

**FINAL Meeting Notes
Lewis River License Implementation
Aquatic Coordination Committee (ACC) Meeting
July 13, 2006
Woodland, WA**

ACC Participants Present (15)

Craig Burley, WDFW
 Jim Byrne, WDFW
 Clifford Casseseka, Yakama Nation (Arrived at 11:40am)
 Diana Gritten-MacDonald, Cowlitz PUD
 Janne Kaje, Steward & Associates (via teleconference)
 Keith Keown, WDFW
 Eric Kinne, WDFW
 Curt Leigh, WDFW (via teleconference)
 Tammy Mackey, American Rivers and Trout Unlimited (via teleconference)
 Jim Malinowski, Fish First
 Kimberly McCune, PacifiCorp Energy
 Todd Olson, PacifiCorp Energy
 Frank Shrier, PacifiCorp Energy
 Richard Turner, NMFS
 Shannon Wills, Cowlitz Indian Tribe

Calendar:

August 9, 2006	TCC Meeting	Woodland City Hall
August 10, 2006	ACC Meeting	Merwin Hydro

Assignments from July 13th Meeting:	Status:
Olson: Send a letter to the SA parties indicating that in order to meet fish production goals during the pond upgrades at the Lewis River Hatchery, the order and timing of pond upgrades has been modified from the schedule 8.7 of the SA.	Pending
McCune: Email Hatchery Upgrade Proposed Schedule including memorandum from Erik Lesko dated 6/19/06, and request comment from ACC on or before 7/24/06.	Complete – 7/13/06
Olson: Prepare individual timelines of H&S Actions for both Coho and Steelhead.	Pending
Keown: Create a draft HGMP by the end of August or early September 2006 so the ACC can review prior to submitting the final version to NMFS.	Pending

Assignments from June 8th Meeting:	Status:
McCune: Post Stillwater Sciences presentation to the Lewis River website.	Complete – 6/12/06
Olson: Create a visual schematic illustrating how the pieces fit	Complete – 6/20/06

together and how the mile stones are achieved in order to reach the tentative decisions the H&S Subgroup have been discussing such as, scale analysis, number of natural origin spring chinook and introduction of natural origin fish into the hatchery.	
Lesko: Provide a general overview to the ACC via email as to the status of the hatchery upgrades at the next ACC meeting.	Complete – 7/13/06
Casseseka: to respond back to McCune regarding the H&S Subgroup participating in a site visit on 6/23/06 to Cle Elum Hatchery.	Complete – 6/14/06

Opening, Review of Agenda and Meeting Notes

Frank Shrier (PacifiCorp Energy) called the meeting to order at 9:10am and conducted a review of the Agenda for the day. He requested a round table introduction of all attendees. WDFW requested the addition of one agenda item to include the review and discussion of a document entitled, “Lewis River late Winter STHD Program/ACC Feedback”, as presented by Keith Keown (WDFW). The ACC agreed to this addition, time permitting. Shrier also requested if the ACC had any comments and/or changes to the ACC 6/08/06 draft meeting notes. Jim Malinowski requested the addition of the text “of gravel” on page 3, Option 1 to add clarity as follows:

Option 1

Add average annual volume of gravel just below Merwin Dam and allow the river to naturally route.

All changes were approved by the ACC at 9:25am.

Hatchery & Supplementation Plan Discussion (Perspectives from the Cle Elum Tour)

Olson provided an overview of the facilities the tour visited such as the egg take area, incubation building, water supply, research area, and satellite acclimation-release sites. He further communicated that he was surprised at the size of the facility, and that the condition was impressive; more of a hatchery setting at the acclimation sites than he expected. He noted the Cle Elum staff did a very good job in explaining the workings of the facilities.

Eric Kinne (WDFW) also expressed that Cle Elum was a large facility; that they have 9 full time employees, 9 houses; and a greeter (hatchery host). The “nature’s rearing” hoop nets and the underwater feeding were all very interesting. The acclimation sites were much larger than he had thought and that fish are there for upwards of 6 months. They do not cut back on feeding to encourage fish to leave and the fish can pretty much leave at any time. There is no way for fish in the stream outside the release point to get in. They individually rear in isolation buckets for every female fish and that they started from 100% wild run and individually marked each group.

Olson said that some of the isolation was for disease purposes.

Kinne also stated that they test every fish for BKD. The complex has a very low incident of BDK. The size of the water chiller was also very impressive. Their fish density is very

low and he is not sure if we can get there on the Merwin project. The survivals are also very good because densities are so low, whereas we have some constraints.

Olson said that initially Christmas trees were placed in the rearing raceways, however they are no longer being used because of disease problems, that they have underwater feeding, plastic hoops in the water to provide shade. Every other pond has camouflage painted walls.

There was general discussion about the underwater feeding systems, temporal distribution, parochial males, growth trajectory and rates of feeding in the Fall.

