LEWIS RIVER AQUATIC COORDINATION COMMITTEE

Facilitator: ERIK LESKO
503-412-8401

Location: SKYPE MEETING ONLY

Date: DECEMBER 10, 2020

Time: 9:30 AM – 1:15 PM

Agenda Items

9:30 a.m.	Welcome ➢ Review Agenda, ACC 11/12/20 Meeting Notes ➢ Comment & Accept Agenda, 11/12/20 Meeting Notes
10:00 a.m.	Public Comment Opportunity
10:15 a.m.	2020/2021 Aquatic Fund Project Presentations (30 minutes each presentation, to include Q&A) ➢ LCFEG - SW Washington Nutrient Enhancement Coalition: Lewis River Support ➢ USFS - Clear Creek and Clearwater Creek Restoration Design ➢ USFS – Rush Creek Side Channel ➢ USFS - Pepper Creek Culvert Removal and Road Hydro-Stabilization
12:15 p.m.	**Break and Working Lunch**
12:30 p.m.	Study/Work Product Updates ○ Flows/Reservoir Conditions Update ○ ATS Update ○ Fish Passage Update
1:00 p.m.	➢ Next Meeting's Agenda ➢ Public Comment Opportunity Note: all meeting notes and the meeting schedule can be located at: https://www.pacificorp.com/energy/hydro/lewis-river/acc-tcc.html

FINAL Meeting Notes
Lewis River License Implementation
Aquatic Coordination Committee (ACC) Meeting
December 10, 2020
Skype Meeting Only

ACC Representatives Present (16)
Bridget Moran, American Rivers
Eli Asher, Cowlitz Indian Tribe
Amanda Froberg, Cowlitz PUD
Josh Ashline, NMFS
Scott Anderson, NMFS
Kim McCune, PacifiCorp
Chris Karchesky, PacifiCorp
Erik Lesko, PacifiCorp
Jeremiah Doyle, PacifiCorp
Joshua Jones (JD), USDA FS
Kate Day, USDA FS
Jeffrey Garnett, USFWS
Peggy Miller, WDFW
Josua Holowatz, WDFW
Bryce Glaser, WDFW
Bill Sharp, Yakama Nation

Guests (4)
Matt Harding, Northwoods
Maurice Frank, LCFEG
Greg Robertson, USFS
Keith Hyde, Assoc of NW Steel headers

Calendar:

January 14, 2021	ACC Meeting	TEAMS Meeting

Assignments from December 10, 2020	**Status**
Lesko/Kimmick/McCune: Follow up on Hyde's requests regarding extension of Swift boat ramp and fish cleaning stations.	**Complete – 1/14/21**
Lesko: Follow up first of the year with Harding to discuss fish stranding survey schedule.	

Assignments from August 13, 2020	**Status**
Romanski: Jim Byrne (Trout Unlimited) requested Tim Romanski (USFWS) investigate why it was decided in 2005 and find out how and why the Merwin trap design was settled on and specified.	**Ongoing**

Opening, Review of Agenda and Meeting Notes
Erik Lesko (PacifiCorp) called the meeting to order at 9:34am and reviewed the agenda. No additions to the agenda were requested.

Lesko also reviewed the November 12, 2020 meeting notes to include edits and comments received from WDFW. The ACC approved the November 12, 2020 meeting notes at 9:41am to include clarifying edits received from WDFW. Edits will be accepted, and the final meeting notes posted to the Lewis River website.

Public Comment
Keith Hyde (Government Affairs Director for Columbia River Chapter of NW Steel headers) expressed that he wants to discuss the following two items with the ACC:

Boat launch at Swift – Hyde expressed that there was an agreement between WDFW and PacifiCorp to open up Swift boat launch later in the year but keep it open later in the season for an additional 30 days for fishing opportunities. There is only one boat launch available up on Swift. The issue is when PacifiCorp closes Swift boat launch it removes fishing opportunities for a large number of recreational anglers to fish on Swift to include probably a dozen guides to use this time to supplement their income when there is not a lot to for other opportunities. This year approximately 35 fishing days were lost when the boat launch was closed early. Hyde would like to ask for a solution to this such as extending the boat ramp at Swift to assist with continuing the fishing opportunities at Swift. Hyde suggested WDFW and PacifiCorp working together to make this happen. Perhaps volunteers could be solicited to assist with this effort.

Mr. Hyde also asked whether the ACC was the correct group to engage in these discussions. Lesko noted that the ACC is probably the right group to start as the issue is related to aquatic resources (angling) but the Recreation or Low Flow Committee group may be more appropriate to review Settlement Requirements, funding, fishing season, regulations, etc. to move forward with this effort. Bryce Glaser (WDFW) communicated he is willing to work with PacifiCorp to get the answers Hyde is looking for regarding extending the Swift boat launch.

Fish Cleaning Stations - When sport anglers are out fishing there is nowhere at Yale, Merwin or Swift to clean fish. He has been discussing this topic with WDFW for the past 10 years with Stacy Kelsey. As the Lewis River becomes more populated there will be more people/recreationists coming to the Lewis River area. Hyde would like to see fish cleaning stations at Speelyai, Cresap, Saddle Dam and Swift. He could easily get volunteers to assist with labor and get to work on soliciting funding for this effort. Lesko noted that this is the first he has heard of this request after working from PacifiCorp for the past 27 years. Lesko will facilitate what is needed to investigate this within PacifiCorp and through its recreation staff. Kim McCune (PacifiCorp) will share Hyde's contact information with its recreation department to discuss the potential of adding fishing opportunities at Swift via ramp extension and investigating any opportunities for fish cleaning stations.

Matt Harding (Northwoods) – Harding communicated that Northwoods cabin owners at the east end of Swift reservoir have had some issues over the past 10 years relative to reservoir operations and when the water levels are dropped. It seems earlier each year, but he said he is aware there are a lot of variables that come into play with operations. The cabin owners' interests are keeping the reservoir up as long as possible. The other issue is when the reservoir drops at Swift (east end) it opens up our area to 100s of acres of what was previous reservoir bed but is now dry land, docks

and marina area ends up on the reservoir floor. What happens is fish get trapped in pools and get stranded. PacifiCorp and Harding went out last July to do some surveys of some of the pools and found quite a few coho as well as a bull trout. Harding is wondering if maintaining reservoir elevations is possible to mitigate both stranding issues and operation of the Swift Boat Ramp. Lesko responded that reservoir operations are implemented through our water management group. However, the question of restrictions on reservoir elevations has come up in the past and the Utilities position is that these are working reservoirs and the operation of the reservoirs are in compliance with our FERC licenses. Lesko suggested that maybe, given the stranding issues, that Mr. Harding work with NMFS and USFWS. Josh Ashline responded indicating that NMFS was working on a Biological Opinion related to the in-lieu license amendment and that he was aware of the issue Mr. Harding expressed and did receive the sampling results provided by PacifiCorp (Lesko) which was presented to the ACC in November. Glaser noted that NMFS and USFWS are the federal regulator authority under ESA and WDFW definitely has interest in this issue as well. The ACC is the right committee to have discussions about aquatic impacts and what recommendations might come from that but it does become complicated when we begin to discuss flow operations that are outlined by the Settlement Agreement and License, flood control and other issues The ACC role is to better understand the problem and help mitigate concerns through perhaps additional surveys, rescue efforts, channel changes, habitat improvements, etc. The flow regulation part is more complicated, but the ACC could be the right forum to continue these discussions.

Lesko reiterated that the Utilities agreed to continue surveys of the area in 2021 to help better understand the stranding issue and severity of fish stranding as the reservoir drafts to meet minimum flow requirements downstream of Merwin Dam.

<Break 10;33am>
<Reconvene 10:37am>

2020/2021 Aquatic Fund Project
Lesko informed the ACC attendees that on or before January 4, 2021 the ACC Representative are to submit written requests for clarification of project information if any questions are not answered in today's presentations (see Lewis River Aquatic Fund Process Timeline below). Full proposals were provided to all ACC representatives on November 22. 2020 and the links to each are provided below. As part of the go, no-go criteria the applicant is to ensure they meet the go, no-go requirements before they submit their final proposals by January 29, 2021.

Lewis River Aquatic Fund Process Timeline

Activity	Target Milestone Date
Request for proposals distributed along with landowner acknowledgement form	September 4
Draft Full Proposals due to ACC	November 20
Conduct Proposed Project Information Meeting *(applicant presentations)*	December ACC meeting
ACC members submit written request for clarification of project information if questions not answered in previous meeting/presentation.	January 4
Final Full Proposals due (ACC requests for clarification need to be included as an Appendix)	January 29
Final Full Proposals submitted to ACC for 30-day review and evaluation	February 1
ACC scoring template due to Utilities	March 1
Distribute combined master scoring template to ACC	March 5
*Conduct Project Selection Meeting	March 11 ACC meeting
Provide add'l 7-day review period for absentee ACC participants, if needed	Third Thursday in March
Submit Project Selection Report to FERC	By April 15th

*Project applicants not permitted to attend this meeting.

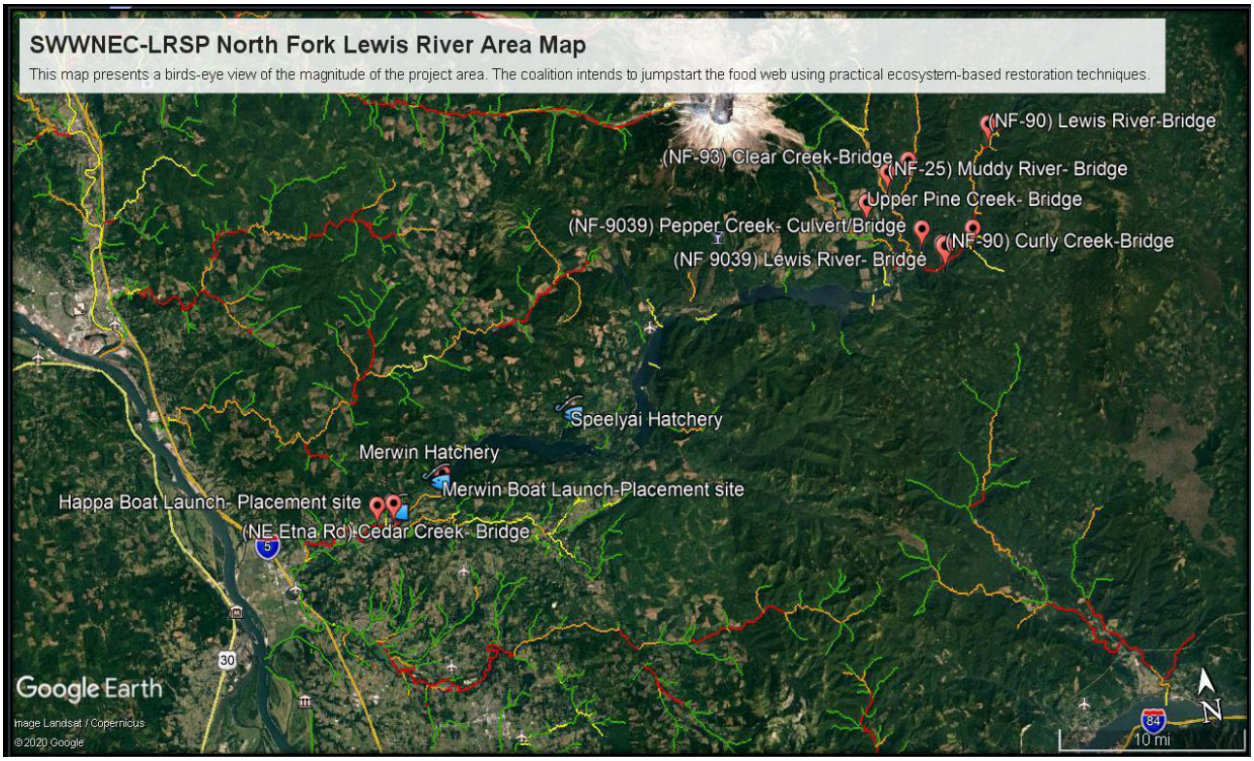
Maurice Frank (LCFEG) informed the ACC that the LCFEG ad it staff members and volunteers intend to address the lack of and diminished presence of naturally occurring marine-derived nutrients within the North Fork Lewis River and its tributaries (WRIA 27). The two primary methods they use to distribute the MDN (nutrient enhancement-NE) are by tossing carcasses and seasoning stream beds with salmon carcass analogs (SCAs). The activities associated with the SWWNEC-LRSP will enhance 15-20 reaches within the North Fork Lewis River Basin, including 11 priority reaches selected by the Aquatic Fund Subgroup (see **Attachment A** for further detail).

