the Utilities, the Aquatic Coordination Committee (ACC) provided final approval of funded projects. This report includes only Resource Projects selected from the 2006/2007 funding process, additional projects are expected to be selected and funded annually following the process established by the ACC.

This 2007 report is available to the Public on PacifiCorp Energy’s website at <http://www.pacificorp.com/Article/Article71316.html>. Copies of this report are available from PacifiCorp Energy.

Background

PacifiCorp Energy owns the Merwin, Yale, and Swift No. 1 hydroelectric projects on the Lewis River in southwest Washington. Cowlitz PUD owns the Swift No. 2 hydroelectric project, also located on the Lewis River. These projects are operated as a coordinated system by PacifiCorp Energy. On November 30, 2004, the Lewis River Settlement Agreement established the Lewis River Aquatics Fund (Fund). The purpose of the Fund is to support resource protection measures through funding aquatic related projects in the Lewis River basin.

As identified in the SA:

“Resource Projects may include, without limitation, projects that enhance and improve wetlands, riparian, and riverine habitats; projects that enhance and improve riparian and aquatic species connectivity that may be affected by the continued operation of the hydroelectric projects; and projects that increase the probability for a successful reintroduction program upstream of Merwin Dam. Species that are targeted to benefit from Resource Projects include Chinook, steelhead, coho, bull trout, chum, and sea-run cutthroat.”

Under the direction of the SA, the Utilities in Consultation with the ACC developed the “Aquatics Fund -- Strategic Plan and Administrative Procedures” (September 2005). This strategic plan provides: (a) a guide to Resource Project development, solicitation, and review; and (b) provides administrative procedures to guide implementation of the Aquatics Fund. The strategic plan is available to the Public on PacifiCorp Energy’s website at <http://www.pacificorp.com/Article/Article49203.html>.

On September 5, 2006, PacifiCorp announced the availability of funds for aquatic related projects in the Lewis River Basin (Letter to interested parties from T. Olson, PacifiCorp). The letter requested that individuals or parties interested in obtaining project funding submit a Pre-Proposal to PacifiCorp. Pre-Proposals were due by October 6, 2006.

In response to the announcement letter, three entities provided thirteen different project Pre-Proposals. They include:

U.S. Forest Service	East Fork Lewis River Instream Structures Steelhead
U.S. Forest Service	Bull trout Restoration and Management Plan for the Lewis River
U.S. Forest Service	Dispersed Camping and Day Use Road Restoration
U.S. Forest Service	Muddy River Floodplain Nutrient Enhancement
U.S. Forest Service	Scotch Broom Removal on the Muddy River Floodplain
U.S. Forest Service	Pine Creek Nutrient Enhancement
U.S. Forest Service	PIT Tag Detectors for Bull Trout in Upper Lewis River
U.S. Forest Service	9015 Culvert Replacement
U.S. Forest Service	Rush Creek Gravel Restoration
Cowlitz Indian Tribe	Martin Access Riparian Forest and Off-channel Habitat Enhancement
Cowlitz Indian Tribe	Plas Newydd Riparian Forest Enhancement
Cowlitz Indian Tribe	Two Forks Access Riparian Forest Enhancement
Stillwater Sciences, Inc.	Prioritizing bull trout habitat restoration for the Lewis River: Development of a decision support tool to guide identification and selection of cost effective restoration projects

Following the Aquatics Fund – Strategic Plan and Administrative Procedures, PacifiCorp and Cowlitz PUD reviewed and evaluated the Pre-Proposals and, on November 9, 2006, provided the ACC with a list of projects recommended for further consideration (Memo to ACC from Shrier – PacifiCorp and Gritten-MacDonald – Cowlitz PUD). In general the Utilities evaluation suggested that while additional information is needed before a commitment of funds should be given, the following projects be solicited to provide complete Proposals:

- Dispersed Camping and Day Use Road Restoration
- Muddy River Floodplain Nutrient Enhancement
- Pine Creek Nutrient Enhancement
- PIT Tag Detectors for Bull Trout in Upper Lewis River
- 9015 Culvert Replacement
- Rush Creek Gravel Restoration
- Martin Access Riparian Forest and Off-channel Habitat Enhancement
- Plas Newydd Riparian Forest Enhancement
- Two Forks Access Riparian Forest Enhancement

The following Pre-Proposals were not selected for further consideration by the Utilities given either geographic location or minimal immediate benefit to instream aquatic habitat.

- East Fork Lewis River Instream Structures Steelhead
- Bull Trout Restoration and Management Plan for the Lewis River
- Scotch Broom Removal on the Muddy River Floodplain
- Prioritizing bull trout habitat restoration for the Lewis River: Development of a decision support tool to guide identification and selection of cost effective restoration projects

At the request of USFWS, PacifiCorp scheduled a conference call meeting on December 5, 2006 to discuss the recommendations of the Utilities and the ACC.

At the December 14, 2006, ACC meeting, the ACC concurred with the Utilities evaluation and selected the nine aquatic project Pre-Proposals for additional consideration. Shortly thereafter PacifiCorp notified the project sponsors and requested full Proposals by January 26, 2007. Upon the due date, nine proposals were submitted. Following receipt of the proposals the Utilities' Subject Matter Experts evaluated and scored the above proposals. Evaluations were conducted as outlined in the *Aquatic Fund – Strategic Plan and Administrative Procedures* document. On February 5, 2007, the ACC was provided a memo (Subject: Review of CY 2006 Aquatic Fund Proposals) providing a description of the proposed Resource Projects, the Utilities evaluation of projects, and the Utilities basis for recommending or not recommending a project for funding (Memo to ACC from Shrier – PacifiCorp and Gritten-MacDonald – Cowlitz PUD).

Following a review period the ACC met on March 8, 2007, to discuss funding the above aquatic projects. Consensus was reached on a final Resource Project list as follows:

Projects Selected for Funding:

- Dispersed Camping and Day Use Road Restoration
- Pine Creek Nutrient Enhancement
- Rush Creek Gravel Restoration
- Martin Access Riparian Forest and Off-channel Habitat Enhancement
- Plas Newydd Riparian Forest Enhancement
- Two Forks Access Riparian Forest Enhancement

Projects Not Selected for Funding:

- Muddy River Floodplain Nutrient Enhancement
- PIT Tag Detectors for Bull Trout in Upper Lewis River
- 9015 Culvert Replacement
- Bull Trout Restoration and Management Plan for the Lewis River

The ACC elected to modify some of the projects from their original proposal. Projects include: Dispersed Camping and Day Use Road Restoration, Martin Access Riparian Forest and Off-channel Habitat Enhancement, Plas Newydd Riparian Forest Enhancement, and Two Forks Access Riparian Forest Enhancement. Changes are identified in the following project descriptors and will be further memorized in project contracting between PacifiCorp Energy and project owner. All changes are acceptable to the respective project owners.

Projects Selected for Funding

The following is a summary description of the individual Resource Projects to be funded by the Aquatics Fund. All of such projects are expected to promote the recovery of anadromous fish post re-introduction above the Lewis River dams, and the federally listed bull trout which spend a portion of their life history in the Lewis River hydroelectric project reservoirs. Included for each project is an overview of the original proposal, any ACC modifications to the project, and identification of Resource Project nexus to the hydroelectric projects. Final Resource Project Plans are provided as appendices to this document.

1) Dispersed Camping and Day Use Road Restoration

Proposed by the USFS, this project will close and/or decommission 6.75 miles of roads and associated dispersed campsites. Roads identified for such actions are non-maintained roads that are not part of the formal Forest road network. These roads lead to dispersed campsites in sensitive riparian areas and access streams where the public have been known to illegally fish for bull trout, erode soil, disrupt the natural streamside habitat, and leave garbage. Intent of project is to reduce access and return disturbed areas to natural habitat. This project requested \$77,000 and would be completed in 2008 or 2009 dependent on acquisition of required permits.

Following ACC review and discussion, the specific action for several roads were modified from road decommissioning to installation of an access gate. Gates would allow access for Washington Department of Fish and Wildlife researchers for ongoing monitoring. At locations already gated and seasonally closed for wildlife, roads would be permanently closed. This project was approved by the ACC and granted funding of \$77,000. The final Resource Project Plan is provided in Appendix B.

Bull trout and future returning adult anadromous fish will benefit from the road closure and decommissioning actions. Access to potential poaching areas will be reduced and habitat will be restored. The increased spawning success of adult fish will result in increased populations of the federally listed bull trout and establishment of upper Lewis Basin stocks of anadromous fish. Road decommissioning and stabilization, along with habitat restoration will benefit aquatic and riparian processes by reducing riparian habitat fragmentation within Riparian Reserves, reducing surface and fill-slope erosion and road-related mass wasting hazards, and by increasing infiltration rates and restoring surface and subsurface flow patterns and hydrologic processes.

2) Pine Creek Nutrient Enhancement

This USFS sponsored project is to provide a second year of nutrient enhancement to Pine Creek via the addition of fish carcasses or carcass analogs. Nutrients would be applied to approximately four miles of the creek. Based on the ACC direction, carcasses will be targeted for instream distribution only. Through increased instream nutrient availability, instream primary production should lead to increased secondary production of aquatic macro-invertebrates, which juvenile bull trout and other salmonids feed upon. The activity may also assist/promote the establishment of new riparian and flood plain vegetation and increase existing plant growth resulting in additional shade over the waterway. This project requested a funding amount of \$43,150 and would be completed in the winter of 2007-2008 to mimic natural coho spawning periods.

In consideration by the ACC, an increased emphasis was given to the placement of carcasses directly into the stream and not onto the banks. Project was granted funding of \$43,150. The final Resource Project Plan is provided in Appendix C.

The Lewis River hydroelectric projects are currently passage barriers to anadromous fish. Without passage, salmon and steelhead have been eliminated from historic areas in the upper basin where they once returned to spawn. This impact has resulted in a decrease of nutrients derived from outside of the basin to these areas. Nutrient enhancement via the placement of salmon carcasses or carcass analogs would help offset this effect in streams of historical anadromy.

3) Rush Creek Gravel Restoration

Proposed by the USFS, this project will place approximately 100 to 150 cubic yards of gravel in stream margins and slow-water wide spots in Rush Creek. Gravel placement will restore dwindling supplies of native gravels. Bull trout spawning surveys of Rush Creek show fish frequently use the creek for spawning and that spawning gravel is very limited and is not replacing itself during scour events. Gravel supplementation will provide an immediate benefit to spawning bull trout. The project requested \$20,000 and would be completed in July 2007 (assuming acquisition of permits) to avoid conflicts with spawning bull trout. If permits are not acquired in a timely manner, project will be completed in July 2008.

ACC representatives agreed to fund this project as originally proposed with the addition of an opportunity for the ACC to review final gravel enhancement sites prior to gravel placement. The final Resource Project Plan is provided in Appendix D.

The placement of gravel will directly enhance instream habitat areas used by bull trout and historically used by anadromous salmonids. Assuming successful retention, new gravel will expand spawning areas for listed and re-introduced species found within the hydroelectric project area.

4) Martin Access Riparian Forest and Off-channel Habitat Enhancement

This project, proposed by the Cowlitz Indian Tribe, is to restore the Martin Access riparian zone and increase function aquatic habitat in the lower Lewis River.

Enhancement activities include planting native trees and shrub species appropriate to forested riparian zones. Location of individual plantings will consider rate and mature size of vegetation, and will consider short-term shading strategies and long-term large woody debris accumulation along river bank. The off-channel portion will also include vegetation plantings, but will focus plantings on a sandbar ridge structure. Consideration has been given to the fact this area is highly disturbed and is occasionally inundated. Intent is to vegetatively armor and anchor the ridge structure and enhance persistence. The cost to complete the project is \$26,200. Project implementation will occur in Summer and Fall 2007; effectiveness monitoring in Spring 2008 and Spring 2009.

ACC representatives approved funding this project as proposed with the requirement that the Tribe will revise final project plan to further protect plantings from beaver predation. Land owner permission and access permission must also be acquired. The final Resource Project Plan is provided in Appendix E.

Project implementation will result in the preservation and enhancement of now scarce functional riparian habitat in the lower mainstem Lewis River. This project benefits the following aquatic species: federally listed Chinook salmon, chum salmon and steelhead trout, and coho salmon. The lower river provides rearing habitat for wild Fall Chinook and improvement in functional habitat will address an important limiting factor.

5) Plas Newydd Riparian Forest Enhancement

Similar to the other Riparian Forest Enhancement projects proposed by the Cowlitz Indian Tribe, this project will improve riparian form and function along the lower Lewis River mainstem. Two sites will receive treatment; an eastern location of approximately 1000 linear feet in distance and a western location of approximately 900 linear feet in distance. Both sites are located on sandbar island structures. Treatment will include the plantings of tree and shrub species appropriate to highly disturbed and occasionally inundated sandbar zones. Over time plantings will vegetatively armor and anchor the transient sandbar ridge structures, enhance their persistence, and help capture then retain river-carried large woody debris. Cost to complete the project is \$29,400. Project implementation will occur in Summer and Fall 2007; effectiveness monitoring in Spring 2008 and Spring 2009.

The ACC representatives granted funding of \$29,400 to this project with the requirement that the Tribe will revise final project plan to further protect plantings from beaver predation (e.g. use NRCS “willow pole planting” technique. Budget reductions may also be realized through cooperation and in-kind contributions from Plas Newydd Farm LLC and landowner Rhidian Morgan. Landowner permission and access permission must also be acquired. The final Resource Project Plan is provided in Appendix F.

Completion of project activities will provide preservation and enhancement of scarce functional riparian habitat in the lower mainstem Lewis River. Aquatic species to benefit include the federally listed Chinook salmon, chum salmon and steelhead trout, and coho salmon. The lower river provides rearing habitat for wild Fall Chinook and improvement in functional habitat will address an important limiting factor.

6) Two Forks Access Riparian Forest Enhancement

The third project proposed by the Cowlitz Indian Tribe, is a riparian forest enhancement project with a focus of stabilizing the river bank of the Lewis River. This project is located on the lower Lewis River mainstem and covers a site of approximately 1500 linear feet. Vegetative plantings, as they mature, will help ensure the persistence of the adjacent off-channel habitat. Concern at the site is that absent stabilization, the river may eventually avulse the riverbank into the off-channel habitat thereby decreasing or eliminating habitat value. Cost to complete the project is \$26,200. Project implementation will occur in Summer and Fall 2007; effectiveness monitoring in Spring 2008 and Spring 2009.

ACC representatives approved funding this project as proposed with the requirement that the Tribe will revise final project plan to further protect plantings from beaver predation. Land owner permission and access permission must also be acquired. The final Resource Project Plan is provided in Appendix G.

Project implementation will result in the preservation of off-channel habitat which is limited in the lower Lewis River. Anadromous fish species both downstream of the Lewis River hydro project (Fall Chinook and chum salmon) and those emigrating from above the hydro projects post re-introduction (Spring Chinook salmon, coho salmon, and steelhead trout) will benefit from riparian-off channel habitat presence in the lower river.

Projects Not Selected for Funding

The following is a summary description of the individual Resource Projects proposed but not selected to be funded by the Aquatics Fund as part of the 2006/07 funding cycle. Justification for not funding these projects is provided.

1. Muddy River Floodplain Nutrient Enhancement

Proposed by the USFS, the intent of this project is to increase riparian vegetation along the Muddy River through addition of nutrients. Fish carcasses or carcass analogs would be deposited in riparian and floodplain areas that lack a robust riparian state. Nutrients would accelerate new or existing growth of vegetation similar to a level found in a healthy watershed. In the long-term, an enhanced riparian canopy may cool summer water temperatures and increase proper system form and function. Funding request was for \$78,000.

After consideration and discussion, the ACC elected to not fund this project. The project was disapproved on the basis that the project does not directly benefit fish recovery and fish habitat. Concerns were also noted that the Muddy River basin continues to incur large-scale flooding disturbances that impede riparian zones, and evaluation of the Pine Creek nutrient project should be completed prior to expansion into this project area.

2. PIT Tag Detectors for Bull Trout in Upper Lewis

To determine where bull trout from Swift reservoir migrate during the spawning season, the USFS proposed a project to locate six PIT tag detectors in the upper Lewis River basin from July through the fall. Detectors would be deployed in 2007 and 2008. Knowledge of spawning areas would allow future protection and identify sites for restoration efforts. Funding request was for \$70,000.

Although ACC representatives held differing views on the value of this project, a consensus was reached to not fund this project. This project leans towards research whereas on-the-ground restoration and enhancement projects more closely meet the Aquatic Fund objectives. Other concerns included disruption to and handling of migrating adult bull trout, inaccuracies of PIT-tag detection (about 50% reliable according to manufacturer BioMark), and the availability of alternative, less intrusive methods such as, snorkel surveys to determine the presence or absence of bull trout.

3. 9015 Culvert Replacement

Sponsored by the USFS, this proposed project would replace two undersized culverts that block fish migration on a tributary to Pine Creek. Culvert replacement would allow fish passage during all life stages and reduce the likelihood of sediment delivery to bull trout waters from high flow events. Approximately one mile of stream would be re-opened to resident fish. USFS requested \$100,000, and the project would be completed by December 2008.

ACC representatives elected to not fund this project. Although it would open access to additional habitat, such habitat would not be available to ESA listed bull trout or anadromous fish upon re-introduction but only localized resident fish. Access is limited by a 14 foot high waterfall downstream.

Conclusion

This report provides the final 2006/2007 Resource Project descriptions and plans for aquatic projects to be funded from the Lewis River Aquatics Fund. Consistent with Consultation with the ACC, certain Resource Projects have been modified and those modifications have been accepted by the Project owners. Distribution of funds to these projects will reduce the current Aquatic Fund by \$221,950. Of the projects selected by the ACC, the Dispersed Camping and Day Use Road Restoration and Rush Creek Gravel Restoration projects can be attributed to bull trout enhancements.

Per SA article 7.5.3.2 (5), any ACC member may initiate the Alternative Dispute Resolution Procedures to resolve disputes relating to Resource Projects 30 days after receiving this final report. If no disputes are identified, PacifiCorp and Cowlitz PUD will provide funds to the identified project owners to implement Resource Projects per SA article 7.8.

Appendix A

Lewis River Settlement Agreement Article 7.5:

7.5 Aquatics Fund. PacifiCorp and Cowlitz PUD shall establish the Lewis River Aquatics Fund (“Aquatics Fund”) to support resource protection measures (“Resource Projects”). Resource Projects may include, without limitation, projects that enhance and improve wetlands, riparian, and riverine habitats; projects that enhance and improve riparian and aquatic species connectivity that may be affected by the continued operation of the Projects; and projects that increase the probability for a successful reintroduction program. The Aquatics Fund shall be a Tracking Account maintained by the Licensees with all accrued interest being credited to the Aquatics Fund. PacifiCorp shall provide \$5.2 million, in addition to those funds set forth in Section 7.1.1, to enhance, protect, and restore aquatic habitat in the Lewis River Basin as provided below. Cowlitz PUD shall provide or cause to be provided \$520,000 to enhance, protect, and restore aquatic habitat in the Lewis River Basin as provided below; provided that Cowlitz PUD’s funds may only be used for Resource Projects upstream of Swift No. 2, including without limitation the Bypass Reach. The Licensees shall provide such funds according to the schedules set forth below.

7.5.1 PacifiCorp’s Contributions.

- a. PacifiCorp shall make funds available as follows: on each April 30 commencing in 2005, \$300,000 per year until 2009 (a total of \$1.5 million).
- b. For each of the Merwin, Yale, and Swift No. 1 Projects, PacifiCorp shall make one-third of the following funds available as follows after the Issuance of the New License for that Project: on each April 30 commencing in 2010, \$300,000 per year through 2014 (a total of \$1.5 million); on each April 30 commencing in 2015, \$100,000 per year through 2018 (a total of \$400,000); and on each April 30 commencing in 2019, \$200,000 per year through 2027 (a total of \$1.8 million); provided that, for any New License that has not been Issued by April 30, 2009, the funding obligation for that Project shall be contributed annually in the same amounts but commencing on April 30 following the first anniversary of Issuance of the New License for that Project.
- c. PacifiCorp shall contribute \$10,000 annually to the Aquatics Fund as set forth in Section 7.1.1.

