

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

Date & Time: Thursday, February 12, 2015
9:00 a.m. – 12:15 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 1/8/15 Meeting Notes ➤ Comment & accept Agenda and 1/8/15 Meeting Notes
9:15 a.m.	<ul style="list-style-type: none"> ○ Study/Work Product Updates ○ Eulachon Consultation - Status ○ Woodland Release Ponds - Status ○ Hatchery Upgrades - Status ○ Acclimation Ponds - Status ○ Merwin Upstream Passage – Status ○ Swift Floating Surface Collector – Status
9:30 a.m.	2014/2015 Lewis River Mainstem Fish Habitat Restoration grant proposal presentation – Adam Haspiel (USFS)
9:50 a.m.	2014/2015 Lewis River Side Channel 5 grant proposal presentation – Adam Haspiel (USFS)
10:15 a.m.	Break
10:30 a.m.	2014/2015 North Fork Lewis River RM13.5 Restoration Project, Phase II grant proposal presentation – Peter Barber (LCFEG)
11:00 a.m.	Swift Collection Operation Discussion
11:30 a.m.	Fish release procedure and evaluation at Lewis River Hatchery
11:45 a.m.	Production Numbers for 2016 Discussion – Spring Chinook
12:00 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#
12:15 p.m.	Adjourn - Please bring your lunch should the meeting extend beyond the lunch hour.

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
February 12, 2015
Merwin Hydro Control Center
Ariel, WA

ACC Participants Present (15)

Erik Lesko, PacifiCorp Energy
 Kim McCune, PacifiCorp Energy
 Chris Karchesky, PacifiCorp Energy
 Frank Shrier, PacifiCorp Energy
 Adam Haspiel, USDA Forest Service
 Baker Holden, USFS (via conference)
 Peggy Miller, WDFW (via conference)
 Michelle Day, NMFS
 Eric Kinne, WDFW
 Shannon Wills, Cowlitz Indian Tribe
 Diana Gritten-MacDonald, Cowlitz PUD
 Jeremiah Doyle, PacifiCorp Energy

Guest

Pete Barber, LCFEG
 Allen Thomas, Columbian
 Richard Turner, NMFS (via conference)

Calendar:

March 12, 2015	ACC Meeting	Merwin Hydro
April 9, 2015	ACC Meeting	Merwin Hydro

Assignments from February 12, 2015 meeting	
Shrier/McCune: Add the Fish Release Procedure and Evaluation at Lewis River Hatchery topic to the August 2015 meeting agenda.	Complete – 3/12/15
Kinne/Lesko: Fish Release Procedure - Investigate if first pass water can be utilized from the adult sorting; temperature solution; costs associated and report to the ACC at March 2015 ACC Meeting.	Pending as of 3/12/15
Kinne/Day: Swift Collection Operation Discussion – Discuss and submit comment to the ACC <u>on or before close of business Friday, February 20, 2015.</u>	Complete – 2/26/15

Assignments from January 8, 2015 meeting	
Lesko: Follow up with PacifiCorp’s permitting department to confirm if a DNR lease is required for Speelyai Hatchery Intake and report back to the ACC and Aaron Roberts (WDFW).	Do not need DNR lease. Complete 2/12/15

Assignments from December 11, 2014 meeting	
Lesko: Follow up with WDFW and inquire about the status of the 2012/2013 lower river coho abundance survey data for 2013 H&S Annual Report. Information still pending as of 3/11/2014.	As of 3/12/15 Kinne checking with WDFW

Opening, Review of Agenda and Meeting Notes

Frank Shrier (PacifiCorp) called the meeting to order at 9:05 a.m. and reviewed the agenda and assignments. The ACC agreed to move the Fish Release Procedure and Evaluation at Lewis River Hatchery topic to the top of the agenda.

The January 8, 2015 meeting notes were reviewed and approved at 9:15 am without change. McCune will finalize the January 8, 2015 meeting notes for posting to the Lewis River website.

Fish Release Procedure and Evaluation at Lewis River Hatchery

Eric Kinne (WDFW) informed the ACC attendees that we may not have the needed broodstock numbers to meet following release projections for 2016:

Lower Lewis River - 1.25 million

Upper Lewis River – 100,000

The ACC may need to decide if we short the upper river or lower river programs. 2015 will be the out-migration year and the ACC will have another year of data before a decision is made, however, a decision may need to be made as early as October 2015. Concern was expressed about meeting broodstock needs in later years.

The ACC agreed to discuss this topic in greater detail in August and make a decision about how to proceed with 2016 release numbers.

Study/Work Product Updates

Eulachon Consultation

Eulachon Biological Opinion (BiOp) was submitted to the FERC by NMFS on February 3, 2015.

Woodland Release Ponds

Project is delayed for one year as the DNR lease review process is a minimum of one year. Shrier also noted that the DNR will not review the lease until and all other permits are in place. PacifiCorp is proceeding with securing all permits needed in order to secure a lease with the DNR.

Hatchery Upgrades:

Two projects remain as part of Schedule 8.7 of the Settlement Agreement.

Speelyai Hatchery Intake Modifications: All permits are in place and project on schedule. DNR lease not required.

Lewis River Downstream Intake: In order to be compliant with ESA and the Settlement Agreement, PacifiCorp is proceeding with completion; work window is June 1, 2015 – October 1, 2015.

Acclimation Pond/Crab Creek, Clear Creek and Muddy River Status

Karchesky (PacifiCorp) reported that both the Clear Creek and Muddy River site were watered up during the week of February 2nd, 2015. Other than some minor repairs, the Clear Creek site is ready to be stocked. Approximately 25,000 to 30,000 smolts are scheduled to be planted.