- Lower Columbia Fish Enhancement Group (LCFEG) - SW Washington Nutrient Enhancement Coalition: Lewis River Support (**Attachment A**) - $143,966 https://www.pacificorp.com/content/dam/pcorp/documents/en/pacificorp/energy/hydro/lewis-river/license-implementation/acc/SWWNEC-LRSP%20Draft%20Proposal.pdf

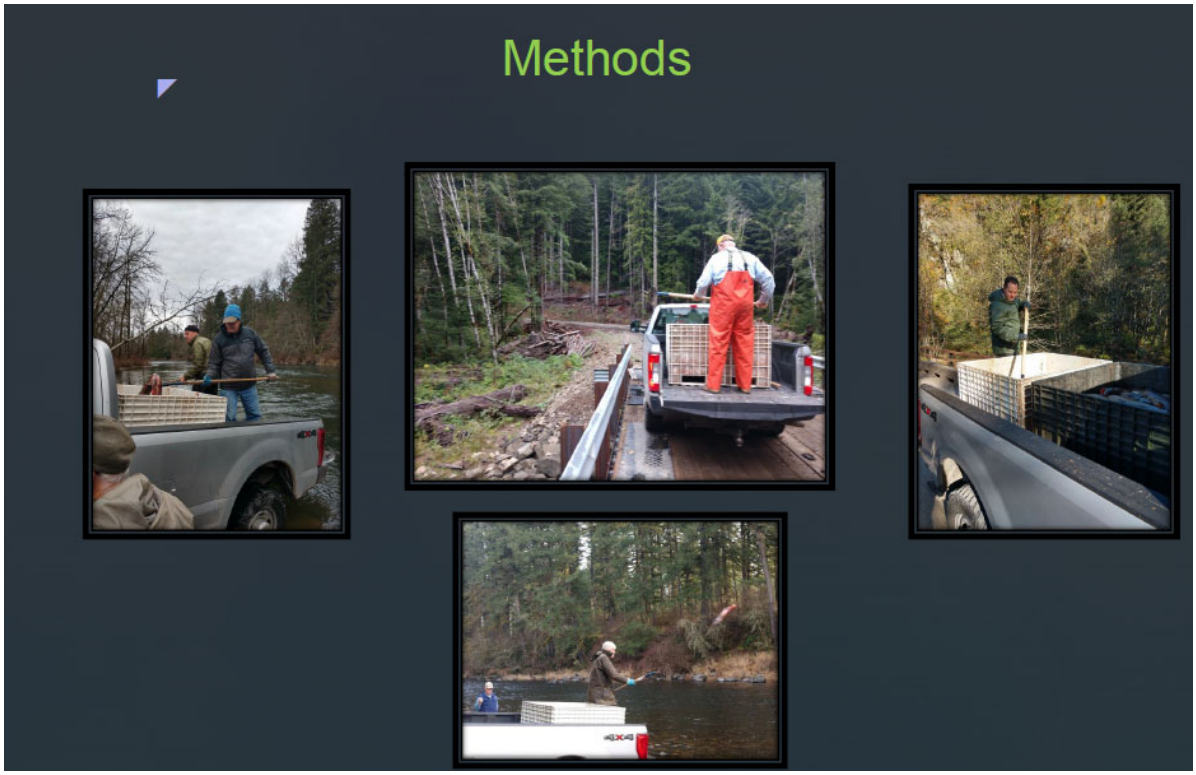
The overall goal of this project is to uplift instream nutrient levels to benefit and sustain ESA-listed anadromous salmonid populations (i.e., Bull Trout, Chum, Coho, Fall/Spring Chinook, and Summer/Winter Steelhead) in the North Fork Lewis River.

Frank reviewed the recycling and direct consumption of the nutrients demonstrating each stage of decomposition that those nutrients are take upon into the system. Nutrients are transported by stream, by critters, through geomorphic process of the river, by cobble, etc.

Frank provide a map representing a bird's eye view of the magnitude of the project area. Everything goes down stream (nutrient cycle) back out towards the ocean. Carcasses start out on the spawning beds and they can travel 70 moves downstream and chucks of flesh are falling off and feeding the nutrients into the system and a whole host of animals.



Frank provided maps illustrating the lower and upper placement locations. The positioning of the carcasses includes positioning themselves on a bridge and throw the carcasses in (see image below).



The ball-park figure of numbers of fish to be distributed are approximately 2,000 fish but it's all run dependent and the fish originated from that basin are never taken out of that basin when

deposited. Kate Day (USFS) communicated that they are planning to talk further about getting rid of that 2,000 cap. The budget in the proposal is for all 4 years.

JD Jones (USFS) provided the following presentation for three (3) Forest Service projects (see Attachment B for further detail).

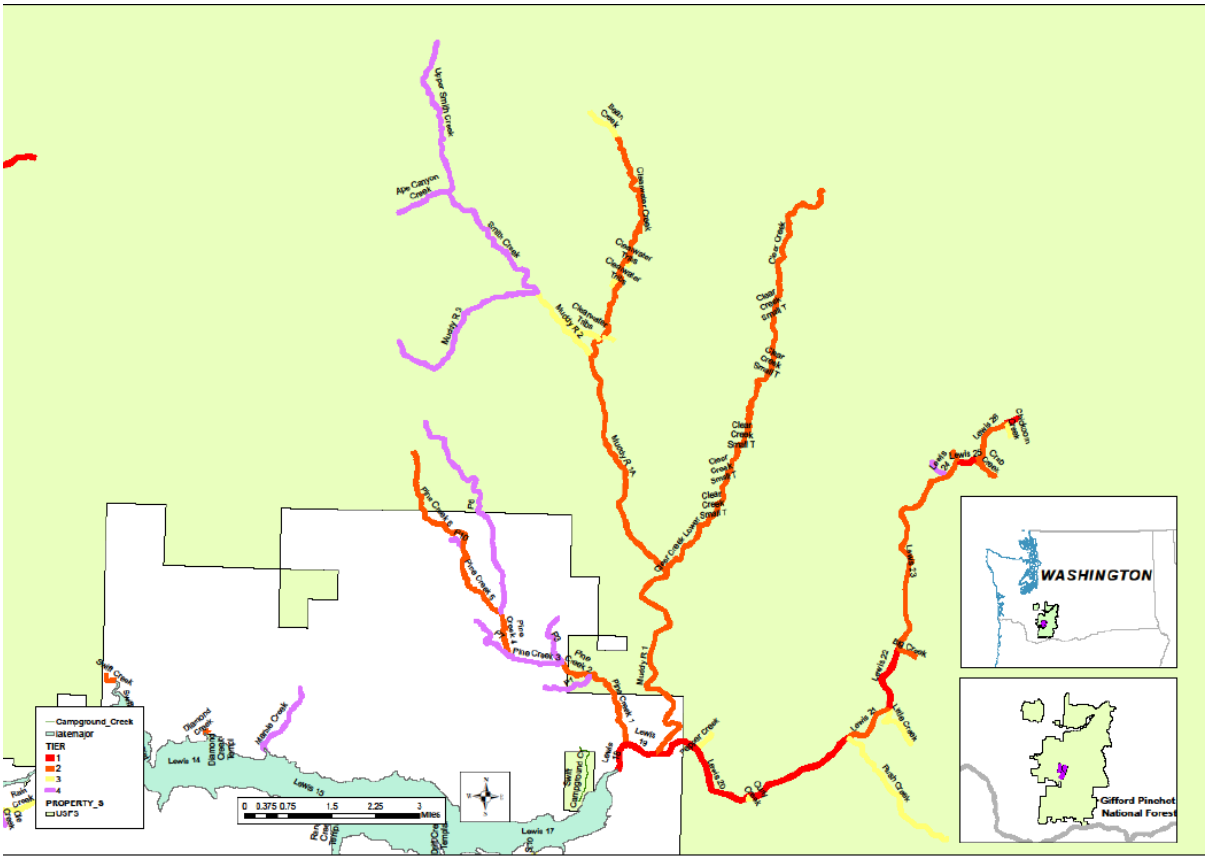
The goal of the projects below is to look at the entire watershed and goals to improve resilience (water quality/quantity, riparian vegetation), plant diversity, etc. reduce road density connectivity (human barriers), habitat complexity and fish populations (emphasis on threatened and endangered).

- USFS - Clear Creek and Clearwater Creek Restoration Design - (**Attachment B**) $333,520
  https://www.pacificorp.com/content/dam/pcorp/documents/en/pacificorp/energy/hydro/lewis-river/license-implementation/acc/11202020%20USFS%20Clearwater.pdf

- USFS – Rush Creek Side Channel (**Attachment B**) $125,500
  https://www.pacificorp.com/content/dam/pcorp/documents/en/pacificorp/energy/hydro/lewis-river/license-implementation/acc/11202020%20USFS%20PineCrk.pdf

- USFS - Pepper Creek Culvert Removal and Road Hydro-Stabilization (**Attachment B**) $48,210
  https://www.pacificorp.com/content/dam/pcorp/documents/en/pacificorp/energy/hydro/lewis-river/license-implementation/acc/11202020%20USFS%20PineCrk.pdf

Jones emphasized that they made sure they were breaking down the tier reaches to locations that are lower in gradient and have potential to access floodplain, excavator or helicopter accessibility, human made barriers, were they covered under NEPA and the large wood complexes will withstand the test of time. Below is a map illustrating LCFRB/EDT Tier Reaches 1-4 to make sure they are looking at the bigger picture. Jones also reviewed tier reaches with lower gradient and potential to access floodplain and build some good resilient complex habitat.



Jones reviewed the following ranking for Clear Creek and Clearwater Creek Restoration Design:

Reach Name	LCFRB Tier	Length		Tier Length	Strategy Excavator (Length)	Strategy Helicopter (Length)
	Ranking	Feet	Miles	Tier II	Tier II	Tier II
Lower Clear Creek	2	32646	6.2	6.2	3.8	2.4
Upper Clear Creek	2	13200	2.5	2.5	0	2.5
Clearwater Creek	2	27451	5.2	5.2	2.2	3.0

Jones informed the ACC that they will have a geomorphologist/hydraulic assessment, engineers work together to build designs that determine where to place the wood, how will the water be displaced and how to get the water to fall out, how deep the large wood needs to be and provide the section views (60% - 90% designs will be provided to the ACC).

Pepper Creek Culvert Removal and Road Hydro-Stabilization

This project includes removal of human made barriers as illustrated in the image below. As outlined in the USFS proposal this culvert is a barrier to anadromous fish passage, and there are twelve road stream crossings that provide a potential source of sediment; three of which have a potential for significant mass wasting events. The undersized barrier culvert on Pepper Creek has incised and/or scoured the channel and disconnected the creek from its floodplain. The 9039-370 road is currently in a closed status on the forest Motor Vehicle Use Map and is unlikely to receive maintenance from Forest Service staff within the next few decades. The combination of these problems can have a negative impact to the reintroduction of anadromous salmonids within the

Upper North Fork Lewis River opening up about 2 miles for access to coho, steelhead, etc. and hydro-stabilize this road.