7.5.2 Cowlitz PUD’s Contributions. Cowlitz PUD shall make or cause to be made funds available as follows: \$25,000 per year on each April 30 following the first anniversary of the Issuance of the New License for the Swift No. 2 Project through the April 30 following the 20th anniversary of the Issuance of the New License for the Swift No. 2 Project (a total of \$500,000); and a single amount of \$20,000 on the April 30 following the 21st anniversary of the Issuance of the New License for the Swift No. 2 Project.

7.5.3 Use of Funds. Decisions on how to spend the Aquatics Fund, including any accrued interest, shall be made as provided in Section 7.5.3.2 below; provided that (1) at least \$600,000 of such monies shall be designated for projects designed to benefit bull trout according to the following schedule: as of April 30, 2005, \$150,000; as of April 30, 2006, \$100,000; as of April 30, 2007, \$150,000; as of April 30, 2008, \$100,000; and on or before the April 30 following the fifth anniversary of the Issuance of all New Licenses, \$100,000; and such projects shall be consistent with bull trout recovery objectives as determined by USFWS; (2) fund expenditures for the maintenance of the Constructed Channel (Section 4.1.3) shall not exceed \$20,000 per year on average; (3) if studies indicate that inadequate “Reservoir Survival,” defined as the percentage of actively migrating juvenile anadromous fish of each of the species designated in Section 4.1.7 that survive in the reservoir (from reservoir entry points, including tributary mouths to collection points) and are available to be collected, is hindering attainment of the Overall Downstream Survival standard as set forth in Section 3, then at least \$400,000 of such monies shall be used for Resource Projects specifically designed to address reservoir mortality; and (4) \$10,000 annually shall be used for lower river projects as set forth in Section 7.1.1. Projects shall be designed to further the objectives and according to the priorities set forth below in Section 7.5.3.1.

7.5.3.1 Guidance for Resource Project Approval and Aquatics Fund Expenditures.

- a. Resource Projects must be consistent with applicable Federal, State, and local laws and, to the extent feasible, shall be consistent with policies and comprehensive plans in effect at the time the project is proposed. These may include, but are not limited to, Washington’s Wild Salmonid Policy, the Lower Columbia River Bull Trout Recovery Plan, and the Lower Columbia River Anadromous Fish Recovery Plan.
- b. The Aquatics Fund shall not be used to fund Resource Projects that any entity is otherwise required by law to perform (not including obligations under this Agreement or the New Licenses for use of the Aquatics Fund), unless by agreement of the ACC.
- c. The Licensees shall evaluate Resource Projects using the following objectives:
 - (1) benefit fish recovery throughout the North Fork Lewis River, with priority to federal ESA-listed species;
 - (2) support the reintroduction of anadromous fish throughout the Basin; and
 - (3) enhance fish habitat in the Lewis River Basin, with priority given to the North Fork Lewis River.

For the purposes of this Section 7.5, the North Fork Lewis River refers to the portion of the Lewis River from its confluence with the Columbia River upstream to the headwaters, including tributaries except the East Fork of the Lewis River.

The Licensees shall also consider the following factors to reflect the feasibility of projects and give priority to Resource Projects that are more practical to implement:

- (i) Whether the activity may be planned and initiated within one year,
- (ii) Whether the activity will provide long-term benefits,
- (iii) Whether the activity will be cost-shared with other funding sources,
- (iv) Probability of success, and
- (v) Anticipated benefits relative to cost.

7.5.3.2 Resource Project Proposal, Review, and Selection.

(1) By the first anniversary of the Effective Date, the Licensees shall develop, in Consultation with the ACC, (a) a strategic plan consistent with the guidance in Section 7.5.3.1 above to guide Resource Project development, solicitation, and review; and (b) administrative procedures to guide implementation of the Aquatics Fund. Both may be modified periodically with the approval of the ACC.

(2) Any person or entity, including the Licensees, may propose a Resource Project. In addition, the Licensees may solicit Resource Projects proposals from any person or entity.

(3) The Licensees shall review all Resource Project proposals, applying the guidance set forth in Section 7.5.3.1. The Licensees shall provide an annual report describing proposed Resource Project recommendations to the ACC. The date for submitting such report shall be determined in the strategic plan defined in subsection 7.5.3.2(1) above. The report will include a description of all proposed Resource Projects, an evaluation of each Resource Project, and the basis for recommending or not recommending a project for funding.

(4) The Licensees shall convene a meeting of the ACC on an annual basis, no sooner than 30 days and no later than 60 days after distribution of the report set forth in Section 7.5.3.2(2), for Consultation regarding Resource Projects described in the report.

(5) Licensees shall modify the report on proposed Resource Projects, based on the above Consultation, and submit the final report to the ACC within 45 days after the above Consultation. Any ACC member may, within 30 days after receiving the final report, initiate the ADR Procedures to resolve disputes relating to Resource Projects. If the ADR Procedures are commenced, the Licensees shall defer submission of the final report on Resource Projects to the Commission, if necessary, until after the ADR Procedures are completed. If the ADR Procedures fail to resolve all disputes, the Licensees shall provide the comments of the ACC to the Commission. If no ACC member initiates the ADR Procedures, the Licensees shall submit the final report to the Commission, if necessary, within 45 days after submission of the final report to the ACC.

Appendix B

Dispersed Camping and Day Use Road Restoration

PROPOSAL FORM -

Lewis River Aquatic Fund

1. Project Title

2007 Dispersed Camping and Day Use Road Restoration Project

2. Project Manager

Adam Haspiel

Mt. St. Helens National Volcanic Monument
42218 NE Yale Bridge Road
Amboy, WA 98604
360-449-7833
360-449-7801 (fax)
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20+ years of fish habitat restoration experience

3. Identification of problem or opportunity to be addressed

A number of spur and/or old logging roads in the Lewis River basin lead to areas on the Lewis River, the Muddy River, or Clear Creek that fishermen use to illegally catch bull trout. Some of these roads were created by 4-wheel drive enthusiasts and are not part of the Forest Service road network, and therefore, not maintained. Many of these roads lead to dispersed camping sites in sensitive riparian areas. Along these roads, and riparian areas, some fishermen have been known to illegally fish for bull trout, erode soil, disrupt the natural habitat, and leave garbage.

This project proposes to close and/or decommission 6.75 miles of these roads, and associated camping sites. Closing and/or decommissioning roads would make access to the streams in the basin more difficult, and overtime, roads and dispersed camping areas would return to its pre condition, eventually reseeding itself, restoring the riparian habitat.

An opportunity to place signs describing bull trout regulations exists as part of this project, and signs would be placed along strategic areas on FS Road 90, 25, and other strategic locations. Approximately 24 signs would be created.

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 Gifford Pinchot National Forest managers have addressed the closure and/or decommissioning of roads and dispersed camping sites for several years. As a result, several roads were recommended for closure in a memo dated August 30, 2000. They were also recommended for closure in an update to the Muddy River watershed analysis.

5. Project Objective(s)

State the objectives of your proposal including how the project is consistent with Aquatics Fund objectives and recovery plans. Describe the technical basis for the objectives including the identification of any supporting technical references.

GOAL (S):

Limit and/or eliminate access to areas where people fish illegally for bull trout by:

- ◆ Closing and/or decommissioning roads and campsites in riparian areas associated with illegal fishing for bull trout.

Restore riparian areas affected by people fishing and camping by:

- ◆ Removing trash and associated camping appurtenances.
- ◆ Planting native trees, shrubs and grass.

Inform people of fishing regulations by:

- ◆ Locating informational signs on bull trout fishing regulations strategically along FS Road 25, and other locations.

This project addresses the following priorities:

Priority 1: *Benefit fish recovery throughout the North Fork Lewis River, with priority to federal ESA-listed species.* Bull trout are a federally listed ESA species. Protecting them from illegal harvest will help populations recover.

Steelhead trout are listed as a threatened species under the ESA
Coho Salmon are listed as a threatened species under the ESA

Priority 2: *Support the reintroduction of anadromous fish throughout the basin.*

The same roads used by fishermen to illegally catch bull trout could be used by fisherman to illegally catch reintroduced anadromous fish.

Priority 3: *Enhance fish habitat in the Lewis River Basin-, with priority given to the North Fork Lewis River.* Closing these roads will enhance bull trout and anadromous fish habitat by making these areas less accessible to fisherman. Harassment of fish affects their survivability, especially during spawning migrations.

6. Tasks:

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

- 1) Secure funding;
- 2) acquire required permits;
- 3) develop a contract; and,
- 4) develop signage.

Monitoring would consist of photopoints established before and after road and campsite closures.

7. Methods:

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

The following table provides a list of roads and associated campsites identified as problem areas. Methods include gating , decommissioning and/or closure of roads. A more detailed plan will be developed when funding for this project has been secured.

6th Field subwatershed	Rd Segment and location	Road Name	ATM Current Condition	Roads Analysis Recommendation	Watershed Analysis Recommendation
Middle Lewis	9039250 and spur (0.4 mi) T6N, R7E Sec. 29	9039250	Not Designated	Not addressed- road created by 4 wheelers	Decomission
Middle Lewis	9039250s (0.1 mi) T6N, R7E Sec. 29	9039250s	Not Designated	Not addressed- road created by 4 wheelers	Decomission
Muddy River	2500910 (T7N, R6E, Sec 1) (last 0.2 mi)	2500910	Open/high clearance	Decommission	Decommission
Muddy River	Non-system road off road 9300 (T7N, R6E, Sec 1) (0.5 mi)	9300g	Not designated	Not addressed	Decommission at a logical point
Muddy River	9039350 (T7N, R6E, Sec 24; T7N, R7E, Sec 19) (0.3 mi)	903935	Closing naturally	Decommission	Decommission ACC- (we will Gate this road)
Muddy River	9039620 (2.7 mi) T6N, R7E Sec 7 T6N, R6E Sec 12,13	9039620	Seasonal wildlife closure (gate)	Decommission	Decommission at a logical point ACC- (we will Gate this road)
Muddy River	9039624 (1.6 mi) T6N, R6E Sec 12	9039624	Seasonal wildlife closure (gate)	Decommission	Decommission at a logical point ACC- (we will Gate this road)
Muddy River	9039626 (0.3) T6N, R6E Sec 12, 13	9039626	Seasonal wildlife closure (gate)	Decommission	Decommission at a logical point ACC- (we will Gate this road)
Muddy River	2500970 (0.5 mi) T6N, R6E Sec 13,14	2500970	Closed but unsuccessfully bermed	Close and stabilize	Closure and stabilization
Clear Creek	Non-system road (at bridge over Clear Creek) (T7N, R7E, Sec 6) (0.15 mi)	9300cb	Not designated	Not addressed	Block vehicular access

Camping sites associated with roads and riparian areas will be restored by removing trash and camping appurtenances, and planting native trees, shrubs and grass.

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.

This majority of this work will be contracted. The preferred method to measure deliverables is to inspect the work of contractors. Forest Service Contracting specialists will perform this task. When the work items are paid for in a contract, it means that this portion of the contract has been completed. Each road will be a separate line item, and each item will be paid for separately. As work on each road is completed the line item will be recommended for payment. This will allow the ACC to track deliverables. Campsite cleanup will be a line item if it is performed by contractors.

Signage for bull trout regulations will be a separate contract. When signs are purchased an invoice will be generated, and this can be a deliverable. When signs are posted by either USFS personnel or contractors, this will be another deliverable.

9. Project Duration

a. Identify project duration. Note that duration of a project funded from Fiscal Year 20xx appropriations may extend beyond the end of the fiscal year.

b. Provide a detailed project schedule to include:

- Initiation of project.

- Completion date for each milestone or major task.

- Project close-out site visit (with PacifiCorp, Cowlitz PUD, and ACC representatives)

The duration of this project under the current Proposal would last two seasons. It could take a number of months to meet objectives.

The project would commence when funding is secured. Roads and campsites will be inventoried and a plan developed for the closure and/or decommissioning of each road or campsite. This may take one season to complete. A contract would be developed and awarded. The contract would be implemented the following season.

Forest Service personnel would develop the narrative for the informational sign during the first season. A contract would be developed and awarded for sign fabrication and, another contract awarded for sign installation. Depending on how long it takes to create the signs, the signs may be installed during the first or second. The project should be completed by the end of December 2008 or 2009.

10. Permits

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. Landowner permission is required prior to finalization of a Funding Agreement with PacifiCorp. 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.

NEPA- the Forest Service will complete NEPA for this project in 2007 or 2008

WDFW- approval from WDFW would be secured prior to project commencement.

USFWS- approval from USFWS would be secured prior to project commencement.

Land ownership is comprised of federal lands managed by the USFS.

11. Matching Funds and In-kind Contributions

If applicable, describe any matching funds and/or in-kind contributions that you have secured or have requested through other means. Matching funds are those funds contributed to the project from other funding sources. In-kind contributions may include donated labor, materials, or equipment. Please be specific in your description of contributions and use of volunteers (e.g. ACE construction is donating 8 hours of backhoe operation including operator).

Partner	Contribution	Funds
Forest Service	NEPA, Project development, Contracting, Permitting	\$23,000 In-kind
Clark Skamania Flyfishers	Labor to clean up campsites	\$1,000 In-kind
Mt. St. Helens Institute	Monitoring, Labor to clean up campsites	\$2,000 In-kind

12. Professional Review of Proposed Project

It is encouraged that the proposal be reviewed by an applicable resource professional prior to submission for funding. Focus of such review should be on biological value and proposed methodology. Please note who completed the review and contact information. This does not have to be a third party review, and can come from someone associated with the sponsoring organization.

This project Proposal was reviewed by WDFW law enforcement agent Rick Webb (for sign development), WDFW Fish Biologist Jim Byrne (for access issues and sign development) Gifford Pinchot National Forest (GPNF) Hydrology program manager, Ruth Tracy, The GPNF Fisheries program manager, Diana Perez, and GPNF North Zone Planning Team Leader & Forest Hydropower Coordinator Karen Thompson.

13. Budget

Provide a detailed budget for the project stages (Final design, Permitting, Construction, Monitoring/Reporting). Include:

Personnel costs

Labor and estimated hours

Operating expenses

Supplies and materials

Mileage

Administrative overhead

If in-kind contributions have been acquired, please note contributions according to project stage within the budget.

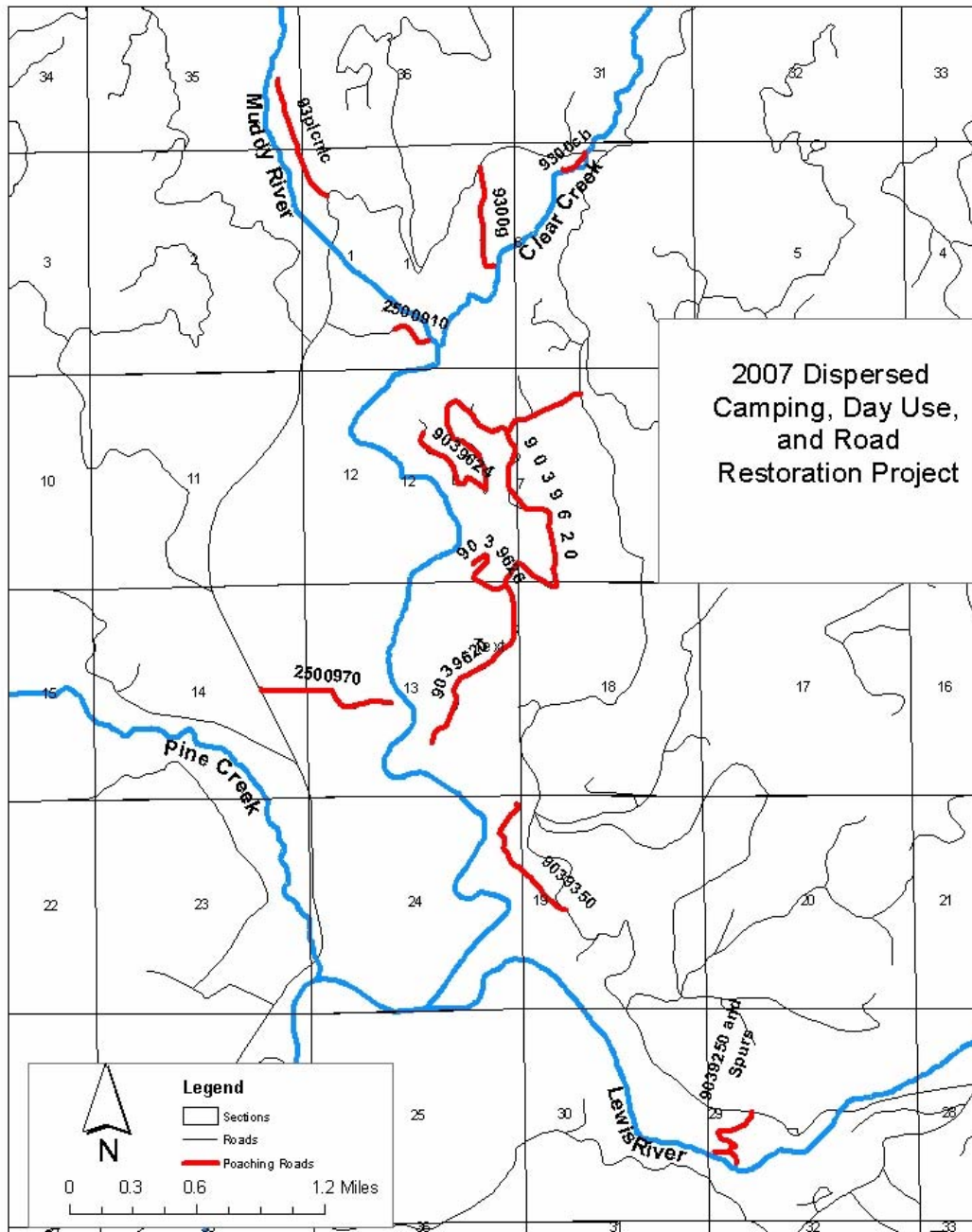
Dispersed campsites and roads

	Total	NEPA	Final designs	Permitting	Construction	Monitoring/Labor /Reporting
Personnel Costs						
FS - Zone Team or Contract		\$4,000(ACC) \$6,000 (IK)				
FS –Fish Bio and Hydrologist			\$3,000 (IK)			
FS - Fish Bio and Hydrologist				\$2,000 (IK)		\$3,000 (ACC) \$3,000 (IK)
FS - Contract administrator -					\$3,000 (ACC) \$3,000 (IK)	
FS - Contract Specialist					\$6,000 (IK)	
Clark-Skamania Flyfishers						\$1,000 (IK)
Mt. St. Helens Institute						\$2,000 (IK)
Contract Payables						
Sign development and posting,					\$7,000 (ACC)	
Campsite cleanup					\$2,000 (ACC)	
Road decommissioning, closures					\$60,000(ACC)	
Administrative Overhead						
		\$3,500(IK)	\$1,500 (IK)			
Total ACC Funds	\$72,000	\$4,000			\$69,000	\$ 3,000
<i>Total FS Funds</i>	<i>\$23,000</i>	<i>\$6,000</i>	<i>\$3,000</i>	<i>\$2,000</i>	<i>\$9,000</i>	<i>\$3,000</i>
<i>Total other Partner Funds</i>	<i>\$3,000</i>					<i>\$3,000</i>
Project Total	\$98,000					
FS personnel estimated as \$300/day.						

Total ACC Funds Requested

\$77,000

This project can be implemented with funds solely acquired from the ACC, and In Kind funds from the Forest Service, Fish First, and Mount St. Helens Institute.



Specific Questions from ACC members
Dispersed Camping and Day Use Road Restoration

Some of these roads (2500910, 93 picnic, and 9039620 complex) are required for river access by biologist performing monitoring work. Most are in remote locations and show little indication of activity (hunting camps) and no evidence of poaching. Road issues should be part of USFS O&M budget, not ACC funds. If poaching is perceived to be a major issue enforcement emphasis could be directed to these areas and/or the roads could be gated. Poaching of bull trout is not the only issue, damage to riparian areas, sediment delivery to streams and illegal dumping of trash are

occurring on portions of these roads. Roads that WDFW uses to access bull trout monitoring locations will be gated, and they will be provided a key.

