

**LEWIS RIVER RELICENSING COLLABORATIVE PROCESS
AQUATICS RESOURCE GROUP**

Reintroduction/ Fish Passage Meeting

December 3, 1999

**Sawyer Hall
Lacey, WA
9 a.m. – 3 p.m.**

**Meeting Summary
Final – February 10, 2000**

Attendees: (21)

Steve Fransen, NMFS	Dana Postlewait, Harza
George Gilmour, Harza	Jennifer Sampson, Technical Advisor
Dean Grover, USFS Regional Hydro Team	Dan Shively, USFS Gifford-Pinchot NF
Steve Lanigan, USFS	Frank Shrier, PacifiCorp
George Lee, Yakama Nation	Gene Stagner, USFWS
Curt Leigh, WDFW	Ruth Tracy, USFS Gifford-Pinchot NF
Dave Leonhardt, PacifiCorp	Lauri Vigue, WDFW
Erik Lesko, PacifiCorp	Kristi Wallis, Facilitator
Diana MacDonald, Cowlitz PUD	Clifford Washines, Yakama Nation
Kevin Malone, Mobrand	Tom Zeilman, Yakama Nation
Lisa McLaughlin, Notetaker	

Calendar:

Dec. 3	Aquatics Resource Group – Reintroduction, Follow-up Brainstorming Fish Passage	USFWS Sawyer Hall, WA
Dec. 7	Terrestrial Resource Group	Lacey, WA
Dec. 9	Steering Committee Postponed	Cowlitz PUD
Dec. 16	Aquatics Resource Group	Cowlitz PUD
Dec. 20	Flood Management	Merwin
Jan. 19, 2000	HEP Team	Lacey, WA
Jan 20 or 25	Cultural Resources	HRA Seattle
Feb. 23	Recreation Resource Group	Merwin

Assignments:

Assignments from Dec. 3 Meeting:	Status
All: Think about how to define “success” in the fish passage study.	
Steering Committee: Discuss meeting note review and approval process at the next meeting.	
Steering Committee: Address PDEA studies, integrating the Federal Power Act.	
G. Gilmore: Add a column to the Habitat Assessment Summary that	

shows which streams were surveyed using the Level 2 protocol.	
G. Gilmore: Send a copy of the preliminary report on accessible anadromous habitat to Cliff Washines.	
K. Malone/D. Postlewait: Write a “strawfish” regarding the timing relationship???? periodicity??? and how it will be integrated with ???.	
WDFW (C. Burley, W. Damers): Provide priority species and policy on anadromous fish reintroduction.	
K. Malone/D. Postlewait: Compile information on the projects’ physical layout and operation characteristics.	
All: Send comments on the Fish Passage Study plan to Dana (dpostlewait@harza.com), Frank (frank.shrier@pacificcorp.com) and Diana (dmacdonald@cowlitzpud.org).	

Assignments from the Previous Meeting	Status
K. Dubé: Send out revised Sediment Budget plan before Nov. 15 th .	
F. Shrier: Add data and revise Anadromous Fish Distribution Map.	
P. Uncapher: Contact K. Dubé w/ species you need for spawning habitat data.	
???: Contact K. Dubé Re: Channel characterizations and general processes: calculating flows, Lower basin hydrography, interaction with gravel and sediment, flow/water/sediment, in her studies.	
J. Marti: Distribute Water Rights Database for Lewis River.	
All: Review K. Dubé’s report(s).	
All: Submit 6-month calendar response to Kristi Wallis.	
All: Review the list of issues in the back of the IIP and be prepared to discuss them at an “issues” meeting in February 2000.	
J. Marti: Provide a written explanation of what information the State needs for 401 Certification within a month. (In progress, assigned to Rusty Post.)	
All: Discuss range of anadromy map with constituents, document why data should or should not be included. Use the following criteria: 1) what is currently known; 2) what is historically documented; 3) what is unknown (anecdotal information or information that is difficult to verify.) Be prepared to discuss at the Dec.3 ARG meeting.	
R. Tracy: Send Muddy River watershed analysis and map to K. Dubé.	
L. Vigue: If not addressed in the cumulative effects analysis, resubmit June 16 th letter to M. Bonoff about the potential effect of recreation (oil/gas) on water quality. Distribute to ARG.	