Rush Creek Side Channel

The Rush Creek Side Channel Reactivation Project proposes to reactivate 3,145 feet of two side channels blocked by legacy roads and landings from timber harvest activities of the early 1970's. This project will include removing the landing, two remnant roads and a stream adjacent berm. One channel near the confluence of the Lewis River (northern side channel) would require the removal of approximately 225 feet of overburden from an old landing construction to reactivate the flow to the side channel. This project can almost double the bull trout habitat.

Jones informed the ACC that he did go out to the site with USFWS and got their recommendations and they were definitely in favor of doing the project and provided suggestions of adaptive management such as creating educational signage about bull trout significance and listing status, fish movement, additional research and targeted monitoring on interactions between bull trout and coho salmon. The goal is for this to act as an alluvial fan as it once was, store water and great spawning habitat.

Eli Asher (Cowlitz Tribe) noted that he really appreciated the comprehensive look at these projects and is supported for comprehensive designs. He has some consternation over the costs but really wants to see the outcomes on a project like this and where it can go. The data collection cost of $170,000 is a lot of money. Then, he suggested maybe not pushing to the final design level if the USFS intends to implement over the course of many years as sometimes designs don't age particularly well and there are often lessons learned as you move through the implementation phases. He also noted that he remains supportive of the Rush Creek Side Channel project.

Jones noted that he anticipates not doing all the suggested monitoring work but thought it best to ask for it up front if they decided to do the work.

Bill Sharp (Yakama Nation) indicated that it might a worthwhile exercise to evaluate full helicopter even though some of the area is accessible by road.

Lesko asked if he knew what the ballpark figure would be for implementing the project and Jones noted that it would be 3-4 times the design cost of implementation which would be $1M - $2M.

<Break 12:02pm>
<Reconvene 12:10pm>

Study/Work Product Updates

Flows/Reservoir Conditions Update
Natural inflow (at Merwin) = 1,552 cfs
Merwin Reservoir elevation = -3.25 feet
Yale Reservoir elevation = -11.25 feet
Swift Reservoir elevation = -37.3 feet
Total hole = -51.70 feet

ATS Update
The final draft Hatchery & Supplementation Plan has been prepared with additional input from the ATS. Lesko will submit Plan within the next week to the NMFS and USFWS (the Services) for approval as required by the Settlement Agreement (SA 8.3.5). Once approved, PacifiCorp will prepare the FERC submittal including cover letter and email approval of the Plan from the Services. PacifiCorp anticipates that the final plan will be submitted prior to the FERC deadline of December 31, 2020. PacifiCorp is currently working on getting a contractor on board to assist with the rewrite for the Monitoring and Evaluation plan which is expected to begin in Spring of 2021. We anticipate this to be a year-long process involving review by both the ATS and required 90-day review by the ACC before finalizing the plan and submitting to the FERC in the spring of 2022.

Fish Passage Update
Chris Karchesky (PacifiCorp) provided the ACC with a brief overview of fish passage operations over the past month. He noted that a recorded number of NOR coho were transported upstream this fall and that distribution of those fish in the upper basin has been very good. Karchesky touched on the recent unscheduled outages at the Merwin Trap that were related to the lift and conveyance system. Karchesky reminded the ACC that PacifiCorp was currently working on some design revisions for the Merwin trap, and current collection efficiency evaluation for adults has been postponed until these improvements could be implemented. An update for the ACC on where things stand with modifying the lift and conveyance system is anticipated sometime earlier next year (2021). Lastly, Karchesky indicated that the first NOR winter steelhead had returned to the Merwin Trap in early December. It contained a PIT tag from the Swift FSC, and it was transported to the upper basin.

Merwin Fish Collection Facility and General Operations (Attachment C)
A total of 1,944 fish were captured at the Merwin Dam Adult Fish Collection Facility (MFCF) during the month of November. Coho collection totals transitioned from a majority of type-S in

the first part of the month, to exclusively type-N by the end of the month. Nearly four in ten (39.0%) of the coho collected in November were of natural origin (NOR). Also, the first adult NOR winter steelhead of the 2021 run year was also collected in November. This fish had been previously PIT tagged as a juvenile at the Swift FSC in May 2018. It was transported and released upstream of Swift Dam. All PIT tag detection recorded at the Merwin Trap can be found on the region wide PIT Tag information System (PTAGIS).

The MFCF fish lift and conveyance system was taken out of service on October 31st due to frayed cables on the crowding mechanism. The lift and conveyance system were placed back in operation on November 3rd but had to be taken out of service again from November 10th through November 12th for repairs after a damaged sheave bushing was discovered. The bushing was replaced, and the lift and conveyance system ran continuously for the rest of the month.

Total river flow below Merwin Dam remained generally consistent in November, except for three drawdown days to accommodate ongoing carcass surveys that are being conducted on the Lewis River below Merwin Dam. Total river flow ranged between 1,200 and 7,120 cubic feet per second (cfs; Figure 1).

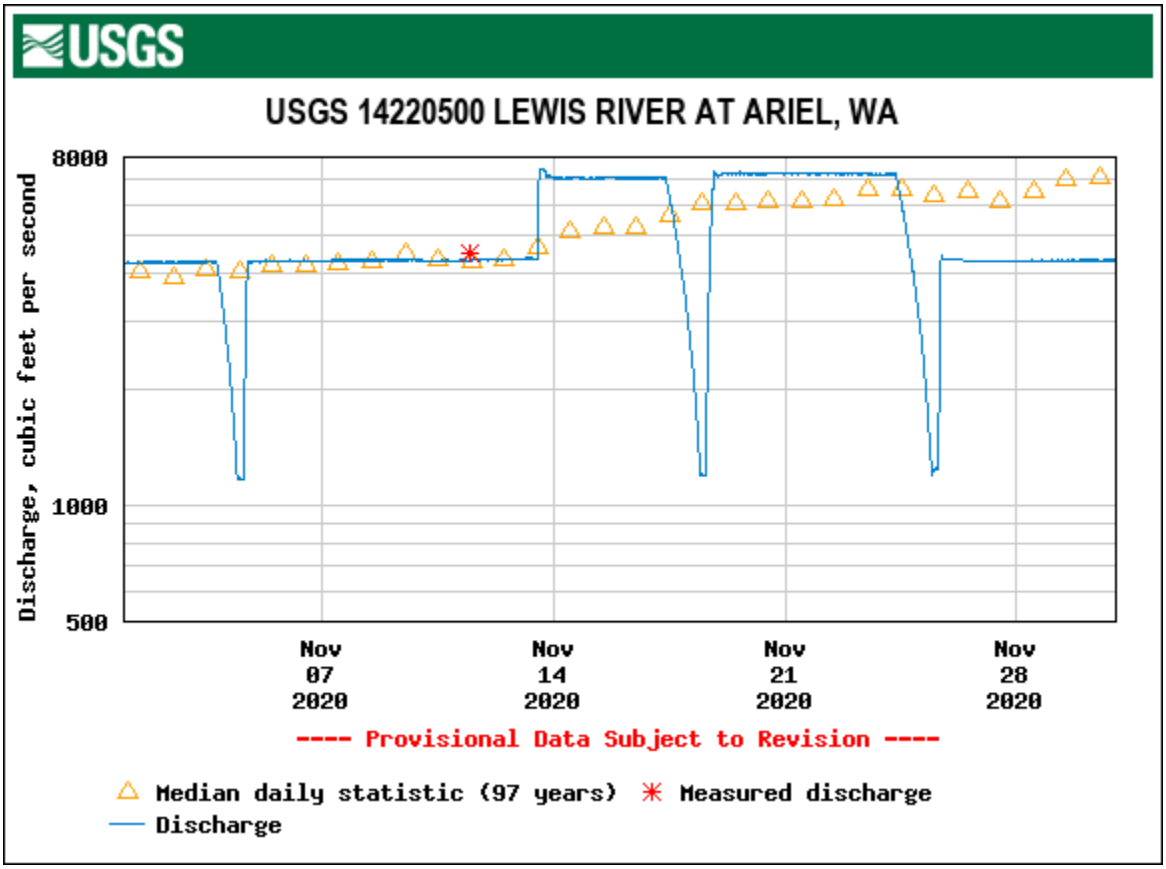


Figure 1. Discharge in cubic feet per second recorded at the USGS Ariel, WA gauge (14220500) located immediately downstream of Merwin Dam.

Upstream Transport (Attachment C)

Overall, upstream fish transport tapered off during the month of November. A total of 699 fish were transported throughout the month, with the majority of these fish being coho (97.6%). Over half of the coho that were transported upstream in November were of natural origin (58.5%). These

fish further added to this year's record run total, which now stands at 4,229 NOR coho in 2020 (Figure 2). In addition to adult coho, 16 cutthroat trout and one true wild winter steelhead were also transported upstream in October.

For calendar year 2020, a total of 8,645 coho, 725 Blank Wire Tag steelhead, 634 spring Chinook, 326 true wild steelhead, and 82 cutthroat have been transported upstream of Swift Dam.

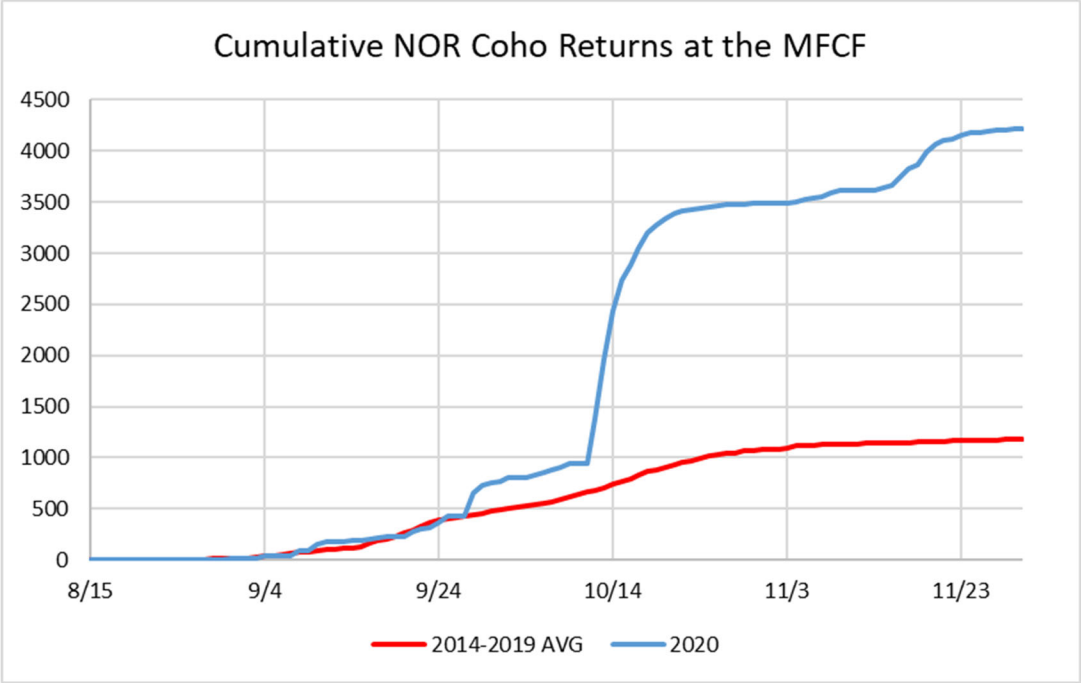


Figure 2. Cumulative number of Natural origin (NOR) coho collected at Merwin Adult Fish Collection Facility in 2020, relative to the 2014-2019 average.

Swift Floating Surface Collector (Attachment C)

The Swift Floating Surface Collector (FSC) was taken out of operation on Nov 10 due to electrical issues with the fry tank debris conveyor. It was placed back into service on Nov 11 after the electrical system had been repaired. A total of 686 fish were collected at the FSC in the month of November. Similar to October, most of these fish were juvenile coho (88.9%).

The FSC is operating and we will monitor if any fish start coming in.

