

FINAL Meeting Notes
Lewis River License Implementation
Aquatic Coordination Committee (ACC) Meeting
April 10, 2008
Ariel, WA

ACC Participants Present (16)

Jim Byrne, WDFW
 Jeremiah Doyle, PacifiCorp Energy
 Bernadette Graham Hudson, LCFRB
 Diana Gritten-MacDonald, Cowlitz PUD
 Adam Haspiel, USDA Forest Service
 LouEllyn Jones, USFWS
 George Lee, Yakama Nation
 Erik Lesko, PacifiCorp Energy
 Jim Malinowski, Fish First (via teleconference 9:00am – 10:30am)
 Kimberly McCune, PacifiCorp Energy
 Bryan Nordland, NMFS (via teleconference 9:00am – 11:45am)
 Todd Olson, PacifiCorp Energy
 Diana Perez, USDA Forest Service
 Frank Shrier, PacifiCorp Energy
 Steve Vigg, WDFW (via teleconference)
 Shannon Wills, Cowlitz Indian Tribe

Calendar:

May 8, 2008	ACC Meeting	Merwin Hydro
May 14, 2008	TCC Meeting	Merwin Hydro

Assignments from April 10th Meeting:	Status:
McCune: Add 8.7 broodstock schedule to the May ACC agenda to discuss Schedule 8.7 of the Lewis River Settlement Agreement.	Complete – 4/14/08

Assignments from March 13th Meeting:	Status:
Olson/McCune: Request each aquatic funding project proponent to define their respective budgets in more detail. Provide new information to the ACC for review prior to the next meeting on 4/10/08.	Complete – 3/19/08
Lesko: Follow up with Frank Shier (PacifiCorp Energy) regarding Acclimation Pond designs/photographs provided by George Lee (Yakama Nation), which were provided for his review; confirm receipt.	Confirmed receipt – 3/18/08
Doyle: Provide 24 hour passage/transit information for coho and steelhead similar to that provided by Nordlund for spring Chinook.	Complete – 4/10/08

Assignments from February 14th Meeting:	Status:
Malone: Provide coho data for the last two years and a like reporting for Spring Chinook.	Pending
Malone: provide the RMIS website information to Malinowski and copy Kimberly McCune (PacifiCorp Energy).	Complete – 3/17/08
Nordlund: Provide data that supports the 24 hour passage/transit information relative to the ATE definition issue.	Complete - 3/7/08

Opening, Review of Agenda and Meeting Notes

Frank Shrier (PacifiCorp Energy) called the meeting to order at 9:10 a.m. Shrier requested a round-table introduction, reviewed the agenda for the day and requested any changes to the agenda. No additions to the agenda were requested.

In addition, Shrier requested comments and/or changes to the ACC Draft 3/13/08 meeting notes and assignments.

Diana Perez (USDA Forest Service) requested edits via email on 4/8/08 relating to the Muddy River Thinning/Brushing/Invasive Plant Project, first paragraph, page 4 (changes are in red text:

The ACC attendees expressed concern that the invasive plant eradication efforts might require repeated multi-year treatments to continue to be effective. The ACC is willing to endorse the eradication of exotics during this five-year period, *and expressed concerns about the applicant returning* to the ACC at some future date for additional funds to repeat this aspect of the project. Diana Perez (USDA FS) expressed that likely the eradication will not be done in five years and that they will seek other funding outside of the ACC for ongoing efforts. Perez also communicated that this initial project is considered the kick-start to a coordinated effort which will contribute to the long-term goals of the USDA FS. *Perez does not want the door closed to applicants coming back to the ACC for additional funds in the future.*

Perez also submitted the additional text below relating to the East Fork Lewis River Instream Structures Steelhead, fourth paragraph, page 5 as follows:

Perez suggested a meeting between USDA FS, Fish First and LCFRB to clarify and understand concerns. Forest Service wants the ACC to be a functioning body with the ability to make their own technical review without being dependent on the LCFRB TAC reviews or processes, while at the same time taking into consideration professional knowledge about projects.

The meeting notes were approved with the submitted changes from Perez at 9:20 a.m.

License Issuance Update

Olson communicated to the ACC attendees that PacifiCorp recently received its license for the Rogue River – Prospect project which is encouraging that licenses are being issued. Olson also noted that he will be traveling to Washington DC next week to attend the National Hydropower Association (NHA) conference and hopes to receive additional

information. Therefore, the earliest anticipated date for license issuance remains June, 2008.

Speelyai Creek Water Right Change of Diversion Discussion

Shrier drew an illustration of the Speelyai Creek and diversion indicating where the Creek comes under Hwy 503; just below is a diversion parallel to the creek bed whereby water empties into Yale Lake. Approximately 15cfs of water can flow from the diversion into Speelyai Creek. Downstream on Speelyai Creek is another diversion just above hatchery which diverts up to 30 cfs of creek flow to the hatchery; whatever is left flows into Lake Merwin. At the upper diversion PacifiCorp has a water right for 15cfs (hatchery flow) and a water right for 70cfs (power production). The State has 15cfs (hatchery water) at the lower diversion. The two 15cfs water rights combined provide the total water right for Speelyai Hatchery.

The flood of 1996 caused the Speelyai channel to be redirected, so the upper diversion is not functioning as originally intended. PacifiCorp could redirect the creek (approximately \$1M fix) back to the diversion side or PacifiCorp can apply to transfer the 15cfs water right to the lower diversion next to Speelyai Hatchery and keep the upper diversion gate closed as it is currently.

Shrier informed the ACC attendees that PacifiCorp's proposal is to transfer the 15cfs water right from the upper diversion and assign it to the lower diversion. No objection was received from the ACC. Shrier requested the ACC members to think about this and will table the question until next meeting.

General discussion took place regarding the water need during the driest time of the year, water temperatures and taking eggs for Spring Chinook. Shrier replied that at the time of year when water has been requested in the past, there is historically less than 3 cfs in upper Speelyai Creek and it is usually too warm to benefit hatchery production. Shrier informed the ACC attendees that the Washington Department of Ecology (DOE) would like PacifiCorp to proceed as soon as possible.

Timeline for proceeding with this proposal is beginning in May and could take a couple of years to complete.

Lewis River Aquatic Funding Proposals Review

Olson provided a memorandum handout titled, *CY 2007/2008 Lewis River Aquatic Fund Proposals – Additional Information Requests (Attachment A)*, dated April 4, 2008 relating to the Lewis River Aquatic Coordination Committee (ACC) March 13, 2008 meeting – discussion of calendar year 2007/2008 Aquatic Fund Proposals. The memorandum includes responses from the Cowlitz Indian Tribe, USDA Forest Service, and PacifiCorp.

Olson expressed that the proponents were on target in providing the information requested.

Olson reviewed each project and the ACC representatives in attendance provided input as follows:

Mud Creek Enhancement (\$43,500) - Cowlitz Indian Tribe

Diana Perez (USDA Forest Service) is in support of the project moving forward, however, she would like to encourage the land owner to work on the two culverts (as they are a hydro barrier). Perhaps the landowner will consider a bridge in the future.

ACC Decision: Approve for funding

Muddy River Thinning/Brushing/Invasive Plant Project (\$117,000) – USDA Forest Service

Shannon Wills (Cowlitz Indian Tribe) requested historical record that the Tribe strenuously disagrees with removing invasive species as without continued maintenance of these cleared/planted sites, invasive species will return in a very short amount of time and all the money and time invested in clearing these areas and planting native conifers will likely have been wasted. In addition, the Tribe sees no benefit to fish; however, the Tribe will not stand in the way of the project moving forward.

ACC Decision: Approve for funding

Clear Creek Road (2575000) Decommission (\$34,000) - USDA Forest Service

No comments.

ACC Decision: Approve for funding

East Fork Lewis River Instream Structures Steelhead (\$60,000) - USDA Forest Service

Bernadette Graham Hudson (LCFRB) and Diana Perez (USDA Forest Service) informed the ACC attendees that they met with Adam Haspiel (USDA FS) and Dick Dyrland (Fish First) last Friday, April 4, 2008. Graham Hudson expressed that they discussed many of their concerns and how the Forest Service could address them. Considerable discussion took place regarding concern for known spawning areas and that the project is outside the North Fork Lewis basin.

Jim Bryne (WDFW) suggested going out to the site and conducting a spawning survey.

Jim Malinowski (Fish First) stated that as he understood the ACC criteria for project selection for funding was that any project in the basin could be funded with priority for projects upstream of Merwin. He pointed out that large areas of prime in-stream habitat have been permanently lost under the reservoirs and the improvement of habitat in the lower basin is a reasonable way to mitigate for that loss. Malinowski argued that East Fork projects provide the opportunity to restore steelhead and salmon populations in what once was a world class steelhead stream. He also disputed the argument that we should

wait for natural processes to restore in-stream functions lost by human abuse of the habitat.

Shannon Wills (Cowlitz Indian Tribe) requested that a serious effort take place to negotiate a better price and other multiple vendor options other than only Groat Brothers. Wills also expressed that she likes the contingencies requested by LCFRB and the USDA Forest Service. Wills also offered to negotiate with Groat Brothers to come to acceptable terms, if needed.

Diana Gritten-MacDonald informed the ACC attendees that she does not support this project as it's outside the area of priority, but will not stand in the way.

Olson expressed that PacifiCorp Energy originally opposed this project as it's not in the North Fork Lewis River, which is the area PacifiCorp prefers. This position is consistent with the Settlement Agreement and FERC's Final EIS as stated in the September 2005 handout... However, PacifiCorp Energy will not stand in the way.

Kimberly McCune (PacifiCorp Energy) provided a handout titled, *Aquatics Fund – Strategic Plan and Administrative Procedures*, dated September 2005 ([Attachment B](#)) for ACC review and discussion at the May 8, 2008 ACC meeting.

ACC Decision: Approve for funding with the following contingency: 1) structures are not to be placed in areas of known spawning, thus spawning surveys will be conducted this year to determine if spawning is occurring at the large pool at site B. If so, no structure will be placed at this site; 2) at least one structure will be left without the addition of spawning gravel (in hopes of informing decisions on future projects and the levels of gravel available in the system).

Panamaker Creek Road Closure and Culvert Removal (\$25,000) – PacifiCorp

No comments.

ACC Decision: Approve for funding

<Break 10:30am>

<Reconvene 10:40am>

Merwin Model Presentation – Frank Shrier

Shrier present a PowerPoint presentation titled, “Merwin Physical Model” for ACC review. For those who were absent the PowerPoint can also be viewed on the Lewis River website at the following link: <http://www.pacificorp.com/Article/Article78699.html> (Please note that certain video clips contained in the PowerPoint cannot be viewed on the website. For a complete copy contact Kim McCune at kimberly.mccune@pacificorp.com for a CD).

Shrier reviewed the purpose and description to include:

- Help with development of phased approach for trap attraction flows and entrance configuration
- Purpose
 - Test trap placement and angle with differing turbine operations and different attraction flows
 - Test applicability of second trap entrance on front of powerhouse
 - Hydraulic information and flow patterns that will help with future work including radio-telemetry and fish behavior.

The model is 1/24 the actual size of Merwin. Photos in the PowerPoint include:

- Merwin Model in the Dry
- Modeling Filling
- Model at 11,400 cfs and corner trap at 400 cfs
- Corner trap flow at 400 cfs
- Yarn which demonstrates corner trap flow vector
- Dye showing corner trap influence in 11,400 turbine flow
- Dye in front of pump intakes, and
- a test summary, dated February 20, 2008 ([Attachment C](#))

As referenced above, Shrier provided video clips illustrating velocity vectors and how vectors change with additional cfs, i.e., 400 cfs, 600cfs, and turbine discharge influence at 12' depth.

In addition, the ACC attendees viewed dye tests at 400 cfs and 600 cfs and video tests at 400 cfs and full turbine at 11,400 cfs.

Shrier informed the ACC attendees that the schedule for the balance of the modeling effort includes more results by the next engineering subgroup meeting on 4/28/08.

Adult Trap Efficiency (ATE) Memorandum – Data Access in Real Time (DART) Passage Time Discussion

Jeremiah Doyle (PacifiCorp Energy) provided a memorandum titled, “*Lewis River – Adult Trap Efficiency (ATE) Definition*”, dated April 10, 2008 ([Attachment D](#)) for ACC review and comment. The memorandum outlined data relating to calculation of median dam passage for Spring Chinook, coho and summer steelhead in addition to the table put together by Bryan Nordland (NMFS) which he emailed to the ACC on March 7, 2008 concerning his rationale for proposed maximum 24 hour median delay time as part of the definition of ATE for the new trap/passage system currently in design for Merwin Dam.

In addition to the median passage time for Spring Chinook over Mid-Columbia River dams run by Nordlund, Doyle included median passage times for coho and Summer Steelhead over the same dams as well as mean passage time for all three species. For consistency sake the methodology employed by Bryan for Spring Chinook was used for Summer Steelhead and Coho and the data for all three species was gathered from the same source (DART), with two exceptions 1) 100 individual fish for both steelhead and coho were sampled as opposed to nine individual Spring Chinook, and 2) coho were

sampled for passage over only two dams (Wanapum and Rock Island) due to the lack of tagged coho passage over Rocky Reach and Wells dam.

Shrier requested ACC review the memorandum and data tables and be prepared to discuss at the next ACC meeting on May 8, 2008.

Shoreline Management Plan (SMP) Update

Olson informed the ACC attendees that PacifiCorp Energy is working on the SMP 30-day review draft and have tentatively scheduled a public meeting in mid May 2008.

