

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

Date & Time: Thursday, November 12, 2015
9:00 a.m. – 12:30 p.m.

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

Contacts: Frank Shrier: (503) 320-7423

Time	Discussion Item
9:00 a.m.	Welcome <ul style="list-style-type: none"> ➤ Review Agenda and 10/8/15 Meeting Notes ➤ Comment & accept Agenda and 10/8/15 Meeting Notes
9:10 a.m.	Public Comment Opportunity
9:15 a.m.	2016/2017 Aquatic Fund Process; Schedule Subgroup meeting(s)
9:30 a.m.	Discuss a slight error between the M&E and H&S plans regarding monitoring fall Chinook and chum
10:00 a.m.	Break
10:15 a.m.	Karchesky – Swift FSC Fish Guide/Lead Net Discussion <ul style="list-style-type: none"> ➤ Review of information learned during past Collection Efficiency (CE) studies ➤ Current CE estimates and fish behavior ➤ Net design and installation schedule
12:00 p.m.	Working Lunch
12:15 p.m.	Study/Work Product Updates <ul style="list-style-type: none"> ○ Production Numbers for 2016 ○ Smolt releases at LRH; first pass water and release options ○ Woodland Release Ponds - Status ○ Hatchery Upgrades - Status ○ Acclimation Ponds - Status ○ Merwin Upstream Passage – Status ○ Swift Floating Surface Collector – Status
12:30 p.m.	<ul style="list-style-type: none"> ➤ Next Meeting’s Agenda ➤ Public Comment Opportunity Note: all meeting notes and the meeting schedule can be located at: http://www.pacificorp.com/es/hydro/hl/lr.html#
12:30 p.m.	Adjourn ACC Meeting

Join by Phone

+1 (503) 813-5252 [Portland, Ore.]

+1 (855) 499-5252 [Toll Free]

Conference ID: 5687805

FINAL Meeting Notes
Lewis River License Implementation
Aquatic Coordination Committee (ACC) Meeting
November 12, 2015
Merwin Hydro Control Center
Ariel, WA

ACC Participants Present (15)

Chris Karchesky, PacifiCorp
 Frank Shrier, PacifiCorp
 Kim McCune, PacifiCorp
 Mark Ferraiolo, PacifiCorp
 Baker Holden, USDA Forest Service
 Adam Haspiel, USDA Forest Service
 Jim Malinowski, Fish First
 Peggy Miller, WDFW
 Aaron Roberts, WDFW
 Diana MacDonald, Cowlitz PUD
 Pat Frazier, WDFW
 Shannon Wills, Cowlitz Indian Tribe (teleconference)
 Karen Adams, LCFRB (teleconference)

Guests

Al Thomas, Columbian
 Peter Stevens, Cramer Fish Sciences

Calendar:

December 10, 2015	ACC Meeting	Merwin Hydro
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Assignments from November 12, 2015	Status
None	

Assignments from July 9, 2015 meeting	Status
ACC: Schedule an initial meeting in the month of October 2015 for the review of the Aquatic Fund Strategic Plan and Administrative Procedures 2016/2017 funding cycle.	Complete – meeting scheduled for 11/19/15

Assignments from February 13, 2014 meeting (revised 9/10/15)	Status
Kinne: Work on securing the 2012, 2013 and 2014 lower river coho abundance survey data for tributaries. Provide this information to Erik Lesko (PacifiCorp).	Pending as of 11/12/15 (Frazier noted he is working to get this done by January 2016 meeting)

Opening, Review of Agenda and Meeting Notes

Frank Shrier (PacifiCorp) called the meeting to order at 9:10 a.m. and reviewed the agenda and assignments.

The October 8, 2015 meeting notes were reviewed and approved with changes indicated below as suggested by Pat Frazier at 9:20 am.

Page 2, first paragraph shall be revised as follows:

2015/2016 Lewis River RM 13.5 Restoration Project, Phase II – Update; SRFB funding not received

The ACC engaged in much discussion over this project. Shrier read the email exchange between Kim McCune and Tony Meyer. In Meyer's response to future plans he stated he planned to "re-scope ACC funds to design and permit objectives only, and use the design to support a future (2017) SRFB project. The scope of the design would cover all of the objectives identified in the original ACC/ SRFB grant. We are essentially flip-flopping the two funding sources. ACC covers design & permitting while SRFB covers construction." There was some uncertainty on the ACC as to what it meant to "support a future (2017) SRFB project" and there was some concern as to how that plan meshed with the moratorium currently in place that would not allow the project to be re-submitted until 2017. The ACC discussion considered that this project had been approved for funding by the ACC in 2015 but was not funded by the SRFB. An option was discussed that considered extending the ACC approval for 2016 because the moratorium prevented the LCFEG to apply for 2016 SRFB funding. They also discussed what the appropriate process is in this instance and the desire to avoid giving preference to LCFEG. Shrier also mentioned that PacifiCorp has repeatedly asked for access and approval from each of the landowners involved in this project and has yet to receive the landowner access agreements. This item was tied to the Aquatic Fund Process Document which states:

Obtain permission of all owners of land used for access to and completion of, the project. Landowner(s) must sign PacifiCorp's consent and release form prior to finalization of a Funding Agreement with PacifiCorp.