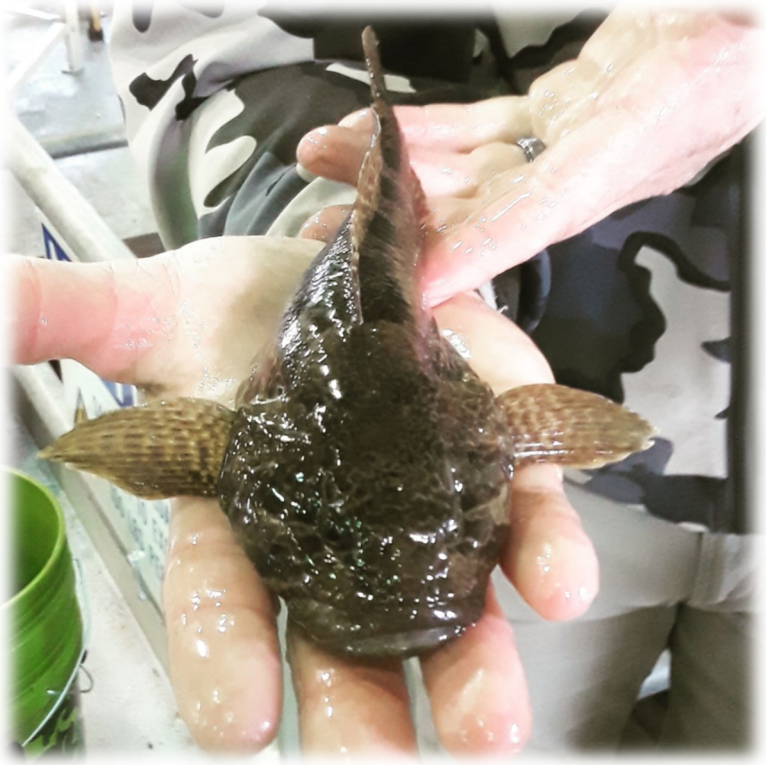


Figure 3. A large Prickly Sculpin was collected at the Swift FSC on Nov 11th. It was subsequently returned to the reservoir after being collected.

Other

Josh Ashline (NMFS) informed the ACC attendees that he is resigning from NMFS as of December 31, 2020 and Steve Anderson will be the primary ACC representative for NMFS going forward.

The collection efficiency report will be delayed until the ACC/TCC annual report review comes out next March 2021.

Agenda items for January 14, 2021

- Review November 12, 2020 Meeting Notes **(ACC COMMENTS DUE January 5, 2021)**
- Swift FSC Collection Efficiency Results for 2020 – Presentation by Four Peaks Environmental
- Study/Work Product Updates

Adjourn 12:22pm

Next Scheduled Meeting:

January 14, 2021
TEAMS Call Only
9:30 a.m. – 12:00 p.m.

Meeting Handouts & Attachments:

- Meeting Notes from 11/12/20
- Agenda from 12/10/20

- **Attachment A** – LCFEG: SW Washington Nutrient Enhancement Coalition: Lewis River Support
- **Attachment B** – USFS: Clear Creek and Clearwater Creek Restoration Design, Rush Creek Side Channel and Pepper Creek Culvert Removal and Road Hydro-Stabilization
- **Attachment C** - Lewis River Fish Passage Report (November 2020)

SW Washington Nutrient Enhancement Coalition-Lewis River Support (SWWNEC-LRSP)

Sponsored By: Lower Columbia Fish Enhancement Group

Introduction

Maurice Frank,
LCFEG Project Manager

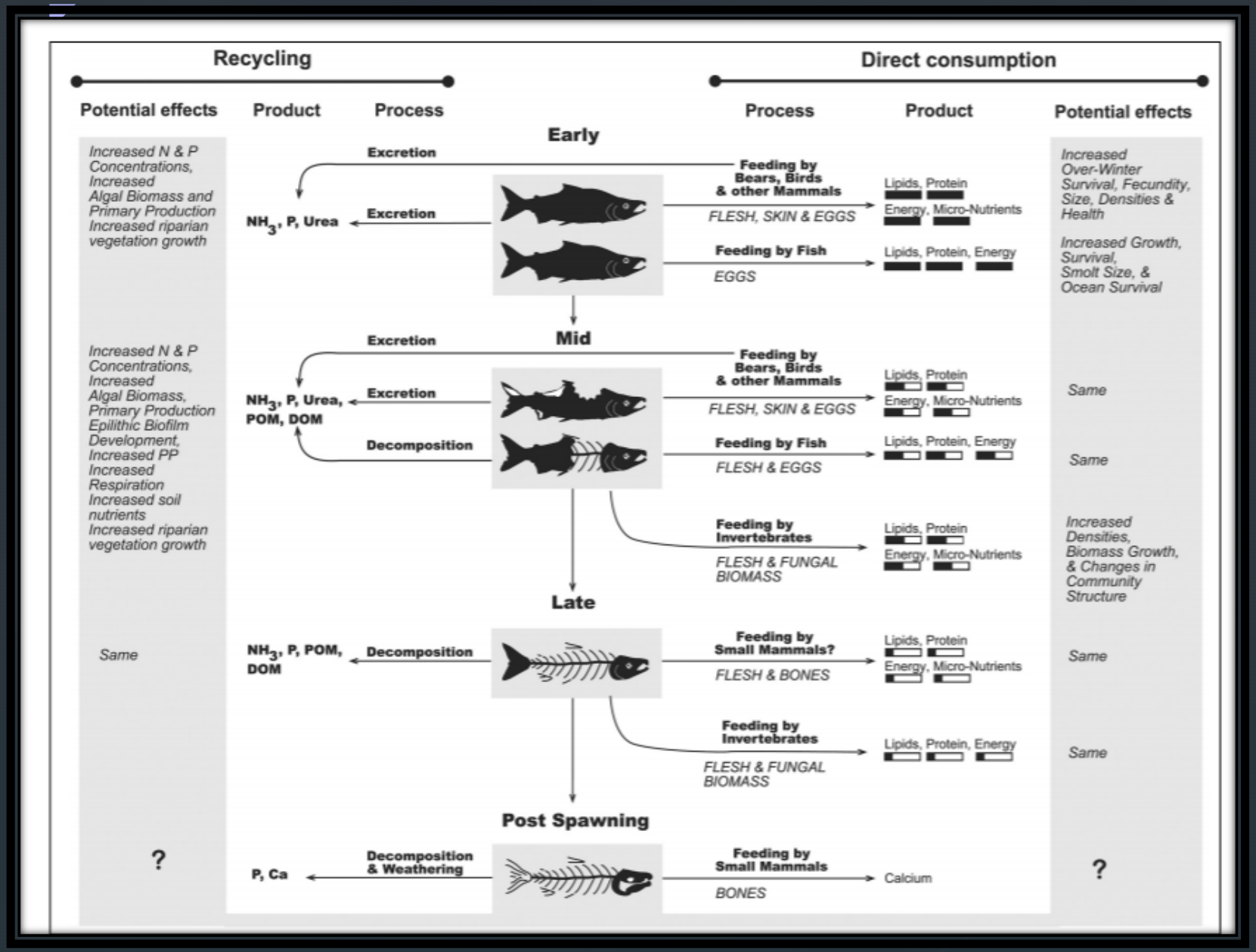
Project Description

- The Lower Columbia Fish Enhancement Group (LCFEG) and its coalition of staff members and volunteers intend to address the lack of and diminished presence of naturally occurring marine-derived nutrients (MDN) within the North Fork Lewis River and its tributaries (WRIA 27).
- The two primary methods we use to distribute the MDN (nutrient enhancement- NE) are by tossing carcasses and seasoning stream beds with salmon carcass analogs (SCAs).
- The activities associated with the SWWNEC-LRSP will enhance 15-20 reaches within the North Fork Lewis River Basin, including 11 priority reaches selected by the Aquatic Fund Subgroup (Lewis 1 Tidal A, Lewis 2 Tidal B, Lewis 2 Tidal D, Lewis 3, Lewis 4 A, Lewis 4 C, Lewis 18, Lewis 19, Lewis 21, Muddy R1, and Muddy R1A).

Project Goal

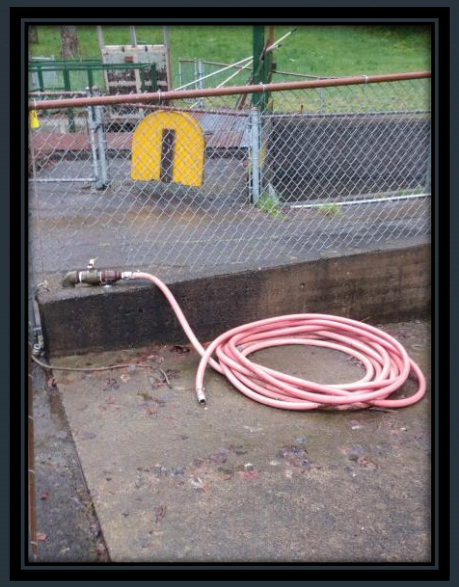
The overall goal of this project is to uplift instream nutrient levels to benefit and sustain ESA-listed anadromous salmonid populations (i.e., Bull Trout, Chum, Coho, Fall/Spring Chinook, and Summer/Winter Steelhead) in the North Fork Lewis River.