The Washington Department of Fish and Wildlife (WDFW) maintains there is no evidence of people's presence in the designated areas with the exception of hunting camps a couple of weeks each year. WDFW suggested that USFS install gates with keys provided for access. This would make it harder for general public access but still allow for access for fish surveys. Plus closing roads does not require NEPA. WDFW was contacted and their recommendations were taken into account while developing this proposal. Their main issues were to make sure they had access to certain areas on the Muddy River.

In developing a formal proposal, please follow up with WDFW to discuss access, road closure, enforcement, restoration issues in more detail. Final proposal should address such issues. WDFW was contacted and their recommendations were taken into account while developing this proposal. Their main issues were to make sure they had access to certain areas on the Muddy River.

Appendix C

Pine Creek Nutrient Enhancement

PROPOSAL FORM -

Lewis River Aquatic Fund

1. Project Title

2007 Nutrient Enhancement on Pine Creek

2. Project Manager

Adam Haspiel

Mt. St. Helens National Volcanic Monument
42218 NE Yale Bridge Road
Amboy, WA 98604
360-449-7833
360-449-7801 (fax)
ahaspiel@fs.fed.us

20+ years of fish habitat restoration experience

3. Identification of problem or opportunity to be addressed

Pine Creek was affected by the eruption of Mount St. Helens in 1980 when a lahar scoured the length of it, eventually depositing sediment into Swift Reservoir. As a result of the eruption, nutrient levels decreased due to loss of allochthonous materials and decreased primary production (Lower Lewis River Watershed Analysis (WA) 1995). Additionally, the floods of 1996 removed much of the river's newly established riparian vegetation. Dams built in the 1930's prevented anadromous fish from returning to spawn in over 170 miles of Pine Creek. This greatly decreased the nutrient levels in affected streams over time by eliminating contributions of carcasses and eggs.

Nutrients added to Pine Creek in the form of carcasses would increase primary and secondary production, leading to increased feeding opportunities for bull trout. The areas along Pine Creek that could be reached by vehicles would be treated by hand, while inaccessible areas would be treated by helicopter. A total of six miles are available to be treated in Pine Creek depending upon partnership funding, ACC funding will allow us to apply nutrients to approximately four miles. The project will benefit bull trout and all species of introduced anadromous fish.

This project replicates the Nutrient Enhancement project funded for 2006 on Pine Creek.

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 Lower Lewis River Watershed Analysis (WA) (1995), and "A study of ecological responses to the 1980 eruption of Mount St. Helens (2005), have identified Pine Creek and its associated floodplains and riparian areas as containing high priority restoration needs.

Coho salmon fry from adult live plants in Swift Reservoir in 2005 were located in Pine Creek and P8 by WDFW during 2006 bull trout surveys.

In December 2006, approximately 3,300 coho carcasses (26,400 lbs) were distributed in Pine Creek and Tributary P8 using a helicopter, and 100 carcasses were distributed by Fish First using a truck. Approximately 4.5 miles of stream were treated with carcasses. The helicopter was able to distribute them fairly evenly with most of them landing instream near the stream edge, some inadvertently landed on the stream bank and in the water. The helicopter distributed them so the majority of carcasses were in slower water areas (i.e. stream margins). Approximately 0.3kg/m² were placed. (Studies performed on streams on the Mt. Hood National Forest that were treated at a rate of 0.4kg/m² showed increases in biofilm production and coho fork lengths.)

5. Project Objective(s)

State the objectives of your proposal including how the project is consistent with Aquatics Fund objectives and recovery plans. Describe the technical basis for the objectives including the identification of any supporting technical references.

GOAL:

Enhance the quality of fish habitat in Pine Creek by:

- ◆ Improving the nutrient levels in Pine Creek and associated floodplains and riparian areas using carcasses.

Based on ACC direction in 2006, carcasses will be targeted for instream distribution only. Riparian vegetation may benefit slightly from this activity as nutrients are dispersed via animal activity, and helicopter misplacement.

Increased nutrient availability instream will provide increased primary production - leading to increased secondary production of aquatic macroinvertebrates, which juvenile bull trout and other salmonids feed upon. Pine Creek is an important spawning tributary for bull trout in the Upper Lewis River Sub basin. It is one of only a few streams (Rush Creek and possibly sections of Muddy River) with cold enough summer water temperatures to allow for successful bull trout spawning and egg incubation.

As an option carcass analogs could be placed in the riparian areas in conjunction with instream placement of carcasses. The addition of nutrients to the riparian areas will accelerate new or existing growth of vegetation similar to a level found in healthy watersheds. As the riparian vegetation matures, shade will reduce overall stream temperatures and provide for a long-term source of LWD. This will benefit bull trout and other fish species.

This project addresses the following Aquatic Fund priorities.

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

Bull trout are listed as a threatened species under the ESA.

Steelhead trout are listed as a threatened species under the ESA

Coho Salmon are listed as a threatened species under the ESA

Priority 2: *Support the reintroduction of anadromous fish throughout the basin.*

Nutrients will enhance the growth and production of anadromous fish.

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

WDFW has produced a report titled, (*Pacific Salmon and Wildlife Ecological Contexts, Relationships, and Implications for Management*), the report states that there is a 50% increase in the size of coho in streams enriched with salmon carcasses. The assumption is made that bull trout and steelhead juveniles will respond in similar fashion.

6. Tasks:

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

- 1) secure funding;
- 2) acquire required permits;
- 3) secure carcasses and/or carcass analogs;
- 4) enlist volunteer groups to help distribute carcasses by truck/hand where applicable; and,
- 5) contract to secure helicopter for distribution of carcasses and/or analogs to areas inaccessible to trucks or hand distribution.

Pre-project monitoring would begin as permits are acquired, and post-monitoring efforts would begin when carcasses and/or analogs are distributed. Monitoring could follow a number of protocols including ones used by the BPA under a contract titled, “Assessment of Three Alternative Methods of Nutrient Enhancement on Biological Communities in Columbia River Tributaries.”

7. Methods:

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

Several methods can/will be used to meet project objectives:

Adult carcasses from various hatchery reared and collected salmonids species will be distributed by hand in areas accessible to vehicles, inaccessible areas would be seeded by helicopter. The Gifford Pinchot National Forest completed a nutrient enhancement project in 2006 using a helicopter. Many of the logistical problems were worked out at that time, which makes this Proposal solid. Mt. Hood National Forest completed a similar project using a helicopter (see attached write-up from Mt. Hood), carcasses distributed in streams with wood floated less than ¼ mile before lodging up, in streams devoid of wood, carcasses floated further lodging around boulders or in slack waters or pool eddies. WDFW guidelines from their draft nutrient supplementation paper “Protocols and guidelines for distributing salmonids carcasses, salmon carcass analogs, and delayed release fertilizers to enhance stream productivity in Washington State” allow up to 1.9 kg/m². We are proposing to seed at the rate of 0.4 kg/m², this equates to approximately four tons per mile, or about 1000 fish per mile.

Carcass analogs are in an experimental stage and are being studied by a USGS research team in the Wind River Drainage.(Analogues are produced from salmon carcasses). The use of carcass analogs is an emerging technology. Fish carcasses and other fish processing waste material is converted into a solid cake. The cake would be treated to kill associated fish pathogens. The advantage of the analog is that they are lighter in weight per unit of nutrient (when compared to carcasses) and they would present a much lower risk of pathogen transfer. The technology is currently in development and testing, and may be useful in meeting Proposal objectives if analogs can be obtained and permitted for use. A

personal conversation with Hal Michaels of WDFW revealed that they would prefer to use analogs if possible.

The project would take place in November, December of 2007 or January 2008 depending upon availability of fish carcasses or analogs. This mimics natural coho spawning periods. Literature has shown increased benefits to fry may occur if nutrients are placed in spring, prior to fry emergence. This however, does not mimic natural spawning behavior in coho, and may cause other unforeseen problems in the ecosystem.

Species that occurred in Pine Creek prior to Dam construction include coho salmon, steelhead trout, and possibly Chinook salmon. At this time due to WDFW restrictions, and/or tribal concerns, the only species available for nutrient enhancement are coho salmon.

Carcass use for Pine Creek is limited to Lewis River stocks. This may cause availability problems because other projects in the Lewis River Basin need carcasses too.

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.

The preferred method to measure deliverables is number/pounds of carcasses/carcass analogs distributed per stream segment. For project assessment purposes, stream segments can be ½ mile increments based on river miles. To verify amounts distributed, hatchery forms documenting numbers of carcasses supplied for the project would be on file at the Mt. St. Helens Ranger District. Invoices for purchases of carcass analogs, if used, will also be on file at Mt. St. Helens Ranger District.

9. Project Duration

a. Identify project duration. Note that duration of a project funded from Fiscal Year 20xx appropriations may extend beyond the end of the fiscal year.

b. Provide a detailed project schedule to include:

- Initiation of project.

- Completion date for each milestone or major task.

- Project close-out site visit (with PacifiCorp, Cowlitz PUD, and ACC representatives)

The duration of this project under the current Proposal would continue for one season. The Proposal would build on efforts from 2006. It could continue for several years, depending on the results and ACC funding. If the project continues for several years, it would be similar in scope and size to this years project; however, it would include minor changes as needed on an annual basis.

Additionally, the reintroduction of anadromous species during 2010 could allow us to expand this program to include continued seeding of nutrients with ACC support. Continued seeding will allow for accelerated riparian vegetation growth (providing streamside shade), and an enhanced aquatic macroinvertebrate population providing greater feeding opportunities for juvenile bull trout and other reintroduced salmonids species.

The project would take place in November, December of 2007 or January 2008 depending upon availability of fish carcasses or analogs. This mimics natural coho

spawning periods. Literature has shown increased benefits to fry may occur if nutrients are placed in spring, prior to fry emergence. This however, does not mimic natural spawning behavior in coho, and may cause other unforeseen problems in the ecosystem.

The project would take 7 to 21 days to complete. Nutrients would be distributed by helicopter over 4 to 5 miles of stream over a 2-5 day period. Hand distribution would occur after helicopter distribution and should be completed by the end of January.

Access may be limited during the months of December and January due to snow, if this is the case, helicopter distribution may occur in areas that were initially identified for hand distribution.

A project closeout meeting would occur at the soonest ACC meeting following project completion and access is available.

10. Permits

NEPA- The Forest Service completed NEPA for this project in 2006. NEPA documents allow us to continue this as an ongoing project for another 5 years.

WDFW- An approval form to distribute both carcasses and carcass analogs will be submitted to WDFW when funding is secured. WDFW coordinates with Department of Ecology (DOE) as part of the approval process.

DNR- A Land Use License from Washington DNR will need to be obtained to use Swift Reservoir boat launch parking area as a helicopter landing and staging area. Both of these permits were secured for the 2006 project, and should be easily obtainable for an ongoing project.

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. Landowner permission is required prior to finalization of a Funding Agreement with PacifiCorp. 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.

Land ownership in Pine Creek is comprised of federal and private lands. The Forest Service manages approximately 2 miles of stream in the area proposed for carcass seeding. Olympic Resources Management owns approximately 4 miles of stream in the proposed project area, and Three Rivers Recreational Area owns about 1 mile of stream near the mouth of Pine Creek. Olympic Resources Management and Three Rivers Recreational Area landowners have been contacted and wish to participate in the project.

11. Matching Funds and In-kind Contributions

If applicable, describe any matching funds and/or in-kind contributions that you have secured or have requested through other means. Matching funds are those funds contributed to the project from other funding sources. In-kind contributions may include donated labor, materials, or equipment. Please be specific in your description of

contributions and use of volunteers (e.g. ACE construction is donating 8 hours of backhoe operation including operator).

Partner	Contribution	Funds
Forest Service	Project development, Contracting, Permitting, Monitoring	\$12,000 In-kind
FishFirst	Labor for carcass collection, Nutrient distribution, Vehicle use 200 miles	\$5,000 In-kind
Mt. St. Helens Institute	Monitoring	\$5,000 In-kind
Olympic Resource Management	Agreements, road use	\$1,000 In-kind

12. Professional Review of Proposed Project

It is encouraged that the proposal be reviewed by an applicable resource professional prior to submission for funding. Focus of such review should be on biological value and proposed methodology. Please note who completed the review and contact information. This does not have to be a third party review, and can come from someone associated with the sponsoring organization.

This project proposal was reviewed by Gifford Pinchot National Forest (GPNF) Hydrology program manager, Ruth Tracy, The GPNF Fisheries program manager, Diana Perez, and GPNF North Zone Planning Team Leader & Forest Hydropower Coordinator Karen Thompson.

13. Budget

Provide a detailed budget for the project stages (Final design, Permitting, Construction, Monitoring/Reporting). Include:

Personnel costs

Labor and estimated hours

Operating expenses

Supplies and materials

Mileage

Administrative overhead

If in-kind contributions have been acquired, please note contributions according to project stage within the budget.

Pine Creek Nutrient Enhancement

	Total	NEPA	Final designs	Permitting	Construction	Monitoring/Labor /Reporting
Personnel Costs						
FS - Zone Team or Contract						
FS -Fish Bio and Hydrologist			\$5,000 (IK)			
FS - Fish Bio and Hydrologist				\$2,000(IK)		\$5,000 (ACC)
FS - Contract administrator -					\$3,000 (IK)	
FS - Contract Specialist					\$2,000 (IK)	
Fish First						\$5,000 (IK)
Pope & Talbot Timber (ORM)						\$1,000 (IK)
Mt. St. Helens Institute						\$5,000 (IK)
Contract Payables						
Helicopter Contract,					\$29,150 (ACC)	
Refrigerated Trailer Rental and mobilization					\$2,500 (ACC)	
Forklift Rental and mobilization					\$1,500(ACC)	
Supplies					\$ 5,000 (ACC)	
Administrative Overhead		\$3,500(IK)	\$1,500 (IK)			
Total ACC Funds	\$43,150				\$38,150	\$ 5,000
<i>Total FS Funds</i>	<i>\$12,000</i>		<i>\$5,000</i>	<i>\$2,000</i>	<i>\$5,000</i>	
<i>Total other Partner Funds</i>	<i>\$11,000</i>					<i>\$11,000</i>
Project Total	\$66,150					
FS personnel estimated as \$300/day.						

Total ACC Funds Requested

\$43,150

This project can be implemented with funds solely acquired from the ACC and Forest Service in kind contributions allowing for four to five miles of carcass seeding, if funds from other groups such as LCFRB come through we can treat up to eight miles. Any other funds acquired will be used to extend the area of distribution.

PINE CREEK NUTRIENT ENHANCEMENT COST SHEET

Prepared by R. Pankratz / Helicopter Manager

Assumptions:

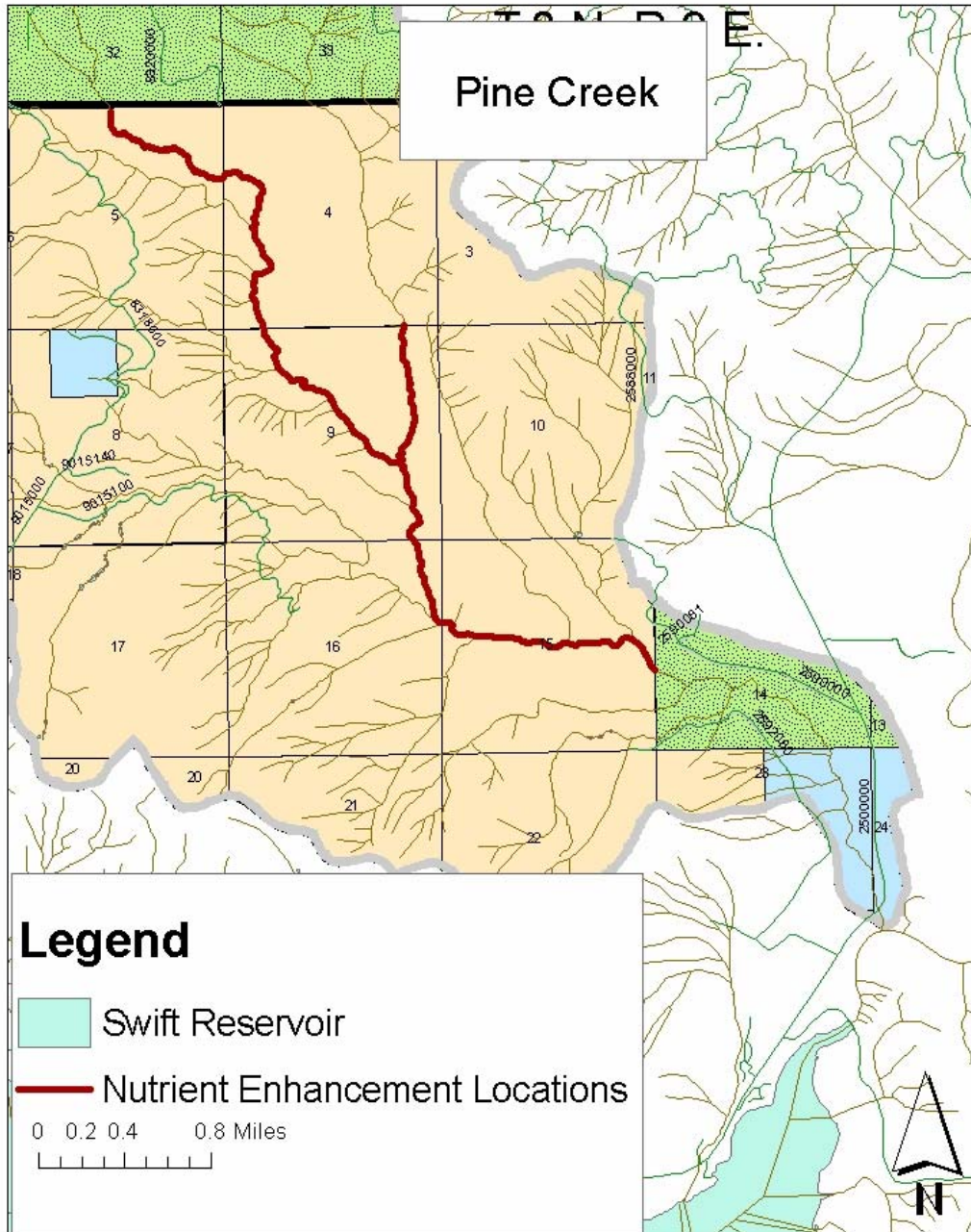
- 1) Approximately 4 tons of fish carcasses per mile to be distributed along Pine Creek by air for four river miles.
- 2) Calculations based upon utilization of Northwest Helicopters Jet Ranger (206 B-III) with custom fish bucket
- 3) No cost factors considered for delivery of fish to operations site
- 4) No cost factors considered for any personnel other than those required to accommodate safe and effective helicopter delivery of fish.
Positions considered are helicopter manager, helitack, road guards, streamside safety monitors, forklift operators, fish loaders.
- 5) Two weathered out days have been factored in.
- 6) Swift boat launch will serve as the heliport and staging area for fish carcasses
- 7) Average weight per fish carcass is ten pounds
- 8) It's an approximate 1 mile flight from the Swift boat launch heliport to the confluence of the Pine Creek and Lewis River
- 9) Personnel salary will include necessary aviation safety and logistical planning

- 10) Helicopter rates derived from Region 6 light helicopter contract with cost modifications addressing this operation
 11) During proj. imp. phase 12 hour days are accounted for to allow for daily prep time, travel times, daily clean-up, contract docs etc.
 Objective is to effectively use aircraft resource during available windows with salary costs secondary to aircraft logistics
 12) Helicopter mobilization calculated from Olympia, Washington
 13) Mobilization, recon and operational flight time are all accounted for in separate line items
 14) A scale is identified for use at heliport as required by regional aviation oversight
 15) No vehicle costs assumed for project support equip.-will need type 6 engine, several pickups, forklift, equip. trailer and tow rig
 16) No cost listed for rental of refer trailer to hold fish

Estimated costs are developed below. . .