Last paragraph shall be revised to read as follows:

The ACC approved this action to withdraw funding for this project and to ask LCFEG to re-apply for 2017 funding. The ACC also agreed to send a written response to the LCFEG that presents the ACC decision and the justification for this decision.

Kim McCune (PacifiCorp) will finalize the October 8, 2015 meeting notes for posting to the Lewis River website.

Public Comment

None

2016/2017 Aquatic Fund Process; Schedule Subgroup meeting(s)

The ACC agreed to meet on Thursday, November 19, 2015 from noon – 2:00pm at the Merwin Hydro Control Center in Ariel, WA. McCune will provide all meeting materials in advance of the meeting.

Initially the ACC will begin review of information specific to the Lewis River synthesis matrix and Lower Columbia Fish Recovery Board interactive map to evaluate future Aquatic Fund proposals for their effectiveness and contribution to the recovery process and the Lewis River Reintroduction program. (<http://www.lowercolumbiasalmonrecovery.org/mappage>). To establish a process for securing landowner acknowledgement/access and to modify pre and full proposals to reflect expectations of applicants to review the synthesis matrix and Salmon Recovery interactive maps in advance of proposal submittal.

Discuss a slight error between the Monitoring & Evaluation (M&E) and Hatchery & Supplementation (H&S) plans regarding monitoring fall Chinook and chum

Shrier informed the ACC attendees that the section on fall Chinook and chum monitoring did not migrate from the M&E plan to the H&S Plan. Erik Lesko (PacifiCorp) will complete an addendum and submit a filing to the Federal Energy Regulatory Commission after the completion of the M&E submittal to the Commission in December 2016. Shrier clarified that, regardless, the work is still occurring this fall.

Karchesky/Stevens - Swift Floating Surface Collector Fish Guide/Lead Net Discussion

Peter Stevens, Cramer Fish Sciences provided a PowerPoint presentation titled, Swift Reservoir Floating Surface Collector Juvenile Salmon Collection Efficiency – November 12, 2015, which can be viewed in more detail at the following link: http://www.pacificorp.com/content/dam/pacificorp/doc/Energy_Sources/Hydro/Hydro_Licensing/Lewis_River/li/acc/11122015_MBG02_ACCMtg_SwiftFSC.pdf



Stevens provided a comprehensive review of information learned during past Collection Efficiency (P_{CE}) studies beginning in the 2013 pilot year through 2015. He provided visuals of the zone of influence (ZOI), antenna locations, total tagged of the three species (Coho, Spring Chinook and Steelhead (see study year 2014/2015 comparison results below), conclusions and lessons learned.

Study Year - 2015

– Results

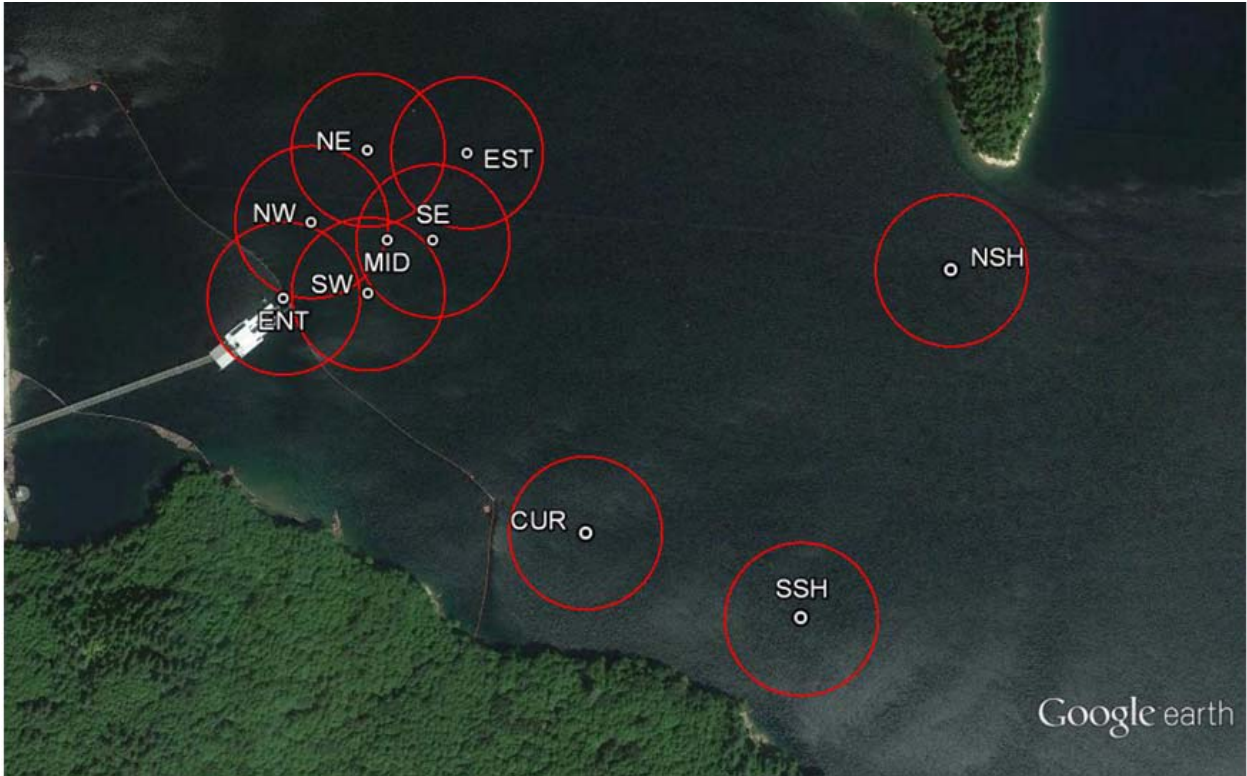
Metric	Coho Salmon	Spring Chinook	Steelhead	Total
Total tagged (n)	149	14	47	200
Detected at ZOI	100	6	43	159
P_{RES}	67.1%	42.9%	91.5%	79.5%
Captured at FSC	12	0	7	19
Collection Efficacy (P_{CE})	12.0%	0.0%	16.3%	11.9%