Despite routine screen cleaning and several flushing events, low dissolved oxygen levels continue to be an issue at the Muddy River site. Dissolved oxygen levels ranging between 4 and 5 mg/L have been consistently recorded. The low oxygen levels are being caused by an iron oxidizing bacteria that is prevalent in the pond (see picture below). Because of these poor water quality conditions, **the ACC agreed to stock the pond with no more than 5,000 fish (or less at PacifiCorp's discretion) this year. The remaining fish will be directly released at the Clear Creek Bridge similar to 2014.** Discussion took place about building a temporary tank for 2016 and concern about fish health was expressed.



Acclimation fish will be tagged with PIT tags on February 25th and 26th, 2015; stocking to begin in early March.

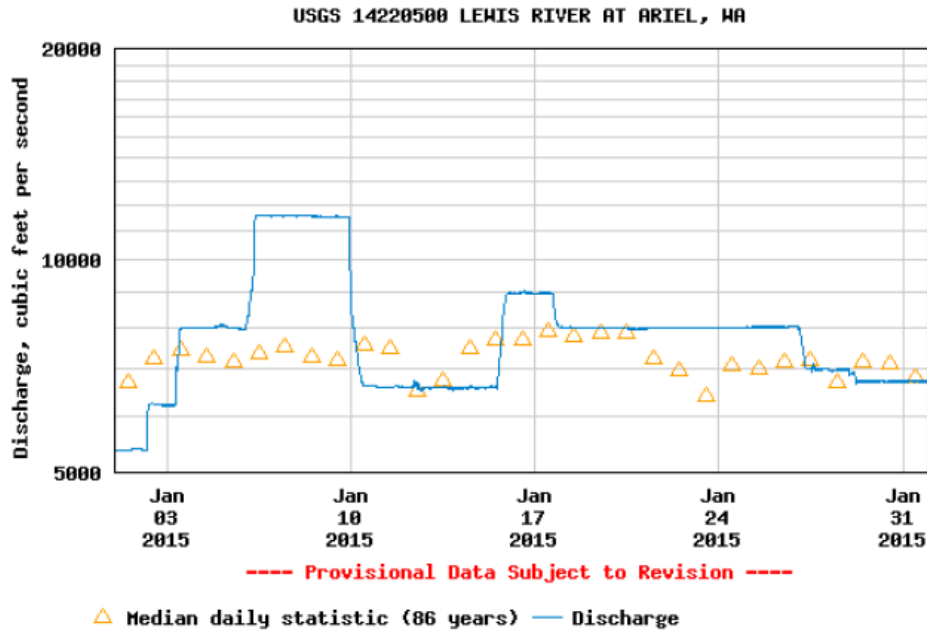
The Crab Creek Acclimation Pond is scheduled to be in operation in spring 2016.

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

During the month of January, a total of 898 fish were captured at the Merwin Fish Collection Facility; the majority (95%) of these fish were hatchery winter steelhead (n=850) followed by blank wire tag (BWT) supplementation winter steelhead (n=27). Five natural origin winter steelhead were captured and returned to the lower river. All hatchery fish and late run natural origin coho were transported to Lewis River Fish Hatchery and processed by WDFW. In addition, other species collected in January included seven resident rainbow trout. The Merwin trap did not operate on January 4th and January 18th-19th due to scheduled outages and maintenance activities. The Auxiliary Water Supply (AWS) system, which can boost attraction flow up to 400 cfs, was operated daily. The Ladder Water Supply (LWS) was operated daily

throughout the month of January. River flow below Merwin Dam ranged between approximately 3,350 cfs to 11,600 cfs during January.

Discharge, cubic feet per second



Karchesky (PacifiCorp) informed the ACC attendees that a 2-day outage is scheduled for February 19th and 20th to install radio telemetry equipment in the ladder portion of Merwin Trap as part of the Adult Trap Efficiency Study.

Upstream Transport ([Attachment A](#))

To date, 27 (17 m: 10 f) BWT winter steelhead have been transported and released upstream of Swift Reservoir.

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

The ACC were informed that recently debris loading at the FSC has been high. Consequently, it has been necessary to turn the FSC off to clean out the fish holding tanks. To date, these outages have only been for 2 to 3 hours; PacifiCorp will inform the ACC if the duration of these outages increases.

A total of 1,390 juvenile fish were collected during the month of January. The majority (57 percent) of these fish were coho (n=796), followed by spring Chinook (n=501), cutthroat trout (n=45), hatchery rainbow trout (n=35), bull trout (n=7), and steelhead (n=6). All hatchery rainbow trout, bull trout, and salmonid fry (<60mm) were returned back to Swift Reservoir. The FSC continuously ran throughout the month of January – it was returned to service January 1, 2015 once the smolt water supply valve (damaged in late December 2014) was repaired. No fish were sampled on January 3, 2015.

Swift Collection Operation Discussion (Summer Operation Protocols)

In accordance with the ACC request, Karchesky (PacifiCorp) provided a memorandum titled, *Operational Guidelines in Consideration of Suspending Summer Operations at the Swift Floating Surface Collector (FSC) – January 2015 (Attachment B)* distributed to the ACC via email on January 21, 2015. The memorandum outlined certain criteria and assumptions to be considered as a new operational protocol for when to turn the FSC off each year.

Discussion took place about adaptive management, fish health/mortality, changes of conditions, benchmark for criteria and notification to the ACC prior to maintenance.

The ACC recommended the following protocol to proceed:

PacifiCorp will proceed with shutting down as appropriate with fish health as a priority and report to the ACC if it sees mortality rates rising.

Before a final decision is made Erik Kinne (WDFW) and Michelle Day (NMFS) would like further time to review and opportunity to comment.

They will discuss and submit comment to the ACC on or before close of business Friday, February 20, 2015.