Consumption Cycle

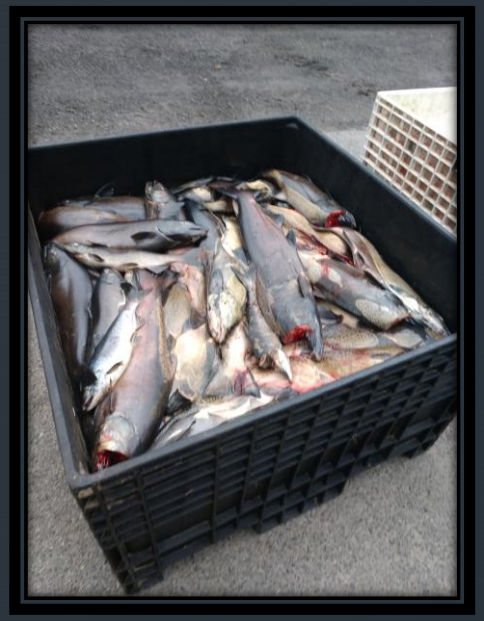


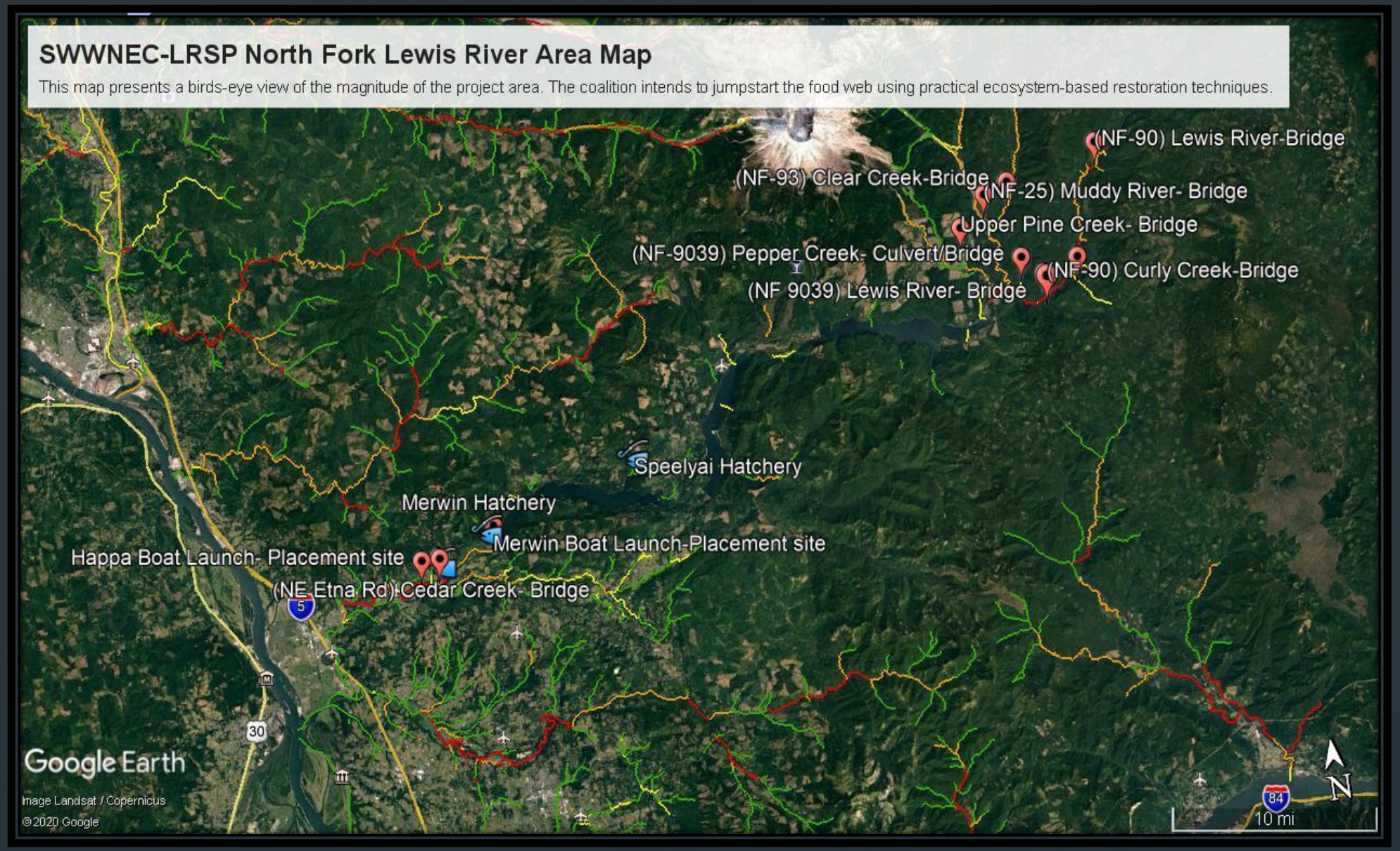
Coalition Partners

Tools of the Trade



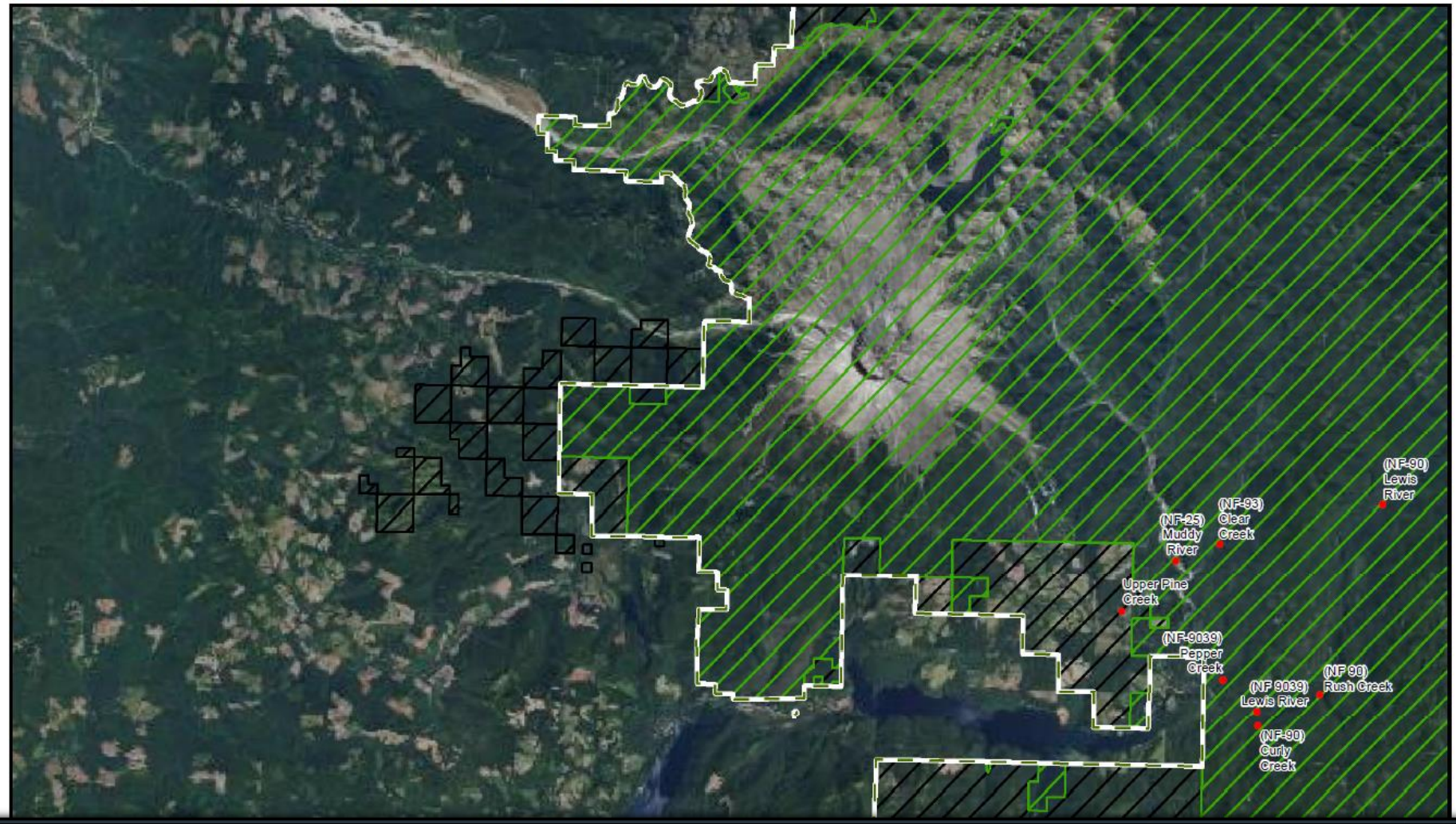
Perks of the job




SWWNEC-LRSP North Fork Lewis River Area Map
This map presents a birds-eye view of the magnitude of the project area. The coalition intends to jumpstart the food web using practical ecosystem-based restoration techniques.
(NF-90) Lewis River-Bridge
(NF-93) Clear Creek-Bridge
(NF-25) Muddy River- Bridge
Upper Pine Creek- Bridge
(NF-9039) Pepper Creek- Culvert/Bridge
(NF-90) Curly Creek-Bridge
(NF 9039) Lewis River- Bridge
Speelyai Hatchery
Merwin Hatchery
Merwin Boat Launch-Placement site
Happa Boat Launch- Placement site
(NE Etna Rd) Cedar Creek- Bridge
5
30
84
Google Earth
Image Landsat / Copernicus
©2020 Google
10 mi
N

Lower Columbia Fish Enhancement Group - Entire Project Area

Gifford Pinchot National Forest & Land Off NFS



Authorization Information

Contact Name: Lower Columbia Fish Enhancement Group
Authorization ID: NA
Primary Use Code: NA
Use Code Name: NA
Issue Date: NA
Legal Description: Multiple, see map

Road Number(s): 90, 9039, 93, 25

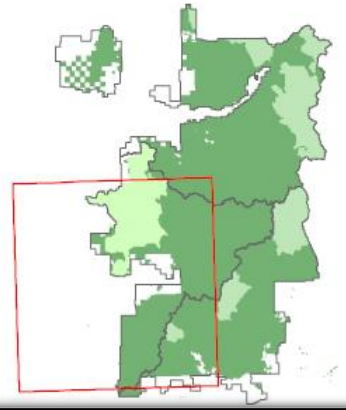
Disclaimer

The USDA Forest Service makes no warranty, expressed or implied regarding the data displayed on this map, and reserves the right to correct, update, modify, or replace this information without notification.
Map Creation Date: 10/9/2020

Legend

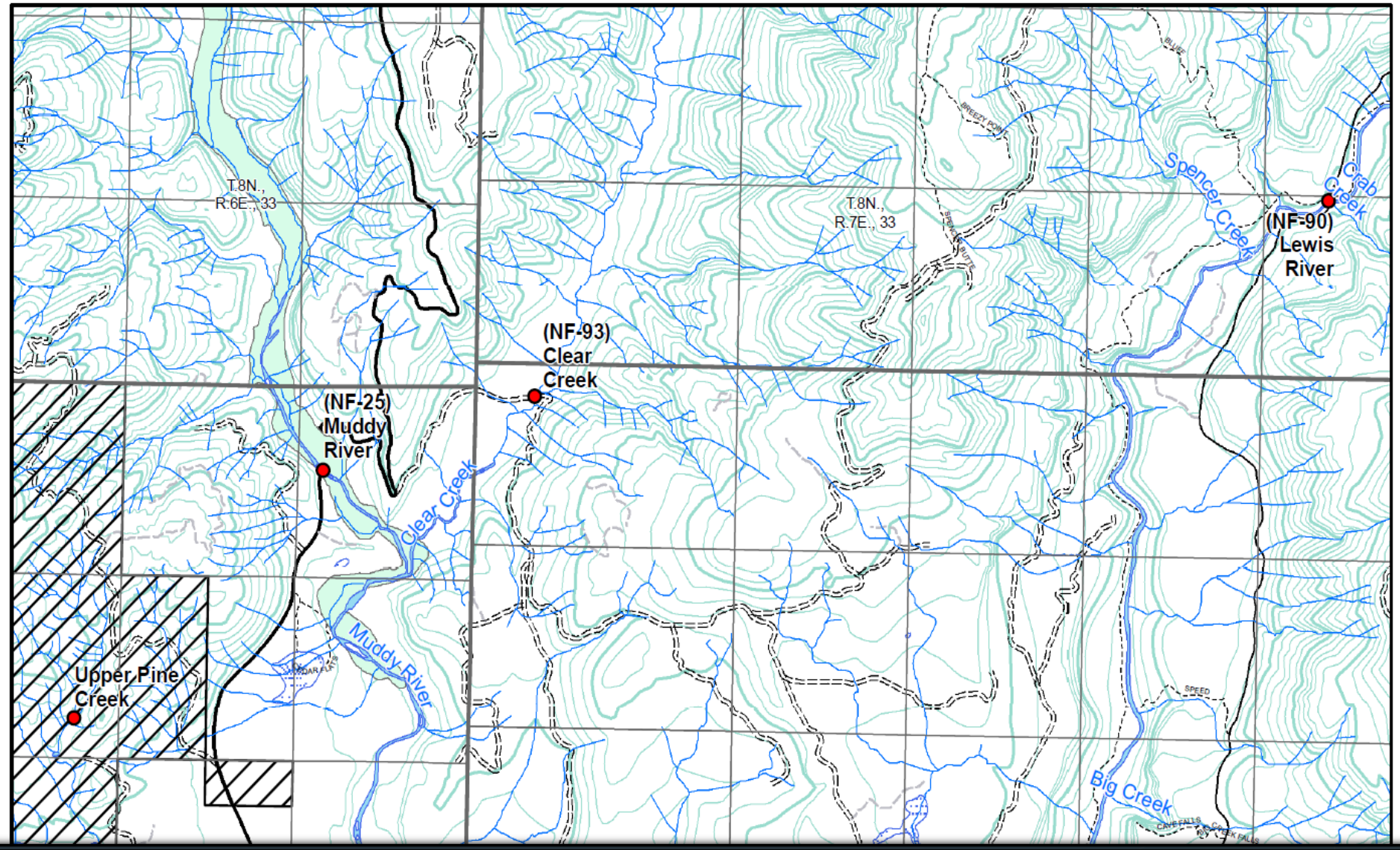
- Placement Site
- Bridge
- Hatchery
- National Forest Administrative Boundary
- NON-FS
- USDA FOREST SERVICE