Study Updates

Erik Lesko (PacifiCorp Energy) and Olson provided the following study updates:

Swift Constructed Channel Concept Design and Swift Upper Release Design – The work window is planned for May – September of 2009. Schedule remains unchanged.

Hatchery Upgrades –

Lewis River Pond 15 – Construction is planned for January 2009.

Speelyai Burrows Pond – Construction planned for 2009.

Lewis River Ponds 13 & 14 – Completed conceptual design - on schedule.

Merwin Hatchery – On schedule pending license issuance in approximately June 2008.

Habitat Preparation Plan – PacifiCorp Energy submitted a draft to ACC on March 18, 2008. Comments are due on April 18, 2008.

Hatchery and Supplementation Plan (H&S) – Waiting for the results of the HGMPs; hope to finalize H&S Plan by end of 2008. Steve Vigg asked about the status of spring chinook (additional) production and broodstock collection activities this year. Lesko responded that PacifiCorp does not intend to collect additional spring chinook broodstock in 2008 as the company has yet to receive the new FERC licenses. In addition, the delay of license issuance has caused delays in implementation of the net pen program ([Attachment E](#)) which is intended to reduce the amount of loading within the hatchery. The ACC agreed to add this topic to the May meeting agenda.

Acclimation Pond Plan – Request for proposal (RFP) has been issued to secure an engineer to assist with design concepts. George Lee requested a copy of the RFP.

Yale BT Entrainment Reduction Study Plan – PacifiCorp working on rigorous evaluation study design which is due 5/19/08.

New topics/issues

Modify today's agenda

Cancel the agenda item for today titled, "Vancouver (FWS) Fisheries Bull Trout Presentation – Tim Whitesel"

Law Enforcement

Olson informed the ACC attendees that a WDFW law enforcement office has started work on the project as of 4/1/08.

Aquatic Fund Financial Reporting

McCune reported that the present balance in the Lewis River Aquatic Fund – Resource Projects (7.5) account is \$312,534.84 as of 3/31/08 and the balance in Lewis River Aquatics Fund – Bull Trout (7.5) account is \$351,848.59 as of 3/31/08 ([Attachment F](#)).

Agenda items for May 8, 2008

- Review of Aquatic Fund – Strategic Plan and Administrative Procedures (September 2005) *Are changes to the Strategic Plan needed?*
- SA 8.7 – Broodstock Schedule Discussion (Hatchery Supplementation Plan)
- Monitoring and Evaluation (M&E) Baseline Monitoring
- ATE Memorandum – DART Passage Time Discussion
- Law Enforcement – Isabel Van Vladriken
- Shoreline Management Planning Update
- Study/Work Product Updates
- Relicensing Update

Public Comment Opportunity

No public comment was provided.

Next Scheduled Meetings

May 8, 2008	June 12, 2008
Merwin Hydro Facility	Merwin Hydro Facility
Ariel, WA	Ariel, WA
9:00am – 3:00pm	9:00am – 3:00pm

Meeting Adjourned at 12:15pm

Handouts

- Final Agenda
- Draft ACC Meeting Notes 3/13/08
- [Attachment A](#) – CY 2007/2008 Lewis River Aquatic Fund Proposals – Additional Information Requests, dated April 4, 2008
- [Attachment B](#) - Aquatics Fund – Strategic Plan and Administrative Procedures, dated September 2005
- [Attachment C](#) – Merwin Model Test Summary, dated February 20, 2008
- [Attachment D](#) - Lewis River – Adult Trap Efficiency (ATE) Definition, dated April 10, 2008
- [Attachment E](#) – Schedule 8.7: Hatchery and Supplementation Facility Upgrades and Maintenance
- [Attachment F](#) - Lewis River Aquatics Fund – Resource Projects and Lewis River Aquatics Fund – Bull Trout financial report as of 3/31/08

MEMORANDUM

DATE: April 4, 2008

TO: Aquatic Coordination Committee

FROM: Kim McCune and Todd Olson

SUBJECT: CY 2007/2008 Lewis River Aquatic Fund Proposals – Additional Information Requests

The following is documentation of follow-up actions related to the Lewis River Aquatic Coordination Committee (ACC) March 13, 2008 meeting – discussion of calendar year 2007/2008 Aquatic Fund Proposals. This memo includes responses from the Cowlitz Indian Tribe, USDA Forest Service, and PacifiCorp.

Cowlitz Indian Tribe

To: Nathan Reynolds, Cowlitz Indian Tribe

From: Todd Olson, PacifiCorp Energy

Re: Mud Creek Enhancement

Dear Nathan,

On March 13, 2008, the Lewis River Aquatic Coordination Committee (ACC) met to discuss the 2007/2008 Aquatic Fund proposals of which the above project was considered. The ACC had the following information requests that require your response prior to any approval of project funding. We would appreciate your response by March 31, 2008.

1. Please provide information that the culverts located at the mouth of Mud Creek meet fish passage guidelines/criteria. The ACC is interested in design specifications such as culvert size, length, grade, condition, min/max water flow, etc.
2. Please provide a budget breakdown of costs related to Contractual Services, how was the cost of "Equipment staging and use - \$20,000" determined?
3. Although David Morgan supports the project, please confirm that Rhidian Morgan (project land owner) is also supportive and note how the Morgan's will be part of the design of the final project.

Thank you for your attention to the above, the responses you provide will be distributed to the ACC. In early April the committee will make final selections and notify project proponents.

Cowlitz Indian Tribe Response: Mud Creek Enhancement

In response to Todd's email of March 19th copied below, here are the Cowlitz Tribe's responses.

1. The 2 culverts at the mouth of Mud Creek are made of concrete and have a 6' inner diameter; are 40' long; have no slope or grade, and are in excellent condition. They do not have tide gates or any obstructions; they are on a base of crushed rock and the streambank slopes through which the culverts protrude (on either side of the road bed) are armored with riprap and gabions. The only fish passage/connectivity issue that might occur is a natural tidal disconnection during periods of low creek flow. I have attached a picture I took this morning of the downstream ends of the culverts. This picture was taken at ~9:00AM, and the corresponding tide chart for the Columbia River at St. Helens, OR, demonstrates that the river height on that gauge was 3.18 ft at 9:00 AM. Recent tidal fluctuation has been varying between 2 and 5'. See attached chart. In particular, note the high water line visible on the interior of the culverts; I assume this line represents the previous 5AM high tide of just under 5' elevation. Please remember that the landowner originally desired to put a bridge in this location, but permitting agencies forced the landowner to install culverts.

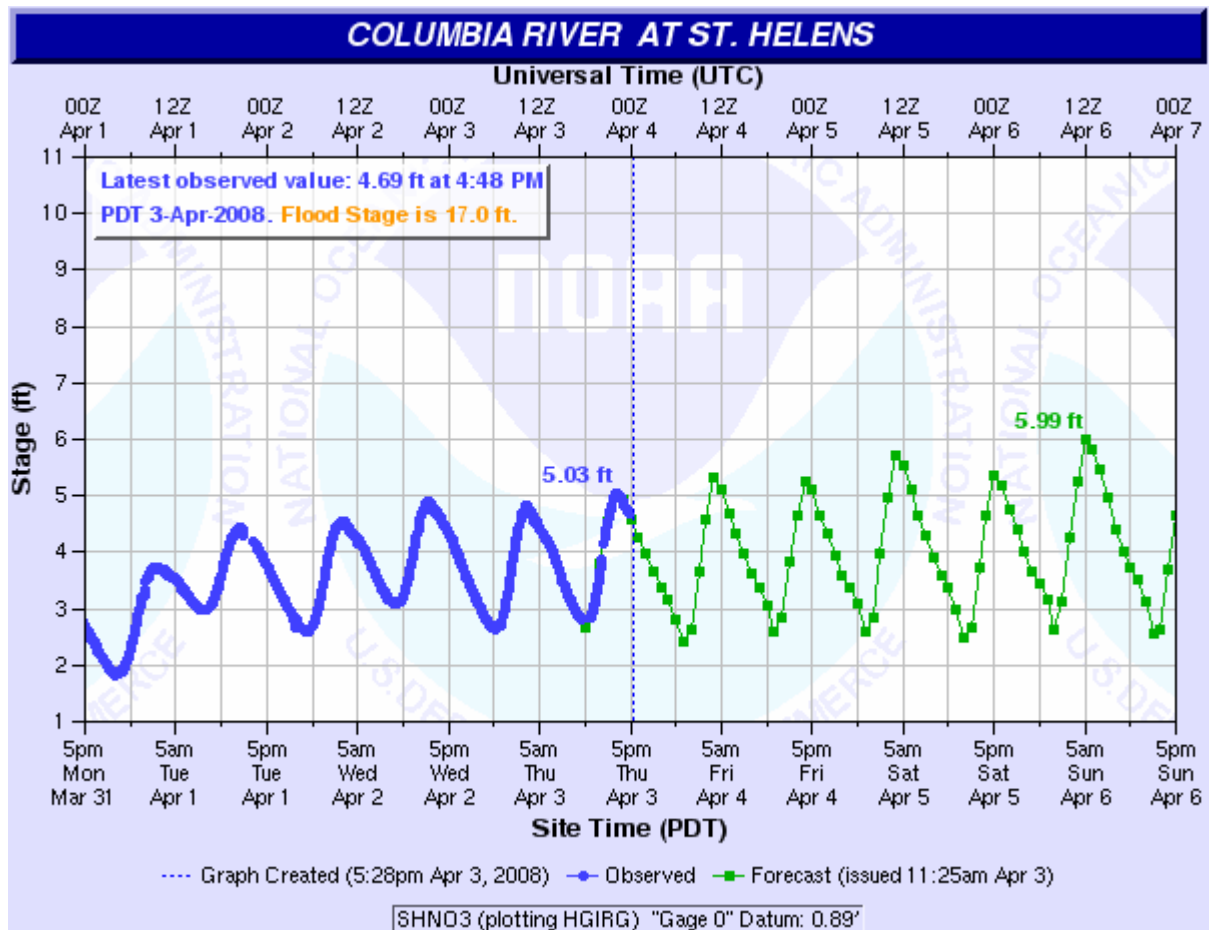
2. The \$20,000 contractor fee has been broken down by the contractor as follows:
Mobilization to get equipment to the project site and back: \$4,000
330 Excavator and operator: \$1,500/day for 5 days = \$7,500
D-8 Cat and operator: \$1,500/day for 5 days = \$7,500
Incidentals: \$1,000

3. A recent phone conversation (2-Apr-2008) that Cowlitz Tribal Biologist Shannon Wills had with Rhidian Morgan confirms both that Rhidian supports the project, and that Rhidian has delegated the landowner's project coordination to his son David -- therefore David Morgan remains the correct landowner point of contact for the Tribe's proposed project. David Morgan will have significant structure design and structure siting input with the final design team; the team will need to consider various factors: ease of access, type and shape of LWD materials obtained, and hydrology of the creek project sites. I foresee that many of these final designs will be developed onsite, with the tribal project manager, a consulting hydrologist, the equipment contractor and the landowner. The landowner will have ultimate veto authority. The Tribe shall not, and does not desire to, implement ANY action or structure without full approval and acceptance from the landowner.

If the answers I have provided here are unsatisfactory to PacifiCorp, or any member of the ACC, I will be pleased to prepare a further response.



Mud Creek Culverts



USDA Forest Service

To: Adam Haspiel, USDA Forest Service

From: Todd Olson, PacifiCorp Energy

Re: 2008 Muddy River Thinning/Brushing/Invasive Plant Project, 2008 Clear Creek Road Decommission (2575), and 2008 East Fork Lewis River Instream Structures for Steelhead

Dear Adam:

On March 13, 2008, the Lewis River Aquatic Coordination Committee (ACC) met to discuss the 2007/2008 Aquatic Fund proposals of which the above project was considered. The ACC had the following information requests that require your response prior to any approval of project funding. We would appreciate your response by March 31, 2008.

2008 Muddy River Thinning/Brushing/Invasive Plant Project

1. Please provide a budget breakdown of costs related to Contractual Services, how was the cost of "Thinning, brushing and invasive eradication Contract - \$73,000 and herbicide Contract - \$10,000" determined?
2. Given concerns that this project will most likely take effort beyond the proposed three year period, please identify the opportunities available to obtain additional funds in future years to continue the eradication-restoration work.

2008 Clear Creek Road Decommission (2575)

1. Please provide a budget breakdown of costs related to Contractual Services, how was the cost of "Contract ACC - \$34,000" determined?

2008 East Fork Lewis River Instream Structures for Steelhead

1. Please provide a budget breakdown of costs related to Contractual Services, how was the cost of "Excavator Contract - \$40,000 and the Supplies and materials - \$16,000" determined?
2. Please meet with LCFRB to discuss the technical aspects and merits of this project. If possible and needed, rescope project to gain LCFRB approval. Provide revised project proposal to ACC.
3. Please provide information on the selection of sites for the instream structures, and if possible identify the specific locations.

Thank you for your attention to the above, the responses you provide will be distributed to the ACC. In early April the committee will make final selections and notify project proponents.

USDA Forest Service Response: Muddy River expanded budget 2008

2008 Muddy River Thinning/Brushing/Invasive Plant Project

1. Please provide a budget breakdown of costs related to Contractual Services, how was the cost of "Thinning, brushing and invasive eradication Contract - \$73,000 and herbicide Contract - \$10,000" determined?

2. Given concerns that this project will most likely take effort beyond the proposed three year period, please identify the opportunities available to obtain additional funds in future years to continue the eradication-restoration work.