Break 10:25am

Reconvene: 10:35am

2014/2015 Aquatic Fund Full Proposal Project Presentation

Lewis River Mainstem Fish Habitat Restoration – Adam Haspiel (USFS)

Haspiel reviewed the project description and provided project site photos to restore approximately 1,000' of the Mainstem Lewis River with approximately 15 structures composed of 200 pieces of large woody material with rootwads. Target Species are Coho Salmon, Chinook, Salmon, Steelhead and Trout, as more fully detailed in the presentation at the following link:

http://www.pacificorp.com/content/dam/pacificorp/doc/Energy_Sources/Hydro/Hydro_Licensing/Lewis_River/2015_AQ_Fund_USFS_Mainstem.pdf

In response to Kim McCune's (PacifiCorp) question no landowner access is required as the project and its access is all on Forest Service lands.

Funds requested for this project is \$72,000*

* Opportunity to save \$6,000 on NEPA if both Forest Service projects are funded

2014/2015 Aquatic Fund Full Proposal Project Presentation

Lewis River Side Channel 5 Restoration – Adam Haspiel (USFS)

Haspiel reviewed the project description and provided project site photos to restore approximately 800' of an existing old side channel at the inlet and outlet, excavating excess deposited material and adding approximately 100 pieces of large woody material in 10 structures. The project also includes obtaining an in-depth site survey using a total station to map the entire project design parameters. The target Species-Spring Chinook (acclimation pond fish), Coho, Salmon and Steelhead, as more fully detailed in the presentation at the following link:

http://www.pacificorp.com/content/dam/pacificorp/doc/Energy_Sources/Hydro/Hydro_Licensing/Lewis_River/2015_AQ_Fund_USFS_SideChannel_5.pdf

In response to Kim McCune's (PacifiCorp) question no landowner access is required as the project and its access is all on Forest Service lands.

Funds requested for this project is \$88,000*

* Opportunity to save \$6,000 on NEPA if both Forest Service projects are funded

2014/2015 Aquatic Fund Full Proposal Project Presentation

Lewis River RM 13.5 Restoration Project Grant Proposal Presentation – Pete Barber (LCFEG)

Barber reviewed the project description and provided project site photos to create a side channel sediment wedge to enhance connectivity and install large woody material to cover in 700' of channel at the confluence of the 2010 side channel project. The project also includes creation of an 1,850' low flow side channel to provide new spawning and complex rearing habitat. In addition, a minimum of 2.0 acres of invasive plant species will be removed and under-planting with greater than 5,000 native riparian plantings. The target species are juvenile rearing of Chinook, Coho, and Steelhead and adult spawning of Coho, Steelhead and possibly Chum as more fully detailed in the presentation at the following link:

http://www.pacificorp.com/content/dam/pacificorp/doc/Energy_Sources/Hydro/Hydro_Licensing/Lewis_River/2015_AQ_Fund_LCFEG_RM_13.5.pdf

In response to Kim McCune's (PacifiCorp) question the land owner is Sam Kaiser for property access and possibly one other landowner permission is needed.

Funds requested for this project is \$77,000*

*Project is contingent on the award of SRFB funds in the amount of \$260,100. If SRFB funds are not received the ACC funds will be returned.

McCune provided links to each full proposal and an evaluation matrix to the ACC on February 2, 2014, and will email the presentation links to the ACC.

Aquatic Fund Project comments are due on or before March 3, 2015.

Release Pond Alternative Discussion

Lesko provide a memorandum titled, *Site Visit and Fish Release Procedure and Evaluation at Lewis River Hatchery – January 15, 2015 (Attachment C)* for ACC review outlining the efforts of the subgroup to evaluate juvenile fish releases from the Lewis River Hatchery intermediate raceways. The subgroup conducted a site visit to insure smolts safely pass the existing structure, and they viewed the drain structure but determined it is not safe for smolts and the potential for injury is higher than originally thought.

The memo provided by PacifiCorp includes recommendations going forward and request the ACC discuss an alternate site or continue use of the existing method.

PacifiCorp recommends continuing with direct release protocols until the construction is complete in Fall 2016.

Kinne (WDFW) recommended consideration of using Pond 15 as a potential option with the outlet structure modifications or, a portable raceway at the release structure for the adult sorting facility.

Shrier expressed that the reintroduction program is in its infancy and we may end up killing fish by handling them in a temporary facility. He recommends that the current release protocol ride until the Woodland release ponds are built. Shannon Wills (Cowlitz Indian Tribe) agreed with this approach.

Discussion update regarding use of Lewis River Hatchery as an interim release facility for smolts from the Swift FSC.:

Lesko briefed the ACC regarding discussions within the subgroup tasked with evaluating the use of the Lewis River Hatchery as a release location for smolts from the FSC. Based on information and observations during a scheduled site visit, PacifiCorp does not support the use of the Lewis River Hatchery's existing drain structure as a safe or effective means to release smolts. PacifiCorp's recommendation and question to the ACC is to either select an alternate location or method, or continue to direct release smolts into the river at either the Island or Pekins Ferry access areas. Several questions and concerns were identified during this discussion:

- The use of Pond 15 is problematic because mortality is not easily quantified
- Construction of temporary raceway (near the adult return pipe) may be possible, but requires first pass water;
- Continue with direct release one more year until the release ponds in Woodland are complete (in 2016). This may be preferable than trying to rig a temporary release raceway/trough in the interim. DNR won't entertain a lease for construction of the approved recovery ponds until all other permits are in place, but a 2016 completion for the release ponds is anticipated
- The burden on WDFW staff if Pond 15 if the Lewis River Hatchery is used as a temporary release facility;
- Can the Lewis River Hatchery adult release pipe be modified to accommodate smolt releases (needs fresh source water)?

Kinne and Lesko will investigate if first pass water can be utilized if it is found that a temporary raceway is feasible near the adult return pipe Lesko and Kinne will also discuss with hatchery staff regarding any logistical issues. Update will be provided at the March ACC meeting.