Craig Burley (WDFW) communicated that he now has a better understanding of the Cle Elum system and how we might tailor their fish cultural activities to our operation on the Lewis River. He further communicated that we have unique challenges not present at Cle Elum.

Hatchery & Supplementation Plan Discussion (Hatchery Upgrade Proposed Schedule)

Olson presented a Hatchery Upgrade Schedule ([Attachment A](#)) and a memorandum from Erik Lesko (PacifiCorp Energy), dated 6/19/06 ([Attachment B](#)) for ACC review. The specific topics discussed were:

- Lewis River Hatchery – Ponds 13, 14, 15 & 16
- Speelyai Hatchery Upgrades
- Downstream water intake repair
- Upstream intake & conveyance pipe testing & repair

General discussion took place regarding the concern of Pond 16 not being the most desirable pond to hold the Spring Chinook (SPCH) for a long period of time, the logic of flipping the schedule priority of Pond 15 & 16, and that we cannot upgrade ponds 13, 14, 15 & 16 in the same year. Other items discussed included the option of rearing smolts in raceways at Lewis during construction periods, how fish density is a major issue, the proposed cubic footage of new ponds, timeline for developing 30% drawings, flow & density index, language in the Settlement Agreement (SA) which addresses flexibility to modify the schedule (see SA 8.7) to fit with production program interests to complete remodel as quickly as possible while representing the interest of the SA, and identifying strategies to keep remodel moving forward timely and with purpose.

Burley communicated that WDFW concurred with the revised schedule; however they wanted folks to realize that the schedule may change post the 30% design.

Olson will send a letter to the SA parties indicating that in order to meet fish production goals during pond upgrades at the Lewis River Hatchery, the order and timing of pond upgrades has been modified from the schedule 8.7 of the SA.

Kimberly McCune (PacifiCorp Energy) will email to the ACC a Hatchery Upgrade Proposed Schedule including memorandum from Erik Lesko dated 6/19/06, and request

comment from ACC on or before 7/24/06. Olson will send above letter out shortly thereafter.

Olson also reviewed a Lewis River Hatchery Implementation Overall Site Plan Sketch – Parallel Pond Arrangement of Pond 15 (**Attachment C**) with the ACC for their informational purposes.

Shrier informed the ACC that he has postponed the acclimation pond site visit to the next ACC meeting on 8/10/06 and requested the ACC postpone discussion and comment until such time a Yakama Nation representative is present.

Break <10:15am>

Reconvene <10:30am>

Hatchery & Supplementation Plan Discussion (Lewis River Spring Chinook Timeline of H&S Actions – review of draft)

Olson reviewed the Lewis River Spring Chinook (SPCH) Timeline (**Attachment D**) with the ACC. He indicated that the table is built on the major assumption that only hatchery origin SPCH are available for the supplementation program; that there are no wild fish available. He reviewed the table year by year from pre 2002 to 2016-future in accordance with Attachment D.

General discussion took place regarding natural out migration, supplemental fish, detection system at trap, statistically valid sample for tagging, M&E Plan, continuation of fish evaluation efficiency, periodic collation, the use of SPCH for Habitat Preparation Plan (HPP). Several suggestions and edits were provided (these are reflected in the Attachment D)

Janne Kaje (Steward & Associates) expressed that the Cowlitz Tribe does not have as strong an objection as the Yakama Nation has relating to the use of SPCH for the HPP.

Burley expressed that further discussion would be helpful for a better understanding of the Yakama Nation's concerns.

Olson said that if the SPCH timeline is helpful then he will put together a similar timeline for Coho and Steelhead. The group agreed in the value. Olson will prepare individual timelines of H&S Actions for both Coho and Steelhead.

Hatchery & Supplementation Plan Discussion (Development of HGMP Discussion, as presented by Keith Keown, WDFW)

Keith Keown (WDFW) reviewed issues needing clarification for development of the HGMP. Keown requested direction from the ACC on issues that are important such as other collection options/contingency plan. Discussion was held on the handout "Lewis River late Winter STHD Program/ACC Feedback" (**Attachment E**).

Richard Turner (NMFS) expressed that he would like to see a good 10 years of fish collection effort before going outside of the basin to acquire broodstock.

Burley communicated that his interpretation of the SA is that we use wild fish from the Lewis River watershed as a priority then use the Kalama as a second priority.

Shrier suggests the use of Cedar Creek then East Fork Lewis River for broodstock collection if we can't get enough in the mainstem Lewis River.

General discussion took place regarding state rearing guidelines, maximizing survival, target fish release size, concern for imposing man-made deadlines, the use of water heaters & chillers to bring fish to appropriate size of release to mimic natural environment, logistical problems of 2-year smolt, hatchery stimuli, maximizing steelhead adults in the hatchery environment, outgoing progeny are the important fish, how to maintain the fitness, kelt reconditioning plan, viral sampling program, use of alternate tissues vs. kidney/spleen, concern of being short on male fish numbers in steelhead program (2x2 factorials), how to address possible overages (higher survival), use of ozonated water (benefits & risks) to rear wild broodstock, volitional release as determined by a number of factors of which smolt behavior is one, budget/monitoring and other costs.