Brushing/thinning

The costs for items shown in this table are derived from past contracts awarded on Mount St. Helens National Volcanic Monument (MSHNVM) for similar types of work. An adjustment of 50% was made to the costs of those contracts to account for specialized requirements of this contract. Brush piling has cost anywhere from \$250 to \$1000 per acre on MSHNVM depending upon the amount and complexity of the brush piling. We chose to take a more conservative figure of \$450 per acre because some areas are sparse and some are dense.

We have done some preliminary map work from aerial photographs and drew polygons around stands that look like they need work. We went out 340 feet from the edge of the river because that is the length of two site potential trees (Forest Service standard Riparian Area). We came up with a total of 266 acres of brushing and thinning, 76 acres of which is primarily scotch broom dominated. Piling of Scotch broom will occur on 29 of those acres so we can burn on site.

Herbicide

The cost derived for the herbicide contract comes from estimates developed on the Mt. Hood National Forest. Their costs averaged \$340 acre based on manual treatment using a backpack sprayer. We wanted to treat about a third of the worst known scotch broom areas, so for \$10,000 we could treat approximately 29 acres.

Nurse Logs & seedlings

The costs derived for nurse logs and seedlings is based upon acquiring wood from Swift Reservoir and transporting it to Muddy River floodplains. We are estimating the cost for this based on known excavator costs from the East Fork Lewis River Project. We then estimated that each log will take 30 minutes to place. \$200/hour multiplied by 50 logs divided by ½ (30 minutes) = \$5,000, move in and out of equipment will be about \$1200.

We got quotes for self loading log trucks for \$85/hour.

We will plant 6 seedlings per nurse log.

Item	Cost per unit	Number of units	Total cost
Excavator	\$200/hour	25	\$5,000
Excavator Move in/out	\$1200	1	\$1,200
Nurse Log transport	\$85/hour	12 hours	\$1,020
Seedling purchase and planting	\$10/tree	300 trees	\$3,000
Total			10,000

Item	Estimated cost per unit	Estimated Units	Total cost
Brushing/thinning/ Scotch broom cutting	\$200/acre	250/acres	\$50,000
Brush Piling	\$450/acre	29/acres	\$13,050
Nurse logs and seedlings	\$200/log/seedling	50 log/seedling	\$10,000
Total			\$73,050
Herbicide	\$340/acre	29 acres	\$9,860
Total			\$9,860

Future Funding

We expect the thinning and brushing to be completed over a three year time span for this project, however invasive weeds (scotch broom) need to be controlled and monitored for a number of years following initial control methods. It is nearly impossible to eradicate an invasive weed without multiple attempts. Maybe a better term is a controlled population. In any case after the initial three year time span that we have to use ACC funds we will need to find additional funds. The Forest Service will have a stewardship timber sale in the Muddy River basin in 2009 or 2010. Funds generated from this sale will enable us to continue monitoring and eradicating/controlling scotch broom initially treated by this project. Another funding source would be Forest Service Challenge Cost Share Funds, Invasive weed program management funds, or other grants. The Forest Service will make a commitment to continue invasive weed control in this area after the three year period for the ACC project runs out.

USDA Forest Service Response: Clear Creek Road Decommission (2575)

The estimate was made based on knowledge gained from previous road decommissions including the 8322700 decommission. An engineer reviewed the culvert sizes, inlet and outlet depths, and stream types, and approximated the cost. I have updated the spreadsheet to show the engineer's cost estimates for culvert removals from the previous ACC project - Muddy River Tributary Road Decommission. The Muddy River Tributary Road Decommission final bid was very close to the engineer's cost estimate. For the Clear Creek FR 2575 Decommission, the engineer will go out once the snow melts, to survey each culvert removal area so that exact quantities of fill to be removed can be determined and put into the contract. If the final engineer's cost are significantly higher, we are not planning to request additional funds from ACC.

Clear Creek Road Decommission Contract Budget Breakdown

Road 2575 MP 1.9 - 3.9

MP	Culvert size	Stream Class	Outlet depth	Comments	Estimated Costs \$K
2.5	18	Road Ditch Relief	6		2
2.8	18	Perennial non-fish	50	Inlet obstructed	20
2.9	36	Perennial non-fish	13		5
3	24	Perennial non-fish	25		10
3.1	36	Perennial non-fish	13		5
3.3	48	Intermittent	15		5
3.5	24	Perennial non-fish	15		5
3.7	24	Perennial non-fish		Fill gone	
3.9	24	Ephemeral	12		5
Total					57

\$4K Move In Move Out = \$61K for design and Contract

Partner came forward with \$40K some of which was needed for Contract Admin

Requested the remainder from ACC

Previous ACC Funded Project - Road 8322700 Cost Estimates for various size culverts with varying fill depths

Outlet Depth	Engineer Cost Estimate
29	\$22,986
24	\$21,659
23	\$11,486
18	\$12,685
18	\$6,942
17	\$8,355
14	\$3,645
14	\$3,645
13	\$2,613

USDA Forest Service Response: East Fork Lewis River expanded budget 2008

2008 East Fork Lewis River Instream Structures for Steelhead

1. Please provide a budget breakdown of costs related to Contractual Services, how was the cost of "Excavator Contract - \$40,000 and the Supplies and materials - \$16,000" determined?
2. Please meet with LCFRB to discuss the technical aspects and merits of this project. If possible and needed, rescope project to gain LCFRB approval. Provide revised project proposal to ACC.
3. Please provide information on the selection of sites for the instream structures, and if possible identify the specific locations.

2008 Excavator and Marooka Estimate

Item	Estimated Hours	Estimated unit cost	Total cost
Excavator with operator	128	\$200/hour	\$25,600
Tracked dump truck with operator	64	\$170/hour	\$10,880
Move in/out of Excavator	1	Lump Sum	\$2000
Move in/out of Tracked Dump truck	1	Lump Sum	\$1500
Total			\$39,980

Cost Estimate Worksheet
for East Fork Lewis River Restoration Project by Excavator 2007

Item	Estimated Hours	Estimated unit cost	Total cost
Excavator with operator	64	\$145/hour	\$9,280
Tracked dump truck with operator	32	\$165/hour	\$5,280
Move in/out of Excavator	1	Lump Sum	\$750
Move in/out of Tracked Dump truck	1	Lump Sum	\$750
Total			\$16,060

Actual Contract Cost-as awarded
for East Fork Lewis River Restoration Project by Excavator 2007

Item	Estimated Hours	Estimated unit cost	Total cost
Excavator with operator	64	\$190/hour	\$12,160
Tracked dump truck with operator	32	\$155/hour	\$4,960
Move in/out of Excavator	1	Lump Sum	\$2000
Move in/out of Tracked Dump truck	1	Lump Sum	\$1500
Total			\$20,620

Supply Cost Estimate Form

Supply Item	Cost per Unit	Number of Units	Total Cost
Boulders	\$30 ton	200	\$6,000
Boulder Delivery	\$30 ton	200	\$6,000
Spawning Gravel	\$17 ton	100	\$1,700
Spawning Gravel Delivery	lump sum	1	\$1,500
Large Wood and Delivery	12 clusters worth	1	\$8,00
TOTAL			\$16,000

Excavator Contract, with Marooka off road dump truck.

The cost for this contract was developed using a combined source. In 2007 we advertised a similar contract to install boulder cross weirs and large woody material clusters in the Upper East Fork Lewis River in Site A. The original cost estimate was developed using criteria developed by Fish First for similar projects they had implemented on Cedar Creek. Then we called local equipment rental companies (United Rentals and a company specializing in caterpillar rentals) Using this information we developed a contract and went put it out for bid. We awarded this contract for \$20,620 to build two to three cross weirs with large wood complexes. We ran this contract as an equipment rental contract, and are expecting to use 64 hours of excavator time and 32 hours of Marooka time. In addition, it included on move in and move out.

We used known prices from the 2007 awarded contract to estimate prices for this contract. For purposes of this contract we doubled the hours involved to 128 hours of excavator time and 64 hours of Marooka time. The move in and move out was estimated to be the same as the actual 2007 contract (not the cost estimate). We added some money for inflation due to the cost of fuel. This led us to a final estimated cost of \$39,980 for the excavator contract that included the Marooka as well for this proposal. We rounded the cost up to \$40,000 to make it a simple figure for the purpose of the ACC proposal.

Boulder Cost Estimate

We purchased boulders for the 2007 project from a Tower Rock, a rock pit in Castle Rock Washington that has square sided boulders that helps immensely to construct the boulder cross weirs. We purchased 200 tons, enough boulders for three to four cross vanes and anchor boulders for the large wood clusters for \$6,000. The cost for delivery of these boulders was \$30 ton for another \$6,000. We had some year end money left at the end of 2007 and we purchased additional boulders for \$7,272 to help offset costs on a future project in the East Fork. The price came out to approximately \$60 a ton for delivered boulders.

We used these known prices to develop a cost estimate this proposal.

Spawning Gravel Estimate

We purchased spawning gravel for the 2007 project from Groat Brothers rock pit in la Center Washington. We purchased 120 tons (about 100 cubic yards) of spawning gravel for \$17 a ton in 2007. Delivery was another \$1,522 dollars.

We used these known prices to develop a cost estimate this ACC proposal.

Large Woody Material estimate

We were fortunate enough to have some wood stockpiled for the 2007 contract and did not need to purchase wood. For this ACC proposal we estimated a cost.

PART I—THE SCHEDULE
 SECTION B—SUPPLIES OR SERVICES AND PRICES/COSTS

ITEM NO.	SECTION B SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	Hydraulic Excavator, (with hydraulic thumb) Track Mounted. Minimum Bucket = 1.0 cubic yard toothed bucket and a 48" wide grading or muck bucket without teeth Minimum Operating Weight 45,000 lbs 60,000 lbs.	64	HR	\$ 190.00	\$ 12,160.00
2	Mobilization (in and out) Adjusted for larger excavator	1	EA	\$ 2,000.00	\$ 2,000.00
3	Tracked dump truck Minimum payload 10,000 lb (Morooka MST 1100 or equivalent)	32	HR	\$ 155.00	\$ 4,960.00
4	Mobilization (in and out)	1	EA	\$ 1,500.00	\$ 1,500.00
				TOTAL PRICE	\$ 20,620.00

DUNS #: 141 065 701

TIN #: 56-2385215

08/20/2007 11:44 FAX 3604497801 Moneyly Excavating, Inc.
 360-835-0288 WESTHELDONIANVM KOMMT BBS
 002/002 p.1

STATEMENT

464344

DATE Aug 17, 2007

TO
 Mount St. Helens Nat. Vol. Monument
 Photo Office
 42218 N.E. Yale Bridge Rd.
 Ambury, OR 98601-4909

TERMS

IN ACCOUNT WITH
 Red's Rock
 6626 N.E. 244th St
 Battle Ground, OR 98604
 East Fork Lewis River Project

Material hauled from
 Groat Bros. Piz - Ridgefield
 Wash. to 5 miles above Sunnyside
 Campground -

8/13/07	7 1/2 hr Haul	105/hr	787.50
8/14/07	3 1/2 " "	105/hr	367.50
8/14/07	3 1/2 " "	105/hr	367.50

Total \$1522.50

Thank you
 [Signature]

SERVICES/SUPPLIES REC'D

DATE

JOB CODE

odoms 25812

FAXED 8/17/07

GROAT BROTHERS, INC.

• WOODLAND, WA 98674
(360) 225-8868 • (360) 887-4600



Trucking Since 1966

Invoice No: 2619
Page No.:
Date: 8/31/07

Sold To: MT ST HELENS NAT VOL MON
42218 NE YALE BRIDGE ROAD
AMBOY WA 98601

ROCK

DATE	YOUR NO.	UNITS	RATE	AMOUNT
8/17/07	4692	27.97	17.00	475.49

		27.97		
			Invoice Total:	475.49

GROAT BROTHERS, INC.
P.O. Box 1630
Woodland, WA 98674

SERVICES/SUPPLIES USED
<i>[Signature]</i>
DATE 9/10/07
JOB CODE NDWFO3

GROAT BROTHERS, INC.
 GUILD RD • WOODLAND, WA 98674
 (360) 225-8868 • (360) 887-4600

Ridgefield Wood waste
 DBA → GROAT BROTHERS, INC.
 P.O. Box 1630
 Woodland, WA 98674



Trucking Since 1966

Invoice No: 2608
 Page No.:
 Date: 8/15/07

Sold To: MT ST HELENS NAT VOL MON
 42218 NE YALE BRIDGE ROAD
 AMBOY WA 98601

ROCK

DATE	YOUR NO.	UNITS	RATE	AMOUNT
8/13/07	4664	49.18	17.00	836.06
8/14/07	4672	22.46	17.00	381.82
		-----		-----
		71.64		Invoice Total: 1,217.88

*pd 8-28-07
 VISA*

SERVICES/SUPPLIES REC'D
AG
 DATE *8/17/07*
 JOB CODE *NEWFO3*

*You can pay By
 VISA*

Accomplished East Fork Lewis River Restoration Items

- Conifer release contract in selected stands from Slide Creek to Green Fork
- Seedling Plantings in riparian areas from Slide Creek to Green Fork in selected areas.
- Closed 16 dispersed camping areas along the East Fork with large boulders
- Issued a no camping closure along 8 miles of the East Fork from Sunset Falls Campground upstream past the Green Fork.
- Closed 4 roads with boulders that were direct access roads to the East Fork 1.3 miles
- Closed 1 road and turned it into a trail that followed the Upper East Fork for 2 miles starting at the Green Fork and Ending near Poison Gulch Creek.
- Installed 360 full length trees with a heavy lift helicopter to form 12 engineered logjams.
- Will Install 300 more trees with secured RAC title II funds for \$85K
- Replaced 1 migration problem culvert with open bottom arch culvert
- Upgraded the main 42 road to reduce sediment inputs to the East Fork Lewis. This is the main gravel road that follows the East Fork starting at Sunset Falls. Also Paved the worst ¼ mile near Sunset Falls.
- Held 3 community cleanup days to clean up trash thrown in the river, and trash from dispersed campground to the dump.