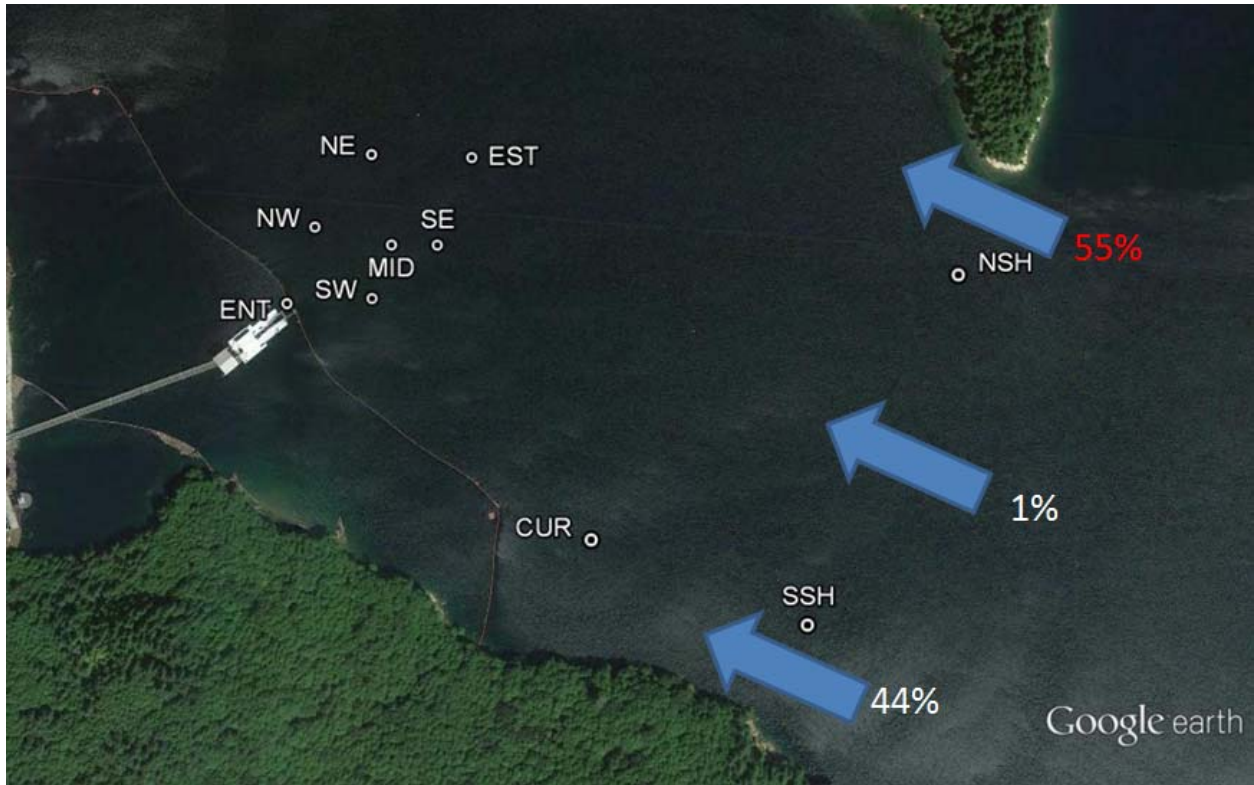
– Results: 2014

Metric	Coho Salmon	Spring Chinook	Steelhead	Total
Total tagged (n)	157	20	16	193
Detected at ZOI	31	3	4	38
P_{RES}	19.7%	15.0%	25.0%	19.7%
Captured at FSC	9	0	1	10
Collection Efficacy (P_{CE})	29.0%	0.0%	25.0%	26.3%

Stevens discussed methodological changes from using Radio-telemetry that provided Collection Efficiency but Acoustic Telemetry can provide behavioral insights driving P_{CE} . An additional modification was all the fish were captured, tagged and released in vicinity of Eagle Cliffs.