Keown expressed that basically there is a difference in survival of 1-year or 2-year smolts. Keown will create a draft HGMP by the end of August or early September 2006 so the ACC can review prior to submitting the final version to NMFS.

Clifford Casseseka (Yakama Nation) expressed that the use of ozonated treated water is acceptable when used for hatchery fish only. Any fish being reared for supplementation purposes should not be raised on ozonated water.

Study Updates

Shrier provided the following study updates:

Yale Entrainment Study – Technically done but going a few extra weeks. A draft report can be expected in September or October 2006.

Merwin Tailrace Behavior Study – Technically complete; trying to get as much SPCH data as possible. Researchers did not get good video during Unit 1 operations during this time last year. The radio antennas continue to run. Expect a draft report by the second week of August 2006. Researchers will complete a river sweep to record any additional data before completing the study.

Bull Trout Limiting Factors Analysis – Starting field work next week; thermographs out.

Merwin Sorting Facility Design – Letter to Services giving notice of PacifiCorp beginning 30% design mailed on 5/15/06.

Speelyai Hatchery Expansion – Proceeding but do not know if expansion will be completed by September 2007. Preliminary design drawings were mailed to the ACC on June 27, 2006.

Swift Downstream Collector, Design Update – Olson provided a PowerPoint presentation (**Attachment F**) to include the following specific topics:

- Alternatives Considered
- Intake Channel Characteristics
- Challenges with Intake Channel Area
- Engineering Team/Preliminary Design Work Tasks
- Downstream Passage Project Activities
- Phased Implementation Approach (Example)
- Upcoming Engineering Subgroup Meeting Discussion Topics
- Schedule Goal

Olson informed the ACC that 30% preliminary (functional) design is scheduled to be submitted for review by May 2007.

New Topics/Issues

Casseseka expressed concern about the Utilities not involving WDFW and the Yakama Nation in the topics outlined in the attached memorandum (**Attachment G**). Casseseka requested that a meeting be incorporated with their Tribal Council meetings which typically take place on the first Tuesday of each month. He further indicated that their's also the option of meeting with the Tribal Executive Committee rather than the Tribal Council. Although not specifically noted in the memorandum, Casseseka opened the meeting to all ACC members and requested that U.S. Fish and Wildlife and NOAA Fisheries attend.

WDFW, PacifiCorp Energy and Cowlitz PUD agreed that they will determine possible meeting dates which will be after 8/1/06 and get back to Casseseka.

Agenda items for August 10, 2006

- Continue H&S Plan Discussions
- Study Updates
- Visit to potential Acclimation Pond sites

Next Scheduled Meetings

August 10, 2006	September 14, 2006
Merwin Hydro Facility	Merwin Hydro Facility
Ariel, WA	Ariel, WA
9:00am – 3:00pm	9:00am – 3:00pm

Meeting Adjourned at 1:00p.m.

Handouts

- Final Agenda
- Draft Meeting Notes 6/8/06
- Memorandum to ACC from Erik Lesko, dated 6/19/06 – Proposed Hatchery Upgrade Schedule
- Hatchery Upgrade Schedule Denoting Both the SA & Proposed Schedule
- Lewis River Spring Chinook – Timeline of H&S Actions, as provided by PacifiCorp
- Lewis River late Winter STHD Program/ACC Feedback, as provided by WDFW dated 7/10/06
- Lewis River Hatchery Implementation Overall Site Plan Sketch – Parallel Pond Arrangement of Pond 15

HATCHERY UPGRADE SCHEDULE DENOTING BOTH THE SETTLEMENT AGREEMENT AND PROPOSED SCHEDULE

Updated: June 20, 2006

Activity	Construction Dates	Construction Period (Days)	Year					NOTES
			2006	2007	2008	2009	2010	
Lewis River Hatchery								
Pond 13 (conversion to raceways)	May 1 - July 31	90						Coho held at LR in raceways longer
Pond 14 (conversion to raceways)	March 15 - July 31	135						SCH held at Speelyai, Pond 16 & LR Pond 15
Pond 15 (conversion to raceway/sorting facility)	Jan 1 - August 30	240						
Pond 16 (conversion to raceways)	April 1 - July 31	120						Moved out to allow for rebuild of P15, P13, P14
Downstream water intake repair (screening modification)	April 1 - July 31	120						Needs to be done at same time of P16
Upstream intake and conveyance pipe testing & repair	May 1 - May31	30						Moved out to coincide with rebuild of P13, P14


Merwin Hatchery

Upgrade ozone Treatment facility	July 1 - September 30	90						Upgrades completed in 2005
Improve flow and exchange rates in rearing ponds	June 1 - July 30	60						
Modify release ponds to accommodate adults	June 1 - July 30	60						