<u>COST ITEM</u>	<u>UNIT</u>	<u># OF UNITS</u>	<u>COST PER UNIT</u>	<u>COST ITEM TOTAL</u>
Helicopter Manager developing project aviation safety plan and logistical planning	day	6	\$271.00	\$1,626.00
Helicopter Manager daily implementation oversight	day	5	\$271.00	\$1,355.00
Helicopter manager overtime	hour	20	\$42.00	\$840.00
Helicopter manager hazard pay for actual flying days	hour	24	\$6.97	\$167.28
Helitack for daily operations = one GS-6	day	4	\$199.00	\$796.00
GS-6 overtime	hour	16	\$24.44	\$391.04
GS-6 hazard pay for actual flying days	hour	24	\$4.07	\$97.68
Helitack for daily operations = two GS-5	day	8	\$130.00	\$1,040.00
GS-5 overtime	hour	32	\$21.21	\$678.72
GS-5 hazard pay for actual flying days	hour	48	\$3.54	\$169.92
Streamside monitoring personnel = two GS-5	day	8	\$130.00	\$1,040.00
GS-5 overtime	hour	32	\$21.21	\$678.72
Road guards for 25 road = two GS-5	day	8	\$130.00	\$1,040.00
GS-5 overtime	hour	32	\$21.21	\$678.72
Fork lift operator GS-9	day	4	\$271.00	\$1,084.00
GS-9 overtime	hour	16	\$42.00	\$672.00
Fish handlers/loaders two GS-9	day	4	\$271.00	\$1,084.00
GS-9 overtime	hour	32	\$42.00	\$1,344.00
Helicopter mobilization flat fee	ea	1	\$555.00	\$555.00
Helicopter demobilization flat fee	ea	1	\$555.00	\$555.00
Helicopter hourly cost mobilization + demobilization	hour	1.5	\$742.00	\$1,113.00
Helicopter hourly cost project recon	hour	0.5	\$742.00	\$371.00
Helicopter hourly cost project implementation	hour	12	\$742.00	\$8,904.00

Helicopter daily guarantee	day	2	\$1,000.00	\$2,000.00
Fuel truck mileage fee	mile	620	\$1.40	\$868.00
Total cost estimate for aviation component of fish carcass placement / Pine Creek				\$29,150



Questions from the ACC group on Pine Creek Nutrient Enhancement

The Tribe is familiar with studies that correlate juvenile salmon growth rates with carcass placement but the likely benefits to riparian vegetation are not sufficiently well substantiated. At this point carcasses will be targeted for instream distribution. Nutrients from carcasses will be available to some sections of riparian area based on animal and insect dispersal. Increased nutrients in general will increase vegetative growth of plants, however there may not be enough nutrients added to make a significant difference in vegetative growth.

The project area is a critically important subbasin for Bull Trout, and is an important subbasin for reintroduction of steelhead, Coho and Spring Chinook. However, 1) the nutrient placement is only proposed for one year, so benefits can be expected to be short term; and, 2) the application is not timed to maximize direct nutrient benefits in relation to reintroduction efforts. Reference is made to ongoing efforts, but details about the future program are lacking. Greater benefits would be anticipated if the project were a component of a long-term nutrient enhancement strategy that is timed and implemented as part of the reintroduction efforts. Benefits from this project would be maximized if it were an annual project. This would be the second year of nutrient additions to Pine Creek. This project could be an ongoing annual effort if the ACC group wants it to be. In regards to timing, the project is geared more towards bull trout at this stage, however increased nutrients in the system will benefit reintroduced salmonids, especially if it is an ongoing effort.

We recommend that the applicant do some literature review on this to make sure that the timing and type of carcass plants is optimal for targeted fish species (including bull trout). The Forest Service has done a recent conference on this topic, so there should be state of the art information available. I have contacted the Mt. Hood NF, and read and reviewed this paper. The following is an excerpt of the papers conclusions.

Conclusions

- Higher carcass treatment levels based on a 0.4 kg/m² target appeared to significantly affect the rate of accumulation of biofilms. Lower levels based on a 2,500 lbs/stream mile target did not.
- Average coho smolt fork lengths in treatment streams increased slightly over the average of those from baseline years. Average coho smolt fork lengths in control streams, in contrast, decreased somewhat from the average of those from baseline years. The difference between treatment and control streams was statistically significant, but requires cautious interpretation.
- Definitive answers are confounded by within- and between-site variability
- Results suggest carcass enrichment might be more effective earlier in the year when flows are lower and temperatures are warmer.
- Streams with human-caused nutrient inputs may benefit less from carcass enrichment.
- Some evidence suggests that nutrient levels are one driver of coho smolt fork length in the Clackamas River and, presumably, their subsequent ocean survival. Carcass enrichment, therefore, holds promise as a restoration tool.
- A proper evaluation of the increase in treatment levels initiated in 2004 requires at least an additional year's data.

We would like to review the results of that effort and density of carcass placement used. Carcass availability is going to be a problem with adding the Muddy too. The paper can be obtained from myself or the Mt. Hood National Forest. Carcasses availability may be a problem based on other projects in the basin and hatchery returns.

Appendix D

Rush Creek Gravel Restoration

PROPOSAL FORM -

Lewis River Aquatic Fund

1. Project Title

2007 Rush Creek Gravel Restoration.

2. Project Manager

Adam Haspiel

Mt. St. Helens National Volcanic Monument
42218 NE Yale Bridge Road
Amboy, WA 98604
360-449-7833
360-449-7801 (fax)
ahaspiel@fs.fed.us

20+ years of fish habitat restoration experience

3. Identification of problem or opportunity to be addressed

WDFW personnel (with assistance from USFS and PacifiCorp) perform spawning surveys for bull trout frequently in the Rush Creek system during summer and fall months. They have noted that over time gravel depositions in Rush Creek are being depleted due to naturally occurring streamflow events. Spawning gravel is very limited in this system and is not replacing itself during scour events. If this trend continues, the little gravel that remains for spawning will disappear.

The goal of this project is to place gravel in Rush Creek to restore dwindling supplies of native gravels. Bull trout and reintroduced anadromous fish will use these gravels to spawn in. Gravel will be brought in from Lewis River sources and distributed either by dumptruck and excavator, and/or helicopters. To reduce overall costs, the project would be implemented during the instream wood placement project by helicopter in Pine Creek. This would save move-in costs for the helicopter.

Approximately 100 to 150 cubic yards of material would be placed in strategic locations, such as stream margins and slow-water wide spots, in Rush Creek.

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 draft Gifford Pinchot National Forest Restoration Plan identifies Rush Creek as one of its top areas for instream restoration for bull trout.

A Stream Survey on Rush Creek was performed in 2004. The survey identified only 12 pieces of LWD per mile. This is well below the 80 pieces per mile recommended in streams on the west side of the cascades. The stream surveyors were not able to take pebble counts due to the high flows, but noted the substrate consisted of larger substrate and bedrock in much of the proposed project area.

5. Project Objective(s)

State the objectives of your proposal including how the project is consistent with Aquatics Fund objectives and recovery plans. Describe the technical basis for the objectives including the identification of any supporting technical references.

GOAL:

Enhance the quantity and quality of spawning habitat in Rush Creek by;

- ◆ Distributing gravel via helicopter, backhoe, and a dump truck to potential spawning areas in Rush Creek

This project addresses the following Aquatic Fund priorities.

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

Bull trout are listed as a threatened species under the ESA.

Steelhead trout are listed as a threatened species under the ESA

Coho Salmon are listed as a threatened species under the ESA

Priority 2: *Support the reintroduction of anadromous fish throughout the basin.*

Increased spawning opportunities in Rush Creek will enhance the production of anadromous fish in the basin. Steelhead and possibly coho salmon will be the reintroduced salmonid that benefits the most from restoration efforts in Rush Creek.

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

Increased spawning gravel will enhance fish habitat in Rush Creek.

6. Tasks:

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

- 1) secure funding;
- 2) acquire required permits;
- 3) secure gravel; and,
- 4) add a small contract onto the Pine Creek instream project to minimize helicopter move-in costs.

Monitoring would commence as permits are acquired, and post-monitoring efforts would begin after gravel is distributed. Monitoring would consist of established photo points and stream surveys that measure gravel.

7. Methods:

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

Gravel will be secured from river run gravel operations in the Lewis River Basin.

There are two methods of distribution: 1) Stockpile gravel near the Rush Creek Bridge on FS Road 90 and use a backhoe to dump gravel over the bridge into the stream. 2) Create a small stockpile of gravel near Rush Creek and distribute upstream and downstream of the bridge with a heavy lift helicopter.

Approximately 100-150 cubic yards of spawning gravel would be placed in stream margins, pool tailouts, and other low velocity areas within stream bankfull. Some gravel would be placed high up in the stream, but below the major waterfall, to be distributed by the stream during high flow events.

The project would take place in July of 2007 or 2008 depending upon availability of funds, and securing of NEPA and appropriate permits.

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.

The preferred method to measure deliverables is tons of gravel delivered to the project worksite by a dump truck. Each load is weighed at the rock pit prior to delivery. Invoices for purchases of gravel will be on file at Mt. St. Helens Ranger District.

9. Project Duration

a. Identify project duration. Note that duration of a project funded from Fiscal Year 20xx appropriations may extend beyond the end of the fiscal year.

b. Provide a detailed project schedule to include:

- Initiation of project.

- Completion date for each milestone or major task.

- Project close-out site visit (with PacifiCorp, Cowlitz PUD, and ACC representatives)

The duration of this project would last one season. Gravel placement would occur in July 2007 to avoid conflicts with spawning bull trout, assuming NEPA, State Permits, and funding is secured. Because there is a short amount of time between ACC final project selection and the implementation window, it is possible that some issues will arise that prevents a 2007-implementation timeframe. If this were the case, the project would proceed in July 2008.

The project would take seven to 21 days to complete. Gravel stockpiles will be delivered in advance of helicopter arrival to assure best use of helicopter flight time.

A project closeout meeting would occur following project completion. Monitoring would occur prior to gravel distribution, following gravel distribution, and during at least once each year during summer months thereafter. Funding for monitoring will come from PacifiCorp funds the first year, after that USFS personnel with help from partners will complete monitoring with in-house funds.

10. Permits

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. Landowner permission is required prior to finalization of a Funding Agreement with PacifiCorp. 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.

NEPA- The Forest Service will need to complete NEPA for this project in 2007

WDFW- approvals from WDFW will be secured prior to the implementation of this project.

USFWS- approvals from WDFW will be secured prior to the implementation of this project.

Land ownership in Rush Creek is comprised of federal lands managed by the USFS.

11. Matching Funds and In-kind Contributions

If applicable, describe any matching funds and/or in-kind contributions that you have secured or have requested through other means. Matching funds are those funds contributed to the project from other funding sources. In-kind contributions may include donated labor, materials, or equipment. Please be specific in your description of contributions and use of volunteers (e.g. ACE construction is donating 8 hours of backhoe operation including operator).

Partner	Contribution	Funds
Forest Service	NEPA, Project development, Contracting, Permitting, Monitoring	\$17,000 In-kind
FishFirst	Site surveys	\$1,000 In-kind
Mt. St. Helens Institute	Monitoring	\$2,000 In-kind

12. Professional Review of Proposed Project

It is encouraged that the proposal be reviewed by an applicable resource professional prior to submission for funding. Focus of such review should be on biological value and propose methodology. Please note who completed the review and contact information. This does not have to be a third party review, and can come from someone associated with the sponsoring organization.

This project proposal was reviewed by Gifford Pinchot National Forest (GPNF) Hydrology program manager, Ruth Tracy, The GPNF Fisheries program manager, Diana Perez, and GPNF North Zone Planning Team Leader & Forest Hydropower Coordinator Karen Thompson.

13. Budget

Provide a detailed budget for the project stages (Final design, Permitting, Construction, Monitoring/Reporting). Include:

Personnel costs

Labor and estimated hours

Operating expenses

Supplies and materials

Mileage

Administrative overhead

If in-kind contributions have been acquired, please note contributions according to project stage within the budget.

Rush Creek Gravel Placement

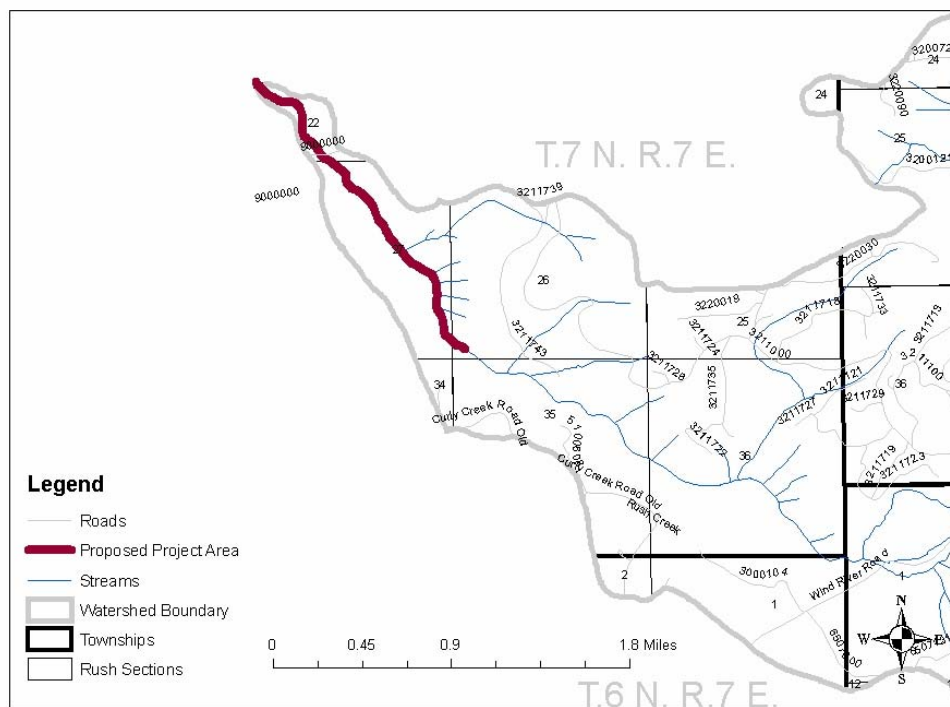
	Total	NEPA	Final designs	Permitting	Construction	Monitoring/Labor /Reporting
Personnel Costs						
FS - Zone Team or Contract		\$2,000(ACC) \$3,000 (IK)				
FS –Fish Bio and Hydrologist			\$3,000 (IK)			
FS - Fish Bio and Hydrologist				\$2,000 (IK)		\$3,000 (ACC)
FS - Contract administrator -					\$3,000 (IK)	
FS - Contract Specialist					\$2,000 (IK)	
Fish First						\$1,000 (IK)
Mt. St. Helens Institute						\$2,000 (IK)
Contract Payables						
Helicopter Contract,					\$10,000 (ACC)	
Gravel Purchase					\$3,500 (ACC)	
Equipment Rental					\$1,500(ACC)	
Administrative Overhead		\$3,500(IK)	\$1,500 (IK)			
Total ACC Funds	\$20,000	\$2,000			\$15,000	\$ 3,000
<i>Total FS Funds</i>	<i>\$17,000</i>	<i>\$3,000</i>	<i>\$3,000</i>	<i>\$2,000</i>	<i>\$5,000</i>	
<i>Total other Partner Funds</i>	<i>\$3,000</i>					<i>\$3,000</i>
Project Total	\$40,000					
FS personnel estimated as \$300/day.						

Total ACC Funds Requested

\$20,000

This project can be implemented with funds solely acquired from the ACC, and In Kind funds from the Forest Service, Fish First, and Mount St. Helens Institute.

Proposed Rush Creek Gravel Restoration



Specific Questions from ACC members Rush Creek Gravel Restoration

How do we know gravel is the limiting factor? What size and for which species? Why is there a lack of gravel recruitment to the creek? What will be done to remedy the lack of recruitment? Will this be a long term project requiring gravel addition for multiple years? Gravel may not be the limiting factor, but visual observations by WDFW and USFS personnel detected few areas of useable spawning gravel for bull trout in stream margins, pool tailouts or riffles. Gravel is found at the bottom of some pools, however the pool/riffle ratio in Rush Creek is 3/97 in the reach below the first waterfall (27 foot waterfall at RM 1.78) The lack of gravel may be due to the high velocity of the stream and stable stream banks. Because the streambanks are stable there will not be much recruitment. The upper reaches of Rush Creek are fairly flat, however even up there most of the substrate is large. This project is a one time project, through monitoring efforts and recommendations from the ACC group it could turn into a multi-year project.

Rush Creek is designated a “tier 2” reach in the Lower Columbia Salmon Recovery Plan (LCFRB, 2004). Reaches are ranked on a 4 Tier basis with Tier 1 being the highest. In addition to bull trout, Rush Creek supports or is believed to be capable of supporting winter steelhead, spring Chinook, and coho to a modest degree. Rush Creek was designated a “tier 2” watershed by LCFRB. This was based on lack of information at the time and does not reflect the importance of this stream for bull trout. The USFS believes this should be reevaluated and reclassified.

EDT analysis for Coho and steelhead suggest that the lack of spawning habitat may be a moderate problem. Channel stability and sediment appear to be more significant problems, particularly for egg incubation. Our 2004 stream survey and visual observations indicate a lack of spawning gravel for Coho, steelhead and bull trout. Channels appear to be stable based on the

stream survey. Sediment appears to be very low, the high velocity of the stream below the falls moves fine sediments out of the system.

Why is spawning habitat limited in Rush Creek? How much spawning habitat would be created? How much gravel would be added? Are there adequate instream structures to retain the gravel? If not, the added gravel will not remain in Rush Creek. Until this basic information is provided, it is impossible to assess whether this project would be a reasonable investment. Spawning habitat is limited in Rush Creek because of high velocity, lack of LWD and lack of pools.

Approximately 100 to 150 cubic yards of gravel would be placed. There may not be adequate structures in place to hold all of the gravel. A project to place large wood was proposed to the ACC in 2006, but was not approved. Part of the project is to distribute gravel higher up in the system so it can work its way downstream and deposit in natural locations.

For one thing, we're not sure that gravel recruitment and supplies from the upper watershed are limiting or that placed gravel will stay in the system. This seems like an artificial method of boosting bull trout production, rather than a project to actually benefit the species long term. It might make more sense to do a one time gravel placement at the LWD sites in Pine Creek, rather than Rush Creek. You could wait a year after the LWD pilot project and see if spawning gravels are trapped by the LWD. If not, you could do some placement there. Pine Creek and Rush creek are very different systems. Gravels move through Pine Creek more frequently than Rush Creek. I agree that Pine Creek would benefit more from gravel placement associated with LWD than Rush Creek with no added LWD.

USFWS suggested that a geomorphologist review the proposal. Ruth Tracy, our Forest Hydrologist has reviewed this proposal. Jim Chamberlin our Forest Geologist has reviewed this proposal. Diana Perez, our Forest Fish Biologist has reviewed this proposal. USFWS can review this proposal with a geomorphologist if they require more review, however if there is concern about gravel staying in place once distributed it should be noted that USFWS did not want to proceed with the 2006 LWD proposal for this stream because they believed there was enough LWD in place to capture and recruit mobile gravels.

Input from USFS Geologist Jim Chamberlin

I did a quick review of the aerial photos and literature of the area. What it appears to me is that the drainage was probably carved through the action of valley glaciers with additional down cutting after the end of the glacial period. The cap rock is a very resistant basalt that probably flowed out of various vents in the Indian Heaven area. It's mapped as the Basalt of Thomas Lake and is dated between 1.5 to 3 million years old. Below this cap rock are layers of resistant and less resistant rock. These older layers are dated around 19 to 25 million years old. It appears that most of the channel is bedrock controlled and would not be susceptible to erosion at a very fast rate. It looks like the channel and canyon walls are very stable. There are also very few side channels coming into Rush Creek which also reduces the possibility of gravel recruitment.

As already noted the gradient of Rush creek from the Lewis River to the falls is about 7% and has fairly high flow rates. I would try and concentrate the placement of gravels in areas just above lower gradient and wider areas of the creek so the gravels will be able to settle out in a more natural pattern.

Input from USFS Hydrologist Ruth Tracy

Rush Creek could benefit from additional spawning gravels. Gravel placement should be along margins, behind existing wood and/or wide spots in the stream to minimize gravel transport out of Rush Creek due to its high energy and limited existing large wood.