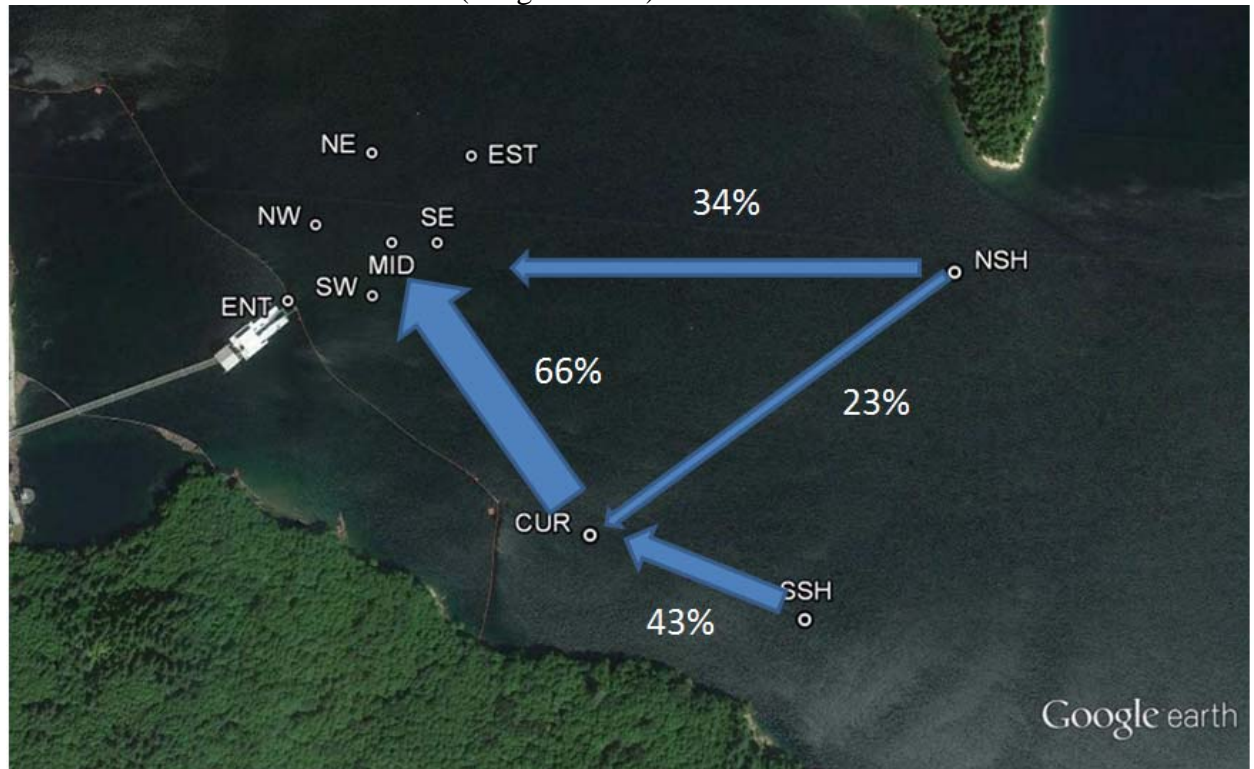
Stevens explained in detail the location of acoustic telemetry, its array configuration and the zone of influence as pictured below:



