FINAL

Final Meeting Minutes

Lewis River Aquatic Technical Subgroup

To: Lewis River Aquatic Technical Subgroup Date: October 15, 2025

From: Chris Karchesky, ATS Facilitator, PacifiCorp

Cc: Larissa Rohrbach and Lincoln Baxter, ATS Administrative Support, Anchor QEA

Re: Final Minutes of the August 28, 2025, Lewis River Aquatic Technical Subgroup Meeting

The Lewis River Aquatic Technical Subgroup (ATS) meeting was held virtually on August 28, 2025, on Microsoft Teams, from 9:30 a.m. to 1:21 p.m. Attendees are listed in Section IX of these meeting minutes.

Action Item Summary

- ATS members provide feedback on the Coho Salmon-Bull Trout Interactions Summary Report by September 5, 2025. A comment-response matrix will be developed after feedback is submitted.
- A brief update will be given to the Aquatic Coordination Committee (ACC) during their September meeting if revisions are still under consideration by their September 11 meeting date.

I. Welcome (Lesko)

A. Review Agenda

Larissa Rohrbach reviewed the agenda including amendments to include discussion of the 2025 Coho Salmon Transport Plan (Transport Plan).

The Coho Salmon-Bull Trout Interactions Summary Report was moved to the beginning of the meeting.

II. Coho Salmon- Bull Trout Interactions Summary

Larissa Rohrbach offered background on the topic and stated that the ATS has worked for several months on this directive from the ACC to discuss a list of questions pertaining to Coho Salmon and Bull Trout interactions. A request to address Science Actions was recorded in an ACC decision document[1] and most have been completed, while others will require longer-term study. She explained that compendium of resources was compiled to provide the best available science on the topic. She mentioned that the Coho Salmon-Bull Trout Interactions Summary Report prepared to respond to these Science Actions had been sent out for review prior to the meeting and reminded attendees of the request for feedback by September 5, 2025, so a status update can be relayed to ACC in their next meeting.

Robert Al-Chokhachy (U.S. Fish and Wildlife Service [USFWS]) asked for clarification on the intent of the document and how it might be used in the future. Erik Lesko answered that this document is one of a few deliverables that are part of that decision document. he explained that the summary's main intent is for the staff from National Marine Fisheries Service and USFWS (the Services) to determine what information is available.

Kale Bentley raised a concern that the status of the Science Actions listed in the Summary Report are not clearly stated. Rohrbach acknowledged that the group is at a place where the data are not available to continue working on some of these Science Actions as well as identifying through this process the specific limits provided by the Incidental Take Statement in terms of methodology.

Lesko agreed and said that this is not the end of discussion on this topic and the group could discuss what further resources are available to continue the work beyond presenting this summary report to the ACC.

Hudson clarified, regarding Bentley's remark, that he is suggesting adding a table where the status of each Science Action could be clearly reported. He was not prepared to discuss the comments on the document for this meeting but intends to adhere to the September 5 deadline for that submittal. He expressed the need for changes to some aspects of the report that everyone should be made aware of and understand before it goes to ACC. He expressed doubt that there is enough time to provide adequate review and discussion in the ATS/Lewis River Bull Trout Recovery Team (LRBTRT) before the ACC meeting. Rohrbach suggested the group revisit the discussion of timing for these revisions after further comments are provided.

Bryce Glaser (WDFW) agreed with Hudson and added that he thought this document laid out some clear points to synthesize to get all involved on the same page about information at hand and data gaps identified and how to address them. He stated this development is an exercise to revisit the requirements of the relevant Biological Opinions (BiOps).

Bentley agreed and said that while some tasks were easy to complete, others will take a nontrivial amount of time and many of these tasks have not been coordinated to identify who should lead

[1] *North Fork Lewis River Project – Request for Decision: Upstream Coho Salmon Transport and Bull Trout Interactions – 2024 and 2025*