Summary of Actions:

1. Introductions. Reviewed and amended the Agenda. Focused the discussion on the Fish Passage Study Plan Outline (Handout 1) and other topics as noted below.
2. Reviewed a matrix summarizing the preliminary draft report on the Accessible Anadromous Fish Habitat Survey (Handout 2). A section of Curley Creek will be surveyed in the future.
3. Briefly recapped the August 3, 1999 fish passage brainstorming session.
4. Approved the draft Fish Passage Study Plan Outline (Handout 1).
5. In response to Study Plan Questions 5, 6, and 7, NMFS, the FWS, USFS, WDFW, and the YN suggested following species be introduced/protected in priority order:
 - NMFS:
 1. wild steelhead
 2. spring chinook
 3. early coho
 4. fall chinook – very low priority
 5. no chum
 - FWS:
 1. bull trout
 2. cutthroat trout
 3. the NMFS salmonid species
 - Yakama Nation:
 1. spring chinook,
 2. steelhead
 3. coho,
 4. fall chinook
 - Forest Service:
 1. Can't prioritize stocks.
 - WDFW:
 1. Internal staff hasn't provided a stated policy or priority list.
6. The ARG did not discuss or approve the draft Engineering Feasibility Study for Fish Passage Facilities emailed November 17, 1999.
7. Tentatively formed a Fish Passage Technical Work Group (FPTWG) (study plan question 13) to discuss the technical aspects of fish passage. The FPTWG will bring recommendations to the ARG. Members include USFS, PacifiCorp, Cowlitz PUD, J. Sampson, WDFW, Yakama Nation, NMFS. Need to add USFWS to work group.
8. At the conclusion of the meeting, the YN thanked NMFS for explaining some of their policies.

Item 1: Introductions, Agenda, Notes (Pre-Meeting Material 1)

Reviewed Agenda.

The Agenda was amended to focus primarily on the Fish Passage Study Outline (Handout 1). The following notes reflect that change.

The ARG recognized the excessive amount of time they have devoted to reviewing notes at past meetings. To streamline the process participants suggested delaying the note approval agenda item until the end of the meeting or, alternatively, scheduling a meeting just to review and approve notes. Several points of view about the need, purpose and scope of the notes emerged from the ensuing discussion. The ARG asked the Steering Committee to discuss the matter further.

Item 2: Review Habitat Inventory Information (Handout 2)

The Habitat Inventory has been renamed the *Assessment of Potential Anadromous Fish Habitat*. A preliminary draft report was distributed at the November 29th ARG meeting. A summary of the data presented on November 29th (December 3 Handout 2) shows that there are 100.4 miles of accessible anadromous fish habitat above Merwin Dam with 6.2 miles accessible from Lake Merwin, 13.5 miles accessible from Yale Lake, and 80.7 miles above Swift Dam.

Based on leaping curves, steelhead are the most acrobatic jumper, so there is more accessible habitat for steelhead than for other anadromous fish species such as chinook and chum. Most barriers identified were taller than 12 feet, which were impassable to all species. Areas that may be passable by some species such as steelhead and coho are defined as obstacles. In the report, barriers are defined as being impassable by all species (based on Powers and Osborn).

One participant suggested adding a column to the Habitat Assessment Summary (Handout 2) showing which creeks were surveyed using Level 2 protocol. He felt that this would show how much habitat has not been surveyed.

Curley Creek was not surveyed at this time because there is a big waterfall right at the mouth.

Question: Is there potential habitat in Speelyai Creek? Can there be structures for resting places? Answer: Speelyai is a decent stream, but there may be a temperature problem and the width/depth ratio is rather high. The lower regions could use some help. They are not ideal habitat areas. Upstream is a little bit better.

Question: Can the data gaps (Muddy system, Clearwater, Smith Creek) be filled in with USFS information? Answer: This is a work in progress and there will be some additions and changes.