USDA Forest Service Response: Addendum to East Fork Lewis Instream Structure Proposal

This addendum provides clarification and additional information about the instream project on the East Fork Lewis River.

The final proposal as written and submitted to ACC was unclear in several aspects, and contained some misleading information. The East Fork project is spread out over two sites, “A” & “B”. Site “A” is 650 feet long and Site “B” is 500 feet long. Site “A” has two structures #1 & #2 that are actually associated with a 2007 contract that has been awarded with Title II funds, but has not been implemented yet. Structures 3, 4, and 5 are part of this year’s proposal with ACC (see attached maps). On site “B” all three structures proposed are for this 2008 ACC proposal. There are two large wood clusters with root wads associated with each cross vane weir. Each cluster is composed of two or three pieces of wood, some with attached root wads. These large wood clusters are placed on the margins of the stream to allow kayaks to pass safely over these structures. This project is part of a series of ‘other projects’ in the East Fork that allows for total ecosystem integration (see attached “other projects” description).

The expected outcome or “Desired Future Condition” is as follows. A restored stream system that allows for spawning and rearing success of steelhead in the Upper East Fork Lewis River. Based on observations in Cedar Creek, each cross vane has the potential to create successful spawning for five to eight pairs of steelhead. This project therefore has the potential to create quality spawning opportunities for 30 to 48 pairs of steelhead. Steelhead fry tend to use slow moving, shallow margin habitat. This project provides margins with increased complexity because of the large wood clusters. In addition, older juvenile

steelhead will have increased complexity in the pools from the large wood clusters. We expect an increase in juvenile steelhead directly proportional to spawning adults.

Stream surveys conducted in the East Fork Lewis on National Forest Lands show there is a low percentage of quality pools in the section from Sunset Falls to Green Fork. The attached table summarizes pool and large woody material data collected on the East Fork Lewis River (see attached table).

Our 2002 Watershed Analysis on the Upper East Fork Lewis River identified the following limiting factors:

Adult spawning sites and incubation success: Low amounts of quality and of spawning gravel areas.

Juvenile rearing and off-channel habitat or refuge areas: very little side channel and connected floodplain areas and complex channels near spawning sites.

Adult holding/security cover; lack of large pools with overhead cover and adequate depth to protect adult fish from predation during summer low flow periods, especially near spawning areas.

Elevated summer water temperatures: water temperatures in the mainstem of the East Fork have exceeded State water quality standards on numerous occasions, sometimes falling within the sub-lethal range for juvenile trout.

Also from the 2002 Upper East Fork Lewis River Watershed Analysis the following concerns were discussed in the "Interpretation Section"

Quantity and Quality of Key Habitat Attributes for Resident and Anadromous Salmonids and Instream Large Wood:

Spawning-limited to due to inadequate supplies and storage of gravel-sized sediment within stream channels.

Loss of channel complexity, spawning and rearing habitat due to historic channel modifications including the Yacolt fire, road building, logging and stream cleanout activities.

Lack of Large Woody Material instream.

Lack of large old trees in riparian reserves and headwater areas, which are considered long-term sources of wood.

This project address the Limiting Factors identified in the Watershed Analysis in several ways. Fish habitat was severely degraded when roads were built adjacent to the creek, the riparian area was logged and the stream was "cleaned out" of large woody material. These actions allowed water velocity to increase, especially during flood events, flushing spawning

size gravel downstream into the lower river. Adding cross vane weirs, spawning gravel, and large woody material will address many of the limiting factors mentioned above.

1. Spawning Gravel: Spawning gravel is not readily recruitable to the stream system from headwater streams as a result of past flood events following the Yalcot fire, logging, and stream cleanouts. Flood events flushed stored gravels from the system. New gravels that may be recruited from slides in headwater streams will be rough and angular in size, and undesirable as spawning gravel. The proposed weirs will hold spawning gravel introduced into the system and keep gravel from moving downstream out of the system. Spawning gravel will be mixed to specific standards adopted by WDFW for summer steelhead. Natural gravel, if any, can also be held in these weirs as it moves downstream.

2. Juvenile Rearing and Refuge Areas. Large woody material installed in conjunction with cross vane weirs will increase juvenile hiding cover in pools and add to overall stream complexity.

3. Adult Holding/Security cover. Large woody material installed in conjunction with cross vane weirs will increase adult hiding cover in pools and will be located near newly created spawning areas to increase success of spawning fish.

4. Elevated water temperatures. Other projects (see other activities) in association with this project will increase large trees in the riparian areas by thinning, brushing and seedling planting of stands. Some thermal refugia will be created with this project as pool depths increase.

Adult Spawner use in proposed project sites.

Spawning use in site A. We have little information of actual use in this area. The present substrate size is of an undesirable large size, and does not lend itself to spawning. Spawning steelhead have been observed upstream and downstream of this location, and spawn for at least another 2.5 miles upstream.

Spawning use in Site B. Information on this location is better. For the four years prior to the 2006 flood there was no spawning in the section at all because the substrate was too large to use, that includes the large pool area identified below Cross Vane Weir #1. Spawning was occurring 500 feet downstream of this site. Ten to 15 redds were documented between here and Sunset Falls in 2006. This pool used to be 10 to 15 feet deep prior to 2001. Some unknown event caused this pool to partially fill and it is now only 6 to 7 feet deep. Spawning was associated with this pool in the past when it was deeper. Following the 2006 flood, small amounts of spawning gravel moved into this area. It is unknown if steelhead spawned here after the spawning gravel appeared. The gravel is only temporary because there is no structural or natural stream morphological conditions to hold it in place. There was concern that this project would cause a loss of spawning habitat associated with the large pool. This section of the East fork has 16.1 quality pools per mile (see attached table), so even if this project to increase spawning habitat has an unseen negative effect on spawning, it would represent a small percentage of spawning associated with quality pools above Sunset falls. A

pebble count (see attached pebble count) was performed in October 2006 directly below the large pool in this section. The average D-50 of the reach was very coarse gravel to small cobble.

Other Projects

Accomplished East Fork Lewis River Restoration Items

- Conifer release contract in selected stands from Slide Creek to Green Fork
- Seedling Plantings in riparian areas from Slide Creek to Green Fork in selected areas.
- Closed 16 dispersed camping areas along the East Fork with large boulders
- Issued a no camping closure along 8 miles of the East Fork from Sunset Falls Campground upstream past the Green Fork.
- Closed 4 roads with boulders that were direct access roads to the East Fork 1.3 miles
- Closed 1 road and turned it into a trail that followed the Upper East Fork for 2 miles starting at the Green Fork and Ending near Poison Gulch Creek.
- Installed 360 full length trees with a heavy lift helicopter to form 12 engineered logjams.
- Will Install 300 more trees with secured RAC title II funds for \$85K
- Replaced 1 migration problem culvert with open bottom arch culvert
- Upgraded the main 42 road to reduce sediment inputs to the East Fork Lewis. This is the main gravel road that follows the East Fork starting at Sunset Falls. Also Paved the worst ¼ mile near Sunset Falls.
- Held 3 community cleanup days to clean up trash thrown in the river, and trash from dispersed campground to the dump.

Table III-8. Summary of stream survey data, Upper East Fork Lewis River Watershed.

Summary of Level II Stream Survey Data ¹										
Watershed	Stream	Year	Reach	Miles	Bankfull Width ²	Pools/Mile	Quality Pools/Mile ³	Large Wood ⁴ /Mile	Bankfull Width: Depth	Rosgen Type ⁵
170800020501 East Fork Lewis River Headwaters	Head Waters East Fork Lewis River	1998	4	2.3	30.3	26.8	7.9	31.4	30.3	B
	Green Fork	1998	1	1.5	19.8*	33.3	5.1	7.2	28.9	B
	Poison Gulch	2001	1,2	1.8	10.5	35.9	2.7	10.7	12.4	A
170800020502 Upper East Fork Lewis River	Upper East Fork Lewis River	1998	1,2,3	5.3	35.7	23.4	16.1	14.6	35.7	B
	Snass Creek	1995	1	1.4	9.1	66.5	ND	14.3	8.8	A
	Slide Creek	1996	1	1.2	20.8	71.0	ND	13.0	ND	B
	Slide Creek	1995	1,2,3	3.4	27.0	77.3	ND	4.8	17.4	B
	Slide Creek T1	1995	1	1.1	19.5	65.8	ND	24.6	21.7	B
	McKinley Creek	2001	1,2	2.2	ND	22.8	4.8	6.1	12.5	A
	Little Creek	ND	ND	ND	ND	ND	ND	ND	ND	ND
170800020503 Copper Creek	Copper Creek	1995	1-4	6.2	51.0	40.3	ND	17.3	23.1	B
	Bolin Creek	1979	1,2,3	0.55	15-25	ND	ND	ND	ND	ND
	Miners Creek	1978	1-4	1.45	ND	ND	ND	ND	ND	ND
	Summit Creek	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Star Creek	ND	ND	ND	ND	ND	ND	ND	ND	ND
170800020504 Middle East Fork Lewis River (King Creek)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
170800020505 Rock Creek	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

1.

Surveys were conducted by Gifford Pinchot fisheries staff or contracted out from 1988 to 2001. Region 6 protocols were not followed until after 1990.

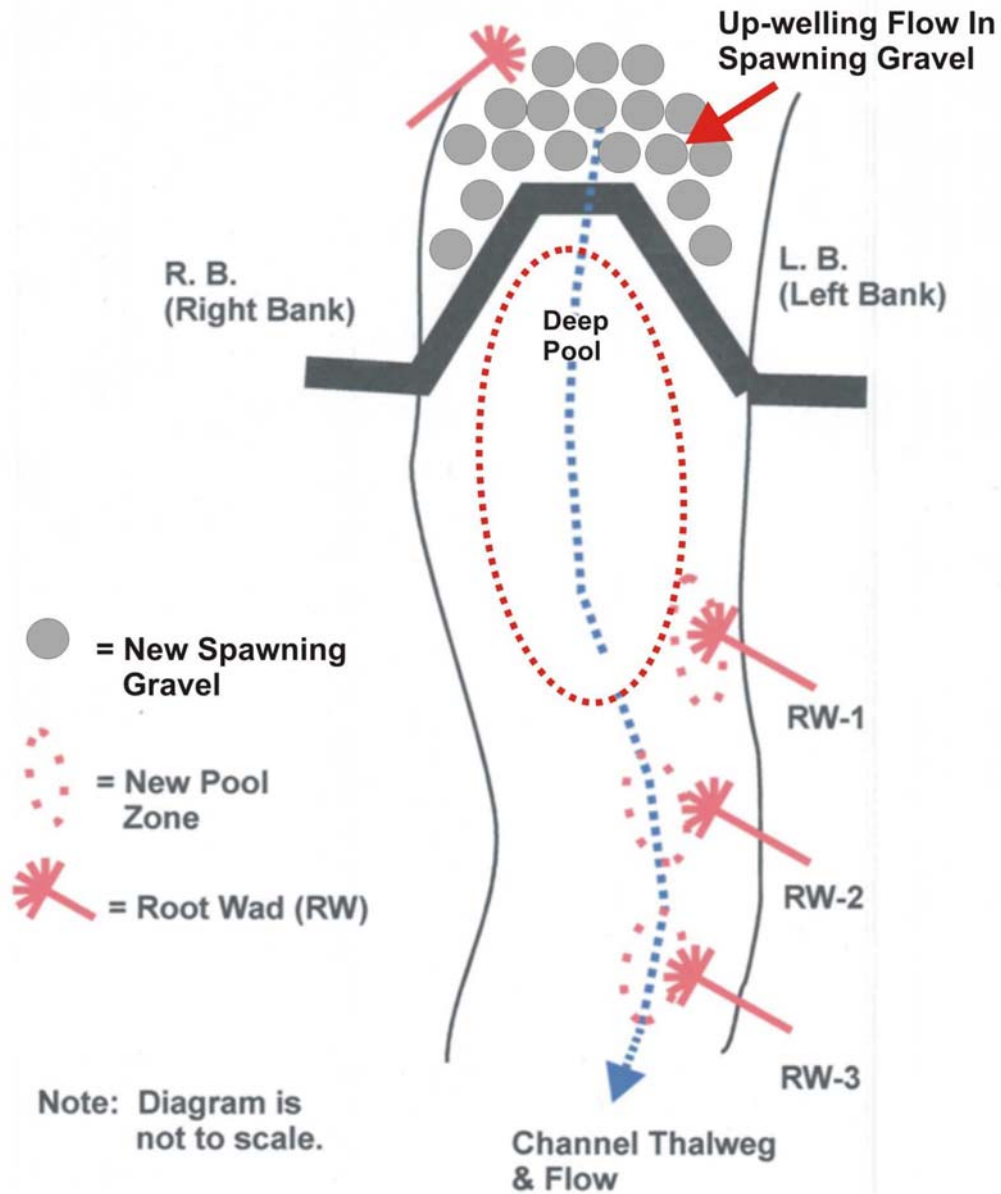
2. * Only one bankfull width estimate for all reaches; wetted width data is available.