Speelyai Hatchery

Pond 14 (conversion to raceways)	February 1 - May 30	120						
Burrows Pond Bank No. 1 (conversion to raceways)	July 1 - October 31	120						SCH to Pond 14, kokanee to stay in one bank
Burrows Pond Bank No. 2 (conversion to raceways)	July 1 - October 31	120						SCH to Pond 14, kokanee to stay in one bank
Repair water intake structure	June 1 - September 30	120						
Expand adult fertilization area	January 1 - March 30	90						
Construct kokanee trap weir/trap	May 1 - August 30	120						
Expand incubation building	July 1 - August 30	60						

 Settlement Agreement Schedule

 Proposed Schedule

Attachment B

Date: June 19, 2006
To: Aquatics Coordination Committee
From: Erik Lesko
Subject: Proposed Hatchery Upgrade Schedule

As part of our ongoing discussions with the Washington Department of Fish and Wildlife and others, it has become apparent that some scheduling changes are needed to meet certain obligations contained in Schedule 8.7 (Hatchery and Supplementation Facility Upgrades and Maintenance) of the Lewis River Settlement Agreement. These scheduling changes affect only Lewis River hatchery.

Changes to the hatchery upgrade schedule are specifically related to fish rearing space during construction of the various projects. That is, fish on site during construction must be moved to other ponds within the complex to accommodate the construction schedule. The amount of available rearing space is limited and thus requires a staggered approach to pond construction. Therefore, we are proposing to move one project up (Pond 15) while deferring other projects (e.g., Pond 16) to ensure that fish production is unaffected.

To meet our fish production goals and commitments in Schedule 8.7 the Licensees are proposing the attached schedule for your review and comment. Differences between Schedule 8.7 and the proposed schedule are explained below.

1. Pond 15 upgrades and sorting facility

Schedule 8.7 calls for upgrades to be made to Ponds 13, 14 and 15 in the same year. By doing so, no rearing space would be available to accommodate the Utilities production goals. Therefore, we are proposing to move forward the modification to Pond 15 (and associated sorting facility) by one year. This will allow juveniles to be held in the Pond during subsequent construction activities on Pond 13 and 14 the following year. Thus, the schedule for these two ponds is unaffected.

2. Pond 16 conversion to raceways

We are proposing to defer the Pond 16 conversion to raceways until April of 2009. The reasons for this change are due to the need for Pond 16 during the construction of the other ponds and our current focus of completing the complex design and permitting of Pond 15. To complete Pond 16 on schedule would require us to

temporarily cease work on Pond 15, which would result in a one year delay from the proposed schedule.