M14 is a low gradient stream that flows in to the east side of Lake Merwin, close to the Speelyai Creek entry.

S15 is a big stream that comes in on the southeast corner of Swift Reservoir. All of the electronic survey data has not been downloaded from the USFS website. I don't remember that discussion. Is the web address for this USFS site available? (G. Stagner)

Item 3: Recap of the August 3, 1999 Fish Passage Brainstorming Meeting (Handout 3)

The facilitator summarized the August 3, 1999 Fish Passage Brainstorming meeting and distributed the list of issues raised during that meeting (Handout 3).

In response to the facilitator's summary, the Forest Service asked whether the ARG is going to aggressively pursue reintroduction. If we are not assuming reintroduction, why did we prepare the study plan? NMFS responded that that assuming fish passage is not a "given", but that the passage feasibility assessment is needed and goes beyond reintroduction. The FWS mentioned that the passage questions also address bull trout inter-reservoir issues. J. Sampson was surprised to see so much emphasis on the engineering aspects of the study plan when the August 3rd meeting focused on biology. The USFS suggested that other factors such as bio-interactions and disease should also be studied. The YN suggested that "if there is no chance for fish passage, we should know this up front". The consultant pointed out that the fish passage study is not the integration step – integration happens in the PDEA. The ARG defines success then the fish passage study tells them what can be achieved. The fish passage study will not produce recommendations.

All of the parties agreed that there was no assumption reintroduction and fish passage would happen, but that there was a need to study fish passage.

I don't exactly agree with this statement. I think what was intended was that we assume reintroduction of anadromy and inter reservoir fish passage would occur for purposes of the fish passage studies. This is not the same as assuming reintroduction itself. (G. Stagner)

Item 4: Related fish passage experience (Handout 1)

The consultants explained their fish-passage related experiences on the Cowlitz, Deschutes, and mainstem Columbia rivers. In describing those experiences, they presented Handout 1 that includes:

- 1) Fish Passage Study Plan Outline (discussed below under Item 5),
- 2) Sample Table of Contents from a fish passage report for Bonneville First Powerhouse
- 3) Draft criteria matrix for Bonneville First Powerhouse

In explaining the handout, the consultant stressed the need for objectives, criteria, and a definition of success. In their experience, data do not necessarily help make the decisions.

In general, the small technical group formed as part of the Deschutes process worked well. The Corps' mainstem Columbia effort was process- driven, detailed and also worked.

According to the consultants, the biggest mistake made in the Cowlitz process was that the group didn't have any criteria and didn't define success. The process never got to the point of thinking they needed PDEA alternatives. The YN mentioned that they saw a breakdown in the Cowlitz process from Day 1.

The consultants repeatedly stressed the importance of good planning, identifying what you want to do and defining success. They reminded the ARG that the Fish Passage study is a technical analysis of the costs and risks, it is not a decision document

During the discussion, the ARG raised the following question:

Question: On the Deschutes, did you look at bull trout bio-interactions?

Answer: Yes. The data are available in the public record. They have a healthy bull trout population so potential biological interactions might not be a big deal. The Lewis River bull trout population is not healthy so the risk analysis will be different.

Item 5: Discuss Proposed Fish Passage Study Plan Outline Part 1: Establish Basin Fish Passage Goals (Handout 1)

To move the conversation forward, the participants agreed to discuss each of the 14 questions in the Fish Passage Study Plan Outline (Handout 1)