Comments are due on or before March 3, 2015.

<12:00 p.m. meeting adjourned>

Agenda items for March 12, 2015

- Review February 12, 2015 Meeting Notes
- **Aquatic Fund Full Proposals – Funding Decision-Making Meeting**
- Impacts of coho in Upper Watershed – Dr. Al Chokhachy
- Study/Work Product Updates

Public Comment

General discussion took place regarding hyporheic flows; mapping of cold water, upwelling/inputs and use of probe on a cable to measure water temperatures.

Next Scheduled Meetings

March 12, 2015	April 9, 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

- Notes from 1/8/15
- Agenda from 2/12/15
- **Attachment A** – Lewis River Fish Passage Report – January 2015
- **Attachment B** - Operational Guidelines in Consideration of Suspending Summer Operations at the Swift Floating Surface Collector (FSC) – January 2015
- **Attachment C** - Site Visit and Fish Release Procedure and Evaluation at Lewis River Hatchery – January 15, 2015

Lewis River Fish Passage Report

January 2015

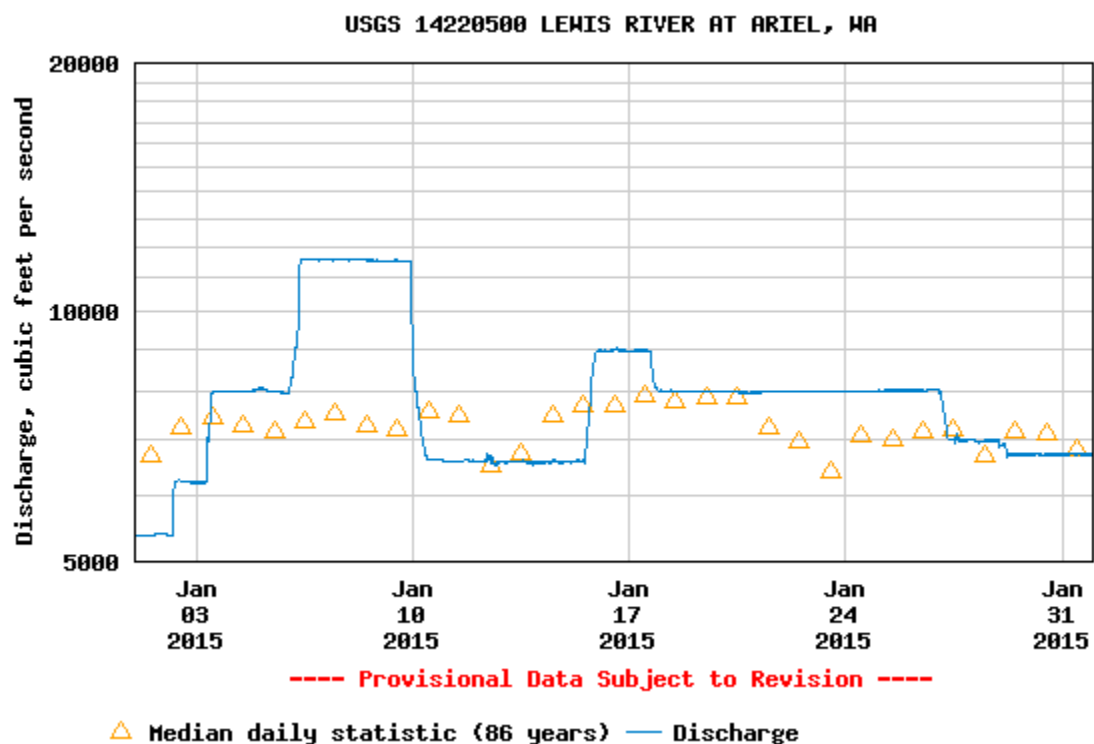
Merwin Fish Collection Facility and General Operations

During the month of January, a total 898 fish were captured at the Merwin Fish Collection Facility; the majority (95%) of these fish were hatchery winter steelhead (n=850) followed by blank wire tag (BWT) supplementation winter steelhead (n=27). Five wild winter steelhead were captured and returned to the lower river. All hatchery fish and late run wild coho were transported to Lewis River Fish Hatchery and processed by WDFW. In addition, other species collected in January included seven resident rainbow trout. The Merwin trap did not operate on January 4th and January 18th-19th due to scheduled outages and maintenance activities.

The Auxiliary Water Supply (AWS) system, which can boost attraction flow up to 400 cfs, was operated daily. The Ladder Water Supply (LWS) was operated daily throughout the month of January.

River flow below Merwin Dam ranged between approximately 3,350 cfs to 11,600 cfs during January.

Discharge, cubic feet per second



Upstream Transport

To date, 27 (17 m: 10 f) BWT winter steelhead have been transported and released into the upstream of Swift Reservoir in 2015.

Swift Floating Surface Collector

A total of 1,390 juvenile fish were collected during the month of January. The majority (57 percent) of these fish were coho (n=796), followed by spring Chinook (n=501), cutthroat trout (n=45), hatchery rainbow trout (n=35), bull trout (n=7), and steelhead (n=6). All hatchery rainbow trout, bull trout, and salmonid fry (<60mm) were returned back to Swift Reservoir. The FSC continuously ran throughout the month of January – it was returned to service January 1, 2015 once the smolt water supply valve (damaged in late December 2014) was repaired. No fish were sampled on January 3, 2015.