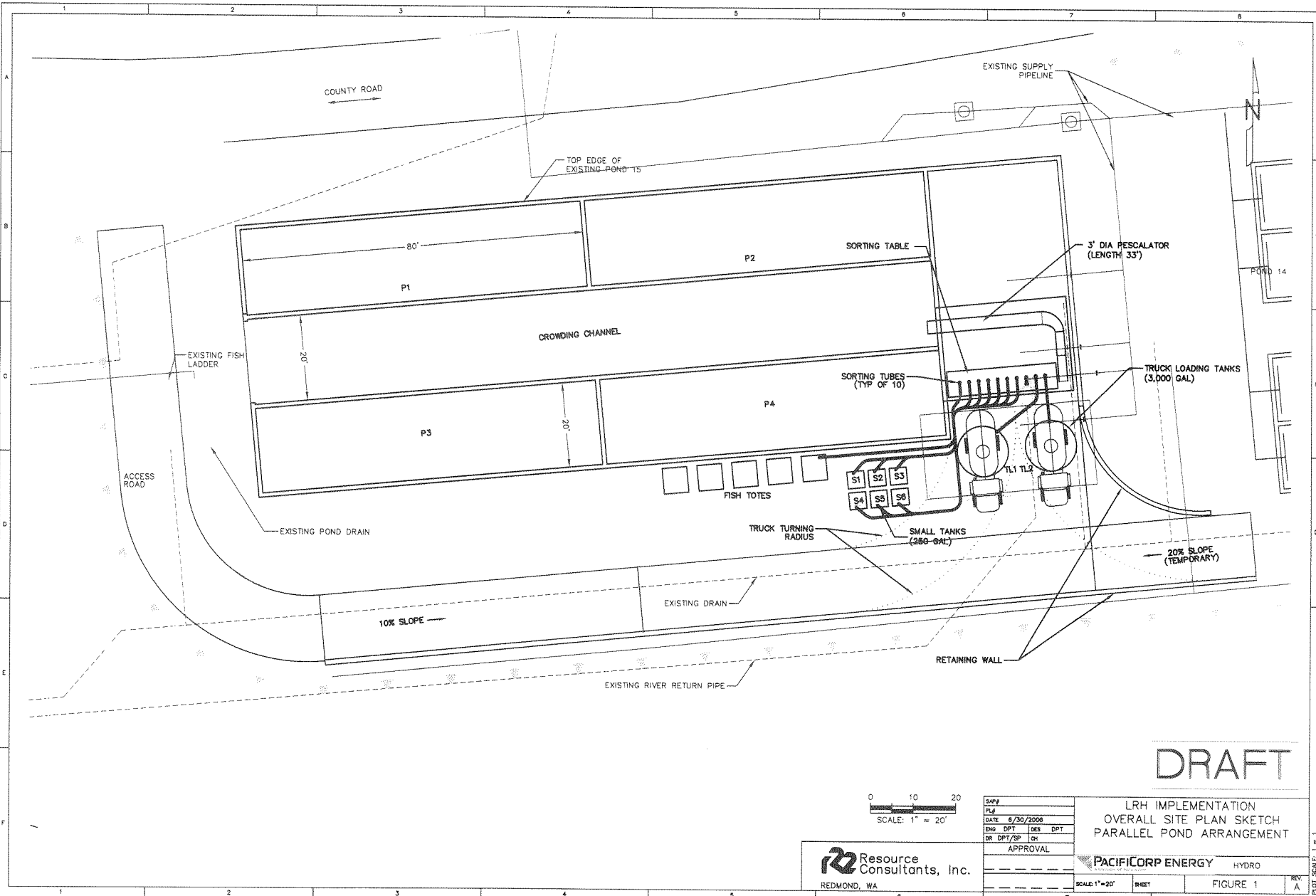
3. Downstream water intake repair

This project is partially complete. Two of the three existing pumps and the pump manifold were replaced in 2004. New pump screening must be completed to closeout this particular project. Because the pumps provide source water for Pond 16, we are proposing to complete the screening of the lower pump intake at the same time Pond 16 is converted to raceways.

4. Upstream intake and conveyance pipe testing and repair

In May 2006, the conveyance pipe was evaluated for testing and inspection. This evaluation showed that the only possible entry route for an inspection camera would be at the downstream end of the pipe where it enters Pond 13. Therefore, we are proposing to conduct this inspection when Pond 13 is converted to raceways as the header pipe will be modified at that point and allow a point of entry into the conveyance pipe. Overhauls of the pumps at the upper intake is ongoing and is unaffected by Schedule 8.7

The attached schedule was developed for discussion at our next ACC meeting. Please be prepared to discuss any questions or comments that you may have. If you should have questions prior to the ACC meeting please call me at (503) 813-6624.



DRAFT



DATE	6/30/2008
ENG	DPT
DR	DPT/SP
APPROVAL	

LRH IMPLEMENTATION	
OVERALL SITE PLAN SKETCH	
PARALLEL POND ARRANGEMENT	
PACIFICORP ENERGY HYDRO	
SCALE: 1"=20'	SHEET
FIGURE 1	REV. A

Resource Consultants, Inc.
REDMOND, WA

NO.	DATE	BY	CHK	APP	REVISION	DRAWING No.	REFERENCE DRAWINGS
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							

McCune, Kimberly

From: Olson, Todd
Sent: Thursday, July 06, 2006 10:41 AM
To: Clifford Casseseka - YN; George Lee - Yakama Nation; Curt Leigh - WDFW; HML LRN (Kinne, Eric); Craig Burley - WDFW
Cc: Lesko, Erik; Shrier, Frank; McCune, Kimberly; Flak, Sean
Subject: LR Hatchery Pond #15 Upgrade
Attachments: LRH - P15 - Drawing.pdf

Gentlemen,

PacifiCorp has been working to develop a conceptual design alternative for upgrades to Lewis River Hatchery Pond #15. As you recall, the Settlement Agreement calls for a rebuild of pond #15 to accommodate adult collection processes and provided the ability to safely collect, handle, sort, and crowd by automation (per Schedule 8.7). Attached is a design I would like you to review prior to presenting to the ACC. Please provide any comments by July 21st so we can complete our 30% design in a timely manner. If you can, I would appreciate any comments before our next ACC meeting on July 13th then I could include this in our Study Updates.

Thank you for your attention to this matter.