Study Plan Question	ARG Discussion
1. Define Success! (Performance Measures)	<ul style="list-style-type: none"> • What does a successful system achieve? Is it questions 2-13 combined? • What information is needed to cover the alternatives? • Limit the focus to a few alternatives. • There was some confusion about whether “success” means success of the study or success of the actual fish passage.
2. Anadromous reintroduction (Yes/No) Why? To what end? (Harvest, ESA?)	<p>Suggested alternatives:</p> <ul style="list-style-type: none"> • Above Swift • Throughout basin • Evaluate by species • Look at species • Self-sustaining populations with set target goals on production • Focus on the scope of the reintroduction
3. Resident fish protection (Yes/No)	<ul style="list-style-type: none"> • Is there a conflict between anadromous fish and resident fish? What are the goals for both?
4. Decision Criteria and Analysis (Working hypothesis)	<ul style="list-style-type: none"> • What criteria drive building a fish passage facility? • Criteria for the project need to be defined at the very beginning and should be applied to issues arising from brainstorming sessions to narrow the focus. • There should be a decision framework. We should talk about some of the critical concurrent studies that need to be done and let the smaller technical group (question 13) come up with the decision making process to give to ARG.
5. Fish Species to be Introduced/Protected	<p>Identify the species of fish to be protected.</p> <p>NMFS:</p> <ol style="list-style-type: none"> 1. wild steelhead 2. spring chinook 3. early coho 4. fall chinook – very low priority 5. no chum. <p>FWS:</p> <ol style="list-style-type: none"> 1. bull trout 2. cutthroat trout 3. same as NMFS species above <p>Yakama Nation:</p> <ol style="list-style-type: none"> 1. spring chinook 2. steelhead 3. coho 4. fall chinook

Study Plan Question	ARG Discussion
	<p>Forest Service:</p> <ul style="list-style-type: none"> • Can't prioritize stocks. All native fish, don't want to limit assemblages occupying historic ranges. <p>WDFW:</p> <ul style="list-style-type: none"> • Internal staff hasn't provided a stated policy or priority list. Information requested from Craig Burley and Wolf Damers. No estimated time of arrival. Agree with NMFS on wild steelhead. <p>PacifiCorp:</p> <ul style="list-style-type: none"> • Agrees with NMFS (question 5) for passage.
6. Species Priority	List those species by priority. See question 5.
7. Exotics Versus Native (Policy: NMFS, USFWS, WDFW)	<p>What are the different policy directions? We need clear statements up front. "Native" needs to be defined as it relates to this passage evaluation.</p> <p>FWS:</p> <ul style="list-style-type: none"> • Don't assume that FWS is opposed to anadromous fish reintroduction into bull trout waters. We will look at what makes sense in the basin. <p>NMFS: See question 5. The following partial conclusions can be drawn from existing policies (These are not all-inclusive.):</p> <ul style="list-style-type: none"> • Wild steelhead, spring chinook and coho as priority. • Juveniles out of the upper basin seem like a long shot. • Wild salmon might be a better mix than the hatchery coho. • A naturally producing salmon is considered a wild salmon. • Early winter hatchery steelhead and Skamania summer steelhead won't be allowed passage into the upper basin as directed in a newly emerged management guideline. <p>WDFW:</p> <ul style="list-style-type: none"> • See question 5. <p>Yakama Nation:</p> <ul style="list-style-type: none"> • Are not recreational fishers. Focus on spring chinook, but there is some debate about whether they are introduced. Mainly use steelhead, coho, and fall chinook
8. Population Size, Geographic Distribution Objectives (WSP, NMFS, USFWS)	Where do fish need to go and why?
9. Stream Reaches	
10. Handling Protocols (Resident versus anadromous)	This feasibility study won't make the call on handling protocols.
11. Disease Protocols	What are acceptable risks? For example, the <i>C. shasta</i> disease levels may not be a factor here.
12. Monitoring and Evaluation	How are you going to monitor success? Are we going to tag fish? Trap them and go to hatcheries? What do we need to look at?
13. Technical Working	One representative from the following organizations agreed to participate in

Study Plan Question	ARG Discussion
Group (Similar to HEP Team)	the FPTWG: <ul style="list-style-type: none"> • USFS • PacifiCorp • Cowlitz PUD • J. Sampson • WDFW • Yakama Nation • NMFS
14. PDEA Alternatives	The PDEA will have alternatives. We can develop and fully analyze the alternatives, if we look far enough ahead.