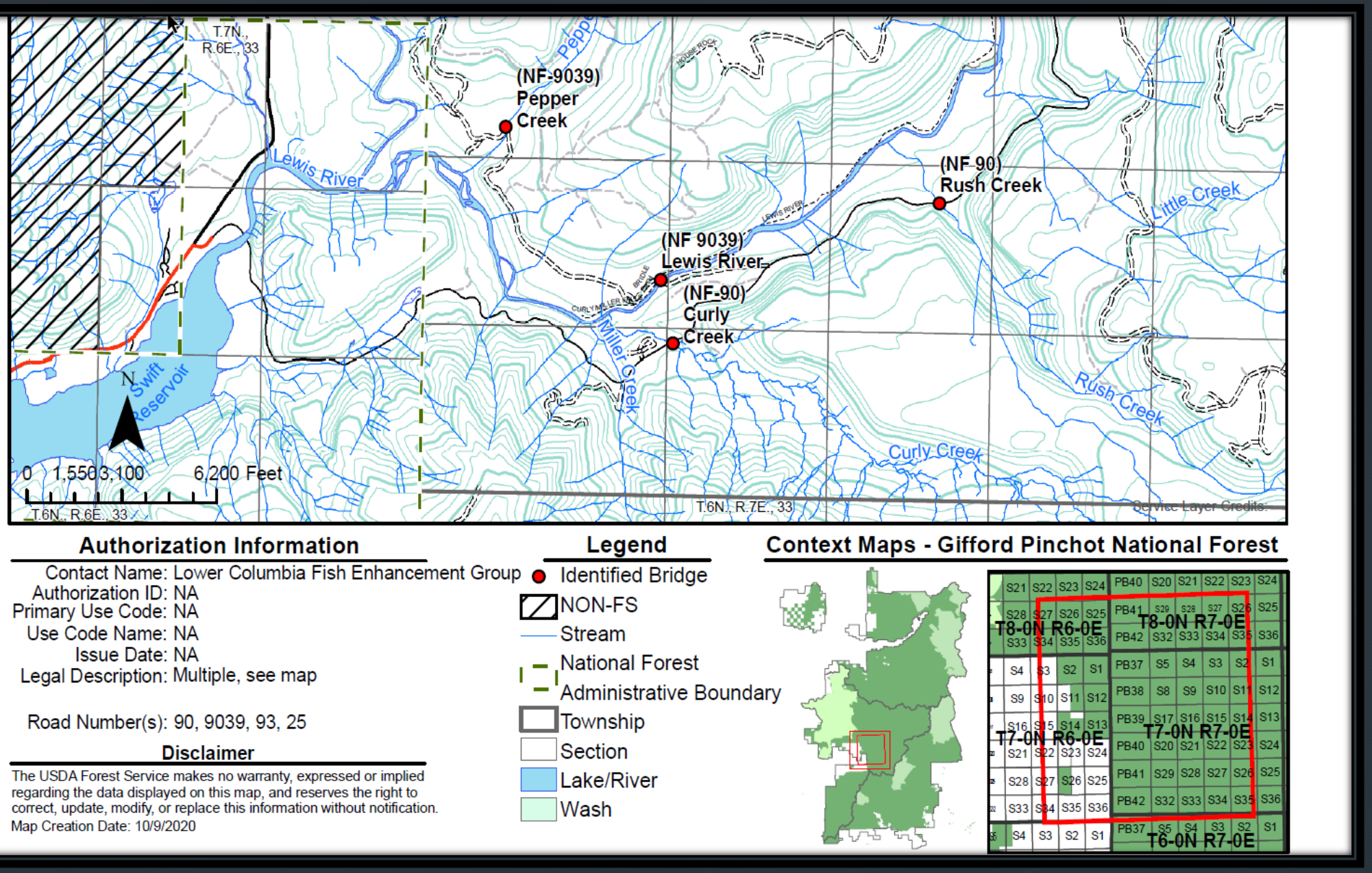
Context Map - Gifford Pinchot National Forest



Lower Columbia Fish Enhancement Group - NFS Area of Interest - Identified Bridges

Gifford Pinchot National Forest





Authorization Information

Contact Name: Lower Columbia Fish Enhancement Group
Authorization ID: NA
Primary Use Code: NA
Use Code Name: NA
Issue Date: NA
Legal Description: Multiple, see map

Road Number(s): 90, 9039, 93, 25

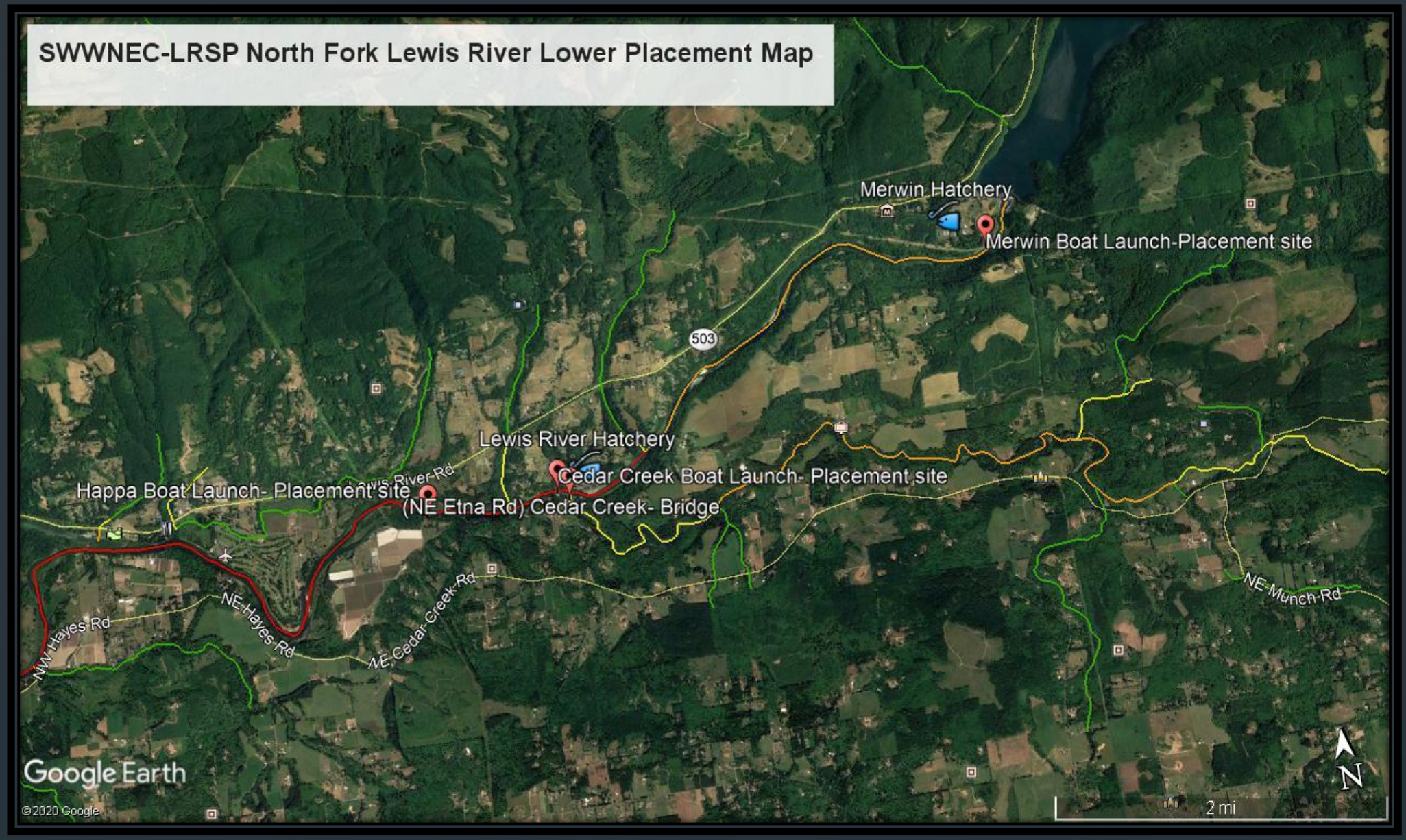
Disclaimer

The USDA Forest Service makes no warranty, expressed or implied regarding the data displayed on this map, and reserves the right to correct, update, modify, or replace this information without notification.
Map Creation Date: 10/9/2020

Legend

- Identified Bridge
- NON-FS
- Stream
- National Forest
- Administrative Boundary
- Township
- Section
- Lake/River
- Wash