Todd

7/6/2006

Lewis River Spring Chinook - Attachment D			Timeline of H&S Actions										NOTE: KEY ASSUMPTION -- THE RETURNING NOR NUMBERS ARE INSUFFICIENT TO START SEGREGATED POPULATION ABOVE SWIFT	
	Pre 2002	2002 - 2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016 - Future		
Hatchery	All returning fish available for broodstock program at hatchery. No differentiation between ad and ad-clipped fish	Fish with adipose fin segregated from hatchery fish. Only hatchery fish used for broodstock.	All returning fish available for hatchery broodstock program. No differentiation between hatchery origin and natural origin fish. Natural origin fish used will be tracked within broodstock program. Begin additional egg take per table 8.4 of the SA for harvest opportunity	All returning fish available for hatchery broodstock program. No differentiation between hatchery origin and natural origin fish. Natural origin fish used will be tracked within broodstock program. Additional egg take per table 8.4 of the SA for harvest opportunity	All returning fish available for hatchery broodstock program. No differentiation between hatchery origin and natural origin fish. Natural origin fish used will be tracked within broodstock program. Additional egg take per table 8.4 of the SA for harvest opportunity	All returning fish available for hatchery broodstock program. No differentiation between hatchery origin and natural origin fish. Natural origin fish used will be tracked within broodstock program. Additional egg take per table 8.4 of the SA for harvest opportunity. Begin rearing juvenile supplementation fish.	All returning fish available for hatchery broodstock program. No differentiation between hatchery origin and natural origin fish. Natural origin fish used will be tracked within broodstock program. Additional egg take per table 8.4 of the SA for harvest opportunity. Rear fish for juvenile supplementation program.	All returning fish available for hatchery broodstock program. No differentiation between hatchery origin and natural origin fish. Natural origin fish used will be tracked within broodstock program. Additional egg take per table 8.4 of the SA for harvest opportunity. Rear fish for juvenile supplementation program.	All returning fish available for hatchery broodstock program. No differentiation between hatchery origin and natural origin fish. Natural origin fish used will be tracked within broodstock program. Additional egg take per table 8.4 of the SA for harvest opportunity. Rear fish for juvenile supplementation program.	Returning NOR fish will be transported upstream with X % retained for hatchery broodstock. Additional egg take per table 8.4 of the SA for harvest opportunity. Rear fish for juvenile supplementation program.	Returning NOR fish will be transported upstream with X % retained for hatchery broodstock. Additional egg take per table 8.4 of the SA for harvest opportunity. Rear fish for juvenile supplementation program.	Returning NOR fish will be transported upstream with X % retained for hatchery broodstock. Additional egg take per table 8.4 of the SA for harvest opportunity. Rear fish for juvenile supplementation program per H&S Plan.		
Construction of Fish Passage Facilities				Begin construction of fish passage facilities			Merwin Upstream and Swift Downstream fish collectors, Acclimation Ponds upstream of Swift, and Stress Relief Pond downstream of Merwin are completed and put into operation	Fish passage facilities operational	Fish passage facilities operational	Fish passage facilities operational	Fish passage facilities operational	Fish passage facilities operational		
							Test Swift FCE with Hatchery Juveniles	Test Swift FCE with Hatchery Juveniles	Monitoring and Evaluation Program	Monitoring and Evaluation Program	Monitoring and Evaluation Program	Monitoring and Evaluation Program		
Supplementation						Begin adult supplementation using hatchery fish	Adult supplementation with hatchery fish; begin juvenile fish supplementation with 100,000 fish from hatchery. Mark X juvenile NOR fish collected at Swift as upper basin origin.	Adult supplementation with hatchery fish; juvenile fish supplementation with 100,000 fish from hatchery. Mark X juvenile NOR fish collected at Swift as upper basin origin.	Adult supplementation with hatchery fish; juvenile fish supplementation with 100,000 fish from hatchery. Mark X juvenile NOR fish collected at Swift as upper basin origin.	Transported adults are mix of hatchery and NOR returns; juvenile fish supplementation with 100,000 fish from hatchery. Mark X juvenile NOR fish collected at Swift as upper basin origin.	Transported adults are mix of hatchery and NOR returns; juvenile fish supplementation with 100,000 fish from hatchery. Mark X juvenile NOR fish collected at Swift as upper basin origin.	Transported adults are NOR returns only; juvenile fish supplementation with 100,000 fish from hatchery. Mark X juvenile NOR fish collected at Swift as upper basin origin.		
HPP		HPP program - goal x fish	HPP program - goal x fish	HPP program - goal x fish	HPP program - goal x fish					Yale HPP Program - goal X fish	Yale HPP Program - goal X fish	Yale HPP Program - goal X fish		

July 10, 2006

TO: Lewis River ACC**FROM:** Eric Kinne/Keith Keown**RE:** Lewis River Late Winter STHD Program/ACC Feedback

The following “issues” need clarification for development of the HGMP. Some exist within the Lewis River Hatchery and Supplementation Plan (H & S Plan) and the Lewis River Fish Planning Document (LFPD), while other issues are not specified in either plan.