Fish Facility Report
Swift Floating Surface Collector
January 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	0	47	4	0	0	10	0	0	0	0	0	4	0	0	0	0	0	65
03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04	0	0	4	0	0	10	0	0	0	0	0	0	0	0	0	0	0	14
05	0	2	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	5
06	0	6	3	0	0	5	0	0	0	0	0	1	0	0	0	0	0	15
07	0	11	7	0	0	5	0	0	0	0	0	4	0	0	0	0	0	27
08	0	11	7	0	0	6	0	0	0	0	0	1	0	0	0	0	2	27
09	0	5	11	0	0	25	0	0	2	0	0	3	0	0	0	0	4	50
10	0	9	7	0	0	18	0	0	0	0	0	0	0	0	0	0	0	34
11	0	1	5	0	0	10	0	0	0	0	0	1	0	0	0	0	0	17
12	0	2	1	0	1	22	0	0	0	0	0	1	0	0	0	0	0	27
13	0	8	3	0	0	14	0	0	0	0	0	1	0	0	0	0	2	28
14	0	29	1	0	0	14	0	0	0	0	0	1	0	0	1	0	0	46
15	0	30	9	0	0	26	0	0	0	0	0	1	0	0	0	0	1	67
16	0	14	0	0	0	43	0	0	0	0	0	2	0	0	0	0	1	60
17	0	20	5	0	0	22	0	0	0	0	0	6	0	0	0	0	0	53
18	0	9	0	0	0	18	0	0	0	0	0	2	0	0	0	0	1	30
19	0	12	2	0	0	24	0	0	0	0	0	3	0	0	0	0	2	43
20	0	27	42	0	0	32	0	0	1	0	0	2	0	0	1	0	4	109
21	0	44	25	0	0	27	0	0	0	0	0	3	0	0	1	0	3	103
22	0	28	10	0	0	46	0	0	0	0	0	3	0	0	0	0	0	87
23	0	20	1	0	0	21	0	0	1	0	0	1	0	0	0	0	3	47
24	0	6	1	0	0	10	0	0	0	0	0	0	0	0	0	0	0	17
25	0	33	1	0	0	13	0	0	0	0	0	0	0	0	0	0	4	51
26	0	33	4	0	2	10	0	0	1	0	0	0	0	0	1	0	1	52
27	0	30	0	0	2	6	0	0	0	0	0	0	0	0	0	0	2	40
28	0	11	0	0	0	7	0	0	0	0	0	0	0	0	1	0	0	19
29	1	37	1	0	0	11	0	0	0	0	0	1	0	0	1	0	3	55
30	0	47	2	0	4	21	0	1	0	0	0	0	0	0	1	0	1	77
31	0	106	0	0	0	14	0	0	0	0	0	4	0	0	0	0	1	125

Monthly	1	638	157	0	9	492	0	1	5	0	0	45	0	0	7	0	35	1390
Annual	1	638	157	0	9	492	0	1	5	0	0	45	0	0	7	0	35	1390

MEMO

Operational Guidelines in Consideration of Suspending Summer Operations at the Swift Floating Surface Collector (FSC)

Prepared by PacifiCorp

Draft: January, 2015

Background

As stipulated in the new operating License for the Lewis River Fish Passage Program (Phase I), PacifiCorp is required to operate the Swift Floating Surface Collector (FSC) daily on an annual basis for the duration of the License. This decision to operate the FSC continuously was originally made in large part given the limited amount of information at the time regarding anadromous fish run timing in the upper Lewis River Basin and how run timing may be affected by seasonal reservoir conditions. However, as more information becomes available, it is important to periodically evaluate the operational procedures of the FSC in order to ensure the facility is being operated in a manner beneficial to the capture and safe passage of out-migrating fishes.

After two years of operation, it has been shown that warm surface water temperature in Swift Reservoir correlates to both a reduction in the rate of target species collected by the FSC and an increase in mortality rates. This correlation has been observed from early-July when the spring out-migration period is coming to a close and remains prevalent through September. During this period, surface water temperatures in the reservoir exceed 18⁰C and the reservoir becomes thermally stratified. Fish numbers collected at the FSC throughout the summer and early fall remain almost non-existent due to these prevailing warm conditions, however those fish that are collected experience a high rate of mortality. By mid-October reservoir surface water temperatures begin to cool and shortly after fish collection numbers at the FSC begin to increase.

During the December 2014 monthly coordination meeting, PacifiCorp presented these findings to the Aquatic Coordination Committee (ACC). Included in the meeting was discussion on the need for turning the FSC off during this critical time period, particularly when surface water temperatures increase beyond what is thermally tolerated by anadromous salmonids. (The visual references used during this discussion are included at the end of this document). It was also discussed that this outage period would allow PacifiCorp to complete annual maintenance activities on the FSC and prepare the facility for winter operation. The following section is a summary of the protocols agreed upon by the ACC that would be used to guide operational decisions for turning the FSC off in the summer and back on in the fall.

New Operational Protocols

It was agreed that an adaptive management type approach would be best mode of operation for determining when to turn the FSC off each year. The reason for this is that conditions can change from year to year. PacifiCorp will notify the ACC prior to the maintenance outage for the FSC that coincides with warm surface water.

- Key criteria and assumptions that will be considered for suspending daily operations of the FSC in the Summer:
 - Maximum daily water temperature recorded in the FSC reaches 18⁰C;
 - Daily catch rates in the FSC have decreased by 50 percent for three consecutive days;
 - Daily rates recorded for collection mortality (S_{COL}) or transport mortality (S_{TRANS}) exceed the standard of 0.5 percent for three consecutive days.