3. Quality or large pools are equal to or greater than 3 feet in depth.

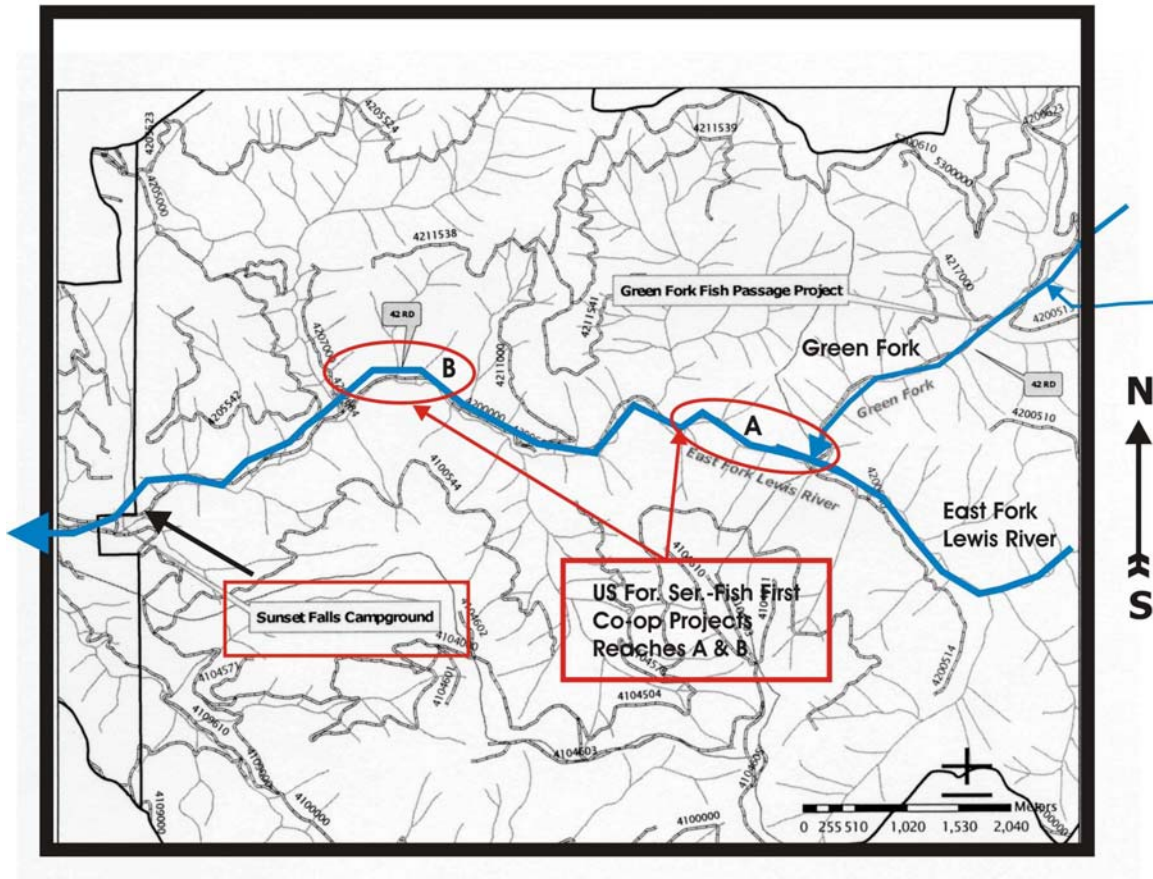
4. Value represents total of large (>24 inches diameter, 50 feet in length) and medium wood (>12 inches diameter, 50 feet in length).

5. A best estimate of Rosgen channel type based on available information about stream gradient, bankfull width to depth ratio and sinuosity (Rosgen 1994). *Was labeled as type "A".

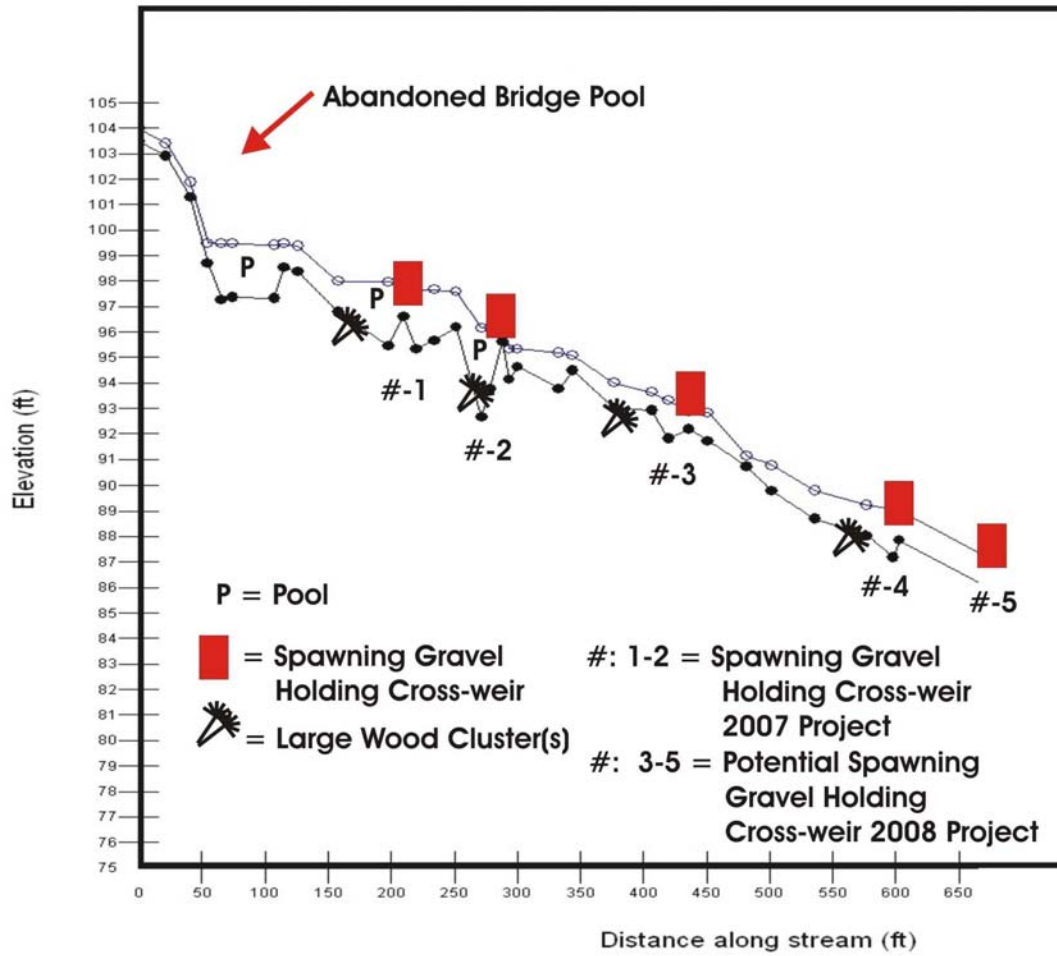
Basic Diagram Of “CV” Weir With Spawning Gravel Placed Above Weir & Oxygenated Pool Formed Below



Schematic Map Of Fish Habitat Project Sites - Upper East Fork Lewis River On Giffort Pinchot National Forest - 2008 Project Reaches "A" & "B"

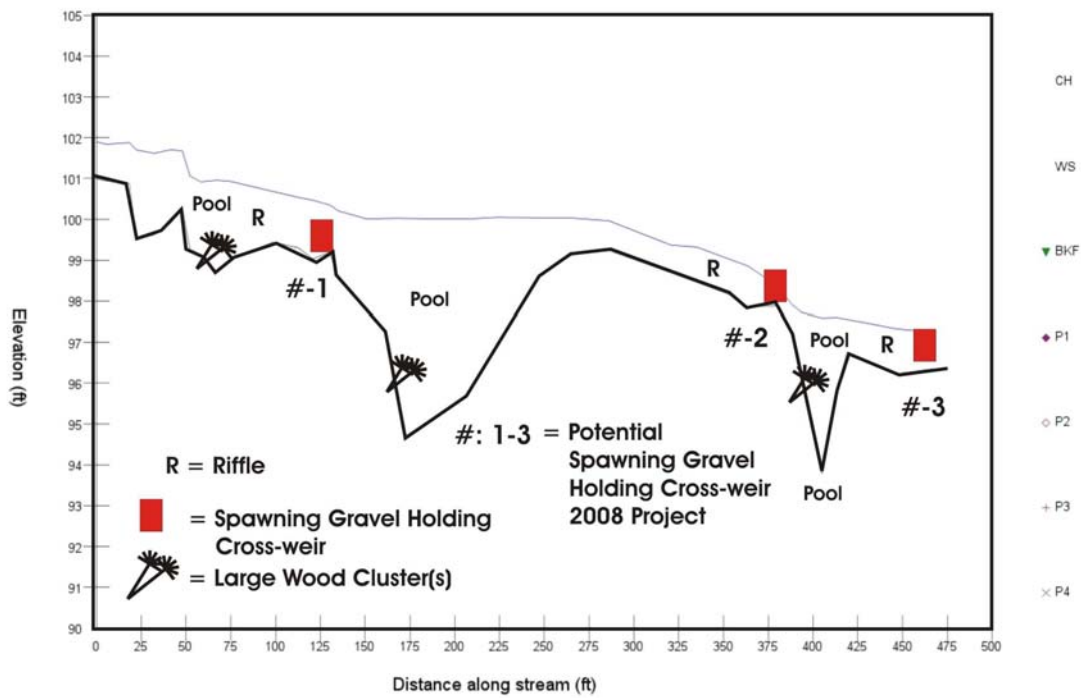


US Forest Service Reach "A" Stream Profile & Restoration Treatments
 US Forest Service Field Data Profile 2006 & 2007



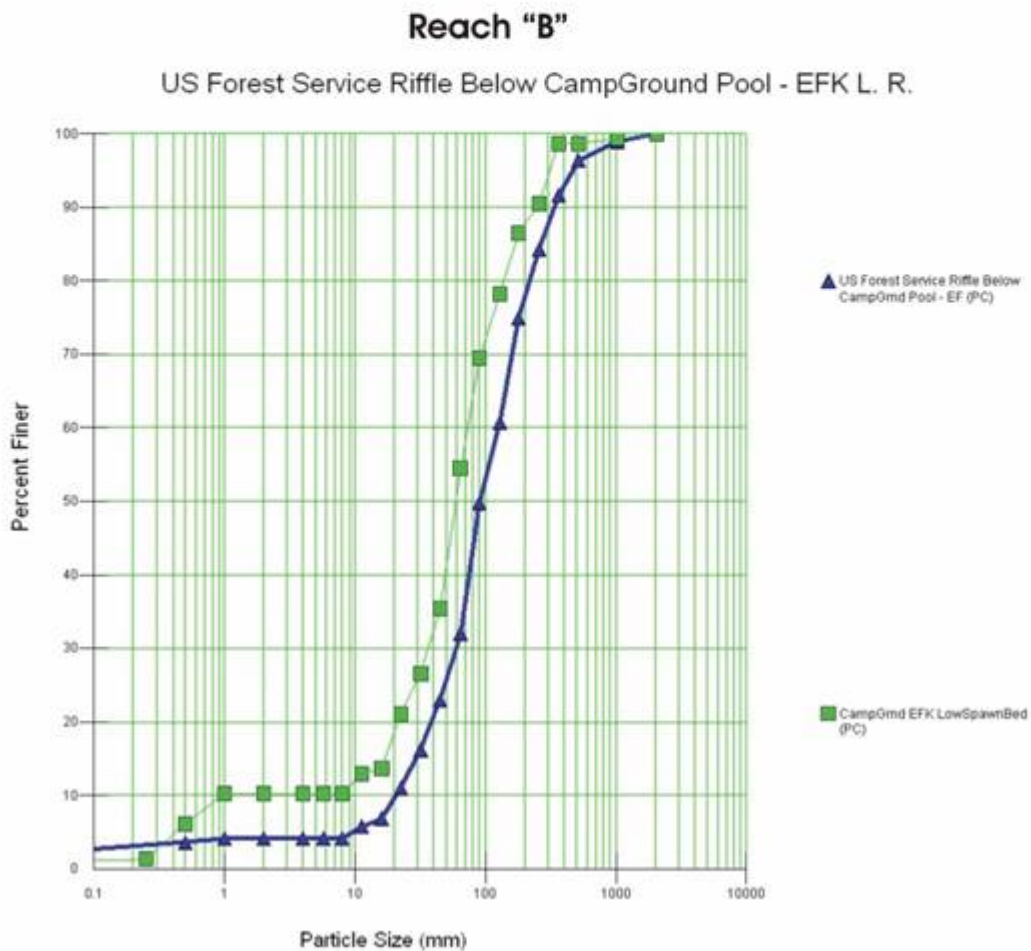
US Forest Service Reach "B" Stream Profile & Restoration Potential Treatments

US Forest Service Field Data Profile 2006-2007



US Forest Service Project Site Analysis Data - Example Graph Riffle Particle Size Counts In Riffle Areas Reaches "A" & "B"

The D-50 Riffle Bed Materials Particle Size Ranged From Very Coarse Gravel (60 mm) to Predominantly Small Cobble (91mm) and Larger"



PacifiCorp Energy

To: Erik Lesko, PacifiCorp Energy

From: Todd Olson, PacifiCorp Energy

Re: Panamaker Creek Road Closure and Culvert Replacement

Dear Erik,

On March 13, 2008, the Lewis River Aquatic Coordination Committee (ACC) met to discuss the 2007/2008 Aquatic Fund proposals of which the above project was considered. The ACC had the following information requests that require your response prior to any approval of project funding. We would appreciate your response by March 31, 2008.