Category	Issue	#	H & S Plan or LFPD Language and Issues
Broodstock	Contingency Plan	1	“Recommendation to use Kalama River Stock” Need to explore (prioritize) other collection options before defaulting to the contingency plan? Set timeline before using Kalama?
	Broodstock - Collection Timing	2	“Collect broodstock across the entire run – January/June” 1. In order to eliminate non-local broodstock, confine collection from March on unless genetic testing is done to determine origin. 2. Late May/June spawners might be too late to achieve smolt as 1+.
	Broodstock - Disposition of spawners	3	“Live spawned and returned back to river” WDFW/Co-Mgrs Fish Health Policy will require kidney/spleen samples of <u>60</u> fish. For ESA listed fish, 50% of spawning population will be needed (J. Kerwin). Kelt reconditioning (Yakama Tribe studies)
	Fertilization	4	“Fertilization - 2 x 2 factorials”. With 25 spawning pairs spread out over 2-3 collection months ♀/♂ ripeness will be spread out - males might need to be used more than once, 3 x 3 factorials to maximize genetics etc.
	Broodstock-Return back to river	5	No language – Yakama Tribe indicates some success with kelt reconditioning (70% - Newsome 2004).
Overages	Higher survival	6	If high survival is achieved, disposition plans required for eggs/fry/fingerling stage?
Rearing	Achieve 1+	7	“Release as 1+ smolts”. Disposition of fish not reaching program goals? 2 year smolt?
	Size at release	8	“Size at release 5-8 ffp, 180 - 210mm fl to approximate the size of naturally produced w STHD”. Note: Fish will be reared to this size exceed wild fish (176 mm, Cedar Creek studies) but will be done to maximize survival. A target size of 5.5 ffp (205 mm fl) will meet Statewide STHD rearing guidelines (below Bonneville) – and maximize survival.
	Water source	9	No language - Ozone treated water 100% through out entire period?
Release Site	Merwin Hatchery	10	No language - Actual site release; Merwin FCF?
Release Type	Volitional/ Forced	11	“Volitional release”. Release will be based on several factors of which smolt behavior will be one.
Budget/ Monitoring	M & E	12	Fish ID – DNA for each adult collected and spawned. Monitor survival for adults returned back to stream – kelts? Costs related to rearing 2 plus smolts if needed. Other costs as identified outside current hatchery budget items.