- Returning the FSC to daily operation in the fall:
 - The FSC will be returned to service after scheduled maintenance activities are completed. This occurring no later than the fifteenth day of October;
 - Maximum daily water temperature recorded in the FSC remains below 18⁰C for three consecutive days;

Visual references provided during the December 2014 ACC meeting:

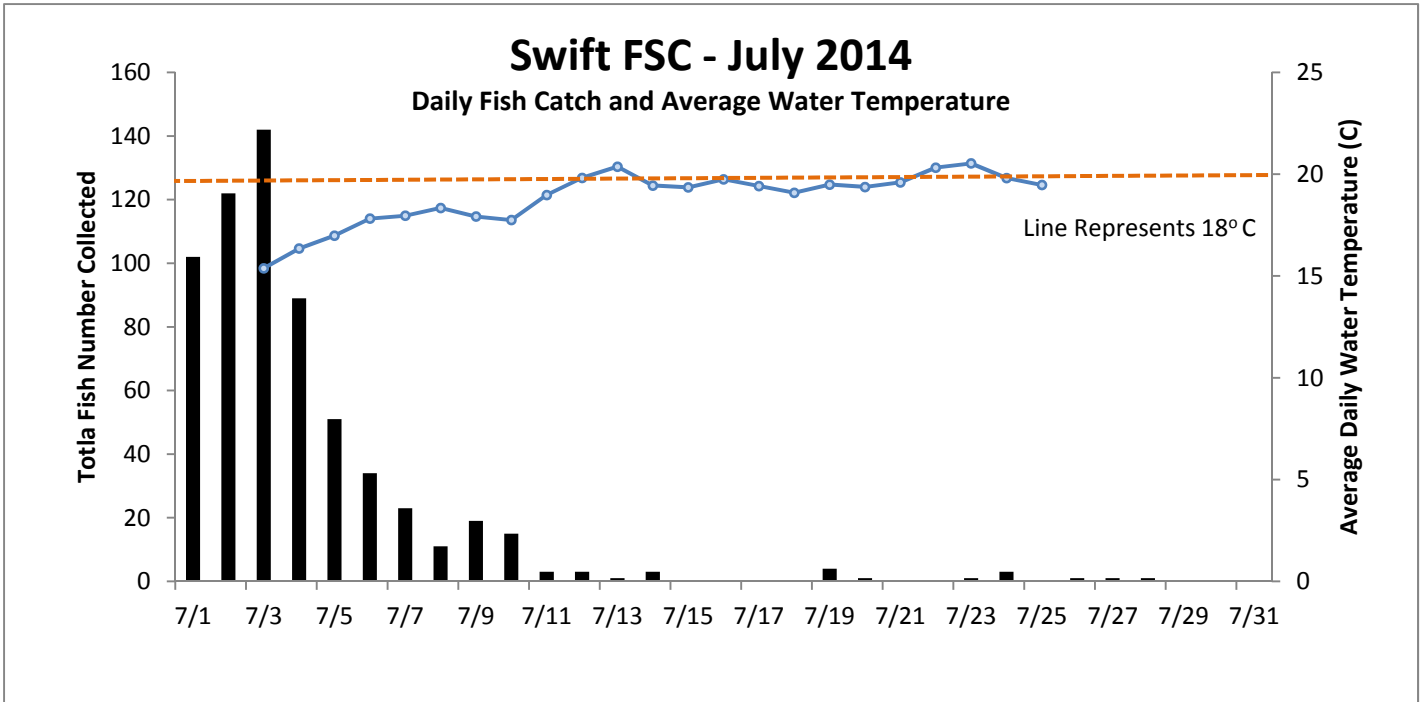


Figure 1. Daily total catch of smolts at the Swift FSC in July 2014.

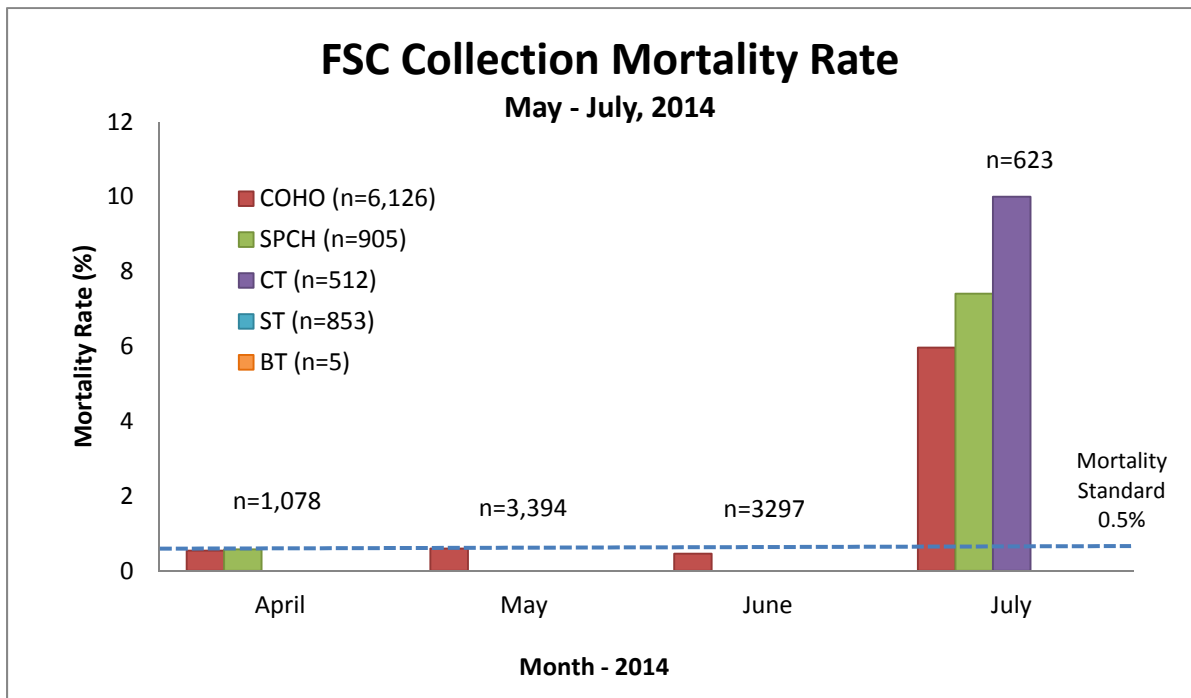


Figure 2. Monthly mortality rates recorded for all target species at the Swift FSC during spring 2014. The dotted line represents the mortality standard of 0.5%.