Appendix E

Martin Access Riparian Forest and Off-channel Habitat Enhancement

Lewis River Aquatics Fund FY2007

Proponent: Cowlitz Indian Tribe

Submittal Deadline: 26-January-2007

Submitted To: Frank Shrier
PacifiCorp – LCT 1500
825 NE Multnomah
Portland, OR 97232

REQUEST: \$26,200

1. Project Title:

Martin Access Riparian Forest and Off-channel Habitat Enhancement: Full Proposal

2. Project Manager (name, address, telephone, email, fax).

Nathan Reynolds
Natural Resources Department
Cowlitz Indian Tribe
PO Box 2547
Longview, WA 98632
Phone: 360.575.6226
Fax: 360.577.7432
Email: nreynolds@cowlitz.org

Mr. Reynolds holds a BS in Natural Resource Sciences and is completing an MS in Environmental Science. He has been employed with the Cowlitz Indian Tribe since 2005. Previously, he owned LaCamas Ecoscience, an ecological planning and analysis firm, and served internships with both the USDA Forest Service and WDFW. Mr. Reynolds has been involved in habitat conservation and restoration issues in southwest Washington State since 1992.

3. Identification of problem or opportunity to be addressed:

Problem:

In the watershed of the North Fork and lower mainstem of the Lewis River, there is scarce riparian habitat, which is essential for:

- A. Chinook salmon, listed as a threatened species under the Endangered Species Act (ESA).
- B. Chum salmon, listed as a threatened species under the ESA
- C. Steelhead trout, listed as a threatened species under the ESA
- D. Coho salmon, proposed for listing under the ESA

These species have endured many impacts which threaten their persistence in the watershed. Arising from various sources, these impacts include: alteration of natural

flow regimes, degradation of riparian habitat function, loss of floodplain and off-channel habitat areas, inputs of point source and non-point source pollution, and impacts of urbanization.

Opportunity:

The opportunity to restore riparian zones addressed in this project proposal will benefit fish recovery throughout the North Fork Lewis River, with priority for federal ESA-listed species. Both the enhancement of riparian forest and scarce off-channel habitat will support larger populations of anadromous fish. This project will also increase the abundance of functional habitat in the lower river, an area of great need.

4. Background:

The North Fork Lewis River habitat assessment prepared for the Lower Columbia Fish Recovery Board (LCFRB) identifies several opportunities (section 3.3.3) that have the greatest potential to benefit salmonid production in the basin (Keefe et al 2004). Item 2 on this list is *Preservation/restoration: north and south banks, RM 2.0 to 3.1*. This report specifically identifies a portion of intact forest “along the margin of a point bar located on the inside of a tight meander bend at RM 2.9 to 3.1.” This is the area our Project targets. See Riparian Forest Enhancement (Fig 1).

The LCFRB habitat assessment further states, “Historic maps suggest [this area] may have supported overflow channels”, and notes that the “[p]reservation/restoration of floodplain habitats in this area is given a relatively high priority due to the scarcity of functional habitat throughout the first 7.3 miles of Lewis River mainstem channel.” Therefore, this small, undiked portion of floodplain habitat is also targeted for our project. See Off-channel Habitat Enhancement (Fig 1).

The Executive Summary of the *Habitat Limiting Factors, Water Resource Inventory Area 27 (Kalama, North Fork Lewis River, And East Fork Lewis River)* states that the second most important recommendation to address limiting factors in the Lewis River is: “Increase and/or enhance off-channel and rearing habitat within the lower Lewis River.” (WCC 2005).

Section 7 of the WRIAs 27 and 28 Watershed Management Plan states, “Restoring lowland floodplain function, riparian conditions, and stream habitat diversity” is a priority action in the lower Lewis River. In table 7.1 of that document, it prescribes, “Within authorities, conduct floodplain restoration where feasible along the [lower Lewis] mainstem and in major tributaries that have experienced channel confinement. Build partnerships with landowners and agencies and provide financial incentives.” Implementation of this prescription will result in “restoration of floodplain function, habitat diversity, and habitat availability”, with a “high” level of certainty (LCFRB 2006).

5. Project Objectives

This proposal is consistent with the Aquatics Fund objectives because the implementation of our project will meet the priorities of the Fund by:

Martin Access Riparian Forest and Off-channel Habitat Enhancement

- A. Benefiting fish recovery throughout the North Fork Lewis River, with priority to federal ESA-listed species.
- B. Supporting the reintroduction of anadromous fish throughout the basin.
- C. Enhancing fish habitat in the Lewis River Basin, with priority given to the North Fork Lewis River.

This proposal is consistent with Recovery Plans because it takes its shape, structure and impetus directly from recent North Fork Lewis River technical assessment and planning documents (Keefe et al 2004, WCC 2005, LCFRB 2006).

6. Tasks

The Riparian Forest Enhancement will occur along a 750' distance (Fig 1, Fig. 2) setback 10' from the edge of bankfull width. The Project aims to block southwest sunshine, thereby shading the mainstem Lewis River. Enhancement will occur by planting tree and shrub species appropriate to forested riparian zones of the Lower Lewis River. The species have been selected to accomplish multiple goals including: rapid growth for summer shade to shelter other plantings and eventually the shallow river edge (Black Cottonwood *Populus balsamifera* ssp.*trichocarpa*), creation of complex and dense shrub layers (Red-osier dogwood *Cornus stolonifera*), and, in the long term, year-round coniferous shade and encourage accumulation of large woody debris through bankfall (Douglas Fir *Psuedotsuga menziesii*).

The ultimate goal of the project is enhanced riparian function; subsidiary goals include reduced water temperatures, increased water quality, and the preservation of habitat quality and function in the mainstem and off-channel habitat. Also, the enhanced riparian function will increase organic inputs to the system, which will in turn boost nutrient levels in both the mainstem and proximal downstream off-channel habitat. Finally, bankfall of large trees from a mature riparian forest will serve as source of large woody debris to the river, which may further enhance nutrient loads, create structure and habitat, and armor the nearby off-channel habitat.

The Off-channel Habitat Enhancement will occur along a different 750' distance (Fig.1, Fig. 3) centered along the highest elevation of sandbar ridge structures. Tasks include planting tree and shrub species appropriate to highly disturbed and occasionally-inundated sandbar zones of the lower Lewis River. The species have been selected to accomplish multiple goals including: rapid growth for summer shade to shelter other plantings (Black Cottonwood *Populus balsamifera* ssp.*trichocarpa*), hardiness to withstand inundation and predation, and creation of complex and dense shrub layers (Red-osier dogwood *Cornus stolonifera*, Sitka willow *Salix sitchensis*, and Scouler's Willow *Salix scouleriana*). In the long term, these plantings will vegetatively armor and anchor the transient sandbar ridge structures and enhance their persistence. The vegetation and armored landforms will help capture and retain river-carried large woody debris, further armoring the landforms.

The ultimate goal of this portion of the Project is enhancing the persistence and function of the important off-channel habitat located between the line of armored sandbars and the main river bank.

7. Methods

An Ecologist will be hired (one-third time, 13.33 hrs/wk, 26 weeks) for detailed Project management. In the field, the Ecologist will identify and layout the project work areas, including needs for planting site preparatory work (invasive species treatment and removal) and planting design. The ecologist will often perform fieldwork with the Biotechnicians, such as site preparation, planting, and watering and will supervise and coordinate their work. The Ecologist will track staff performance, host the Year-1 Project closeout site visit for the ACC, convey financial information to the accountant, prepare as-built plans, and assemble and submit the Year 1 Project Report.

Two Biotechnicians will be hired (one-third time, 13.33 hrs/wk, 20 weeks) to implement the project, including site preparation, planting, and watering. They will also transport the enhancement plants from the nursery to the staging area, and to the project site.

Plantings will be installed according to species-specific methods. In the Riparian Forest Enhancement area, stakes, tubes, and weedcloth will be used to increase survivorship. In the Off-channel Habitat Enhancement area, these items will not be used since inundation will rapidly remove these items. After installation, the Biotechnicians will water the plantings on a regular schedule until the onset of the rainy season.

Project administration will be overseen by Mike Iyall, Director of the Natural Resources Department of the Cowlitz Indian Tribe (0.5 hrs/wk, 26 weeks). Financial reporting and accounting will be conducted by Jess Groll, Cowlitz Indian Tribe Accountant (0.5 hrs/wk, 26 weeks).

The Cowlitz Indian Tribe will promote *volunteer planting days* to both the tribal membership and the general public. These events will provide excellent opportunities for community-building efforts and environmental education.

8. Specific Work Products

The first year product will be the completed enhancement plantings and the Year 1 Project Report, which will include staff performance, financial reports, and as-built drawings and photographs of the completed enhancement projects. The Year 2 Project Report will be a survivorship assessment of the plantings, done in spring 2008. The Year 3 Project Report also will be a survivorship assessment, done in spring 2009.

The ultimate work product will be the preservation and enhancement of now scarce functional riparian habitat in the lower mainstem Lewis River, for the benefit of ESA-listed anadromous salmonids (as well as benefit to other non-listed species) and enhanced overall ecosystem function.

9. Project Duration

Martin Access Riparian Forest and Off-channel Habitat Enhancement

Project Implementation will occur in Summer and Fall 2007; effectiveness monitoring will be conducted in Spring 2008 and Spring 2009.

10. Permits

No permits are necessary to conduct this project.

The Riparian Forest Enhancement site is owned in fee-simple by Fred Martin of Renton WA. He has verbally indicated that he is interested in seeing enhancement work done on the property, but is checking with other family members. A letter of support is pending.

The Off-channel Habitat Enhancement site is owned by the State of Washington, and managed by the Aquatic Lands branch of the Washington Department of Natural Resources (DNR). A Right-of-entry has been requested from DNR Aquatics and is pending.

Access to the site will be provided through the Martin Access property of the Washington Department of Fish and Wildlife (WDFW), adjacent to the Charles Martin fee parcel. A Right-of-entry has been requested from WDFW and is pending.

11. Matching funds and in-kind contributions

The Tribe has received verbal confirmation from Guy Norman, Regional director for Washington Department of Fish and Wildlife (WDFW) Region 5, that a seasonally available vehicle may be provided for Biotechnicians and the ecologist to use during the course of this project. Such a vehicle would be a full-size 4WD pickup truck suitable for carrying project materials and gear. Written confirmation is being developed, and final coordination will likely not occur until May or June. A letter of support is pending.

12. Professional Review of the Proposed Project

The proposed scope of work has been reviewed and approved by Shannon Wills, Cowlitz Indian Tribe Biologist. The proposed budget has been reviewed and approved by the accounting department of the Cowlitz Indian Tribe. The Cowlitz Tribal Council passed a resolution supporting this scope of work proposed by the Tribe's Natural Resource Department. That resolution is appended to this proposal.

13. Budget

See attached estimating spreadsheet.

References:

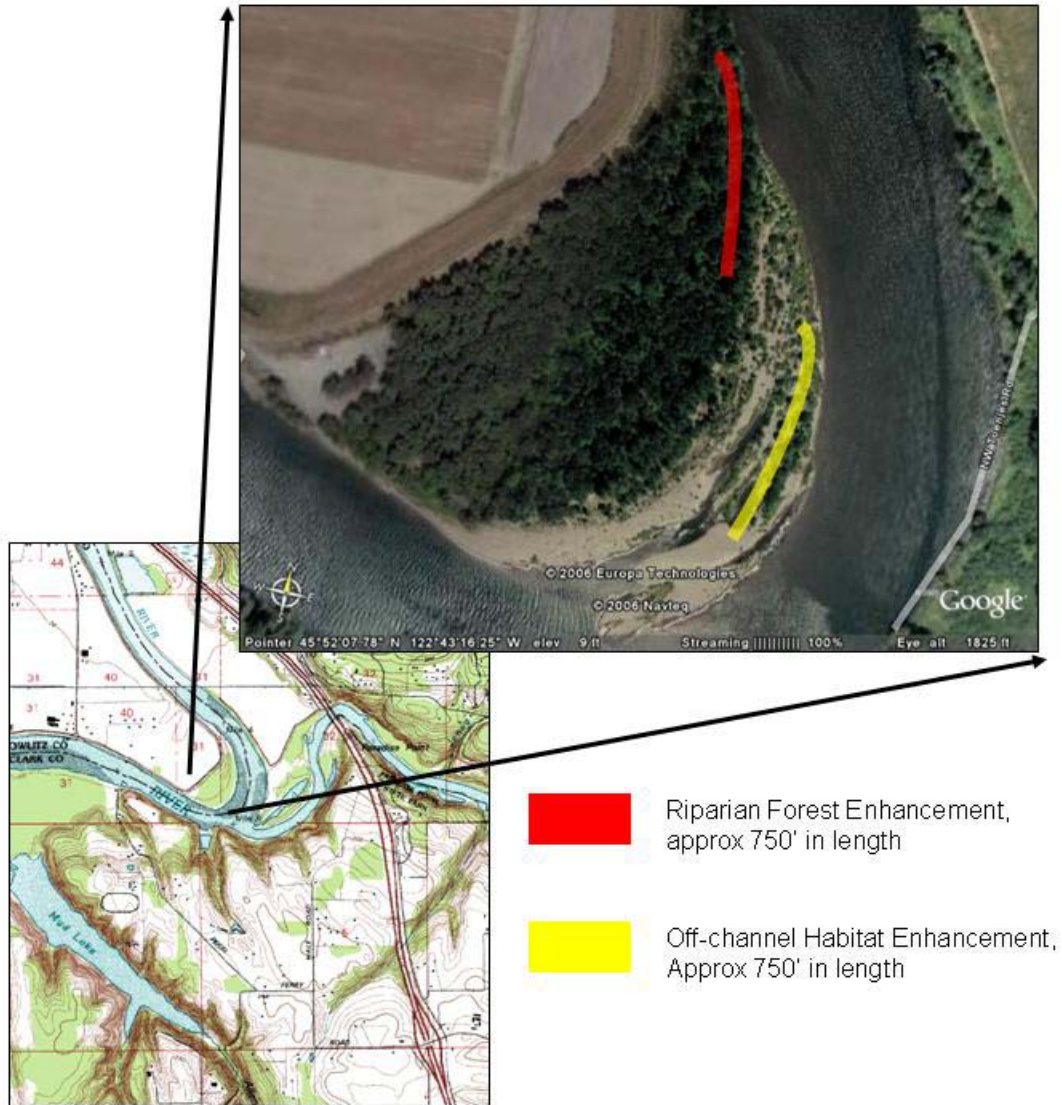
Keefe et al 2004, Keefe, M., R Campbell, P. DeVries, S. Madsen, D. Resier; *Kalama, Washougal and Lewis River Habitat Assessments, Chapter 3: The North Fork Lewis River Basin*, prepared for the Lower Columbia Fish Recovery Board Dec 2004, Accessed online at:
http://www.lcfrb.gen.wa.us/Watershed%20Assessmsent%20Report%20Chps/LCFRB_Chapter3_NFLewisBasin_FINAL_12.31.04.PDF
(Printed version in possession of Mr. Reynolds)

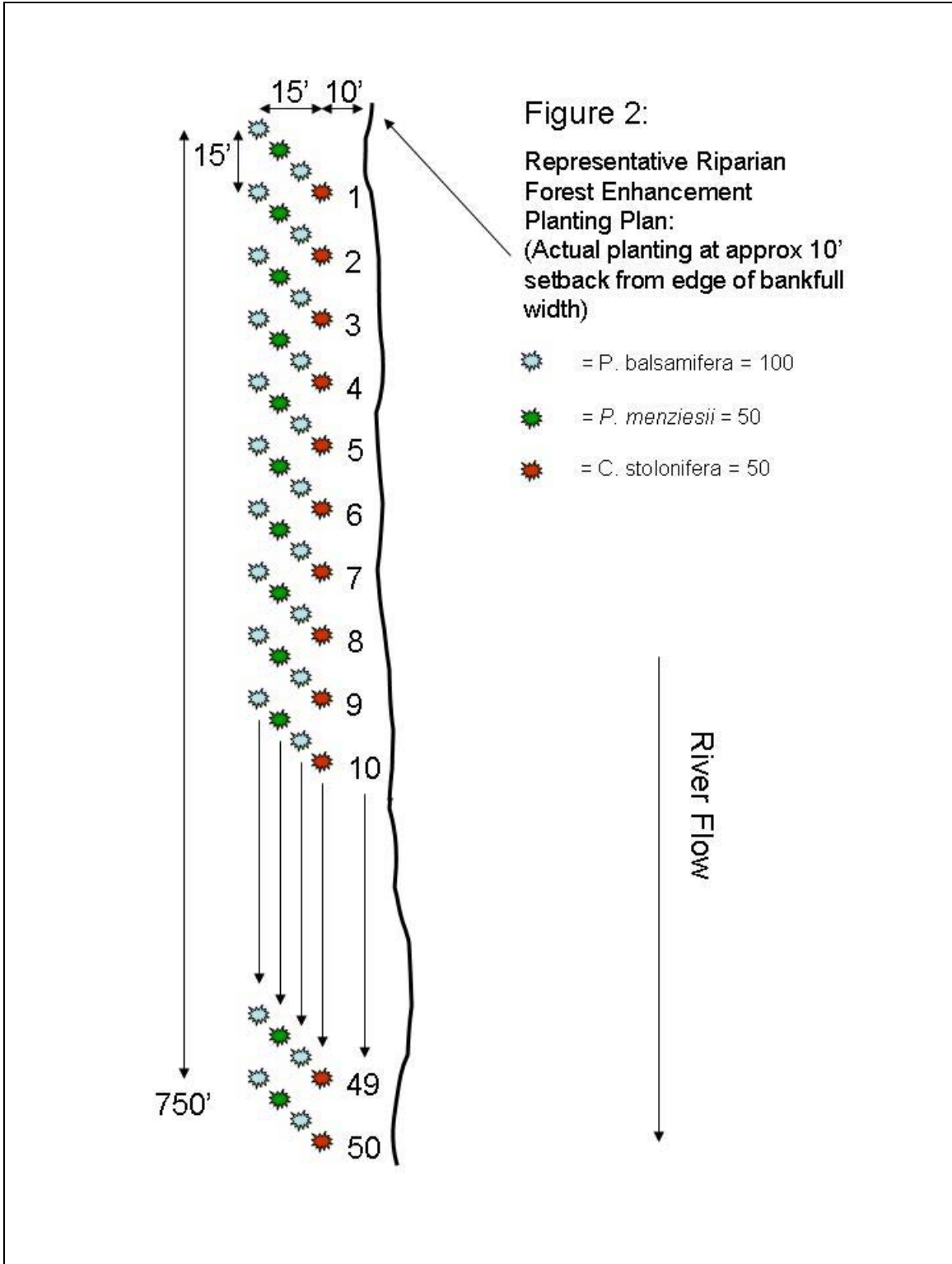
Martin Access Riparian Forest and Off-channel Habitat Enhancement