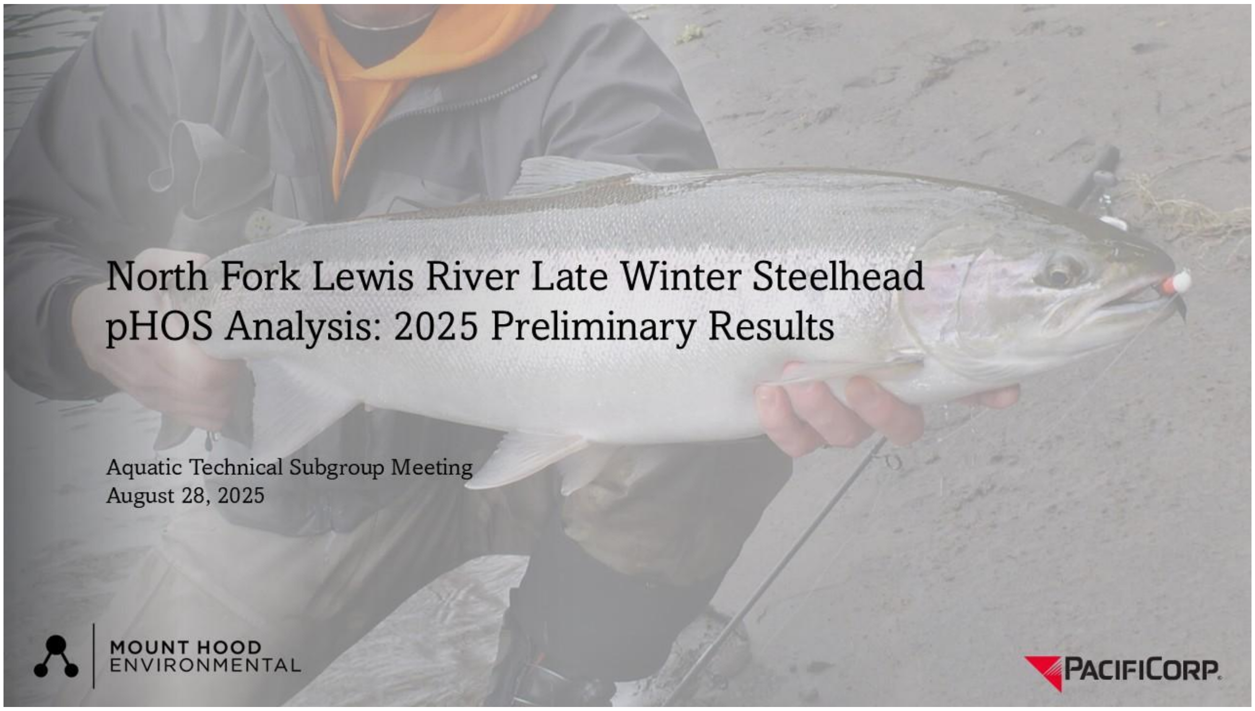
them. He stated it would be a missed opportunity if the group doesn't develop a strategy for moving forward with the relationship between the two competing BiOps.

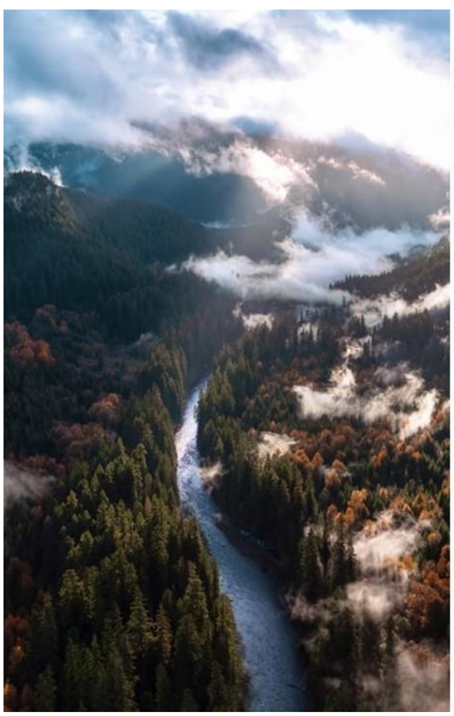
Lesko agreed that this topic is far from finished and that the submission to the ACC should be delayed to allow for more time to resolve these comments. Actions for 2025 are already set and Coho Salmon run season is impending. An option is to include this discussion in the September ATS meeting with the intention to submit the report to the ACC priori to their October meeting. Hudson requested that comments on the report be turned around quickly after they are submitted to this group so the ATS/LRBTRT can review prior to submittal to the ACC. Glaser called for an update be provided to the ACC explaining why the deadline has not been met for their September meeting. It was clarified that Hudson requested for a comment-response matrix to summarize submittals from various agencies before the next ATS meeting. It was agreed that this matrix would be developed after comment submittals to assist review before the next ATS meeting.