1. Please provide a budget breakdown of costs related to on the ground activities; how was the cost of "Backhoe w/Operator - \$4,000, Seeding and Stabilization Crew - \$7,800, and Materials - \$2000" determined?
2. The ACC stipulates for project approval, that PacifiCorp take measures to minimize the introduction of invasive plants brought in by the machinery. All equipment which could carry such plant sources should be washed and steam cleaned. Please acknowledge inclusion of such action into project.
3. Please consider the opportunity for cost reduction through an in-kind contribution of resources from PacifiCorp. If an in-kind contribution is made please identify the subject cost savings.

Thank you for your attention to the above, the responses you provide will be distributed to the ACC. In early April the committee will make final selections and notify project proponents.

PacifiCorp Energy's Response:

This is a revised response regarding the Panamaker project questions raised at the last ACC meeting. Total costs at the project remain unchanged.

Original Budget

COSTS	Permitting	Construction	Monitoring and Reporting
Personnel Costs			
Contract Supervisor	\$3000		
Biological Staff	\$1000	\$1500	\$1500
Backhoe w/Operator		\$4000	
Seeding and Stabilization Crew		\$7800	
Materials		\$2000	
Administrative Overhead		\$2200	\$2000
TOTAL COSTS	\$4,000	\$17,500	\$3,500

Revised Budget:

Based on the ACC request to provide a further budget breakdown a revised budget is being submitted based on further analysis of costs and contributed labor from PacifiCorp as an in-kind contribution. The original costs were estimated at \$24,500. Because monitoring and reporting will occur in subsequent years to the actual work, they are not included in the revised costs (these are in-kind cost savings of \$3,500.00). Additionally, there is no cost attributed to any oversight by PacifiCorp fisheries staff (potentially another \$1000.00 in staff time). Finally, if there is follow-up stabilization of the site, these costs are not captured. While the costs are redistributed, the original budget was an estimated not-to-exceed price that still seems reasonable. A contractor has not been to the site to confirm expected labor and materials because the site is still under snow at this time. Therefore, the recommendation is to maintain an estimated cost of \$25,000.00 to account for any underestimates and unknown conditions that may exist at the site requiring more labor than anticipated.

Invasive Weeds:

Invasive weed treatment was not spelled out in the original budget but is part of the monitoring that would occur to ensure weeds do not become established. Contractors will be required to ensure their equipment is clean and free of leaks per their established contracts.

Analysis of Costs:

The rates are determined using 2007 PacifiCorp contractor costs and the use of contractors and personnel with previous experience in this type of work. The work will be conducted based on time and materials and as such, the rates are only an estimate. The contract work of labor and equipment is re-apportioned in the analysis below.

Panamaker Creek Budget Breakdown

Equipment:

Backhoe: 45 hrs X \$95/hr	\$	4,275
Dump truck: 20 hrs X \$80	\$	1,600
Mobilization	\$	1,200
Mileage: 0.505/ mile X 700 miles	\$	353
Dumping fees for culverts	\$	750
	Subtotal	\$ 8,178

Supervision:

20 hrs X \$106/hr (agency meeting, inspections)	\$	2,120
PacifiCorp fisheries staff	\$	-
PacifiCorp wildlife staff: 16 hrs X \$70	\$	1,120
	Subtotal	\$ 3,240

Materials:

Erosion control matting (\$80/ roll X 10 rolls)	\$	800
Silt Fence	\$	300
Grass seed (\$2/lb X 120 lbs)	\$	240
	Subtotal	\$ 1,340

Labor to stabilize and grass seed:

Foreman (\$45/hr X 24 hrs)	\$	1,080
Crew (\$27.00/hr X 120 hrs)	\$	3,240
Mileage (0.505/ mile X 700 miles)	\$	353
	Subtotal	\$ 4,673

Permitting:

Preparation of Application	\$	3,000
Submittal and Coordination	\$	1,000
	Subtotal	\$ 4,000

AFUDC and Capital Surcharges	\$	1,982
Taxes (7.6%)	\$	1,078

Project Total \$24,491

Aquatics Fund – Strategic Plan and Administrative Procedures

Prepared by PacifiCorp and Cowlitz PUD

September 2005

1.0 Introduction

On November 30, 2004 PacifiCorp, Cowlitz PUD, and a number of interested parties reached a Settlement Agreement (SA) concerning the relicensing of the Lewis River Hydroelectric Projects. Listed within the agreement was an article for PacifiCorp and Cowlitz PUD to establish a Lewis River Aquatics Fund. Specific language from the SA is as follows:

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.

14.2.4 TCC and ACC Decision-Making Process and Limitations

(D) In no event shall the TCC or the ACC increase or decrease the monetary, resource, or other commitments made by PacifiCorp and Cowlitz PUD in this Agreement; override any other limitations set forth in this Agreement; or otherwise require PacifiCorp to modify its three Projects' facilities without PacifiCorp's prior written consent or require Cowlitz PUD to modify its Project's facilities without Cowlitz PUD's prior written

consent, which consent may be withheld in the applicable Licensee's discretion.

PacifiCorp and Cowlitz PUD will be responsible for compiling proposals and making initial recommendations to the Lewis River Aquatic Coordination Committee (ACC). The ACC will play an important role in the discussion and final selection of projects. The Settlement Agreement calls for the Licensees to obtain the views of and attempt to reach consensus among the ACC; therefore, it is critical that the ACC have the ability to reach consensus on funded projects in a timely and well thought out manner.

2.0 Purpose

The intent of this document is two fold. First the document briefly identifies goals of the aquatic fund, provides evaluation guidance at a program level, and then outlines more specific evaluation components of resource projects such as priorities, technical questions, and policy questions. Second, this document identifies the steps to be undertaken to implement the Aquatics Fund. Process forms are included as appendices.

3.0 Funding Process Considerations

3.1 Aquatics Fund Goals:

The goal of the fund is to support resource protection measures that 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 reintroduction outcome goal of the comprehensive aquatics program contained in Section 3 of the SA is to “achieve genetically viable, self-sustaining, naturally reproducing, harvestable populations above Merwin Dam greater than minimum viable populations (“Reintroduction Outcome Goal”)”.

3.2 Project Evaluation Guidance at a Program Level

The ACC and Licensees shall consider the following factors in the review of potential aquatic projects:

Proposed Projects:

- Resource projects must have specific objectives and expected outcome(s) that help attain the purposes of the Aquatic Fund.
- Resource Projects must be consistent with applicable Federal, State, and local laws.

- Resource Projects, to extent feasible, shall strive to be consistent with policies and comprehensive plans, such as the Lower Columbia Salmon Recovery Plan, in effect at the time the project is proposed.
- Aquatics Fund monies shall not be used to fund projects that any entity is otherwise required by law to perform, except by agreement of the ACC.
- Licensees shall evaluate proposals based upon: (1) the benefit to fish recovery throughout the North Fork Lewis River with priority to ESA –listed species, (2) the support to the reintroduction of anadromous fish throughout the basin, and (3) the enhancement of fish habitat in the Lewis River Basin with priority to the NF Lewis River. (See Appendix A for geographic scope of Fund)
- Licensees shall consider factors that reflect the feasibility of projects and give priority to resource projects that are more practical to implement.
- Resource project must use Best Management Practices (BMPs). The ACC may identify suggested sources of BMPs, but applicants must identify what sources they are using for BMPs and how they will protect resource values.

Process Considerations (or requirements):

- Any interested party may submit resource project proposals for funding.
- If a representative of the ACC proposes a project for funding, he or she may participate in the ACC review of the Utilities evaluation of proposed projects, however they may not champion their own projects(s) and must remove themselves if a conflict of interest arises. The intent is to allow an ACC representative to participate in the process, but to also make sure that no favoritism (perceived or otherwise) is given to ACC members.
- Entity receiving Aquatic Funds must meet all state or federal permitting requirements for their project.

3.3 Evaluation of Resource Projects

Given the expected number of potential Aquatics Fund proposals to be submitted and the cap on funding, a mechanism to review and evaluate projects is needed. In general evaluation criteria can be grouped into five areas:

1. Consistency with Fund objectives and priorities
2. Benefits to priority fish species and stocks
3. Scientific validity and technical quality of proposed project
4. Ability for the project proponent to successfully implement proposed project
5. Cost effectiveness and timeliness

In completing the evaluation of proposals and reporting recommendations to the ACC, PacifiCorp and Cowlitz PUD will rate each proposal giving consideration to the five general evaluation criteria listed above. Given the importance that a proposed project be consistent with Fund objectives and priorities, proposed projects will be evaluated as a “Meets” or “Does not meet” against this specific criteria. If during the Pre-Proposal

review (1st Stage) the project receives a “Does not meet” response, the proposal will be dropped from further evaluation and funding. The Licensees shall document this determination in its recommendations report to the ACC.

The following sections provide information and questions to be considered in completing the “Meets/Does not meet” response or numerical rating for each general evaluation criteria. A weighting percentage is also identified per criteria. For each proposed project that Meets consistency with the Fund objective and priorities, reviewers will give a score of 1 to 5 for each remaining criteria (1 is lowest value, 5 is highest value). The weighting will then be multiplied against the score, and the addition of all weighted scores be the final score (see Appendix D for a sample evaluation sheet).

The basis for recommendation of any given project funding will be identified in a report to the ACC.

3.3.1 Consistency with Fund Objectives and Priorities (Meets or Does not meet):

1. Benefit fish recovery throughout the North Fork Lewis River, priority to federal ESA-listed species
2. Support the re-introduction of anadromous fish throughout the Basin
3. Enhance fish habitat in the Lewis River Basin, with priority given to the North Fork Lewis River.

3.3.2 How does the proposed project benefit priority fish species and stocks? (Chinook, Steelhead, Coho, Bull Trout, Chum, and Sea-run Cutthroat) (40 % weight):

- Does the proposal clearly describe the expected benefits of the project?
- Does the proposal clearly identify the salmonid species and stocks that would benefit from the project?
- Does the project address a limiting factor(s) to the target species, a limiting life history stage, or an important habitat process or condition?
- Will the project provide long-term benefits? Does the project provide tangible, on the ground benefits?
- Is the project generally consistent with the intent (strategies, measures, actions, and priorities) of applicable recovery and planning documents (e.g. Lower Columbia Salmon Recovery Plan)?

3.3.3 Scientific validity and technical quality of proposed project (40% weight):

- Is the problem to salmonids and the associated objectives of the proposed project clearly described?
- Does the project provide a detailed schedule with proposed end dates?
- Does the proposal employ appropriate techniques, adequate design and proper siting?
- Is it clear how the proposed project will meet its intent and purpose?
- What is the likelihood that the project will achieve stated objectives?
- Does the project provide for implementation monitoring? How will success be demonstrated? Are the benefits or outcomes from the project measurable (e.g.

- number of trees planted or amount of structure placed)? What monitoring protocols will be used, if any?
- Have watershed processes and a larger global aspect been considered in developing the proposal?
 - How does the project fit within the fish needs as identified through watershed planning documents, recovery plans, etc?
 - Is the project dependent on other key conditions or processes? (i.e., do other watershed activities/projects need to occur prior to getting the full benefits of proposed project?)
 - Does the project take into account the condition or processes of the watershed (e.g., high flow events)?
 - How might other habitat protection, assessments, or restoration actions in the watershed impact the project?
 - Has the project proposal received professional review, and if so, what is the content of that review?
 - Does the proposal identify any negative or positive impacts to other resource areas (e.g., recreation)?

3.3.4 Ability for the project proponent to successfully implement proposed project (10% weight)

- Does proposal include both appropriate numbers of personnel and experienced team members?
- Has the applying party submitted proposals in previous years? If their proposal received funding, has it been successfully implemented?
- Does the project have support from other parties that are knowledgeable of the landscape conditions, project, and potential outcomes?
- Will the project be able to obtain the necessary permits in a timely manner?

3.3.5 Cost effectiveness and timeliness (10% weight)

- Does the project have matching funding or in-kind participation? Is there collaboration between numerous parties?
- Is the project budget identified by work effort (administration, materials, labor, etc.) and is it appropriate?
- Does the project have a reasonable cost relative to the anticipated benefits?
- Is the project self-maintaining once completed? If not, how will maintenance be achieved?
- Can the project activities be planned and initiated in one year?

4.0 Funding Process

4.1 General Process

Per the Settlement Agreement, PacifiCorp and Cowlitz PUD will make money available to the Aquatics Fund in the spring of each year as identified in Figure 4.1. There is the potential that following the Fund Process non-distributed monies may remain in the

account. Likewise project withdrawals may not occur as expected due to withdrawal of a project or other circumstance. The ACC will be advised of the Aquatics Fund financial status throughout the year. Any monies not distributed shall remain in the Fund, will gain interest, and will be available for the following year's use unless ACC parties agree to conduct a second Fund process within that same year.

Although the funding process schedule in the first year of the program may be modified, in subsequent years it will generally be conducted in the fall and early winter. In early September of each year PacifiCorp together with Cowlitz PUD will notify potential fund applicants, a list of whom PacifiCorp together with Cowlitz PUD developed in consultation with the ACC, that the Utilities are seeking pre-proposals for the following year's funding (see Table 4.1 for activity timeline). Such notice shall inform the potential applicants of the need to (1) complete a pre-proposal form, and (2) submit it to PacifiCorp by early October. PacifiCorp will provide Cowlitz PUD copies of pre-proposal forms. Applicants will be requested to complete a short (2-3 pages) pre-proposal form that briefly describes the proposed project, expected results and benefits, and implementation details (see Appendix B for form). PacifiCorp will compile and with Cowlitz PUD evaluate pre-proposals. To minimize any bias, individual reviewers (subject matter experts from the Utilities) will evaluate and score all proposals. PacifiCorp together with Cowlitz PUD shall prepare a report summarizing the evaluation outcome and provide it to the ACC by early November. Included in the report will be a list of the pre-proposals and the Utilities ranking of pre-proposals including a narrative explaining ranking and funding recommendations (all submitted pre-proposal forms will be attached to report). After gathering input from the ACC, PacifiCorp and Cowlitz PUD will finalize pre-proposal selection. Based on the number of projects, individual project cost, and funding available, PacifiCorp together with Cowlitz PUD will notify applicants of their selection for further consideration. This selection should occur by early December.