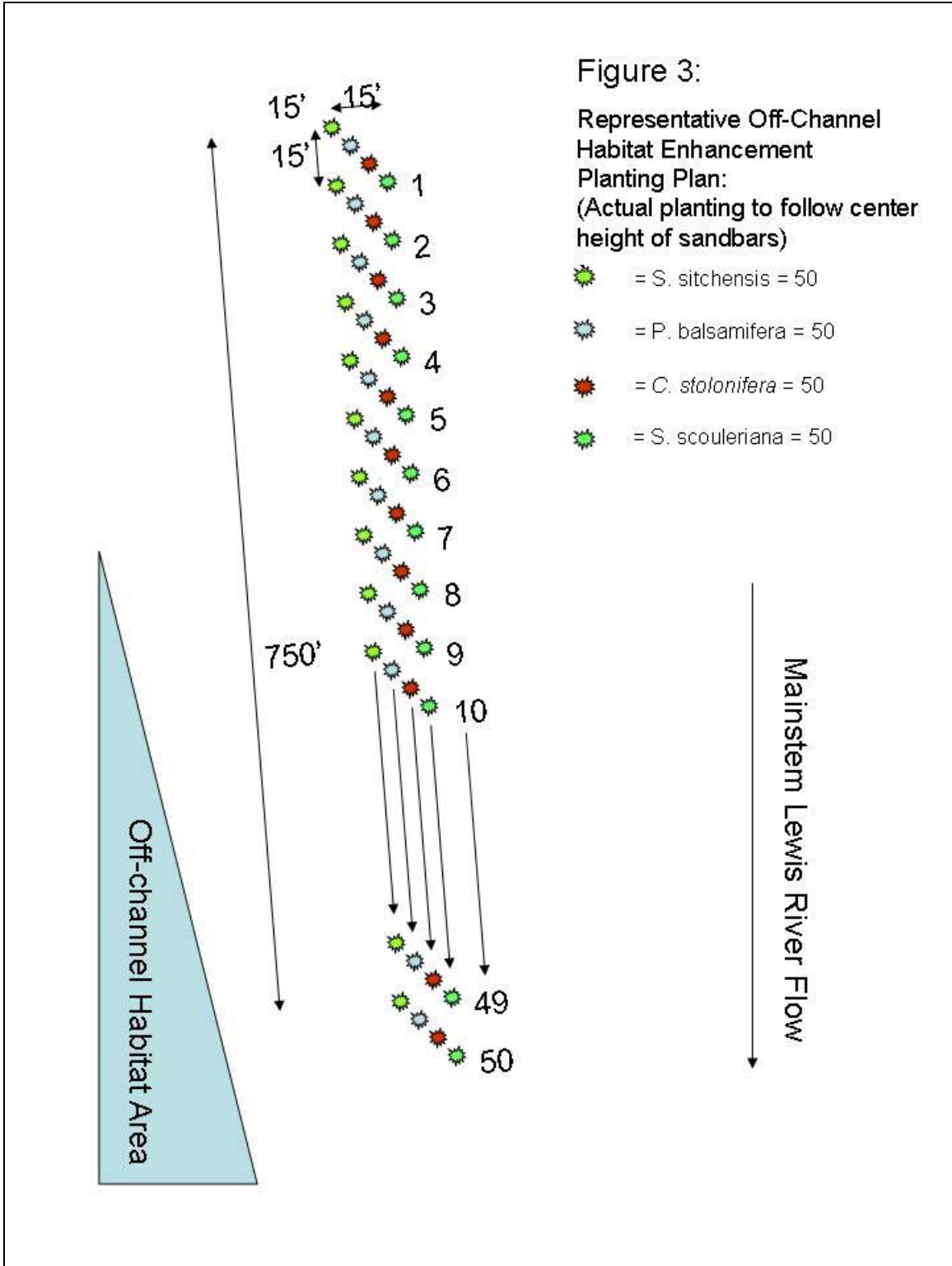
LCFRB 2006, *Salmon-Washougal & Lewis Watershed Management Plan WRIAS 27-28*, Lower Columbia Fish Recovery Board, 2006 Accessed online at:
http://www.lcfrb.gen.wa.us/pdf/WRIA%2027_28%20Watershed%20Management%20Plan.pdf, (Printed version in possession of Mr. Reynolds)

WCC 2005, *Habitat Limiting Factors, Executive Summary, Water Resource Inventory Area 27, Kalama, North Fork Lewis River, And East Fork Lewis River*, Washington Conservation Commission, Accessed online at:
<http://salmon.scc.wa.gov/reports/wria27sum.shtml>
(Printed version in possession of Mr. Reynolds)

Figure 1: Martin Access Riparian Forest and Off-channel Habitat Enhancement







Martin Access Riparian Forest and Off-channel Habitat Enhancement

Martin Access Restoration Budget
ACC Funding Request FY2007

ndr

Personnel	FTE	Weeks	Hrs/Wk	Annual Hours	Hourly Rate	Personnel Cost	Total Amount
NRD Director	0.01	26	0.5	13	\$ 45.00	\$ 585	
Accountant	0.01	26	0.5	13	\$ 45.00	\$ 585	
NRD Ecologist	0.17	26	13.3	346	\$ 21.00	\$ 7,266	
NRD Sci-Tech	0.13	20	13.3	266	\$ 15.00	\$ 3,990	
NRD Sci-Tech	0.13	20	13.3	266	\$ 15.00	\$ 3,990	

Year 1 Gross Wages \$ 16,416

Section B: Payroll Taxes & Benefits

	%	Amount
Year 1	18.37%	\$ 3,016

Payroll Taxes & Benefits \$ 3,016

Travel	Rate/Mile	Miles/R. trip	Trips/ Week	weeks	Travel Cost
Trips to Martin Landing	0.485	45	3	20	\$ 1,310
Trips to Sound Native Plants	0.485	150	1	2	\$ 146
					\$ -

Travel \$ 1,456

Misc Equipment	Qty	Unit	Total
Populus trichocarpa (2 gal)	150	\$ 6.00	\$ 900
Cornus stolonifera (2 gal)	100	\$ 6.00	\$ 600
Salix scouleriana (1 gal)	50	\$ 2.85	\$ 143
Salix sitchensis (1 gal)	50	\$ 2.85	\$ 143
Pseudotsuga menziesii (2 gal)	50	\$ 6.00	\$ 300
Planting tube (box 250)	1	\$ 60.00	\$ 60
Planting weed cloth (bundle 100)	2	\$ 80.00	\$ 160
Weed cloth staples (box 1000)	1	\$ 31.50	\$ 32
Bamboo stake (pack 500)	1	\$ 24.00	\$ 24
Cable ties (bag 1000)	1	\$ 32.00	\$ 32
Long handle planting shovel	4	\$ 44.90	\$ 180
Tile Spade planting shovel	4	\$ 55.90	\$ 224
Machete	4	\$ 30.00	\$ 120
Gas powered string trimmer	1	\$ 200.00	\$ 200
Field Notebooks	4	\$ 10.00	\$ 40
Field vests	2	\$ 66.95	\$ 134
Misc Field Supplies	1	\$ 200.00	\$ 200
Trimmer gas/oil mix (gal)	15	\$ 4.00	\$ 60

Equipment \$ 3,550

Other Program Costs	Qty	Unit	Total
Photocopying/Printing	1	\$ 100.00	\$ 100
Office supplies	1	\$ 100.00	\$ 100
Nextel	2	\$ 50.00	\$ 100
Nextel service (month)	6	\$ 40.00	\$ 240
Administrative and staging space at the Cowlitz Tribal Offices	6	\$ 200.00	\$ 1,200

Other Program Costs \$ 1,740
Total Request \$ 26,200

In-Kind	Qty	Unit	Total
WDFW Truck	1	\$ 5,000	\$ 5,000

In-kind \$ 5,000
Total Project Cost \$ 31,200



Cowlitz Indian Tribe

Cowlitz Tribal Council
Resolution No. 07- 06

Title: FY2007 Lewis River ACC Aquatics Fund Program Funding Request --
Martin Access Riparian Forest Enhancement

WHEREAS, the Cowlitz Indian Tribe is Acknowledged as a Sovereign Indian Nation by the United States Government, and

WHEREAS, the Cowlitz Indian Tribal Council is the governing body of the Cowlitz Indian Tribe as authorized by the tribe's Constitution and By-laws, and

WHEREAS, the Cowlitz Indian Tribe declares that plentiful clean water and abundant fish runs are important to the cultural identity of the Tribe, and

WHEREAS, these qualities have been significantly impaired by the establishment of three dams within the watershed of the Lewis River, and

WHEREAS, the Lewis River Aquatic Coordination Committee has an existing *Aquatics Fund* that funds on the ground habitat restoration projects within this watershed of Tribal interest, and

WHEREAS, the establishment of a restoration project at the *Martin Access* of the Lewis River would further develop the individual skills of Tribal employees, expand the program delivery of the Natural Resource Department, and enhance the Tribe's role and participation within the technical agencies and organizations of Southwest Washington State, and

WHEREAS, such a project would advance scientific knowledge and protect natural resources which are cultural resources to Tribal members, and are pertinent to the Tribe's Native culture,

NOW THEREFORE BE IT RESOLVED by the Tribal Council of the Cowlitz Indian Tribe, to hereby authorize the Natural Resource Department to seek and apply for funding from the *Aquatics Fund Program* of the Lewis River Aquatic Coordination Committee to conduct on the ground habitat restoration at the *Martin Access*, to benefit juvenile salmonids in the Lewis River Watershed, and to do so in a respectful and honorable manner consistent with Native Culture.

CERTIFICATION

The forgoing resolution was adopted this 6 day January 2007, at a duly called Tribal Council meeting by a vote of 19 For, 0 Against, and 0 Abstain.



William Lyall
Tribal Council Chair



Nancy Osborne
Tribal Council Secretary

Appendix F

Plas Newydd Riparian Forest Enhancement

Lewis River Aquatics Fund FY2007

Proponent: Cowlitz Indian Tribe

Submittal Deadline: 26-January-2007

Submitted To: Frank Shrier
PacifiCorp – LCT 1500
825 NE Multnomah
Portland, OR 97232

REQUEST: \$29,400

1. Project Title:

**Plas Newydd Farm Riparian Forest Enhancement:
Full Proposal**

2. Project Manager (name, address, telephone, email, fax).

Nathan Reynolds
Natural Resources Department
Cowlitz Indian Tribe
PO Box 2547
Longview, WA 98632
Phone: 360.575.6226
Fax: 360.577.7432
Email: nreynolds@cowlitz.org

Mr. Reynolds holds a BS in Natural Resource Sciences and is completing an MS in Environmental Science. He has been employed with the Cowlitz Indian Tribe since 2005. Previously, he owned LaCamas Ecoscience, an ecological planning and analysis firm, and served internships with both the USDA Forest Service and WDFW. Mr. Reynolds has been involved in habitat conservation and restoration issues in southwest Washington State since 1992.

3. Identification of problem or opportunity to be addressed:

Problem:

In the watershed of the North Fork and lower mainstem of the Lewis River, there is scarce riparian habitat, which is essential for:

- A. Chinook salmon, listed as a threatened species under the Endangered Species Act (ESA).
- B. Chum salmon, listed as a threatened species under the ESA
- C. Steelhead trout, listed as a threatened species under the ESA
- D. Coho salmon, proposed for listing under the ESA

These species have endured many impacts which threaten their persistence in the watershed. Arising from various sources, these impacts include: alteration of natural

flow regimes, degradation of riparian habitat function, loss of floodplain and off-channel habitat areas, inputs of point source and non-point source pollution, and impacts of urbanization.

Opportunity:

The opportunity to restore riparian zones addressed in this project proposal will benefit fish recovery throughout the North Fork Lewis River, with priority for federal ESA-listed species. The enhancement of riparian forest will support larger populations of anadromous fish. This project will also increase the abundance of functional habitat in the lower river, an area of great need.

4. Background:

The North Fork Lewis River habitat assessment prepared for the Lower Columbia Fish Recovery Board (LCFRB) identifies several opportunities (section 3.3.3) that have the greatest potential to benefit salmonid production in the basin (Keefe et al 2004). Item 2 on this list includes the preservation of “small areas of intact forest within this area of the Lewis River”, and specifically identifies a portion of intact forest “on the south bank between river mile 2.0 and 2.7.” Maps and aerial photos also indicate the area supports approximately 1900 linear feet of intact, functional off-channel habitat. Therefore, this small, undiked portion of forested floodplain habitat is a significant and important remnant of scarce off-channel habitat once common in the lower river.

The habitat assessment (Keefe et al 2004) also points to the need to preserve or restore the ecological function of off-channel habitats in the lower Lewis River:

“[p]reservation/restoration of floodplain habitats in this area is given a relatively high priority due to the scarcity of functional habitat throughout the first 7.3 miles of Lewis River mainstem channel.”

The Plas Newydd Farm site includes a significant component of off-channel habitat. Though this Riparian Forest Enhancement project does not directly address off-channel habitat, the enhanced riparian quality achieved by this project will ensure the persistence of the off-channel habitat by stabilizing the riverbank and reducing erosion. In the absence of stabilization, the river may eventually sediment in and abandon the off-channel habitat, making that area unsuitable for salmonid use.

Other relevant planning documents produced for the Lewis River support the need to enhance or preserve off-channel habitat. The Executive Summary of the *Habitat Limiting Factors, Water Resource Inventory Area 27 (Kalama, North Fork Lewis River, And East Fork Lewis River)* states that the second most important recommendation to address limiting factors in the Lewis River is: “Increase and/or enhance off-channel and rearing habitat within the lower Lewis River.”(WCC 2005).

Section 7 of the WRIAs 27 and 28 Watershed Management Plan states, “Restoring lowland floodplain function, riparian conditions, and stream habitat diversity” is a priority action in the lower Lewis River. In table 7.1 of that document, it prescribes, “Within authorities, conduct floodplain restoration where feasible along the [lower

Lewis] mainstem and in major tributaries that have experienced channel confinement. Build partnerships with landowners and agencies and provide financial incentives.” Implementation of this prescription will result in “restoration of floodplain function, habitat diversity, and habitat availability”, with a “high” level of certainty (LCFRB 2006).

5. Project Objectives

This proposal is consistent with the Aquatics Fund objectives because the implementation of our project will meet the priorities of the Fund by:

- A. Benefiting fish recovery throughout the North Fork Lewis River, with priority to federal ESA-listed species.
- B. Supporting the reintroduction of anadromous fish throughout the basin.
- C. Enhancing fish habitat in the Lewis River Basin, with priority given to the North Fork Lewis River.

This proposal is consistent with Recovery Plans because it takes its shape, structure and impetus directly from recent North Fork Lewis River technical assessment and planning documents (Keefe et al 2004, WCC 2005, LCFRB 2006).

6. Tasks

The Riparian Forest Enhancement projects will occur in two locations along the riverbank of the Plas Newydd Farm. The eastern location is an approximate 1000' linear distance (Fig. 1, Fig. 2) centered on the highest elevation of a sandbar island structure. The western location is an approximate 900' linear distance (Fig. 1, Fig. 3) centered on the highest elevation of a pendant sandbar structure. Enhancement will occur by planting tree and shrub species appropriate to forested riparian zones of the lower Lewis River. The project aims to block southern sunlight, thereby shading both the off-channel habitat and the mainstem Lewis River.

Tasks include planting tree and shrub species appropriate to highly disturbed and occasionally-inundated sandbar zones of the lower Lewis River. The species have been selected to accomplish multiple goals including: rapid growth for summer shade to shelter other plantings (Black Cottonwood *Populus balsamifera* ssp. *trichocarpa*), hardiness to withstand inundation and predation, and creation of complex and dense shrub layers (Red-osier Dogwood *Cornus stolonifera*, Sitka Willow *Salix sitchensis*, and Scouler's Willow *Salix scouleriana*). In the long term, these plantings will vegetatively armor and anchor the transient sandbar ridge structures and enhance their persistence. The vegetation and armored landforms will help capture and retain river-carried large woody debris, further armoring the landforms.

The ultimate goal of the project is enhanced riparian function; subsidiary goals include reduced water temperatures, increased water quality, and the preservation of habitat quality and function in the mainstem and off-channel habitat. Also, the enhanced riparian function will increase organic inputs to the system, which will in turn boost nutrient levels in both the mainstem and proximal downstream off-channel habitat. Finally,

bankfall of large trees from a mature riparian forest will serve as source of large woody debris to the river, which may further enhance nutrient loads, create structure and habitat, and armor both the riverbank and nearby off-channel habitat.

7. Methods

An Ecologist will be hired (one-third time, 13.33 hrs/wk, 26 weeks) for detailed project management. In the field, the Ecologist will identify and layout the project work areas, including needs for planting site preparatory work (invasive species treatment and removal) and planting design. The Ecologist will often perform fieldwork with the Biotechnicians, such as site preparation, planting, and watering and will supervise and coordinate their work. The Ecologist will track staff performance, host the Year-1 Project closeout site visit for the ACC, convey financial information to the accountant, prepare as-built plans, and assemble and submit the Year 1 Project Report.

Two Biotechnicians will be hired (one-third time, 13.33 hrs/wk, 20 weeks) to implement the project, including site preparation, planting, and watering. They will also transport the enhancement plants from the nursery to the staging area, and to the project site.

Plantings will be installed according to species-specific methods. Planting stakes, tubes, and weedcloth will not be used to increase survivorship as inundation will rapidly remove these items. After installation, the Biotechnicians will water the plantings on a regular schedule until the onset of the rainy season.

Plas Newydd Farm has offered to provide green willow poles for additional planting stock and the use of a gas-powered auger to prepare installation. These poles will be installed in chevron formations within the outer sets of plantings in both the East and West areas to provide additional structural integrity to the plantings. As the number of poles to be provided remains unknown at this point, the ecologist will coordinate and finalize that issue during installation. The locations of the chevrons will appear on as-built drawings and the survivorship and effectiveness of the chevrons in catching and retaining additional large woody debris will be assessed in the monitoring reports.

Project administration will be overseen by Mike Iyall, Director of the Natural Resources Department of the Cowlitz Indian Tribe (0.5 hrs/wk, 26 weeks). Financial reporting and accounting will be conducted by Jess Groll, Cowlitz Indian Tribe Accountant (0.5 hrs/wk, 26 weeks).

The Cowlitz Indian Tribe will promote *volunteer planting days* to both the tribal membership and the general public. These events will provide excellent opportunities for community-building efforts and environmental education.

8. Specific Work Products

The first year product will be the completed enhancement plantings and the Year 1 Project Report, which will include staff performance, financial reports, and as-built drawings and photographs of the completed enhancement projects. The Year 2 Project

Plas Newydd Farm Riparian Forest Enhancement

Report will be a survivorship assessment of the plantings, done in spring 2008. The Year 3 Project Report also will be a survivorship assessment, done in spring 2009.

The ultimate work product will be the preservation and enhancement of now scarce functional riparian habitat in the lower mainstem Lewis River, for the benefit of ESA-listed anadromous salmonids (as well as benefit to other non-listed species) and enhanced overall ecosystem function.

9. Project Duration

Project Implementation will occur in Summer and Fall 2007; effectiveness monitoring will be conducted in Spring 2008 and Spring 2009.

10. Permits

No permits are necessary to conduct this project.

The Plas Newydd Farm Riparian Forest Enhancement site is owned by the Plas Newydd Farm LLC and is managed by Rhidian Morgan. Access to the riparian enhancement site on the riverbank is achieved site through the Plas Newydd Farm parcel. A verbal Right-of-entry has been offered by Rhidian Morgan; written confirmation is pending.

Some of the planting area may extend onto lands owned by the State of Washington, and managed by the Aquatic Lands branch of the Washington Department of Natural Resources (DNR). A Right-of-entry has been requested from DNR Aquatics and is pending.

11. Matching funds and in-kind contributions

The Tribe has received verbal confirmation from Guy Norman, Regional director for Washington Department of Fish and Wildlife (WDFW) Region 5, that a seasonally available vehicle may be provided for Biotechnicians and the ecologist to use during the course of this project. Such a vehicle would be a full-size 4WD pickup truck suitable for carrying project materials and gear. Written confirmation is being developed, and final coordination will likely not occur until May or June. A letter of support is pending.

Plas Newydd Farm LLC has verbally offered to support this Riparian Forest Enhancement project by providing heavy equipment to haul materials across the farm to the site. Plas Newydd Farm has also offered to provide green willow poles and the use of a gas-powered auger to drill holes for green willow pole installation.

12. Professional Review of the Proposed Project

The proposed scope of work has been reviewed and approved by Shannon Wills, Cowlitz Indian Tribe Biologist. The proposed budget has been reviewed and approved by the accounting department of the Cowlitz Indian Tribe. The Cowlitz Tribal Council passed a resolution supporting this scope of work proposed by the Tribe's Natural Resource Department. That resolution is appended to this proposal.