III. Adult Steelhead Abundance and Composition Monitoring Update

Ian Courter from Mt. Hood Environmental and Jeremiah Doyle (PacifiCorp) gave background on the topic, reminding the group that the methods for this work were adjusted for this year to exclude some less productive sampling areas and to increase effort in productive sampling areas. They introduced Mark Roes as the statistician and Ben Brisko as the field lead for Mt. Hood Environmental's efforts.

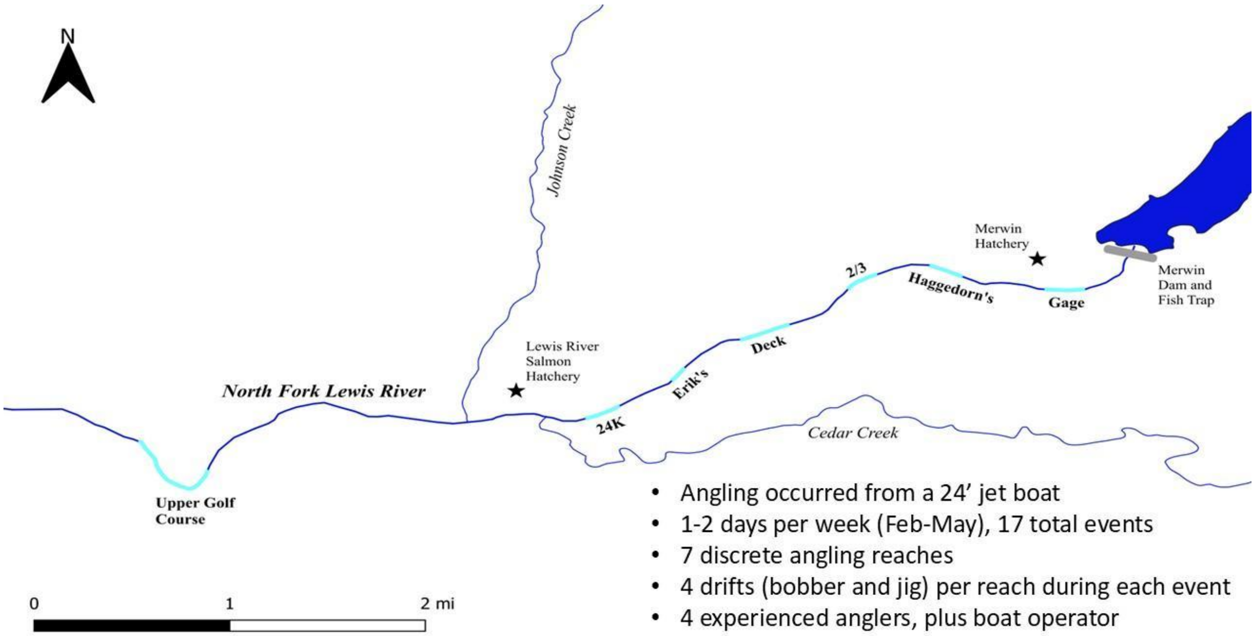
Coulter then presented and the slides are included as follow.