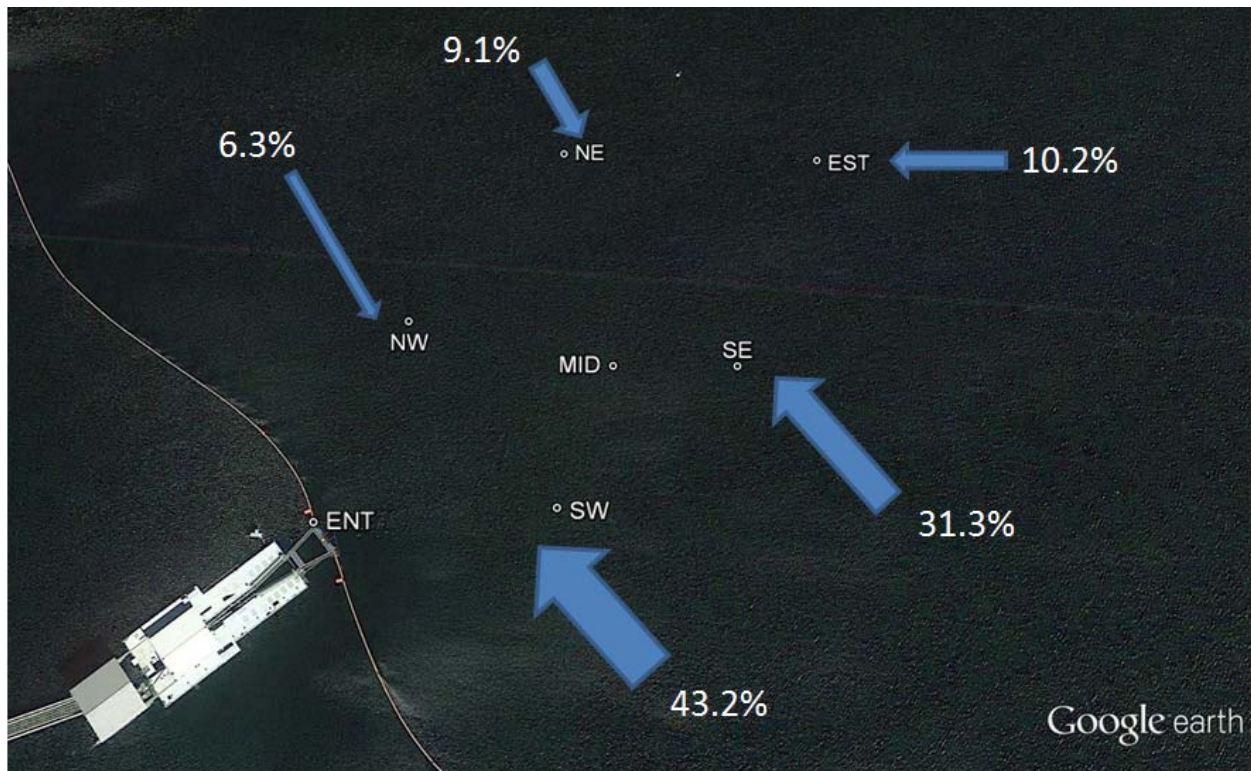


In the 2015 study year 55% came in from the North Shore (NSH), 44% came in from the South Shore (SSH) and 1% came in from the middle. All were naïve fish released at the head of the reservoir.

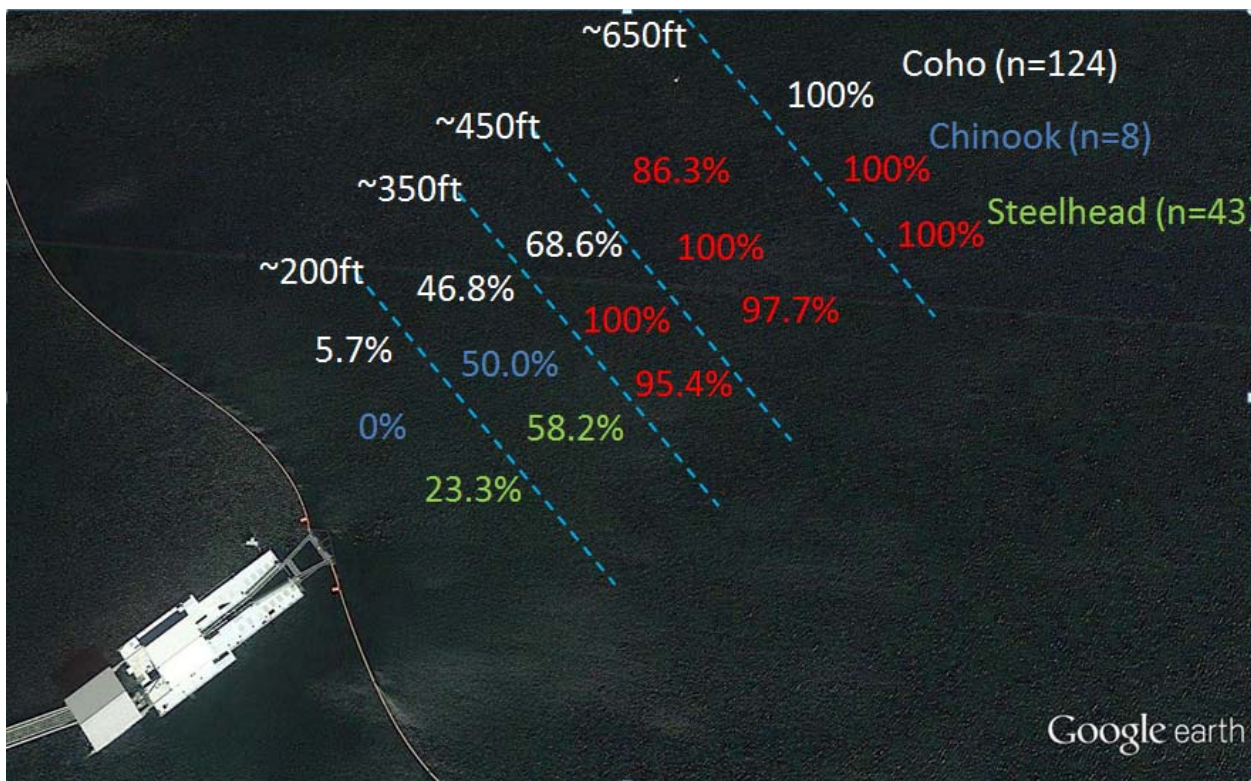
Stevens also provided an illustration of all three species travel path and the array entrance direction near the surface collector (images below):



Travel path



Array entrance direction



The distribution results of array entrances of all three species are indicated above.