13. Budget

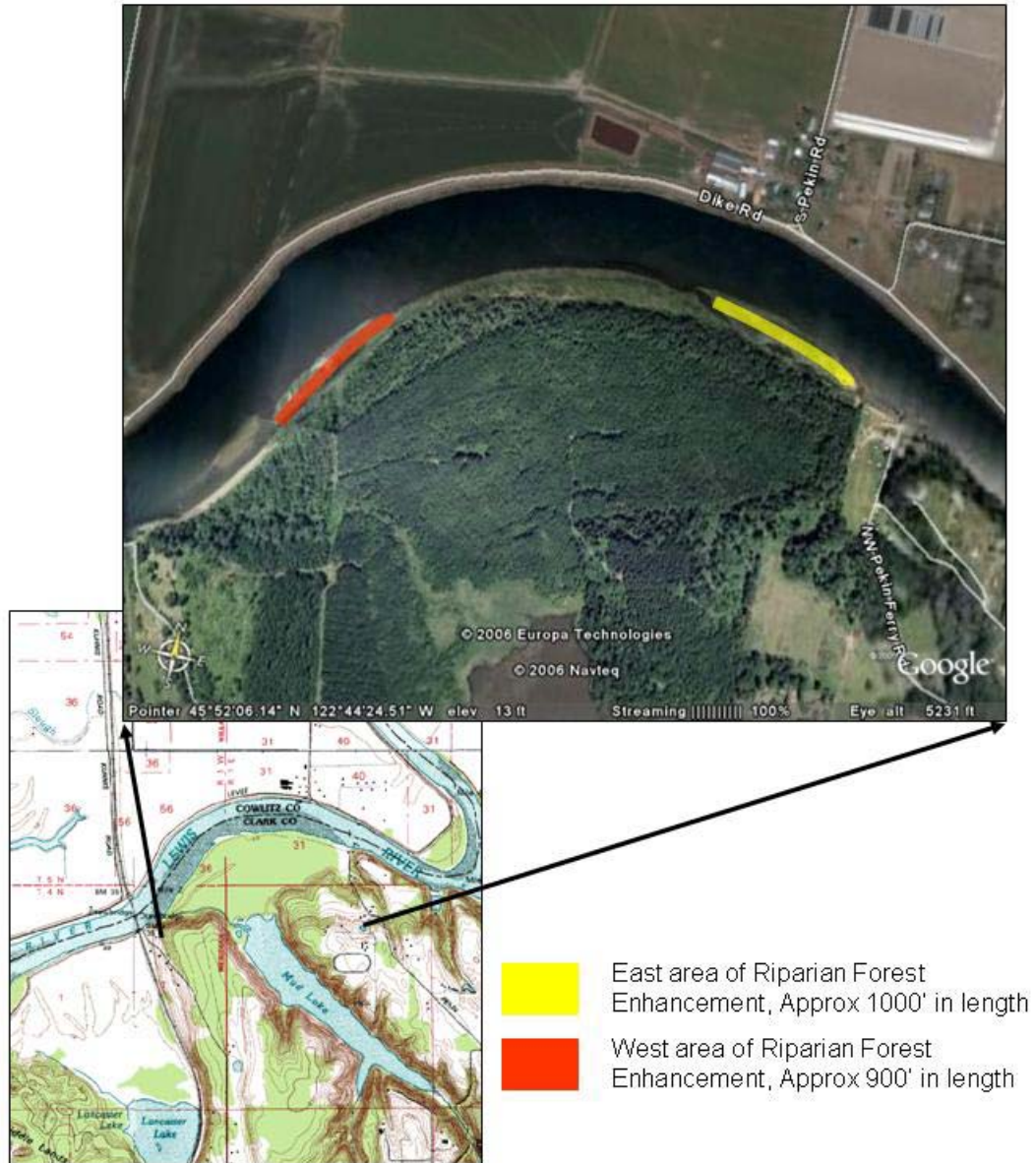
Plas Newydd Farm Riparian Forest Enhancement

See attached estimating spreadsheet.

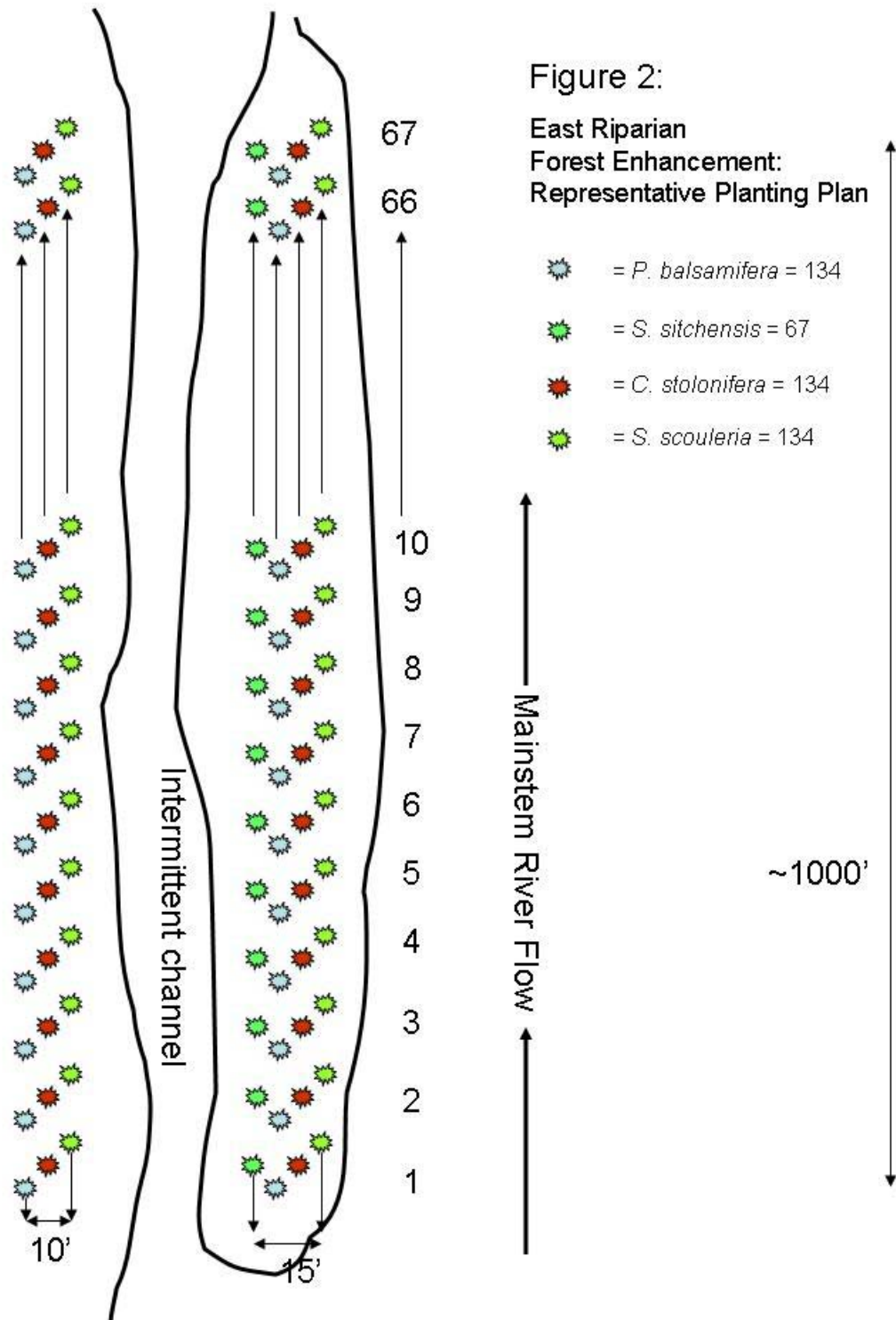
References:

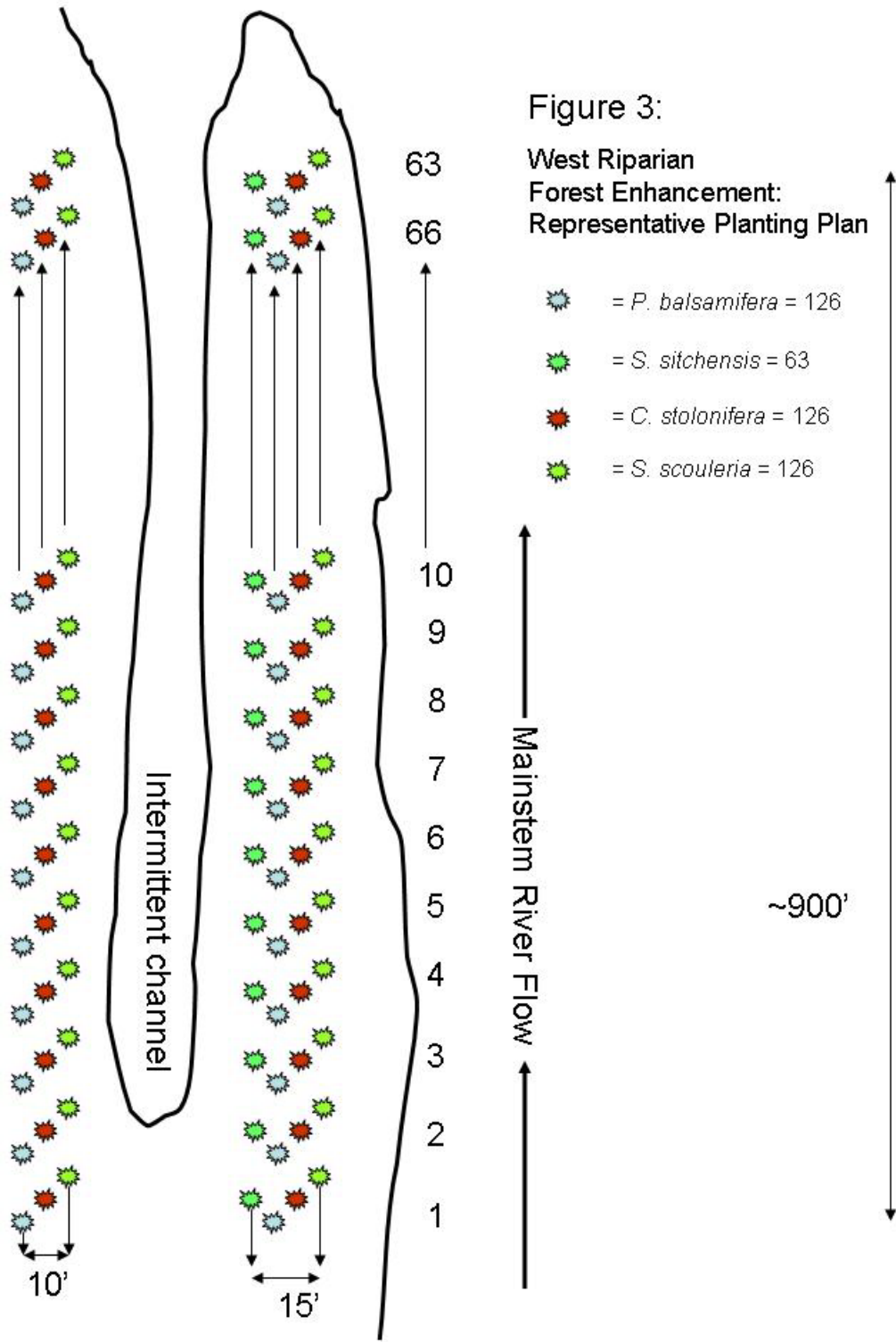
- Keefe et al 2004, Keefe, M., R Campbell, P. DeVries, S. Madsen, D. Resier; *Kalama, Washougal and Lewis River Habitat Assessments, Chapter 3: The North Fork Lewis River Basin*, prepared for the Lower Columbia Fish Recovery Board Dec 2004, Accessed online at:
http://www.lcfrb.gen.wa.us/Watershed%20Assessmsent%20Report%20Chps/LCFRB_Chapter3_NFLewisBasin_FINAL_12.31.04.PDF
(Printed version in possession of Mr. Reynolds)
- LCFRB 2006, *Salmon-Washougal & Lewis Watershed Management Plan WRIAS 27-28*, Lower Columbia Fish Recovery Board, 2006 Accessed online at:
http://www.lcfrb.gen.wa.us/pdf/WRIA%2027_28%20Watershed%20Management%20Plan.pdf , (Printed version in possession of Mr. Reynolds)
- WCC 2005, *Habitat Limiting Factors, Executive Summary, Water Resource Inventory Area 27, Kalama, North Fork Lewis River, And East Fork Lewis River*, Washington Conservation Commission, Accessed online at:
<http://salmon.scc.wa.gov/reports/wria27sum.shtml>
(Printed version in possession of Mr. Reynolds)

Figure 1: Plas Newydd Riparian Forest Enhancement



Plas Newydd Farm Riparian Forest Enhancement





Plas Newydd Farm Riparian Forest Enhancement

Plas Newydd Restoration Budget
ACC Funding Request 2007

ndr

Personnel	FTE	Weeks	Hrs/Wk	Annual Hours	Hourly Rate	Personnel Cost	Total Amount
NRD Director	0.01	26	0.5	13	\$ 45.00	\$ 585	
Accountant	0.01	26	0.5	13	\$ 45.00	\$ 585	
NRD Ecologist	0.17	26	13.3	346	\$ 21.00	\$ 7,266	
NRD Sci-Tech	0.13	20	13.3	266	\$ 15.00	\$ 3,990	
NRD Sci-Tech	0.13	20	13.3	266	\$ 15.00	\$ 3,990	
0							Year 1 Gross Wages \$ 16,416

Section B: Payroll Taxes & Benefits	%	Amount
	18.37%	\$ 3,016
Payroll Taxes & Benefits \$		3,016

Travel	Rate/Mile	Miles/R. trip	Trips/ Week	weeks	Travel Cost
Trips to Plas Newydd	0.485	66	3	20	\$ 1,921
Trips to Sound Native Plants	0.485	150	1	2	\$ 146
Travel \$					2,067

Misc Equipment	Qty	Unit	Total
Populus trichocarpa (2 gal)	260	\$ 6.00	\$ 1,560
Cornus stolonifera (2 gal)	260	\$ 6.00	\$ 1,560
Salix scouleriana (1 gal)	260	\$ 2.85	\$ 741
Salix sitchensis (1 gal)	130	\$ 2.85	\$ 371
Planting tube (box 250)	3	\$ 60.00	\$ 180
Planting weed cloth (bundle 100)	6	\$ 80.00	\$ 480
Weed cloth staples (box 1000)	2	\$ 31.50	\$ 63
Bamboo stake (pack 500)	1	\$ 24.00	\$ 24
Cable ties (bag 1000)	2	\$ 32.00	\$ 64
Long handle planting shovel	4	\$ 44.90	\$ 180
Tile Spade planting shovel	4	\$ 55.90	\$ 224
Machete	4	\$ 30.00	\$ 120
Gas powered string trimmer	1	\$ 200.00	\$ 200
Field Notebooks	4	\$ 10.00	\$ 40
Field vests	2	\$ 66.95	\$ 134
Misc Field Supplies	1	\$ 200.00	\$ 200
Trimmer gas/oil mix (gal)	15	\$ 4.00	\$ 60
Equipment \$			6,201

Other Program Costs	Qty	Unit	Total
Photocopying/Printing	1	\$ 100.00	\$ 100
Office supplies	1	\$ 100.00	\$ 100
Nextel	2	\$ 50.00	\$ 100
Nextel service (month)	6	\$ 40.00	\$ 240
Administrative and Staging space at the Cowlitz Tribal Offices	6	\$ 200.00	\$ 1,200
Other Program Costs \$			1,740
Total Request \$			29,400

In Kind	Qty	Unit	Total	
WDFW	Truck	1	\$ 5,000	\$ 5,000
Plas Newydd Farm	Willow Poles, auger, heavy equip	1	\$ 5,000	\$ 5,000
In Kind \$			10,000	
Total Project Cost \$			39,400	



Cowlitz Indian Tribe

Cowlitz Tribal Council
Resolution No. 07- 05

Title: FY2007 Lewis River ACC Aquatics Fund Program Funding Request – Plas Newydd Riparian Forest Enhancement

WHEREAS, the Cowlitz Indian Tribe is Acknowledged as a Sovereign Indian Nation by the United States Government, and

WHEREAS, the Cowlitz Indian Tribal Council is the governing body of the Cowlitz Indian Tribe as authorized by the tribe's Constitution and By-laws, and

WHEREAS, the Cowlitz Indian Tribe declares that plentiful clean water and abundant fish runs are important to the cultural identity of the Tribe, and

WHEREAS, these qualities have been significantly impaired by the establishment of three dams within the watershed of the Lewis River, and

WHEREAS, the Lewis River Aquatic Coordination Committee has an existing *Aquatics Fund* that funds on-the-ground habitat restoration projects within this watershed of Tribal interest, and

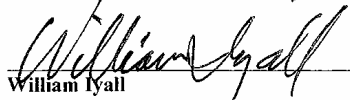
WHEREAS, the establishment of a restoration project at the *Plas Newydd* site of the Lewis River would further develop the individual skills of Tribal employees, expand the program delivery of the Natural Resource Department, and enhance the Tribe's role and participation within the technical agencies and organizations of Southwest Washington State, and


WHEREAS, such a project would advance scientific knowledge and protect natural resources which are cultural resources to Tribal members, and are pertinent to the Tribe's Native culture,

NOW THEREFORE BE IT RESOLVED by the Tribal Council of the Cowlitz Indian Tribe, to hereby authorize the Natural Resource Department to seek and apply for funding from the *Aquatics Fund Program* of the Lewis River Aquatic Coordination Committee to conduct on-the-ground habitat restoration at the *Plas Newydd* site, and thereby increase salmonid abundance in the Lewis River Watershed, and to do so in a respectful and honorable manner consistent with Native Culture.

CERTIFICATION

The forgoing resolution was adopted this 6 day January 2007, at a duly called Tribal Council meeting by a vote of 19 For, 0 Against, and 0 Abstain.


William Iyall
Tribal Council Chair


Nancy Osborne
Tribal Council Secretary

P.O. Box 2547 - Longview, WA 98632-8594 - (360) 577-8140 - Fax (360) 577-7432 - E-MAIL - cowlitztribe@tdn.com

Appendix G

Two Forks Access Riparian Forest Enhancement

Two Forks Access Riparian Forest Enhancement

Lewis River Aquatics Fund FY2007

Proponent: Cowlitz Indian Tribe

Submittal Deadline: 26-January-2007

Submitted To: Frank Shrier
PacifiCorp – LCT 1500
825 NE Multnomah
Portland, OR 97232

REQUEST: \$26,400

1. Project Title:

**Two Forks Access Riparian Forest Enhancement:
Full Proposal**

2. Project Manager (name, address, telephone, email, fax).

Nathan Reynolds
Natural Resources Department
Cowlitz Indian Tribe
PO Box 2547
Longview, WA 98632
Phone: 360.575.6226
Fax: 360.577.7432
Email: nreynolds@cowlitz.org

Mr. Reynolds holds a BS in Natural Resource Sciences and is completing an MS in Environmental Science. He has been employed with the Cowlitz Indian Tribe since 2005. Previously, he owned LaCamas Ecoscience, an ecological planning and analysis firm, and served internships with both the USDA Forest Service and WDFW. Mr. Reynolds has been involved in habitat conservation and restoration issues in southwest Washington State since 1992.

3. Identification of problem or opportunity to be addressed:

Problem:

In the watershed of the North Fork and lower mainstem of the Lewis River, there is scarce riparian habitat, which is essential for:

- A. Chinook salmon, listed as a threatened species under the Endangered Species Act (ESA).
- B. Chum salmon, listed as a threatened species under the ESA
- C. Steelhead trout, listed as a threatened species under the ESA
- D. Coho salmon, proposed for listing under the ESA

These species have endured many impacts which threaten their persistence in the watershed. Arising from various sources, these impacts include: alteration of natural

Two Forks Access Riparian Forest Enhancement

flow regimes, degradation of riparian habitat function, loss of floodplain and off-channel habitat areas, inputs of point source and non-point source pollution, and impacts of urbanization.

Opportunity:

The opportunity to restore riparian zones addressed in this project proposal will benefit fish recovery throughout the North Fork Lewis River, with priority for federal ESA-listed species. The enhancement of riparian forest will support larger populations of anadromous fish. This project will also increase the abundance of functional habitat in the lower river, an area of great need.

4. Background:

The North Fork Lewis River habitat assessment prepared for the Lower Columbia Fish Recovery Board (LCFRB) identifies several opportunities (section 3.3.3) that have the greatest potential to benefit salmonid production in the basin (Keefe et al 2004). Item 2 on this list includes the preservation of “small areas of intact forest within this area of the Lewis River”. This report notes specifically identifies a portion of intact forest “along the margin of a point bar located on the inside of a tight meander bend at RM 2.9 to 3.1.”; that forest is addressed in the Martin Access proposal. However, there is additional intact forest on the left bank of the North Fork Lewis River between RM 3.5 and 3.7. Maps, aerial photos and physical survey indicate the area supports both riparian forest and intact, functional off-channel habitat. This is the area our Two Forks Access Project targets. See Riparian Forest Enhancement (Fig 1).

The habitat assessment (Keefe et al 2004) also points to the need to preserve or restore the ecological function of off-channel habitats in the lower Lewis River:

“[p]reservation/restoration of floodplain habitats in this area is given a relatively high priority due to the scarcity of functional habitat throughout the first 7.3 miles of Lewis River mainstem channel.”