Upon receiving notice that a project has been selected for further consideration, the applicant will have until mid January to complete and submit a full proposal (see Appendix C for form). PacifiCorp and Cowlitz PUD will evaluate and rank the proposals and report conclusions in a report to the ACC. 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. The Utilities will Consult with the ACC and give ACC representatives a 30-day period to review and provide comment on conclusions. An annual meeting of the ACC will follow the review period to allow Consultation on Resource Projects described in the report. The meeting is to be no sooner than 30 days and no later than 60 days after distribution of the report. Per ACC input, the Utilities will finalize the list of projects to receive funding and notify funding recipients. It is expected that this final review process will be completed by early April.

It is the intent of the Settlement Agreement Parties that the ACC shall strive to operate by consensus and in the case of the Aquatics Fund, strive to reach agreement on Resource Projects to be funded. As provided in the Settlement Agreement, any disputes are to be resolved as expeditiously and informally as possible, and that issues within the scope of

the ACC are discussed in those committees before being referred to the ADR Procedures. Any disputes among ACC members shall be resolved in accordance with the Settlement Agreement.

For each selected project, PacifiCorp will distribute funding according to an invoiced time and materials basis, with a not-to-exceed amount for the total project. Project proponents will be responsible to include a report of activities for invoiced amount. Upon project completion and prior to final invoice payment, project proponent, the utilities representatives, along with ACC representatives if they so choose, shall visit the project and conduct a project close-out review.

5.0 Review of Funding Process

This document has been prepared in Consultation with the ACC representatives to meet identified obligations in the Settlement Agreement. As provided in the Settlement Agreement, this document which includes both the Aquatic Fund strategic plan and administrative aspects may be modified periodically with the approval of the ACC.

Table 4.1. Funding Process Timeline

Activity	Target Milestone Date
Submit Request For Pre-Proposal Forms	Early September
Pre-Proposal Forms due	Early October
Pre-Proposal Listing and Evaluation Report Submitted to ACC	Early November
Pre-Proposal Report Comments due from ACC	Late November
Finalize List of Selected Projects for Additional Consideration	Early December
Submit Request For Proposals to Selected Applicants	Early December
Proposals due	Mid January
Proposal Evaluation Report Submitted to ACC (30 day review)	Mid February
Proposal Report Comments due	Mid March
Finalize List of Selected Projects and Notify Project Funding Recipients	Early April
Contract Procurement	April
Submit Report To FERC	May
Funding Available for Invoicing	April

Appendix A
Geographic scope of Aquatic Fund

(See attached)

Appendix B

PRE- PROPOSAL FORM -

Lewis River Aquatic Fund

Form Intent:

To provide a venue for an applicant to clearly indicate the technical basis and support for proposed project. Specifically the project's consistency with recovery plans, Settlement Agreement Fund objectives, technical studies and assessments which support the proposed action and approach.

Proposal format:

Please complete the following form for each proposal. Maps, design drawings and other supporting materials may be attached. The request is to be brief in response with a total completed form length of no more than 3 pages of text.

The deadline for Pre-Proposal Form submission is mm/dd/yy. Please submit materials to:

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

1. Applicant organization.
2. Organization purpose
3. Project manager (name, address, telephone, email, fax).

Note: Please attach a resume or other description of the education and experience of the persons responsible for project implementation.

4. Project Title

5. Summary of Project proposal

Note: Please include description of how project addresses Lewis River Aquatic Fund priorities and identify any impacts to other resource areas (e.g. wildlife, recreation, etc.).

6. Project location (including River/Stream and Lat/Long coordinates if available).

7. Expected products and results (Please attach any drawings).
8. Benefits of proposed Project
9. Project partners and roles.
10. Community involvement (to date and planned).
11. Procedure for monitoring and reporting on results.
12. Project schedule (anticipated start date, major milestones, completion date).
13. Funding requested (estimated cost for project design, permitting (including necessary resource surveys), construction, and monitoring).
14. Type and source of other contributions (Identify cash (C) and/or in-kind (IK), and status, pending (P) or confirmed (Co)).
15. If you have technical assistance needs for this project, please briefly describe such needs.

Appendix C

PROPOSAL FORM -

Lewis River Aquatic Fund

Form Intent:

To provide a venue for an applicant to clearly indicate the technical basis and support for proposed project. Specifically the project's consistency with recovery plans, SA Fund objectives, technical studies and assessments which support the proposed action and approach.

Proposal format:

Please complete the following form for your proposal. Maps, design drawings and other supporting materials may be attached.

The deadline for Proposal Form submission is mm/dd/yy. Please submit materials to:

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

1. Project Title
2. Project Manager
3. Identification of problem or opportunity to be addressed

Summarize information about the problem or opportunity addressed by your proposal.

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)

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.

6. Tasks

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

7. Methods

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

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.

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)

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.

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).

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.

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.

Appendix D
Lewis River Aquatics Fund – Individual Project Evaluation Sheet

For each Evaluation Criteria listed below, a determination of “meets” or “does not meet” or a score of 1 to 5 is assigned by project evaluator. If during the Pre-Proposal review the project receives a “does not meet” response to any “Consistency with Fund Objectives and Priorities” component, the proposal will be dropped from further evaluation and funding. A 1 is the lowest score (does not or very unlikely to meet objectives), a 5 the highest score (greater likelihood of meeting objectives). Scores are multiplied by the assigned weighting then totaled for a single project score.

<p>A. Consistency with Fund Objectives and Priorities (Meets or Does not meet):</p> <ol style="list-style-type: none"> 1. Benefit fish recovery throughout the North Fork Lewis River, priority to federal ESA-listed species (Bull Trout, Chinook, Steelhead, and Chum) 2. Support the re-introduction of anadromous fish throughout the Basin (Spring Chinook, Winter Steelhead, Coho, and Sea-run Cutthroat) 3. Enhance fish habitat in the Lewis River Basin, with priority given to the North Fork Lewis River. 	
<p>B. How does the project benefit priority fish species and stocks? (Spring Chinook, Winter Steelhead, Coho, Bull Trout, and Sea-run Cutthroat) (40 % weight):</p> <ul style="list-style-type: none"> ▪ Does the proposal clearly describe the expected fish benefits of the project? ▪ Does the proposal clearly identify the salmonid species and stocks that would benefit from the project? ▪ Does the project address a limiting factor(s) to the target species, a limiting life history stage, or an important habitat process or condition? ▪ Will the project provide long-term benefits? Does the project provide tangible, on-the-ground benefits? ▪ Is the project generally consistent with the intent (strategies, measures, actions, and priorities) of applicable recovery and planning documents (e.g. Lower Columbia Salmon Recovery 	<p>Score = _____ multiplied by 4.0 = _____</p>

Plan)?	
<p>C. Scientific validity and technical quality of proposed project (40% weight):</p> <ul style="list-style-type: none"> • Is the problem to salmonids and the associated objectives of the proposed project clearly described? • Does the proposal employ appropriate techniques, adequate design and proper siting? • Is it clear how the proposed project will meet its intent and purpose? • Is it likely that the project will achieve stated objectives? • Does the project provide for implementation monitoring? If so what monitoring protocols will be used? Are the benefits or outcomes from the project measurable (e.g. number of trees planted or amount of structure placed)? • Have watershed processes and a larger global aspect been considered in developing the proposal? • How does the project fit within the fish needs as identified through watershed planning documents, recovery plans, etc? • Has the project proposal received professional review? • Does the proposal identify any negative or positive impacts to other resource areas (e.g. wildlife, recreation, etc.)? 	<p>Score = _____ multiplied by 4.0 = _____</p>
<p>D. Ability for the project proponent to successfully implement proposed project (10% weight)</p> <ul style="list-style-type: none"> • Does proposal include both appropriate numbers of personnel and experienced team members? • Has the applying party submitted proposals in previous years? If their proposal received funding, has it been successfully implemented? • Will the project be able to obtain the necessary permits in a timely manner? 	<p>Score = _____ multiplied by 1.0 = _____</p>

<p>E. Cost effectiveness and timeliness (10% weight)</p> <ul style="list-style-type: none"> • Does the project have matching funding or in-kind participation? Is there collaboration between numerous parties? • Is the project budget identified by work effort (administration, materials, labor, etc.) and is it appropriate? • Does the project have a reasonable cost relative to the anticipated benefits? • Is the project self-maintaining once completed? If not, how will maintenance be achieved? • Can the project activities be planned and initiated in one year? 	<p>Score = _____ multiplied by 1.0 = _____</p>
Total Weighted Score	XX

- 1) Merwin Physical Model Description and Purpose
- 2) PowerPoint of Model pictures
- 3) Test example

Test Plan for Corner Trap:

February 20, 2008

Test Summary:

Test	Tailrace WSEL (ft)	Powerhouse Discharge (cfs)	Corner Trap Weir EI (ft)	Corner Trap Weir Width (ft)	Corner Trap Discharge (cfs)
1 (a)	53.2	11,400	38	4	400
2 (a)*	53.2	11,400	38	6	600
3 Baseline	53.2	11,400	No weir	No weir	No discharge
4	Repeat 1 at 5' & 12' depth	11,400	38	4	400
5	Repeat 2 at 5' & 12' depth	11,400	38	6	600

(a) Tests completed at 5' depth during week of February 4th.

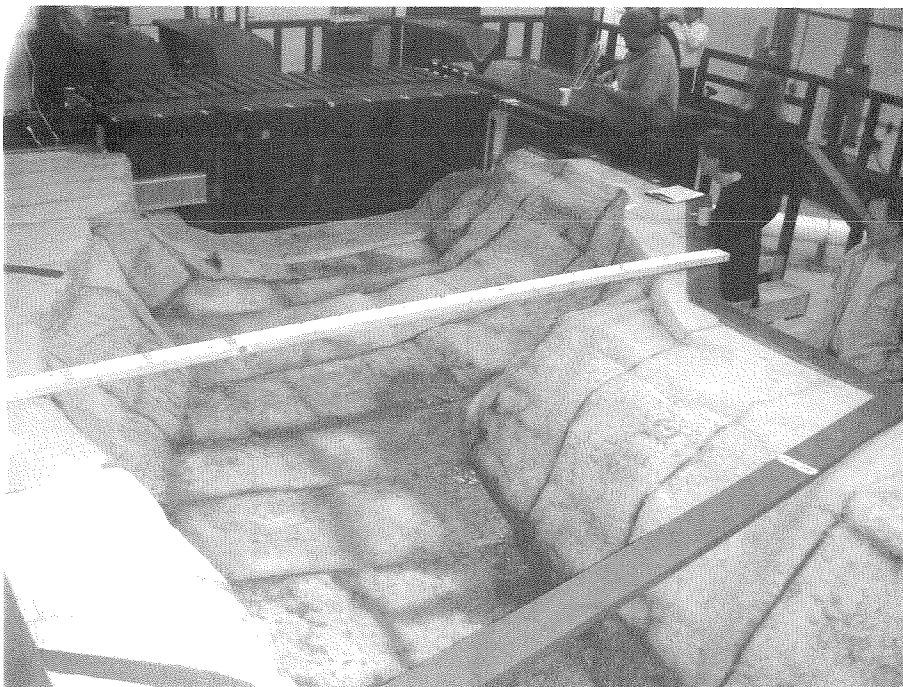
4) Velocity Vectors

5) Dye Tests

Still Photos

Videos

6) Questions



MEMORANDUM

DATE: April 10, 2008

TO: Aquatic Coordination Committee

FROM: Jeremiah Doyle, PacifiCorp Energy

SUBJECT: Lewis River - ATE Definition

The purpose of this memo is to provide additional information relating to the assignment referenced as follows:

Assignments from February 14, 2008 ACC Meeting:	Status:
Nordlund: Provide data that supports the 24 hour passage/transit information relative to the ATE definition issue.	Complete - 3/7/08

The attached table is in addition to the table put together by Bryan Nordland of NMFS which he emailed to the ACC on March 7, 2008 concerning his rationale for proposed maximum 24 hour median delay time as part of the definition of ATE for the new trap/passage system currently in design for Merwin Dam. In addition to the median passage time for Spring Chinook over Mid-Columbia River dams run by Bryan, I also included median passage times for Coho and Summer Steelhead over the same dams as well as mean passage time for all three species. For consistency sake the methodology employed by Bryan for Spring Chinook was used for Summer Steelhead and Coho and the data for all three species was gathered from the same source (DART), with two exceptions 1.) 100 individual fish for both steelhead and coho were sampled as opposed to nine individual Spring Chinook, and 2.) coho were sampled for passage over only two dams (Wanapum and Rock Island) due to the lack of tagged coho passage over Rocky Reach and Wells dam.