LR SA 4.4.1 Modular Surface Collector Preliminary Engineering

ACC July 13, 2006

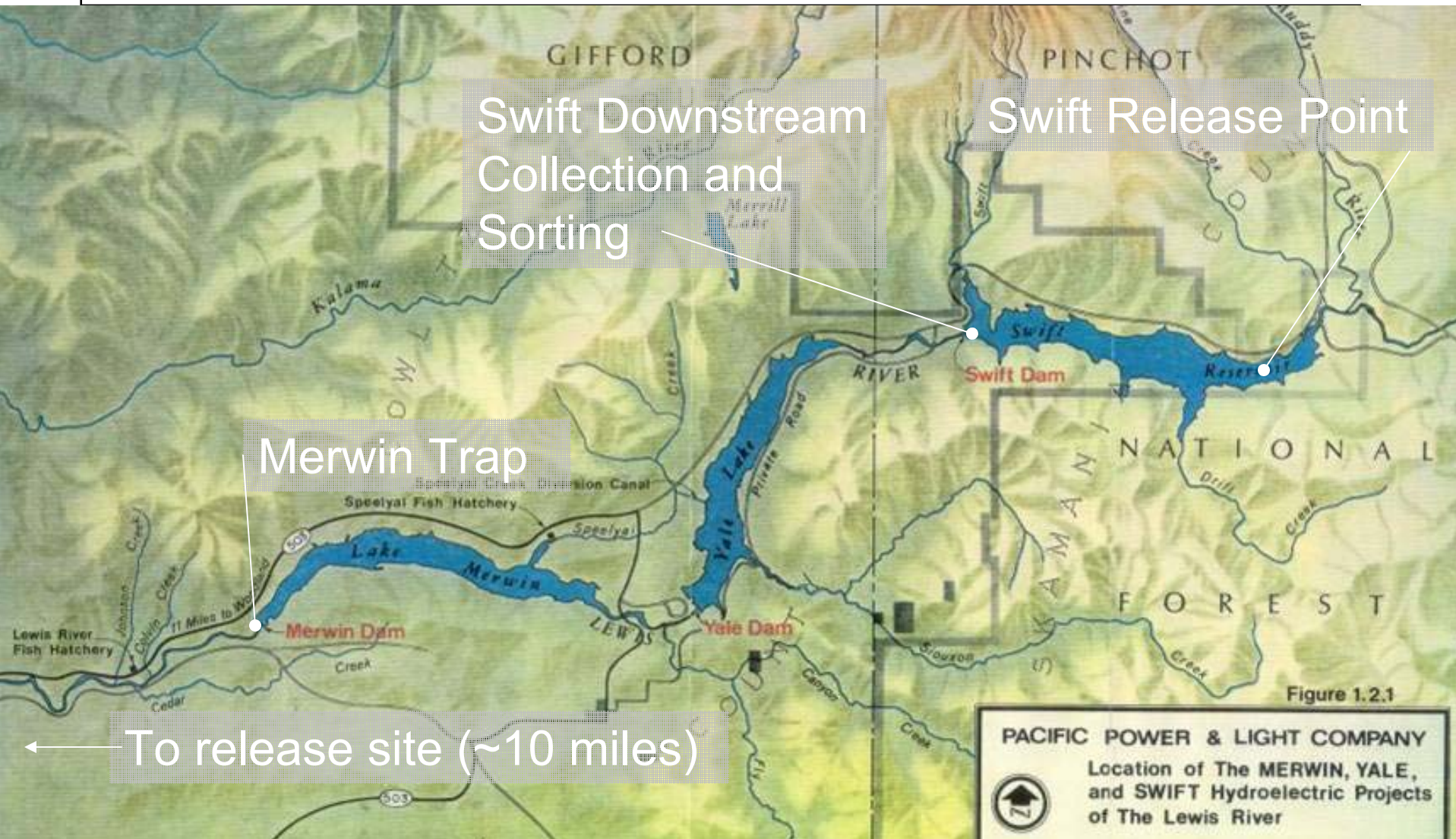
Outline

- Background and Review
- Phased Implementation Approach
- Project Schedule (Work Complete and Upcoming)

For full background, review April 2006 Engineering Subgroup Presentation at:

<http://www.pacificorp.com/Article/Article61767.html>

Lewis River Re-introduction Program



Alternatives Considered

- Relicensing Evaluations (2001)
 - ◆ 5 concepts considered
 - ◆ Floating collector was the recommended option.
- Settlement Agreement Signing (11/2004)
 - ◆ Modular Surface Collector incorporated into section 4.4 of the Settlement Agreement
- Consideration of PMF modifications (2005/6)
 - ◆ Review of alternatives and potential synergies with probable flood passage modifications

Intake Channel Characteristics



Reservoir Level ~910

Challenges with Intake Channel Area

- Narrow Channel to Locate a FSC
- High Velocities at Low Reservoir Elevations
- Potential Impacts to Spillway Capacity

Engineering Team / Preliminary Design Work Tasks

PacifiCorp's team consists of Black & Veatch, R2 Resources, northwest hydraulic consultants, Art Anderson & Associates, and Ken Bates.

Design areas:

- Collector Location
- Collector Design
- Fish Sorting & Transfer
- Mooring & Access

Downstream Passage Project Activities

July 2006 – Preliminary Engineering Begins

Fall 2006 – Expected License Issuance

License Year 1 (Fall 2007) – 90% preliminary design to agencies & stakeholders

License Year 1.5 (Winter 2008) – Final design to FERC

License Year 4.5 (Winter 2011) – Facility Operational

Phased Implementation Approach (Example)

- Phase 1
 - ◆ Install moderate discharge floating surface collector and a test a few locations if necessary
 - ◆ Cabled mooring system
 - ◆ Personnel access and fish transfer by boat
 - ◆ Supporting components designed for full potential discharge capacity.
- Phase 2
 - ◆ Increase collector discharge capacity by adding a screen and pump module
- Phase 3
 - ◆ Install guidance features
- Completion Phase
 - ◆ Install permanent location measures if O&M savings are justified

Upcoming Engineering Subgroup Meeting

Discussion Topics

- Aug 8, 2006
 - ◆ initial fish numbers
 - ◆ initial sorting protocol
 - ◆ basic Floating Surface Collector (FSC) criteria
 - ◆ approach to determine FSC location
 - ◆ Computational Fluid Dynamics (CFD) modeling approach
- Sep 20, 2006
 - ◆ update on fish numbers and sorting criteria
 - ◆ review expanded FSC criteria document
 - ◆ CFD model update #1

Upcoming Subgroup Meeting Discussion Topics (cont)

- Oct 31, 2006
 - ◆ CFD model update #2
 - ◆ FSC design update
- Dec 12, 2006
 - ◆ present CFD model results
 - ◆ criteria complete
- Jan 23, 2007 (est.)
 - ◆ update on FSC layout
 - ◆ update on fish sorting and transport plan
- March 6, 2007 (est.)
 - ◆ review key design issues and drivers
 - ◆ request agency approval of concepts

Schedule Goal

- 30% Preliminary (functional) Design by May 2007
- Enable RFP for Engineering-Procure-Construct (EPC) Contract
- Active subgroup participation is critical to meet schedule requirements.



Cultural Resources Program

MEMO

To: Lavina Washines, Chairperson, Tribal Council

Through: Johnson Meninick, Manager
Cultural Resource Program

From: Clifford Casseseka

Your request for a meeting with PacifiCorp, Cowlitz Utilities and Washington Department of Fish and Wildlife after the July 13, 2006 meeting At Merwin, PacifiCorp Headquarters to set up a meeting here with the Tribal Council Executive Committee. I will mention your request at the meeting and get some days that they will be available to come over here for a meeting. Mr. Gorge Lee, Yakama Nation Fish Biologist and myself came up with there (3) topics that need to be addressed.

1. Co-Management with WDFW
2. Hatchery Upgrades
3. Supplementation Program tailored for Lewis river

If the Executive Committee and the Fish/Wildlife Committee would like to add any other issues, please let me know by Friday, July 7, 2006 before 5:00pm. Extension 4720

Cc: Tribal Council Fish/Wildlife Committee