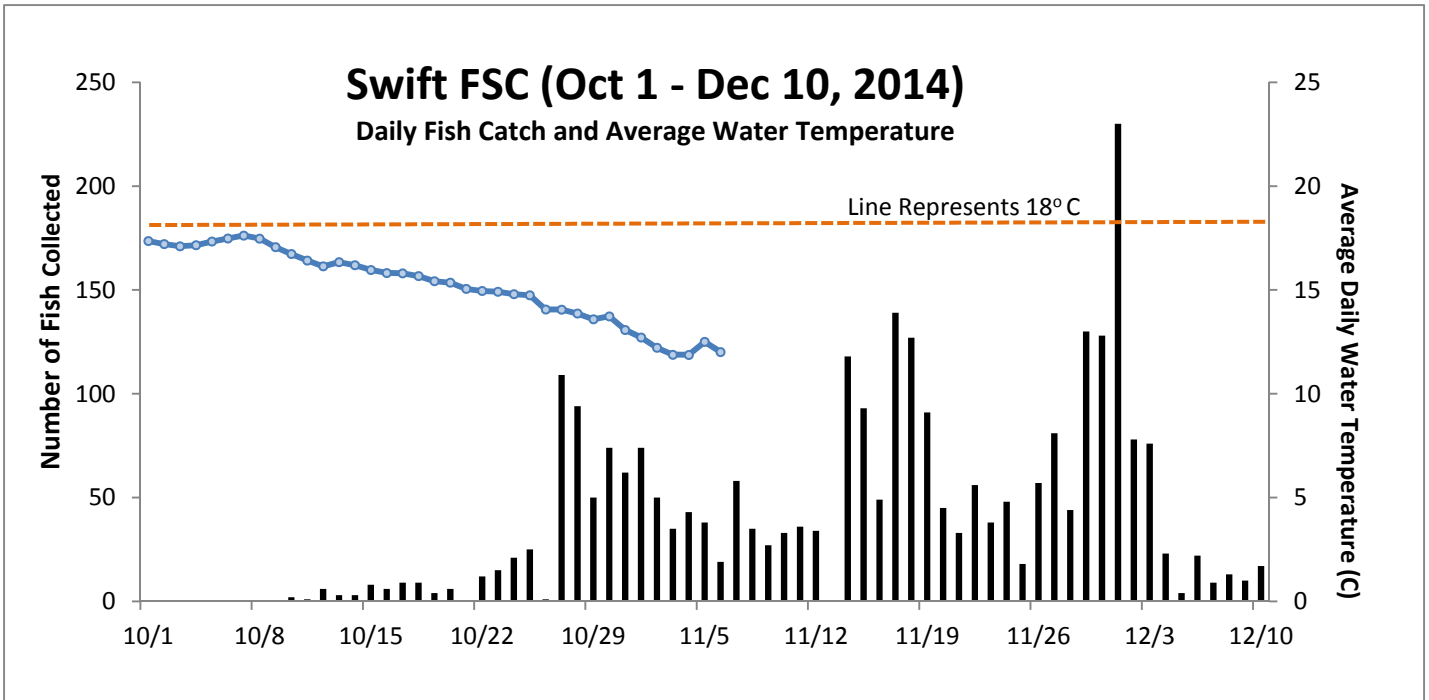


Figure 3. Daily total catch of smolts at the Swift FSC during October through early December, 2014.