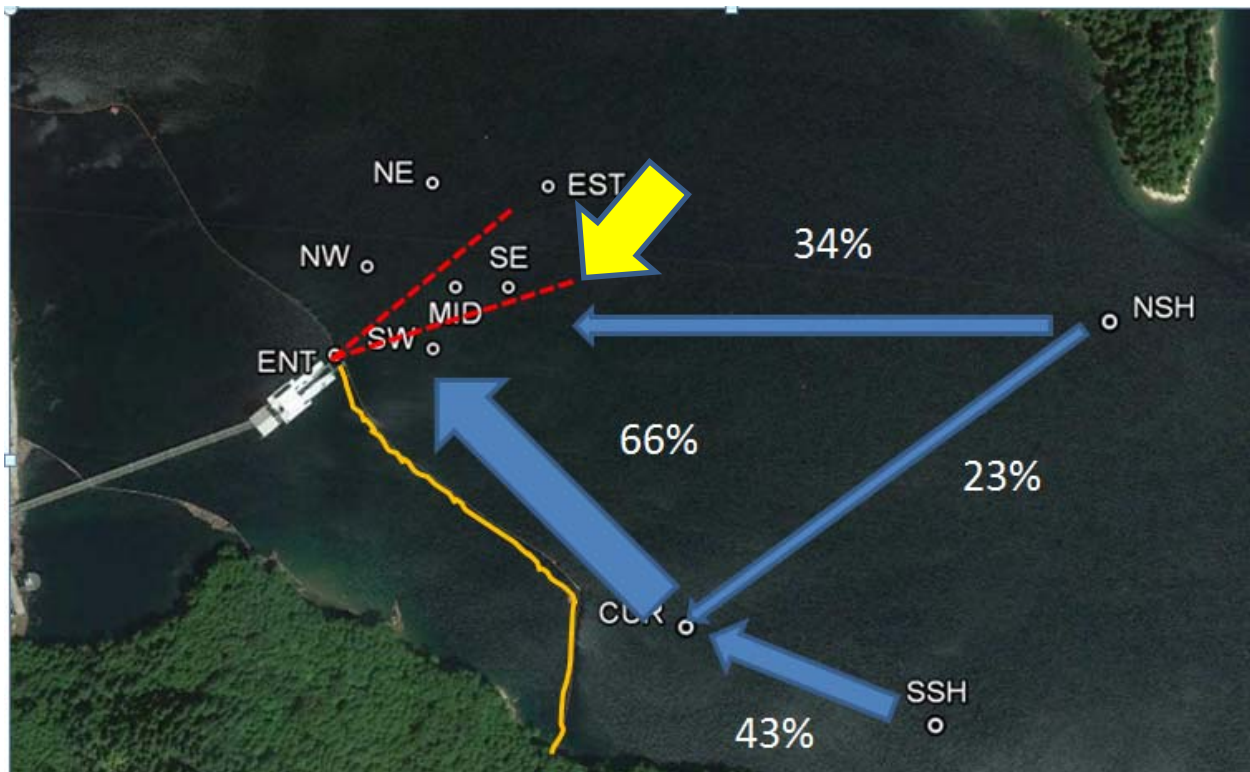
The preliminary conclusions are:

- Acoustics zone of influence is larger but more consistent with monitoring & evaluation
- Collection efficiency was lower in 2015 but more smolts passed
- There were substantially higher P_{RES} (% of total tagged and detected at zone of influence) due to improved tagging diluted collection efficiency.

The following acoustic behavioral insights were learned:

- The forebay entrance was evenly distributed North v. South
- A large majority of smolts approach the floating surface collector from the South
- All species have peak passage within 450ft of the floating surface collector
- Approximately 90% of fish pass within 650ft of the floating surface collector

Chris Karchesky (PacifiCorp) reviewed the addition of a new net design and installation schedule as follows (red line illustrates 60% design location and new net at yellow arrow):



The goal is to intercept and guide fish to the entrance of the floating surface collector. Vertical length of the net is 650ft with a depth of 60ft.

Study Year 2016 includes the following:

Repeat capture, tagging and release at Eagle Cliffs

Add acoustic design modifications such as possible addition of receivers to array, modifications to account for lead net, re-orientation of array along axis of net and alter receiver geometry or number to account for net.

PacifiCorp is planning on an April 1, 2016 installation deadline.

<Break 10:30am>

<Reconvene 10:45am>

Study/Work Product Updates

Production Numbers for 2016

Aaron Roberts (WDFW) reported no change. The number of smolts available for the upstream Acclimation Ponds next year will probably be about the same as this year - (45,000).

Smolt releases at LRH; first pass water and release options

No updates from WDFW.

Woodland Release Ponds

PacifiCorp completed and submitted its permit packet; the City of Woodland is reviewing for Shorelines/Critical Areas/SEPA approval. Upon approval from City of Woodland PacifiCorp will take the packet to upper management at Department of Natural Resources (DNR) and request an expedite on the land lease permitting process.

Hatchery Upgrades:

All hatchery upgrades are complete. This topic will be removed from future work product updates.

Acclimation Pond/Crab Creek

Crab Creek is complete. It has been disassembled and waiting for consultation with NMFS and FWS for fall operations

Fall release of 45,000+ acclimation fish occurred at the Clear and Crab Creek sites (2,900 tagged); on the 1st or 2nd of October; numerous acclimation fish were observed at the collector shortly after release.