All PIT tag data is courtesy DART

Calculation of median dam passage time for Spring Chinook, assuming optimal cruising speed in river. Fish traveled from Priest Rapids (and through Wanapum, Rock Island and Rocky Reach Dams) to Wells Dam in 2007 (courtesy Bryan Nordland, NMFS)		
Median days to pass Wells from Priest Rapids excluding highest 5% passage time=	8.65	Range (days)=
Median days to pass Wells from Priest Rapids excluding Highest and Lowest 5% passage time=	8.75	6.58 - 33.04
Median days to pass Wells from Priest Rapids not excluding any passage time=	8.75	
Mean days to pass Wells from Priest Rapids excluding highest 5% passage time=	13.52	
Mean days to pass Wells from Priest Rapids excluding highest and lowest 5% passage time=	14.52	9 tags sampled
Mean days to pass Wells from Priest Rapids not excluding any passage time=	13.52	
median total number of days from Priest Rapids to Wells	8.65	median time from excel worksheet PIT data, excluding highest 5%
mean total number of days from Priest Rapids to Wells	11.43	mean time from excel worksheet PIT data, excluding highest 5%
river miles from Priest Rapids to Wells	118	Wells is river mile 515.1; Priest Rapids is river mile 397.1
assumed travel time in hours per day	12	assumption that travel is limited to daytime hours
assumed average migration speed	2.25 ft/s 18.4 miles per day	Optimal cruising speed, per Bell 1992
days spent in river	6.409877	calculated travel time in river from the above data
median days passing 4 dams	2.240123	4 dam passage time = median total travel time minus in river travel time
mean days passing 4 dams	5.020123	4 dam passage time = mean total travel time minus in river travel time
median days passing 1 dam	0.448025	1 dam passage time = 4 dam passage time divided by 4
mean days passing 1 dam	1.255031	1 dam passage time = 4 dam passage mean time divided by 4
median hours passing 1 dam	10.75259	conversion to hours/median
mean hours passing 1 dam	30.12074	conversion to hours/mean

Calculation of median dam passage time for Coho, assuming optimal cruising speed in river. Fish traveled from Priest Rapids (and through Wanapum) to Rock Island Dam in 2007		
Median days to pass Rock Island from Priest Rapids excluding highest 5% passage time=	5.05	
Median days to pass Rock Island from Priest Rapids excluding Highest and Lowest 5% passage time=	5.1	Range (days)=
Median days to pass Rock Island from Priest Rapids not excluding any passage time=	5.1	2.1 - 21
Mean days to pass Rock Island from Priest Rapids excluding highest 5% passage time=	5.53	
Mean days to pass Rock Island from Priest Rapids excluding highest and lowest 5% passage time=	5.69	
Mean days to pass Rock Island from Priest Rapids not excluding any passage time=	6.07	99 tags sampled
median total number of days from Priest Rapids to Rock Island	5.05	median time from excel worksheet PIT data, excluding highest 5%
mean total number of days from Priest Rapids to Rock Island	5.53	mean time from excel worksheet PIT data, excluding highest 5%
river miles from Priest Rapids to Rock Island	56.3	Rock Island is river mile 453.4; Priest Rapids is river mile 397.1
assumed travel time in hours per day	12	assumption that travel is limited to daytime hours
assumed average migration speed	2.25 ft/s 18.4 miles per day	Optimal cruising speed, per reference 49 in Bell 1992
days spent in river	3.05	calculated travel time in river from the above data
median days passing 2 dams	2	2 dam passage time = median total travel time minus in river travel time
mean days passing 2 dams	2.48	2 dam passage time = mean total travel time minus in river travel time
median days passing 1 dam	1	1 dam passage time = 2 dam passage time divided by 2
mean days passing 1 dam	1.24	1 dam passage time = 2 dam passage mean time divided by 2
median hours passing 1 dam	24	conversion to hours/median
mean hours passing 1 dam	29.76	conversion to hours/mean

**Calculation of median dam passage time for Summer Steelhead, assuming optimal cruising speed in river. Fish traveled from Priest Rapids
(and through Wanapum, Rock Island and Rocky Reach Dams) to Wells Dam in 2007**

Median days to pass Wells from Priest Rapids excluding highest 5% passage time=	10.8	
Median days to pass Wells from Priest Rapids excluding Highest and Lowest 5% passage time=	11.1	Range (days)=
Median days to pass Wells from Priest Rapids not excluding any passage time=	11.1	5 - 55.9
Mean days to pass Wells from Priest Rapids excluding highest 5% passage time=	13.30421	
Mean days to pass Wells from Priest Rapids excluding highest and lowest 5% passage time=	13.74	100 tags sampled
Mean days to pass Wells from Priest Rapids not excluding any passage time=	14.88	
median total number of days from Priest Rapids to Wells	10.8	median time from excel worksheet PIT data, excluding highest 5%
mean total number of days from Priest Rapids to Wells	13.3	mean time from excel worksheet PIT data, excluding highest 5%
river miles from Priest Rapids to Wells	118	Wells is river mile 515.1; Priest Rapids is river mile 397.1
assumed travel time in hours per day	12	assumption that travel is limited to daytime hours
assumed average migration speed	2.25 ft/s 18.4 miles per day	Optimal cruising speed, per reference 49 in Bell 1992
days spent in river	6.41	calculated travel time in river from the above data
median days passing 4 dams	4.39	4 dam passage time = median total travel time minus in river travel time
mean days passing 4 dams	6.89	4 dam passage time = mean total travel time minus in river travel time
median days passing 1 dam	1.09	1 dam passage time = 4 dam passage median time divided by 4
mean days passing 1 dam	1.72	1 dam passage time = 4 dam passage mean time divided by 4
median hours passing 1 dam	26.16	conversion to hours/median
mean hours passing 1 dam	41.28	conversion to hours/mean
Rerun of steelhead using faster cruising speed		
median total number of days from Priest Rapids to Wells	10.8	median time from excel worksheet PIT data, excluding highest 5%
mean total number of days from Priest Rapids to Wells	13.3	mean time from excel worksheet PIT data, excluding highest 5%
river miles from Priest Rapids to Wells	118	Wells is river mile 515.1; Priest Rapids is river mile 397.1
assumed travel time in hours per day	12	assumption that travel is limited to daytime hours
assumed average migration speed	2.5 ft/s 20.45 miles per day	Median cruising speed of steelhead, per chart in Bell 1992 "Swimming Speeds"
days spent in river	5.77	calculated travel time in river from the above data
median days passing 4 dams	5.03	4 dam passage time = median total travel time minus in river travel time
mean days passing 4 dams	7.53	4 dam passage time = mean total travel time minus in river travel time
median days passing 1 dam	1.25	1 dam passage time = 4 dam passage median time divided by 4
mean days passing 1 dam	1.88	1 dam passage time = 4 dam passage mean time divided by 4
median hours passing 1 dam	30	conversion to hours/median
mean hours passing 1 dam	45.12	conversion to hours/mean

8.7 Hatchery and Supplementation Facilities, Upgrades, and Maintenance. The Licensees shall, in collaboration with the hatchery managers and hatchery engineers and in Consultation with the ACC, undertake or fund facility additions, upgrades, and maintenance actions as provided in Schedule 8.7, consistent with best methodologies and practices. The Licensees, in collaboration with the hatchery managers and hatchery engineers, and in Consultation with the ACC, shall design these facilities, upgrades, and maintenance actions to include elements that ensure usefulness of the facilities for supplementation and production fish culturing practices and to accommodate the facility additions, upgrades, and maintenance actions identified in Schedule 8.7. The Licensees shall complete the upgrades or actions by the deadlines identified in Schedule 8.7, provided that the Licensees shall schedule the updates or actions consistent with (i) the required hatchery production or (ii) the reintroduction program. The Licensees shall not be required to construct new hatchery facilities or to expand the existing Hatchery Facilities except as provided pursuant to this Section 8.7. WDFW retains the right and authority to operate its hatchery and conduct other or additional fish production activities that do not impact the goals set forth in Section 8.1 at the state-owned Lewis River Hatchery at no additional cost to the Licensees.

**SCHEDULE 8.7: HATCHERY AND SUPPLEMENTATION FACILITY UPGRADES
AND MAINTENANCE**

SCHEDULE 8.7: HATCHERY AND SUPPLEMENTATION FACILITY UPGRADES AND MAINTENANCE

Specific details will be developed with engineering input as part of the development of the Hatchery and Supplementation Plan.

In the schedule below, the notation “LY” refers to the number of anniversaries after the Issuance of the New License(s) for the Merwin Project or the Swift Projects, whichever occurs earlier.

Lewis River Hatchery

A. Adult pond modifications

Rebuild of the current adult pond (pond # 15), to accommodate adult collection processes and provide the ability to safely collect, handle (electro-anesthetic or acceptable alternative), sort (by species), and crowd by automation (e.g. Minter Creek Hatchery, Cole M. Rivers Hatchery).

- Complete on the same schedule as the Merwin Trap Upgrade identified in Section 4.2(c) of the Settlement Agreement.

B. Rearing pond raceways

Rebuild all asphalt ponds into concrete raceways to provide rearing versatility and increase water exchange rate to maximize smolt to adult survival. Conversion of these three ponds shall be staged as follows:

- Pond 16 by LY 1
- Pond 13 by LY2
- Pond 14 by LY 2

C. Downstream water intake repair

Replace the two existing submersible pumps with turbine motors, replace common header to handle additional flow, stabilize current structure, and bring into compliance with NOAA Fisheries standards by replacing intake screens.

- Complete by end of calendar year 2008. Will require coordination with rebuild of pond 16.

D. Upstream intake and pond pipe maintenance

Test and repair intake and conveyance pipe.

- Complete by end of calendar year 2006.

Repair or replace pumps as needed for as long as the hatchery is being used to meet Licensees’ hatchery obligations. Conduct appropriate preventative maintenance to assure pump reliability.

Merwin Hatchery

A. Ozone treatment upgrade

Upgrade and replace the existing system with current technology, and add a small backup system for incubation.

- Complete by LY 2

B. Rearing pond flow increase

Replace risers in the ponds, with screened up wells and larger valves, to improve flow patterns and exchange rates.

Lewis River Hydroelectric Projects Settlement Agreement

- Complete by LY 2

C. Modify release ponds to accommodate adult steelhead

Plumb new inflow into the ponds and extend the pond wall and screen heights in order to accommodate quantity of adult summer steelhead needed for broodstock.

- Complete by LY 2

D. Fish Hauling Trucks

Purchase two additional fish hauling trucks designed to handle juveniles and adults for hatchery, supplementation and reintroduction purposes. Given that there are two existing trucks, these additions will bring total to four hauling trucks.

- Purchase first additional truck by LY 1
- Purchase second additional one truck by LY 3

Speelvai Hatchery

A. Rearing pond 14 raceways

Convert pond 14 into raceways for rearing versatility

- Complete by LY 4

B. Raceway and pond maintenance

Convert existing Burrow's Ponds into two raceways and modify the raceways to provide flexibility to segregate fish into three sections. Make necessary repairs to stop leaking between raceways.

- Repair first bank of raceways by LY 1
- Repair second bank of raceways by LY 2

C. Water intake structure repair

Replace existing dam with new intake diversion adjacent to the hatchery stabilize intake location and replace valves.

- Completed by LY 3

D. Adult fertilization area

Increase covered area by extending existing roof and pouring a larger concrete apron. Increase the capacity of the kill bins.

- Completed by LY 2

E. Kokanee Trap

Construct adult kokanee trap to allow kokanee broodstock collection.

- Completed by LY 3

F. Incubation area expansion

Expand incubation building to cover existing intermediate troughs and incorporate new early rearing vessels to provide capacity for multiple species and, Add early rearing vessels.

- Completed by September of LY 1

Net Pens

Install net pens with capacity not to exceed 20,000 pounds, either in Swift Reservoir or in the Swift No. 2 canal. Investigate which location is better for net pens and install net pens in the single most appropriate location.

- Siting and permitting by LY 1
- Complete by LY 2

Lewis River License Implementation
Lewis River Aquatics Fund - Resource Projects
Sections 7.5, 7.5.1, 7.5.3, 7.5.3.1 & 7.7

Funding Start Date: 4/30/05

Release Date	Funds Received	Expense	Interest	Balance	Notes
12/31/05				\$ 161,327.11	Contributions in 2004 dollars, adjusted for inflation.
4/30/06	\$ 212,172.03				
9/30/06		\$ 46,000.00			Muddy River Tributary Road Decommission - USDA FS
12/31/06			\$ 24,305.00		
4/30/07	\$ 163,897.54	\$ 80,000.00			Fish Passage Culvert Replacement - USDA FS
8/23/07		\$ 79,000.00			2007 Dispersed Camping & Day Use Road Restoration - USDA FS
9/6/07		\$ 75,000.00			2007 Aquatic Funding Enhancement Projects - Cowlitz Indian Tribe
12/31/07			\$ 30,833.16		
Total Spent to Date:			\$ 280,000.00		
Running Total:			\$ 312,534.84		

Lewis River License Implementation

Lewis River Aquatics Fund - Bull Trout

Sections 7.5, 7.5.1, 7.5.3, 7.5.3.1 & 7.7

Funding Start Date: 4/30/05

Release Date	Funds Received	Expense	Interest	Balance	Notes
12/31/05				\$ 161,327.11	Contributions in 2004 dollars, adjusted for inflation.
4/30/06	\$ 106,086.01				
11/30/06		\$ 37,889.08			Pine Creek Nutrient Enhancement - USDA FS
12/31/06			\$ 19,176.61		
4/30/07	\$ 163,897.54	\$ 25,000.00			Pine Creek Instream & Floodplain Structures for Bull Trout and Steelhead - USDA FS
7/31/07		\$ 20,000.00			Rush Creek Gravel Restoration - USDA FS
8/21/07		\$ 43,150.00			2007 Pine Creek Nutrient Enhancement - USDA FS
12/31/07			\$ 27,400.40		
Total Spent to Date:			\$ 126,039.08		
Running Total:			\$ 351,848.59		