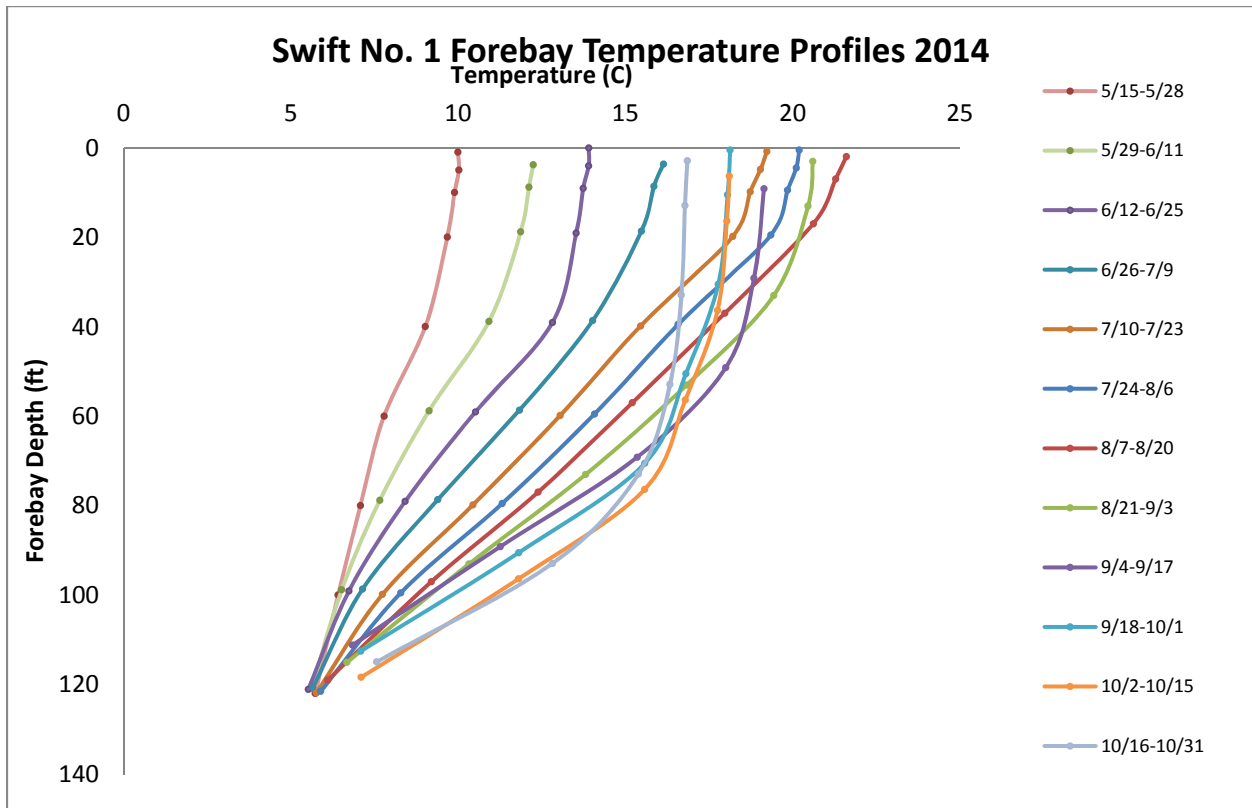


Figure 4. Swift Reservoir forebay temperature profiles (May – Oct, 2014).

January 15, 2015

Mike Chamberlain – WDFW
Michelle Day – NOAA Fisheries
Pat Frazier – WDFW
Chris Karchesky – PacifiCorp
Eric Kinne – WDFW

Kim McCune – PacifiCorp
Todd Olson – PacifiCorp
Aaron Roberts – WDFW
Frank Shrier – PacifiCorp
Shannon Wills – Cowlitz Indian Tribe

From: Erik Lesko – PacifiCorp

Re: Site visit and fish release procedure and evaluation at Lewis River hatchery

On January 13, 2015, PacifiCorp biologists Erik Lesko and Chris Karchesky met with Mike Chamberlain (Lewis River Hatchery Manager) to discuss protocols and the ability to evaluate juvenile fish releases from the Lewis River Hatchery intermediate raceways. We inspected the discharge gallery and weir box to determine if there was a means to effectively capture and safely handle fish after release from the intermediate raceways. Information from this assessment would ultimately be used to determine whether smolts from the Swift Floating Surface Collector (FSC) held in the raceways could be safely released to river using the existing drain configuration at the hatchery.

Based on our inspection and discussing operational protocols with Mike Chamberlain, we believe that the intermediate raceways do not provide (1) a safe route for fish to reach the river and, (2) a means to capture and handle fish to assess injury as originally proposed.

Given the potential for injury observed during the inspection we do not propose moving forward with an evaluation of the intermediate raceway release option. Rather, we propose the group looks for an alternate interim release location or continues the interim practice of direct releasing smolts into the river until the Woodland Release Pond is completed.

I have attached the following pictures to help illustrate our findings during the inspection:

Figure 1. (Discharge Gallery): Structural framework, piping, chains and cables can injure fish that would travel or reside in this area. Smolt would have to traverse the entire length of the gallery to reach the discharge pipe drain.

Figure 2. (Discharge Gallery Outlet Drain): The drain is partially blocked by the permanent ladder.

Figure 3. (Weir Box): The inlet pipe discharges into the concrete weir box and while aligned with the drain there is a potential that fish discharged into the weir box will collide with the cement walls surrounding the drain pipe. This risk increases as flow increases to 4,000 gpm.

Figures 4. (Pipe condition): The piping to the weir box has a number of rust nodules and is not a smooth route and has the potential for descaling, bruising and lacerations. Outlet pipe to river is similar.

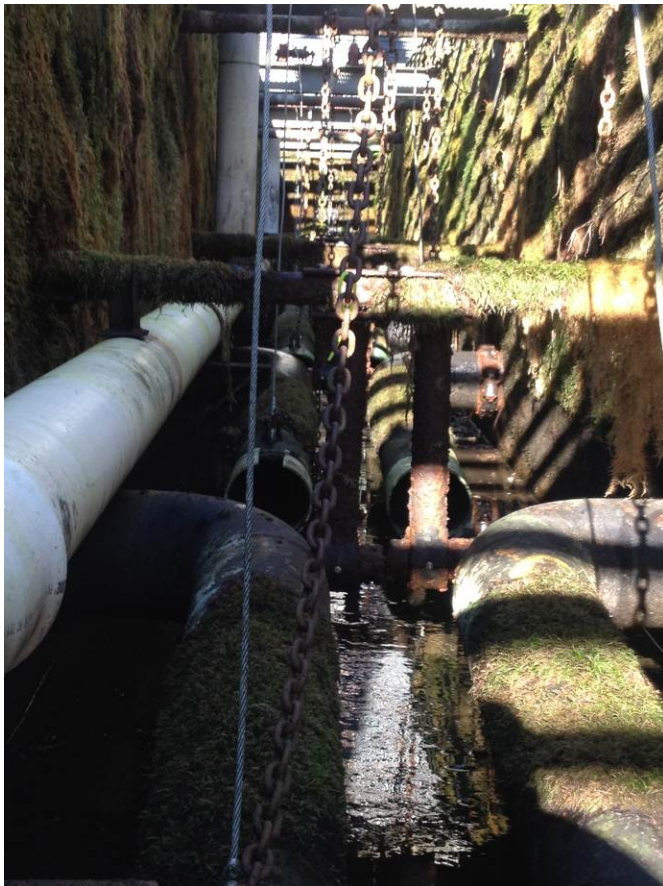


Figure 1: Discharge Gallery for intermediate raceways



Figure 2: Discharge drain from gallery



Figure 3: Weir Box indicating incoming pipe from gallery and discharge pipe to river



Figure 4: Weir box inlet pipe condition