The Two Forks Access site includes a significant component of off-channel habitat. Though this Riparian Forest Enhancement project does not directly address off-channel habitat, the enhanced riparian quality achieved by this project will ensure the persistence of the off-channel habitat by stabilizing the riverbank and reducing erosion. In the absence of stabilization, the river may eventually avulse into the off-channel habitat, making that area unsuitable for salmonid use.

Other relevant planning documents produced for the Lewis River support the need to enhance or preserve off-channel habitat. The Executive Summary of the *Habitat Limiting Factors, Water Resource Inventory Area 27 (Kalama, North Fork Lewis River, And East Fork Lewis River)* states that the second most important recommendation to address limiting factors in the Lewis River is: “Increase and/or enhance off-channel and rearing habitat within the lower Lewis River.”(WCC 2005).

Section 7 of the WRIAs 27 and 28 Watershed Management Plan states, “Restoring lowland floodplain function, riparian conditions, and stream habitat diversity” is a

Two Forks Access Riparian Forest Enhancement

priority action in the lower Lewis River. In table 7.1 of that document, it prescribes, “Within authorities, conduct floodplain restoration where feasible along the [lower Lewis] mainstem and in major tributaries that have experienced channel confinement. Build partnerships with landowners and agencies and provide financial incentives.” Implementation of this prescription will result in “restoration of floodplain function, habitat diversity, and habitat availability”, with a “high” level of certainty (LCFRB 2006).

5. Project Objectives

This proposal is consistent with the Aquatics Fund objectives because the implementation of our project will meet the priorities of the Fund by:

- A. Benefiting fish recovery throughout the North Fork Lewis River, with priority to federal ESA-listed species.
- B. Supporting the reintroduction of anadromous fish throughout the basin.
- C. Enhancing fish habitat in the Lewis River Basin, with priority given to the North Fork Lewis River.

This proposal is consistent with Recovery Plans because it takes its shape, structure and impetus directly from recent North Fork Lewis River technical assessment and planning documents (Keefe et al 2004, WCC 2005, LCFRB 2006).

6. Tasks

The Riparian Forest Enhancement will occur along a 1500’ distance (Fig 1) set back 10’ from the edge of bankfull width. The project aims to block solar influx, thereby shading the mainstem Lewis River. Enhancement will occur by planting tree and shrub species appropriate to forested riparian zones of the Lower Lewis River. The species have been selected to accomplish multiple goals including: rapid growth for summer shade to shelter other plantings and eventually the shallow river edge (Black Cottonwood *Populus balsamifera* ssp.*trichocarpa*), creation of complex and dense shrub layers (Red-osier Dogwood *Cornus stolonifera*), and, in the long term, year-round coniferous shade and encourage accumulation of large woody debris through bankfall (Red Cedar *Thuja plicata*). Currently the dominant forest canopy species is composed of mature Oregon Ash *Fraxinus latifolia*, so that species will also be planted.

The ultimate goal of the project is enhanced riparian function; subsidiary goals include reduced water temperatures, increased water quality, and the preservation of habitat quality and function in the mainstem and off-channel habitat. Also, the enhanced riparian function will increase organic inputs to the system, which will in turn boost nutrient levels in both the mainstem and proximal downstream off-channel habitat. Finally, bankfall of large trees from a mature riparian forest will serve as source of large woody debris to the river, which may further enhance nutrient loads, create structure and habitat, and armor both the riverbank and nearby off-channel habitat.

7. Methods

Two Forks Access Riparian Forest Enhancement

An Ecologist will be hired (one-third time, 13.33 hrs/wk, 26 weeks) for detailed project management. In the field, the Ecologist will identify and layout the project work areas, including needs for planting site preparatory work (invasive species treatment and removal) and planting design. The ecologist will often perform fieldwork with the Biotechnicians, such as site preparation, planting, and watering and will supervise and coordinate their work. The Ecologist will track staff performance, host the Year-1 Project closeout site visit for the ACC, convey financial information to the accountant, prepare as-built plans, and assemble and submit the Year 1 Project Report.

Two Biotechnicians will be hired (one-third time, 13.33 hrs/wk, 20 weeks) to implement the Project, including site preparation, planting, and watering. They will also transport the enhancement plants from the nursery to the staging area, and to the project site.

Plantings will be installed according to species-specific methods. Planting stakes, tubes, and weedcloth will be used to increase survivorship. After installation, the Biotechnicians will water the plantings on a regular schedule until the onset of the rainy season.

Project administration will be overseen by Mike Iyall, Director of the Natural Resources Department of the Cowlitz Indian Tribe (0.5 hrs/wk, 26 weeks). Financial reporting and accounting will be conducted by Jess Groll, Cowlitz Indian Tribe Accountant (0.5 hrs/wk, 26 weeks).

The Cowlitz Indian Tribe will promote *volunteer planting days* to both the tribal membership and the general public. These events will provide excellent opportunities for community-building efforts and environmental education.

8. Specific Work Products

The first year product will be the completed enhancement plantings and the Year 1 Project Report, which will include staff performance, financial reports, and as-built drawings and photographs of the completed enhancement projects. The Year 2 Project Report will be a survivorship assessment of the plantings, done in spring 2008. The Year 3 Project Report also will be a survivorship assessment, done in spring 2009.

The ultimate work product will be the preservation and enhancement of now scarce functional riparian habitat in the lower mainstem Lewis River, for the benefit of ESA-listed anadromous salmonids (as well as benefit to other non-listed species) and enhanced overall ecosystem function.

9. Project Duration

Project Implementation will occur in Summer and Fall 2007; effectiveness monitoring will be conducted in Spring 2008 and Spring 2009.

10. Permits

No permits are necessary to conduct this project.

Two Forks Access Riparian Forest Enhancement

The Two Forks Riparian Forest Enhancement site is owned by the State of Washington and is managed by the Washington Department of Fish and Wildlife (WDFW). Access to the riparian enhancement site on the riverbank is achieved site through the WDFW parcel. A Right-of-entry has been requested from WDFW and is pending.

11. Matching funds and in-kind contributions

The Tribe has received verbal confirmation from Guy Norman, Regional director for Washington Department of Fish and Wildlife (WDFW) Region 5, that a seasonally available vehicle may be provided for Biotechnicians and the ecologist to use during the course of this project. Such a vehicle would be a full-size 4WD pickup truck suitable for carrying project materials and gear. Written confirmation is being developed, and final coordination will likely not occur until May or June. A letter of support is pending.

12. Professional Review of the Proposed Project

The proposed scope of work has been reviewed and approved by Shannon Wills, Cowlitz Indian Tribe Biologist. The proposed budget has been reviewed and approved by the accounting department of the Cowlitz Indian Tribe. The Cowlitz Tribal Council passed a resolution supporting this scope of work proposed by the Tribe's Natural Resource Department. That resolution is appended to this proposal.

13. Budget

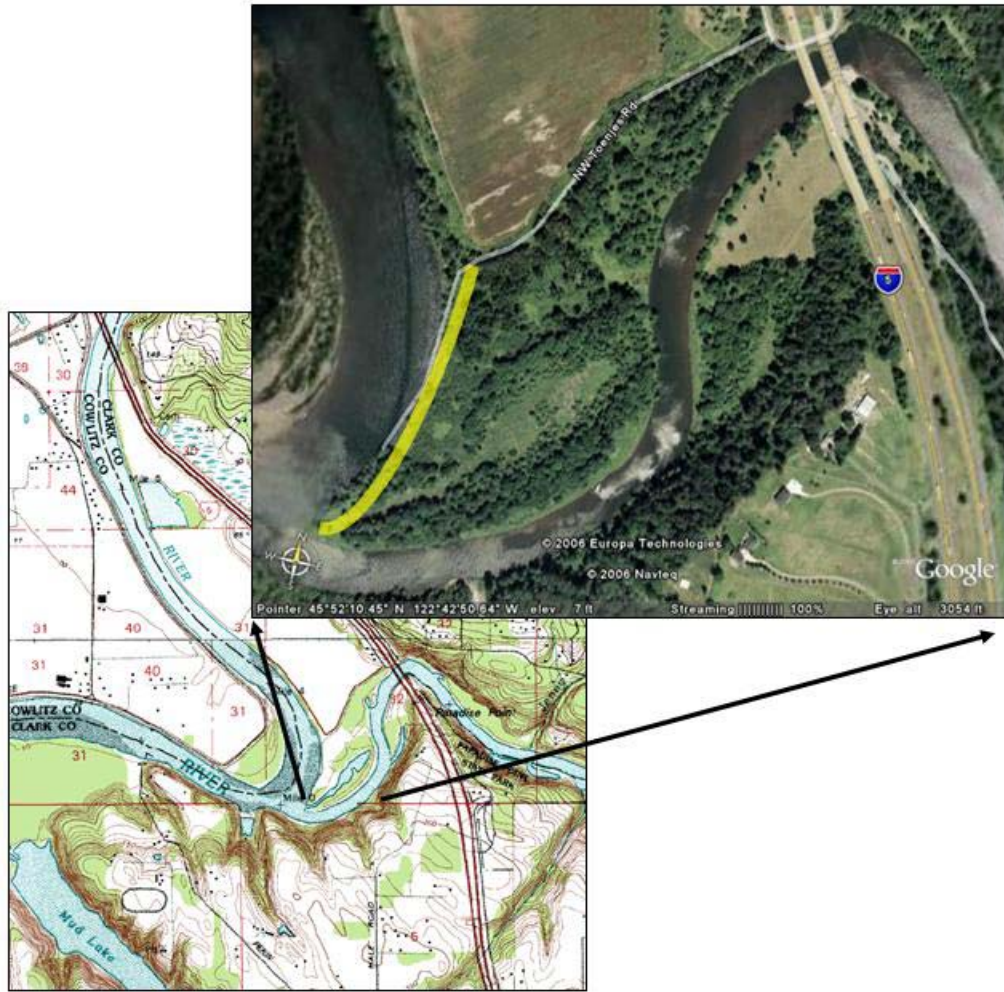
See attached estimating spreadsheet.


References:

- Keefe et al 2004, Keefe, M., R Campbell, P. DeVries, S. Madsen, D. Resier; *Kalama, Washougal and Lewis River Habitat Assessments, Chapter 3: The North Fork Lewis River Basin*, prepared for the Lower Columbia Fish Recovery Board Dec 2004, Accessed online at:
http://www.lcfrb.gen.wa.us/Watershed%20Assessmsent%20Report%20Chps/LCFRB_Chapter3_NFLewisBasin_FINAL_12.31.04.PDF
(Printed version in possession of Mr. Reynolds)
- LCFRB 2006, *Salmon-Washougal & Lewis Watershed Management Plan WRIAS 27-28*, Lower Columbia Fish Recovery Board, 2006 Accessed online at:
http://www.lcfrb.gen.wa.us/pdf/WRIA%2027_28%20Watershed%20Management%20Plan.pdf, (Printed version in possession of Mr. Reynolds)
- WCC 2005, *Habitat Limiting Factors, Executive Summary, Water Resource Inventory Area 27, Kalama, North Fork Lewis River, And East Fork Lewis River*, Washington Conservation Commission, Accessed online at:
<http://salmon.scc.wa.gov/reports/wria27sum.shtml>
(Printed version in possession of Mr. Reynolds)

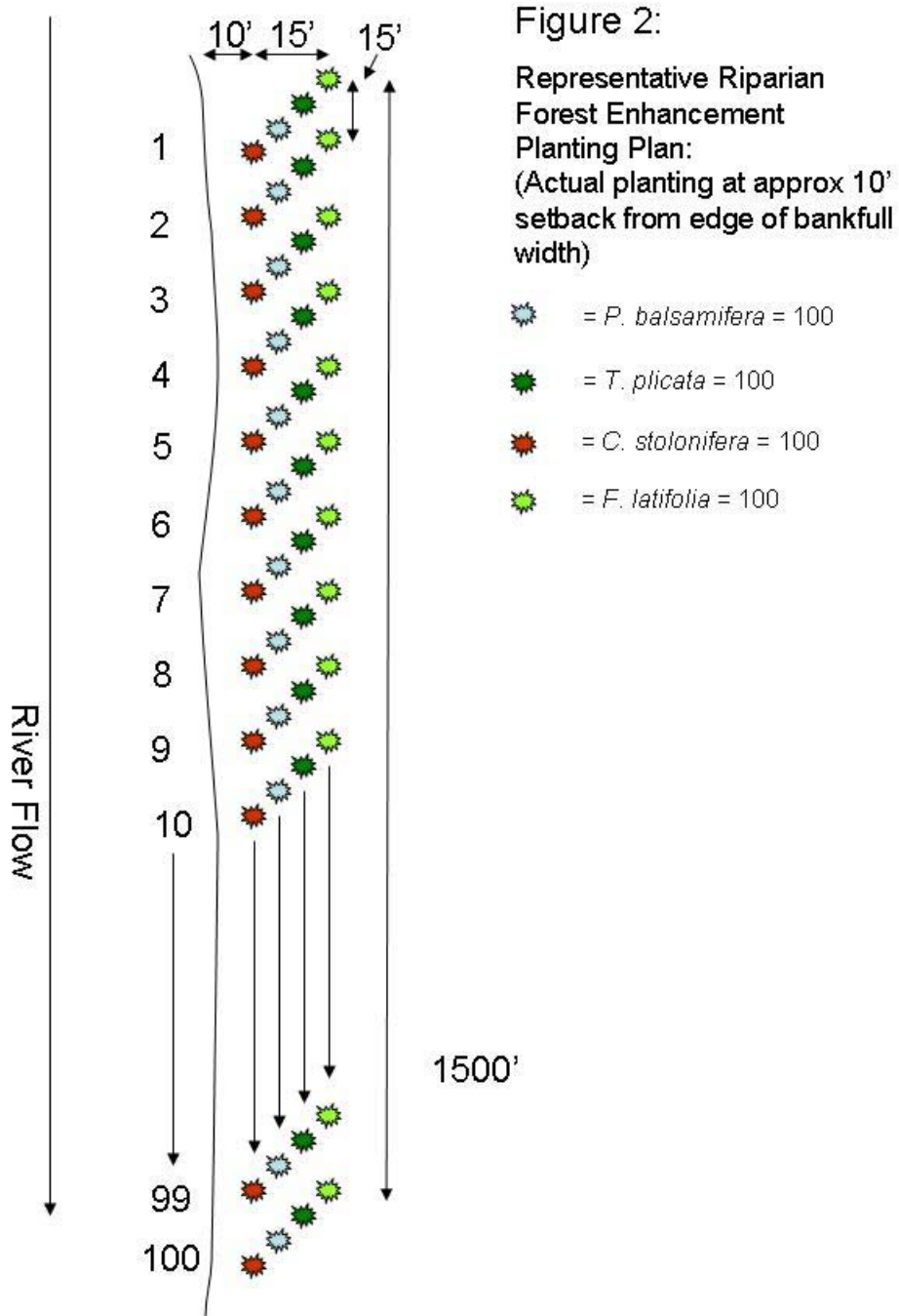
Two Forks Access Riparian Forest Enhancement

Figure 1: Two Forks Access Riparian Forest Enhancement



 Area of Riparian Forest Enhancement, Approx 1500' in length

Two Forks Access Riparian Forest Enhancement



Two Forks Access Riparian Forest Enhancement

Two Forks Access Restoration Budget
ACC Funding Request 2007

ndr

Personnel	FTE	Weeks	Hrs/Wk	Annual Hours	Hourly Rate	Personnel Cost	Total Amount
NRD Director	0.01	26	0.5	13	\$ 45.00	\$ 585	
Accountant	0.01	26	0.5	13	\$ 45.00	\$ 585	
NRD Ecologist	0.17	26	13.3	346	\$ 21.00	\$ 7,266	
NRD Sci-Tech	0.13	20	13.3	266	\$ 15.00	\$ 3,990	
NRD Sci-Tech	0.13	20	13.3	266	\$ 15.00	\$ 3,990	

Year 1 Gross Wages \$ 16,416

Section B: Payroll Taxes & Benefits

	%	Amount
Year 1	18.37%	\$ 3,016

Payroll Taxes & Benefits \$ 3,016

Travel	Rate/Mile	Miles/R. trip	Trips/ Week	weeks	Travel Cost
Trips to Two Forks Access	0.485	45	3	20	\$ 1,310
Trips to Sound Native Plants	0.485	150	1	2	\$ 146

Travel \$ 1,456

Misc Equipment	Qty	Unit	Total
Populus trichocarpa (2 gal)	100	\$ 6.00	\$ 600
Cornus stolonifera (2 gal)	100	\$ 6.00	\$ 600
Fraxinus Latifolia (2 gal)	100	\$ 6.00	\$ 600
Thuja plicata (2 gal)	100	\$ 6.00	\$ 600
Planting tube (box 250)	1	\$ 60.00	\$ 60
Planting weed cloth (bundle 100)	1	\$ 80.00	\$ 80
Weed cloth staples (box 1000)	1	\$ 31.50	\$ 32
Bamboo stake (pack 500)	1	\$ 24.00	\$ 24
Cable ties (bag 1000)	1	\$ 32.00	\$ 32
Long handle planting shovel	4	\$ 44.90	\$ 180
Tile Spade planting shovel	4	\$ 55.90	\$ 224
Machete	4	\$ 30.00	\$ 120
Gas powered string trimmer	1	\$ 200.00	\$ 200
Field Notebooks	4	\$ 10.00	\$ 40
Field vests	2	\$ 66.95	\$ 134
Misc Field Supplies	1	\$ 200.00	\$ 200
Trimmer gas/oil mix (gal)	15	\$ 4.00	\$ 60

Equipment \$ 3,785

Other Program Costs	Qty	Unit	Total
Photocopying/Printing	1	\$ 100.00	\$ 100
Office supplies	1	\$ 100.00	\$ 100
Nextel	2	\$ 50.00	\$ 100
Nextel service (month)	6	\$ 40.00	\$ 240
Administrative and Staging space at the Cowlitz Tribal Offices	6	\$ 200.00	\$ 1,200

Other Program Costs \$ 1,740
Total Program Costs \$ 26,400

In Kind	Qty	Unit	Total
WDFW Truck	1	\$ 5,000	\$ 5,000

In Kind \$ 5,000
Total Project Cost \$ 31,400



Cowlitz Indian Tribe

Cowlitz Tribal Council
Resolution No. 07- 04

Title: FY2007 Lewis River ACC Aquatics Fund Program Funding Request - Two Forks Access Riparian Forest Enhancement

WHEREAS, the Cowlitz Indian Tribe is Acknowledged as a Sovereign Indian Nation by the United States Government, and

WHEREAS, the Cowlitz Indian Tribal Council is the governing body of the Cowlitz Indian Tribe as authorized by the tribe's Constitution and By-laws, and

WHEREAS, the Cowlitz Indian Tribe declares that plentiful clean water and abundant fish runs are important to the cultural identity of the Tribe, and

WHEREAS, these qualities have been significantly impaired by the establishment of three dams within the watershed of the Lewis River, and

WHEREAS, the Lewis River Aquatic Coordination Committee has an existing *Aquatics Fund* that funds on-the-ground habitat restoration projects within this watershed of Tribal interest, and


WHEREAS, the establishment of a restoration project at the *Two Forks Access* of the Lewis River would further develop the individual skills of Tribal employees, expand the program delivery of the Natural Resource Department, and enhance the Tribe's role and participation within the technical agencies and organizations of Southwest Washington State, and

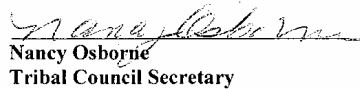
WHEREAS, such a project would advance scientific knowledge and protect natural resources which are cultural resources to Tribal members, and are pertinent to the Tribe's Native culture,

NOW THEREFORE BE IT RESOLVED by the Tribal Council of the Cowlitz Indian Tribe, to hereby authorize the Natural Resource Department to seek and apply for funding from the *Aquatics Fund Program* of the Lewis River Aquatic Coordination Committee to conduct on-the-ground habitat restoration at the *Two Forks Access*, and thereby increase salmonid abundance in the Lewis River Watershed, and to do so in a respectful and honorable manner consistent with Native Culture.

CERTIFICATION

The forgoing resolution was adopted this 6 day January 2007, at a duly called Tribal Council meeting by a vote of 19 For, 0 Against, and 0 Abstain.


William Ayall
Tribal Council Chair


Nancy Osborne
Tribal Council Secretary

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