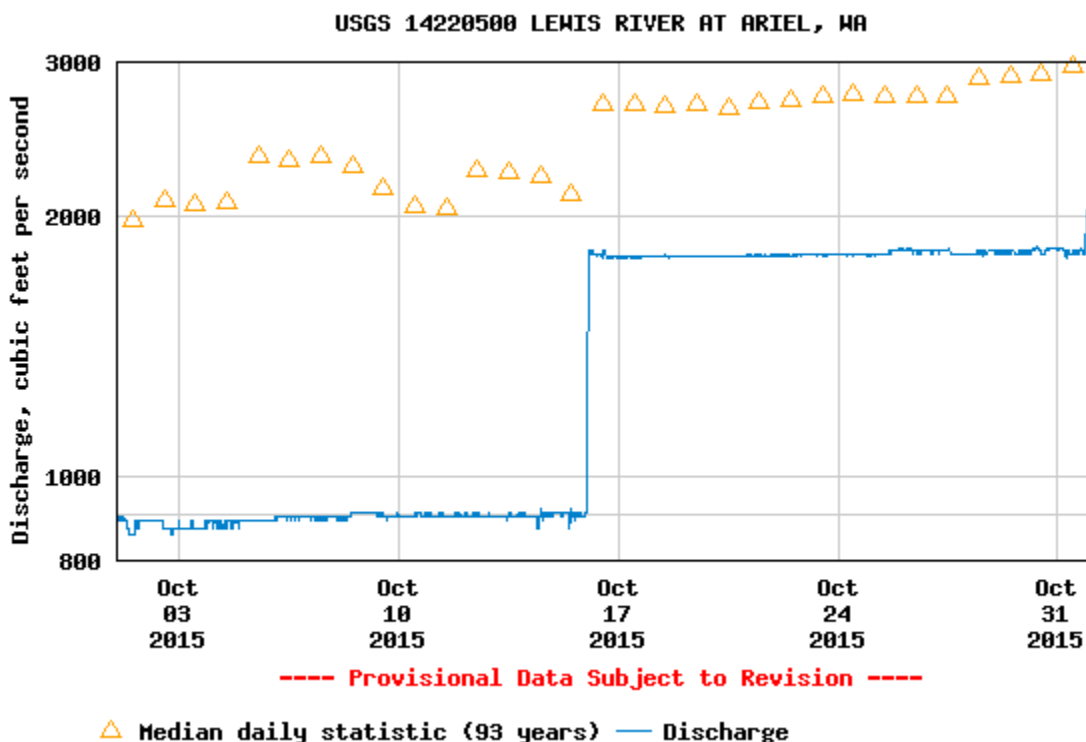
Merwin Fish Collection Facility and General Operations ([Attachment A](#))

Karchesky (PacifiCorp) reported during the month of October, a total 1,953 fish were captured at the Merwin Fish Collection Facility; the majority (29%) of these fish were early run coho (n=574) followed by fall Chinook (n=527). All hatchery summer steelhead, hatchery fall Chinook, and hatchery coho jacks were given to Washington Department of Fish and Wildlife. WDFW also retrieved 338 of 521 hatchery adult coho and 6 of 53 adult wild coho for brood stock. Eight wild summer steelhead, 191 wild fall Chinook, two wild sockeye, two cutthroat trout less than thirteen inches, and 19 rainbow trout less than twenty inches were captured at Merwin trap and returned downstream. One hundred eighty-five hatchery coho (adults: 183, jacks: 2), fifty-nine wild coho (adults: 46, jacks: 13), and eight cutthroat trout greater than thirteen inches were captured at Merwin trap and transported upstream of Swift dam. Eight hatchery coho were radio tagged and returned downstream as part of the Merwin Trap Efficiency Study.

The Merwin Trap ran continuously throughout the month of October. The Auxiliary Water Supply (AWS) system, which can boost attraction flow up to 400 cfs, was operated daily in addition to the Ladder Water Supply (LWS) throughout the month of October.

River flow below Merwin Dam ranged between approximately 857 cfs to 2070 cfs during October.

Discharge, cubic feet per second



Upstream Transport ([Attachment A](#))

To date, 1,218 (741 m: 477 f) BWT winter steelhead have been transported and released upstream of Swift Reservoir (27 of which were captured via tangle net in the lower river as part of the Hatchery and Supplementation Plan Monitoring). In addition, 530 (327 m: 181 f: 22 j) coho (238 of which were captured at Lewis River Fish Hatchery) and 19 coastal cutthroat trout exceeding thirteen inches have been transported upstream of Swift Reservoir this year.

Swift Floating Surface Collector ([Attachment A](#))

The Swift Floating Surface Collector (FSC) was put back into daily service October 15, 2015. A total of 215 juvenile fish were collected during the month of October and transported downstream. The majority (53 percent) of these fish were coho (n=115), followed by spring Chinook (n=91), steelhead (n=7), and bull trout (n=2). One coho fry (<60mm) and two bull trout were returned back to Swift Reservoir. The FSC was suspended the nights of October 16, 2015 and October 25, 2015 due to heavy debris loading.

< Meeting adjourned at 11:10 a.m. >

Agenda items for December 10, 2015

- November 12, 2015 Meeting Notes
- M&E Update
- 2016/2017 Aquatic Fund Process Update
- Jim Fisher – Evaluating Restoration Effectiveness; Lewis River Basin
- Study/Work Product Updates

Other

Adam Haspiel, USDA Forest Service announced his retirement date of November 30, 2015. Baker Holden will be the primary ACC representative for the USDA Forest Service which will be noted in the 2015 ACC/TCC Annual Report.