In going through questions 1-14, the following points emerged:

- We need to resolve the issues raised at the August 3rd meeting before we go through Study Plan questions 1-14.
- There are five issues identified on Aug. 3rd that are not included in the 14 questions. If you want to know where fish will be going and how currents within the reservoir might help guide fish, don't you need some kind of detailed study? Where does that level of detail fit into this list? Answer: Those types of details would be addressed in Task 2 items 2 and 3, under the operating characteristics. Hydraulic data are interesting, and we have enough data to do a feasibility report. But, every time you put a structure in the reservoir, you change the currents. We don't plan to do a study because the fish don't care. Hamilton studied this in Merwin in 1970 for a gulper that didn't work.
- There is not one set of answers for all these questions. We should think of the yes and no's as alternatives. There will be more than one alternative even in a reintroduction scenario. Use a list of species to come up with alternatives.
- K. Malone reminded the group to set up performance standards and compile and summarize information for questions 1-12. Then propose facilities and suggest what to do next. There is enough information to outline what possible facilities may be needed.
- Spring chinook are actually Carson stock. Should they be passed upstream? (F. Shrier)
- What about sea run cutthroat trout? Response: See the information developed in the Cowlitz River process, the percentage may be similar to the Lewis River. In the Lewis River, searun cutthroat trout were stocked from a hatchery, the catch rate is poor and they are not doing well. Sea run cutthroat trout are scattered throughout the basin and need low-gradient streams with small gravel for spawning. Additional comment: Any assumptions need to be documented.
- The projects impacted mainstem habitat that was historically available to fall chinook. Why not consider passing them? Response: Because they would be lost to production, they don't get through the reservoirs very well at all. Fall chinook did not historically go above Yale. Old reports refer to chinook in the Muddy River but they were spring chinook, not falls.

- Question: Why would we not consider passing a wild fall chinook if it showed up at Merwin?
 Answer: If it would be lost to production, NMFS would recommend not passing it upstream. There is a high likelihood of being lost. Juvenile fall chinook do not pass through hydro reservoirs well at all. In the Baker system, 300 adult chinook yielded 350 juveniles. Three hundred adults should produce millions of juveniles. Fall chinook tend to leave the area right away, and have a low passage efficiency. Historically, there are no spawning grounds above Yale. Fish are confined in the lower 7 miles of spawning habitat.
- Question: Do we have enough data on smelt and lamprey?
 Answer: It is not feasible to pass smelt. We are not sure but lamprey may be a good candidate for reintroduction.
- The fish passage technical study will summarize all the information on the project, given there is clear direction from the beginning. It will answer questions like “what kind of system will work well here?” by citing flow rate, biological data, forebay hydraulics and more. It will offer alternatives, combine policy, disease data, species information, etc. to develop Fish Passage Alternatives.
- Question: Are there any criteria we can use to say, “let’s not even bother with this because it’s just not going to work?”
 Answer: Each technical team is a little different. Some areas have higher risk than others do. There are also differing professional opinions on what is or isn’t doable. NMFS is willing to bend and look at objectives. This process is part negotiation, part science and part what you think you can do at the location.
- All things need to be brought to the table at the very beginning. Some of those things will fall off the table right away, but everything needs to be looked at.
- NMFS is not opposed to any particular alternatives. The agency has screening criteria in place for juvenile fish. They do have some selective preferences in systems based on their successful application in some conventional installations. Eicher screens are experimental because there are not very many of them installed and operating, so there is no feedback. NMFS is not bound by some internal policy. But the NMFS does have protocol on experimental systems.
- The study plan seems to focus on technology. Do we need to focus on why or what rather than how?
- Question: What is the timeline for ARG to address questions 1-14?
 Answer: It goes in pretty quick order. Some studies will need to be done to answer some of those goal questions. Early definitions give better direction to the basin plan technicians. The more we narrow down the alternatives, the better off we’ll be. K. Malone recommended looking at the Deschutes project as a starting point.
- Question: Do you supplement with other studies to integrate reintroduction?
 Answer: Other studies are on a parallel track. We might start with #1-14 and see which of those really require on of the parallel investigations. Before any PDEA decision, you

would need the results from both investigations. The studies should be cross-referenced. We need to draw on other work that's out there already.