Context Maps - Gifford Pinchot National Forest


SWWNEC-LRSP North Fork Lewis River Lower Placement Map
Merwin Hatchery
Merwin Boat Launch-Placement site
503
Lewis River Hatchery
Cedar Creek Boat Launch- Placement site
Happa Boat Launch- Placement site
(NE Etna Rd) Cedar Creek- Bridge
Lewis River Rd
NW Hayes Rd
NE Hayes Rd
NE Cedar Creek Rd
NE Munch Rd
Google Earth
© 2020 Google
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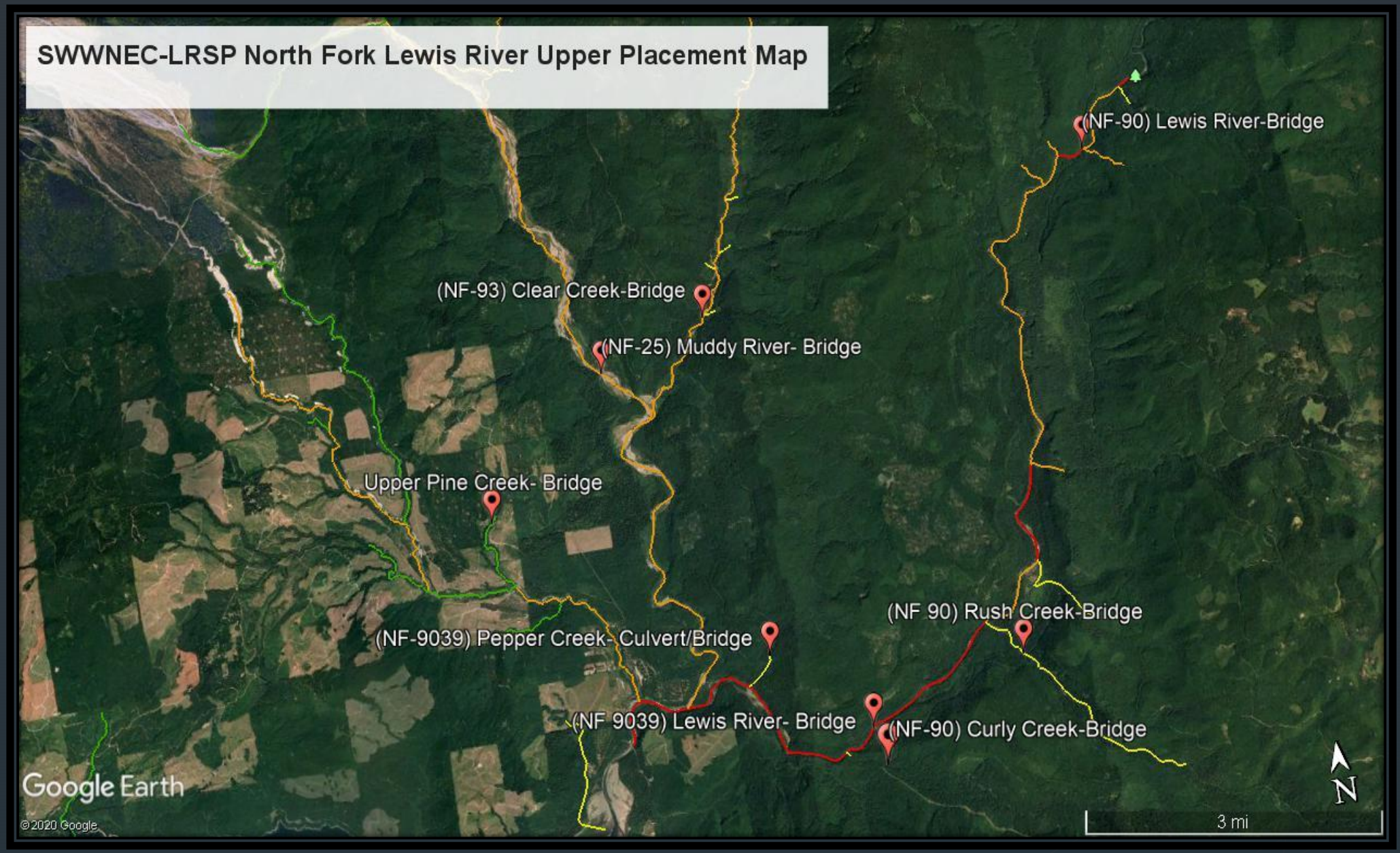
SWWNEC-LRSP North Fork Lewis River Upper Placement Map
(NF-90) Lewis River-Bridge
(NF-93) Clear Creek-Bridge
(NF-25) Muddy River- Bridge
Upper Pine Creek- Bridge
(NF 90) Rush Creek-Bridge
(NF-9039) Pepper Creek- Culvert/Bridge
(NF 9039) Lewis River- Bridge
(NF-90) Curly Creek-Bridge
Google Earth
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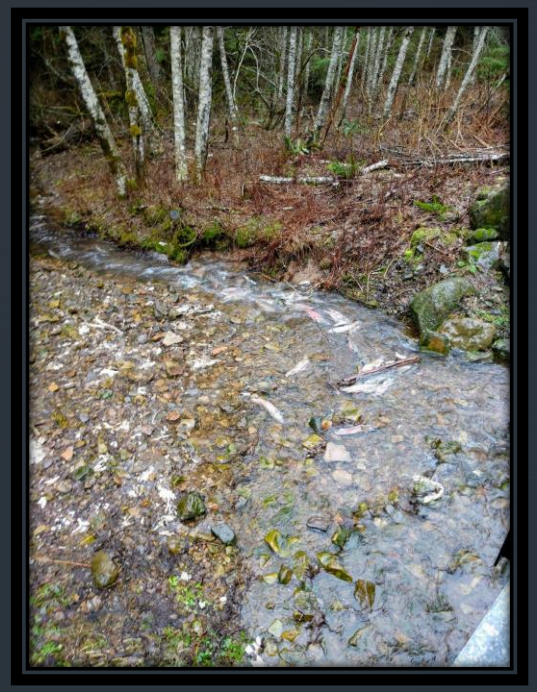
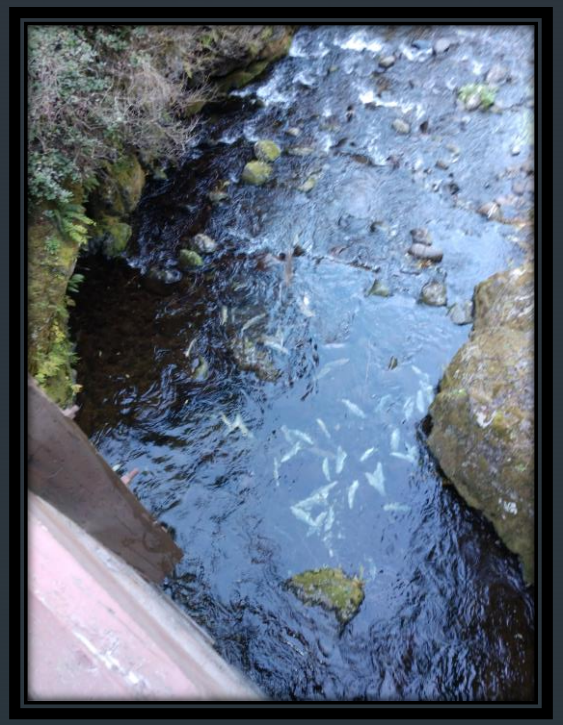
Positioning

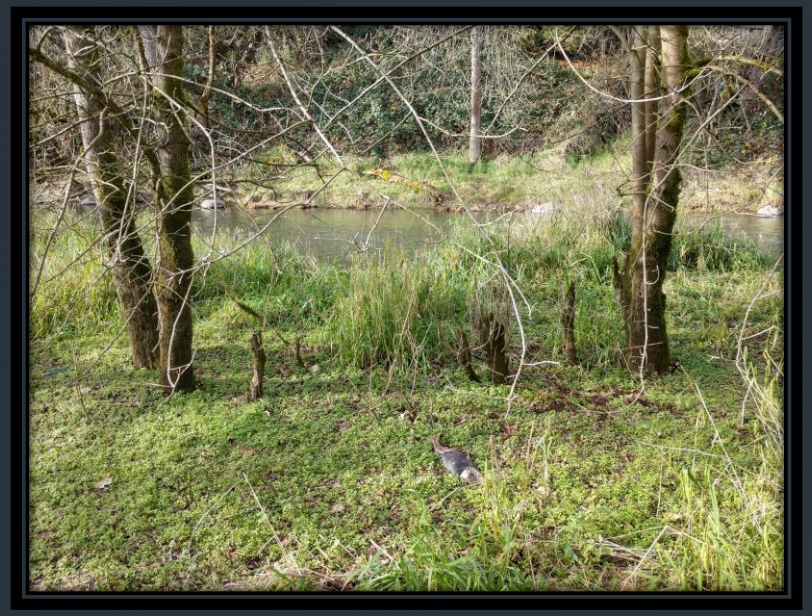
Methods

Finished Product



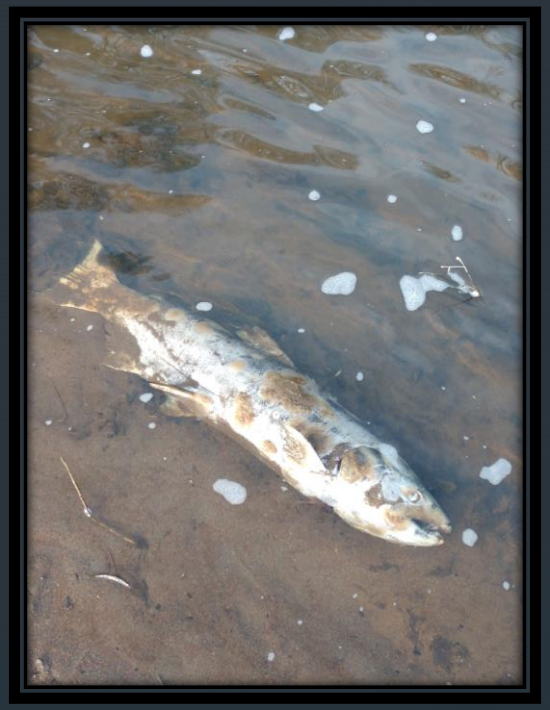


Projected Outcome



Thank you for your time.

Questions?



Lewis River Fish Passage Report

November

Merwin Fish Collection Facility and General Operations

A total of 1,944 fish were captured at the Merwin Dam Adult Fish Collection Facility (MFCF) during the month of November. Coho collection totals transitioned from a majority of type-S in the first part of the month, to exclusively type-N by the end of the month. Nearly four in ten (39.0%) of the coho collected in November were of natural origin (NOR). Also, the first adult NOR winter steelhead of the 2021 run year was also collected in November. This fish had been previously PIT tagged as a juvenile at the Swift FSC in May 2018. It was transported and released upstream of Swift Dam. All PIT tag detection recorded at the Merwin Trap can be found on the region wide PIT Tag information System (PTAGIS).

The MFCF fish lift and conveyance system was taken out of service on October 31st due to frayed cables on the crowding mechanism. The lift and conveyance system were placed back in operation on November 3rd, but had to be taken out of service again from November 10th through November 12th for repairs after a damaged sheave bushing was discovered. The bushing was replaced, and the lift and conveyance system ran continuously for the rest of the month.

Total river flow below Merwin Dam remained generally consistent in November, except for three drawdown days to accommodate ongoing carcass surveys that are being conducted on the Lewis River below Merwin Dam. Total river flow ranged between 1,200 and 7,120 cubic feet per second (cfs; Figure 1).

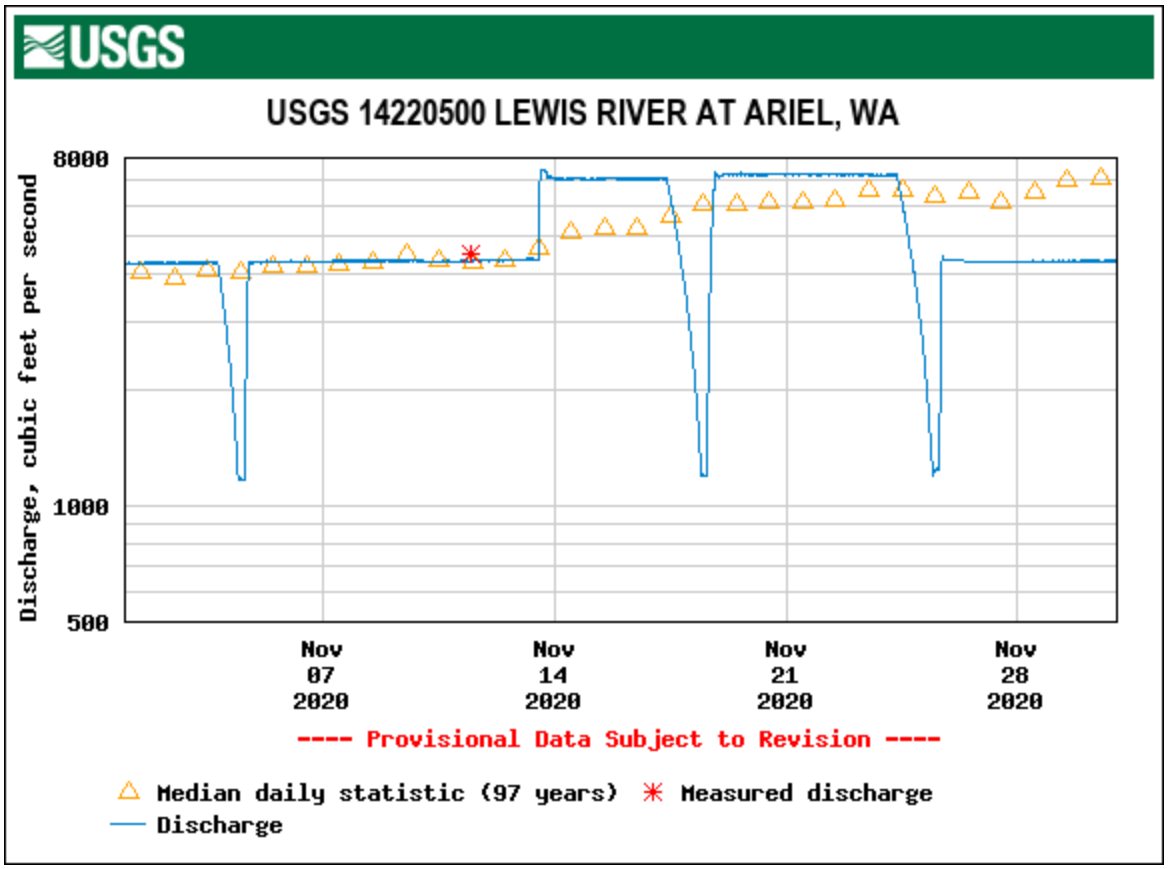


Figure 1. Discharge in cubic feet per second recorded at the USGS Ariel, WA gauge (14220500) located immediately downstream of Merwin Dam.

Upstream Transport

Overall, upstream fish transport tapered off during the month of November. A total of 699 fish were transported throughout the month, with the majority of these fish being coho (97.6%). Over half of the coho that were transported upstream in November were of natural origin (58.5%). These fish further added to this year's record run total, which now stands at 4,229 NOR coho in 2020 (Figure 2). In addition to adult coho, 16 cutthroat trout and one true wild winter steelhead were also transported upstream in October.