Merwin inflows are approximately 4,500 cfs currently.
FERC release flows are 3,300 cfs now and will be increased to 4,200 cfs by 1400 on Tuesday, 11/17/15

Next Scheduled Meetings:

November 12, 2015	December 10, 2015
Merwin Hydro Control Center	Merwin Hydro Control Center
Ariel, WA	Ariel, WA
9:00 a.m. –3:00 p.m.	9:00 a.m. – 3:00 p.m.

Meeting Handouts & Attachments:

- Meeting Notes from 10/08/15
- Agenda from 11/12/15
- **Attachment A** - Lewis River Fish Passage Report (October, 2015)

Lewis River Fish Passage Report

October 2015

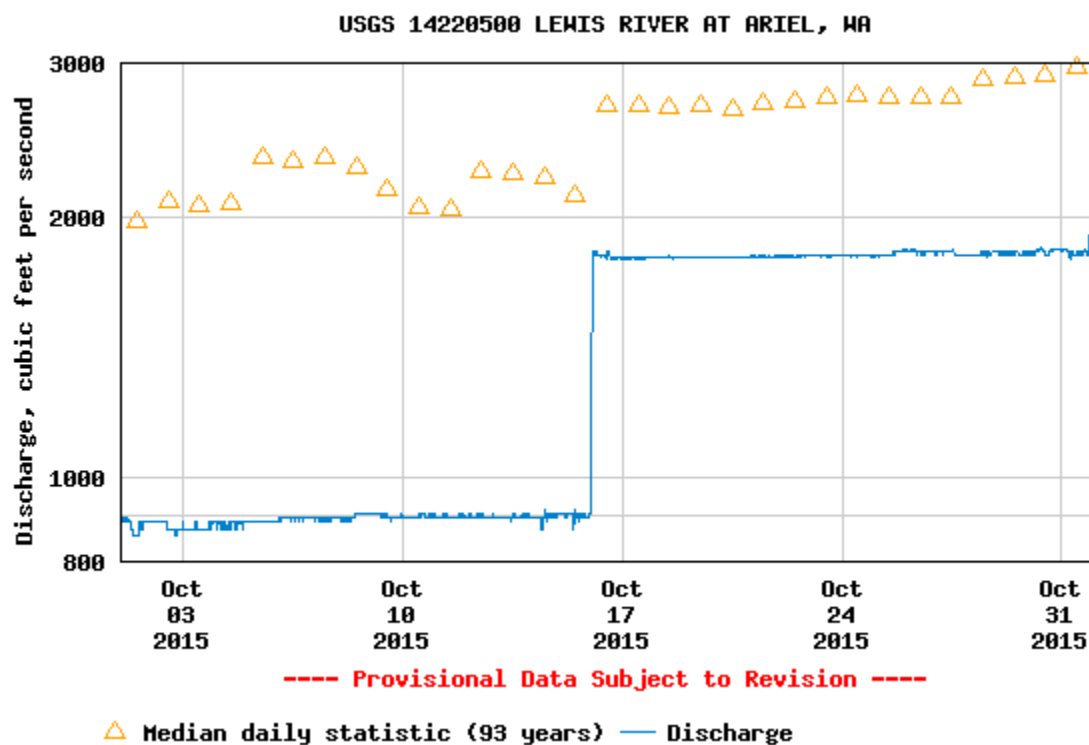
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Fish Facility Report
Swift Floating Surface Collector
October 2015

Day	Coho			Chinook			Steelhead				Cutthroat			Bull Trout			Planted Rainbow	Total
	fry	parr	smolt	fry	parr	smolt	fry	parr	smolt	kelt	fry	< 13 in	> 13 in	fry	< 13 in	> 13 in		
01																		
02																		
03																		
04																		
05																		
06																		
07																		
08																		
09																		
10																		
11																		
12																		
13																		
14																		
15																		
16	0	2	10	0	0	14	0	0	0	0	0	0	0	0	0	0	0	26
17																		
18	0	0	6	0	0	8	0	0	0	0	0	0	0	0	0	0	0	14
19	0	0	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	3
20	0	0	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0	3
21	0	0	2	0	0	1	0	0	1	0	0	0	0	0	0	0	0	4
22	0	2	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	5
23	0	2	17	0	1	17	0	1	1	0	0	0	0	0	0	0	0	39
24	0	0	9	0	1	12	0	0	0	0	0	0	0	0	0	0	0	22
25	0	0	15	0	4	4	0	0	0	0	0	0	0	0	0	1	0	24
26																		
27	0	0	3	0	4	7	0	0	0	0	0	0	0	0	0	0	0	14
28	0	1	8	0	1	2	0	0	0	0	0	0	0	0	0	0	0	12
29	0	0	4	0	0	2	0	1	0	0	0	0	0	0	0	0	0	7
30	0	1	6	0	0	3	0	0	1	0	0	0	0	0	0	0	0	11
31	1	6	18	0	0	4	0	0	1	0	0	0	0	0	1	0	0	31
Monthly	1	14	100	0	11	80	0	2	5	0	0	0	0	0	1	1	0	215
Annual	5825	4254	23278	0	200	4308	0	24	1204	31	1	594	48	0	15	2	1848	41631