- Some ARG members suggested the following studies:
 - Disease (*C. shasta* and others). Hatcheries are familiar with disease studies. We need to summarize existing disease studies and disease-related hatchery policies. Disease in trap-and-haul systems is very much a concern and there is a set disinfection protocol where necessary. The USFS feels we may be underestimating how much information is needed in the disease risk study. K. Malone pointed out that there would be things missing at the end of the feasibility study. They will be identified and evaluated at that time.
 - Interaction between species. We should compile the existing information. If 100% certainty on introducing fish to the upper basin is what we're looking for, we're not going to get it.
- The Fish Passage Technical Working Group should be kept small and technical, including only specialists from each organization. Both biologists and engineers are needed but the biggest concern is to keep the group small. NMFS indicated that its engineers will not participate if this is not a technical group, because they don't have the time to deal with bringing everyone up to speed on engineering issues. J. Sampson pointed out that in any of these groups, decisions are made and that it's not appropriate to exclude people who want to participate, even if NMFS engineers don't want to deal with the public. There is not a very good track record of documenting decisions.
- The ARG is not a policymaking group and neither is the Steering Committee necessarily. Existing policies should be on the table up front.
- We appear to be working on two tracks and there is some question about how and when to integrate the Federal Power Act Process and the NEPA process. The PDEA looks at cumulative effects but the "terms and conditions" don't look at cumulative effects. The Steering Committee will need to address this issue at their next meeting.
- There is always the risk in a collaborative process that agencies with mandatory conditioning authority will try to work through the process but play their trump card at the end. NMFS responded by saying "possibly".

Item 6: Discuss Proposed Fish Passage Study Plan Outline Part 2: Fish Passage Analysis Starts
(Handout 1)

After discussing the basin passage goals (questions 1-14) the consultant described the six Fish Passage Study tasks.

Task 1 (brainstorming and species identification) has already been completed. Species identification and priority of species, for each organization are shown next to Question 5 in the above table. To begin working on Task 2, we need to look at information that is currently available.

Task 3, the initial activities and facility design meeting, can be aided by looking at the criteria from other projects. From an engineering standpoint, look at the water flow data. Are screens

feasible? Can the project be prototyped? There are a lot of benefits to prototyping. Much of the necessary data has already been collected. Create a list of fish passage facilities to be examined. Describe what you think would work for this project.

Tasks 4 and 5 are the actual drafting of the feasibility report. Fish passage facilities actually have to achieve something, to meet some overall goal. What are we trying to achieve and what kind of system will get us there? This report covers the pros and cons of these goals. It will also point out fatal flaws, missing data and will play into the final decision.

Task 6 is the final feasibility report. After this report, the fish passage information portion of the project is done. The PDEA is informed, as well as the DEA. Any settlements are reviewed and then FERC can make an educated building decision.

The group approved the general approach of the Fish Passage Study Plan outlined in Handout 1. Some changes will be needed, concurrent studies should be identified and more detail should be provided on logistics and cost. (The ARG did not discuss or approve (except to the extent it is included in Handout 1) the Draft Engineering Feasibility Study for Fish Passage emailed on November 17th.)

Item 7: Next Steps

- Send comments on notes from previous meetings to Veronica (veronica.stofiel@pacificorp.com)
- Next Aquatics Meeting: December 16, 1999, 9 a.m.– 4 p.m. Cowlitz PUD.
- Agenda Ideas for the mid-January meeting:
 - Study Plan questions 1-14. (ARG could develop answers to questions 1-14 by February so that FPTWG could get started.)
 - End of the Year Review
 - Fish Passage Technical Work Group (FPTWG)

Pre-Meeting Materials

1. Agenda (distributed via email 11-17-99)
2. Engineering Feasibility Study for Fish Passage facilities (distributed via email on 11-17-99).

Handouts

(All Handouts become part of the public review file)

1. Fish Passage Study Plan Outline
2. Preliminary draft summary of Accessible Anadromous Fish Habitat
3. Issues List from the August 3, 1999 Fish Passage Brainstorming.