For calendar year 2020, a total of 8,645 coho, 725 Blank Wire Tag steelhead, 634 spring Chinook, 326 true wild steelhead, and 82 cutthroat have been transported upstream of Swift Dam.

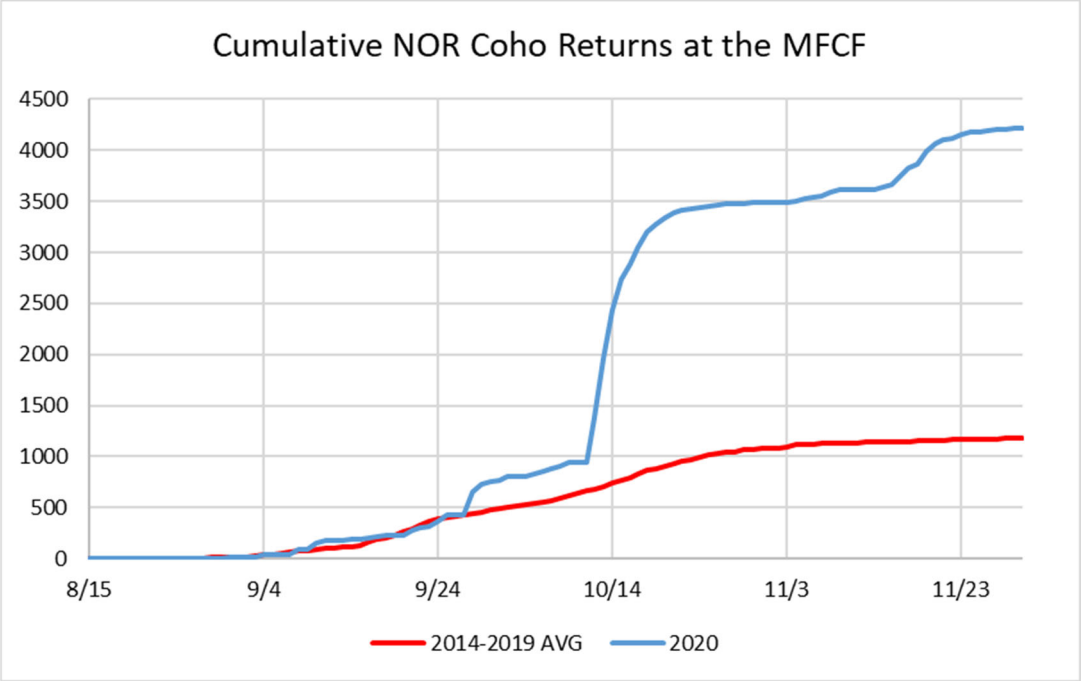


Figure 2. Cumulative number of Natural origin (NOR) coho collected at Merwin Adult Fish Collection Facility in 2020, relative to the 2014-2019 average.

Floating Surface Collector

The Swift Floating Surface Collector (FSC) was taken out of operation on Nov 10 due to electrical issues with the fry tank debris conveyor. It was placed back into service on Nov 11 after the electrical system had been repaired. A total of 686 fish were collected at the FSC in the month of November. Similar to October, most of these fish were juvenile coho (88.9%).

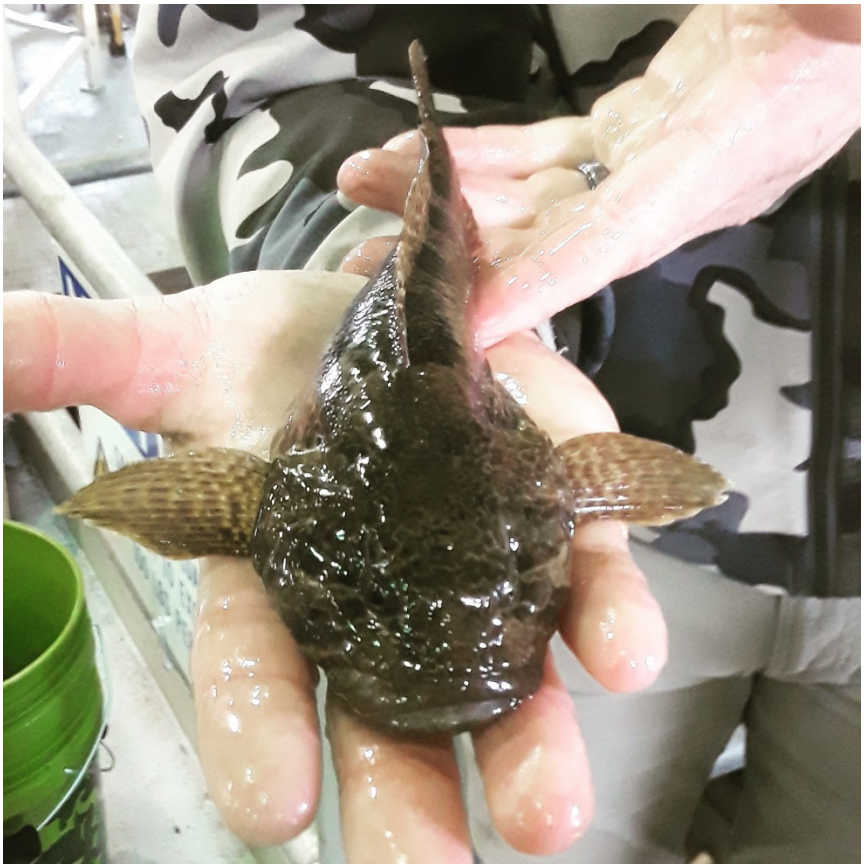


Figure 3. A large Prickly Sculpin was collected at the Swift FSC on Nov 11th. It was subsequently returned to the reservoir after being collected.

Fish Facility Report
Merwin Adult Trap
November 2020

Reporting Date	Spring Chinook (1)									Early Coho												Late Coho											
	AD-Clip			Wild			Recap			AD-Clip			CWT			Wild			Recap			AD-Clip			CWT			Wild			Recap		
	M	F	JK	M	F	JK	M	F	JK	M	F	JK	M	F	JK	M	F	JK	M	F	JK	M	F	JK	M	F	JK	M	F	JK	M	F	JK
1-Nov																																	
2-Nov																																	
3-Nov																																	
4-Nov										19	14	23	5	3	13	9	6	1															
5-Nov										15	12	19	5	5	12	14	6					1	5			1		1	1	1			
6-Nov										11	6	10	3	1	2													1	8	1			
7-Nov										6	3	8		1	4	8	7					1											
8-Nov										10	4	5	3		1	19	11	3				1	2					1	3	1			
9-Nov										2	4		1			6	9	1				3	5	4	3		2	4	3				
10-Nov																																	
11-Nov																																	
12-Nov																																	
13-Nov										2	2	3										12	12		2	3	3	2	3				
14-Nov										5	12	8				1	2	1				42	16	29	8	6	11	10	7				
15-Nov										15	16	11				2	5	2				44	36	16	10	4	10	13	13				
16-Nov										34	6	15	3	6	4	22	7	2				13	20	9	1	10	2	14	28	1			
17-Nov										5	3			3		8	3					16	16	6	4	3	4	29	40	1			
18-Nov										1	2			3			1					40	30	20	3	6	7	19	25				
19-Nov											3			3								36	25	4	7	6	5	71	52	3			
20-Nov																						13	11	5	6	2	3	34	32				
21-Nov																						8	4				4	16	16	3			
22-Nov																						2	1		1			6	9				
23-Nov																						1	3	3				18	17	1			
24-Nov																						5	6	3	1	3	2	9	16	1			
25-Nov																						4	9	1		1		3	2	1			
26-Nov																						7	8	1	2	1		7	4				
27-Nov																						1	5	2	1	2	1	3	5				
28-Nov																						2	4	2			1	4	1				
29-Nov																						4	5			2		4	3				
30-Nov																						3	5	3				2	2				
Monthly	0	0	0	0	0	0	0	0	0	125	87	102	20	25	36	89	57	10	0	0	0	259	228	108	49	50	55	271	290	14	0	0	0
Annual	709	567	821	76	53	41	0	0	0	1467	1858	2068	217	290	405	1469	1986	186	0	0	0	267	237	110	49	50	56	274	291	20	0	0	0

Reporting Date	S. Steelhead						W. Steelhead								Fall Chinook									Sockeye		Chum		Pink		Cutthroat	Rainbow (< 20 inches)	Bull Trout	**Daily Total**
	Fresh		Recap		Wild		AD-Clip		BWT		Recap		Wild		AD-Clip			Wild			Recap												
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	JK	M	F	JK	M	F	JK	M	F	M	F	M	F				
1-Nov																																	
2-Nov																																	
3-Nov																																	
4-Nov	1																	1		1													96
5-Nov																			1											1			100
6-Nov																																	43
7-Nov																																	38
8-Nov	1																	1	2														68
9-Nov		1																												1			49
10-Nov																																	
11-Nov																																	
12-Nov																																	
13-Nov	1																		1														46
14-Nov																		1												1			160
15-Nov																		1	1											1			200
16-Nov																			3	1													201
17-Nov																			3											3			147
18-Nov																																	157
19-Nov								1										3	1											2			222
20-Nov																		1	1											2			110
21-Nov																		2	1														54
22-Nov								1											1											1			22
23-Nov							2											1	2											1			49
24-Nov													1					1															48
25-Nov																														2			23
26-Nov								1																									31
27-Nov							2																										22
28-Nov							1																										15
29-Nov							1	1										1												1			22
30-Nov							2	3												1													21
Monthly	3	1	0	0	0	0	8	7	0	0	0	0	1	0	0	0	0	13	17	3	0	0	0	0	0	0	0	0	0	16	0	0	1944
Annual	649	1031	159	446	3	1	297	181	339	383	0	1	246	209	147	100	131	149	187	33	0	0	0	6	6	1	0	0	0	82	0	0	18354

1 Only hatchery verses wild distinctions are currently being made. All hatchery fish are labeled as "AD-Clip".

2 Total counts do not include recaptured salmon.

Fish Facility Report

Swift Floating Surface Collector

November 2020

	Coho			Chinook			Steelhead				Cutthroat					
Day	**fry**	**parr**	**smolt**	**fry**	**parr**	**smolt**	**fry**	**parr**	**smolt**	**kelt**	**fry**	**<13 in**	**> 13 in**	**Bull Trout**	**Planted Rainbow**	**Total**
1		7	20			0		1	1					0	0	**29**
2		4	5			0			0					0	0	**9**
3		1	6			1	1		0					0	0	**9**
4	1		2			2			0					0	0	**5**
5		1	11			1			1					0	0	**14**
6			10			1			3					0	0	**14**
7		3	16			0			1					0	0	**20**
8		1	14			1			4					0	0	**20**
9		4	6			1			0					0	0	**11**
10																
11																
12		7	27			2			1	1				0	0	**38**
13		5	30			0		1	1					0	0	**37**
14		28	40			0		2	1					0	0	**71**
15		9	56			1			0					0	0	**66**
16		34	14			5			1				1	0	0	**55**
17		24	23			4			1					0	0	**52**
18		20	6			0			0			1		0	0	**27**
19		15	21			0			0					0	0	**36**
20		7	20			0			0			1		0	0	**28**
21		5	11			0			0					0	0	**16**
22		23	28			0		1	2			2		0	0	**56**
23		7	8			0			0					0	0	**15**
24		5	6			0			1			1		0	0	**13**
25		1	3			0			0			1		0	0	**5**
26	1	2	0		1	2			0					0	0	**6**
27		2	1			0			1			1		0	0	**5**
28		3	2			1			1			1		0	0	**8**
29		6	4			0			1			3		0	1	**15**
30		2	0			3			0			1		0	0	**6**
Monthly	2	226	390	0	1	25	1	5	21	1	0	12	1	0	1	**686**
Total	81	4738	26174	3	3038	12650	67	51	4101	124	1	452	29	21	2074	**53604**