Project Overview

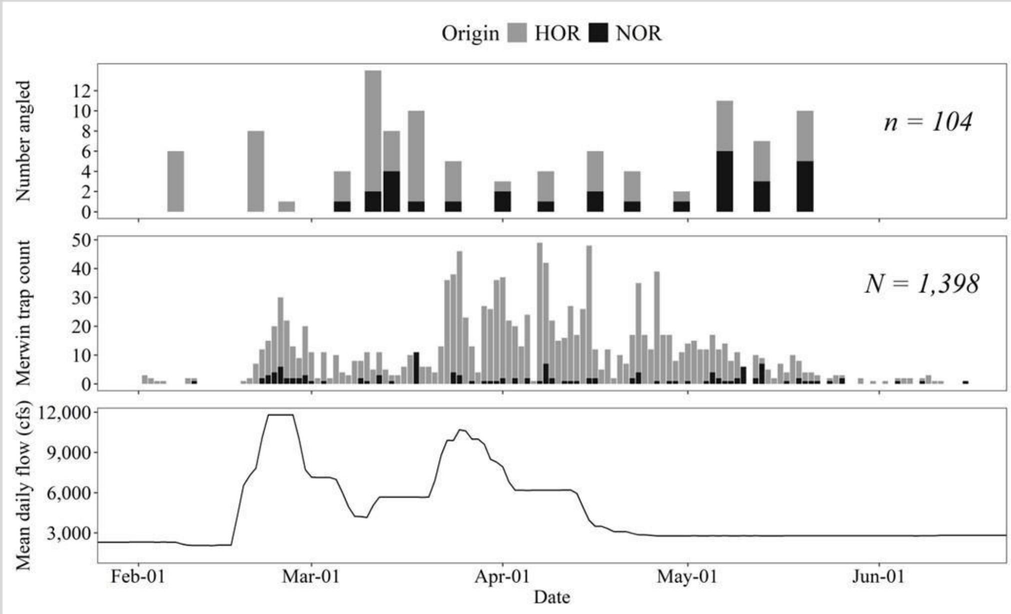
- Integrated hatchery uses 100% NOR brood from the lower river to supplement late returning adults for upper basin reintroduction (BWTs)
- Early returning Chambers Creek HOR stock no longer propagated. Last return expected in 2026.
- Supplementation Plan target for lower river pHOS <30%
- Monitoring in 2016 and 2018
  - Tangle netting for marking
  - Tangle netting and Merwin trap for recapture
  - multi-state mark-recapture model to estimate pHOS
- Monitoring in 2024 and 2025
  - Angling for marking
  - Angling and Merwin trap for recapture
  - multi-state mark-recapture model to estimate pHOS



- Angling occurred from a 24’ jet boat
- 1-2 days per week (Feb-May), 17 total events
- 7 discrete angling reaches
- 4 drifts (bobber and jig) per reach during each event
- 4 experienced anglers, plus boat operator

Field Data Collection

- Origin (HOR or NOR)
  - HOR = BWT and/or stubby dorsal
- Fork length, gender, life-history, reproductive status of residuals, pre- or post-spawn status, capture location, and time.
- Scale and genetic samples
- PIT tagged and returned to the river
- Recap via angling and Merwin trap



Angling and Trap Results

2024

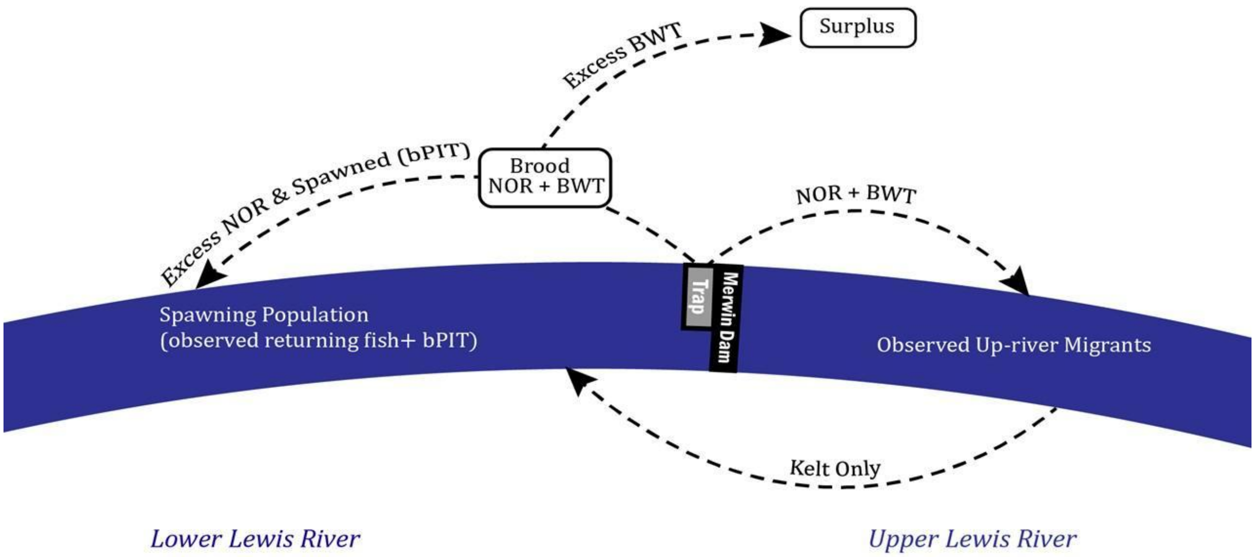
Angling
- 18 angling events
- 79 captures (29% residuals)
- 1 recapture

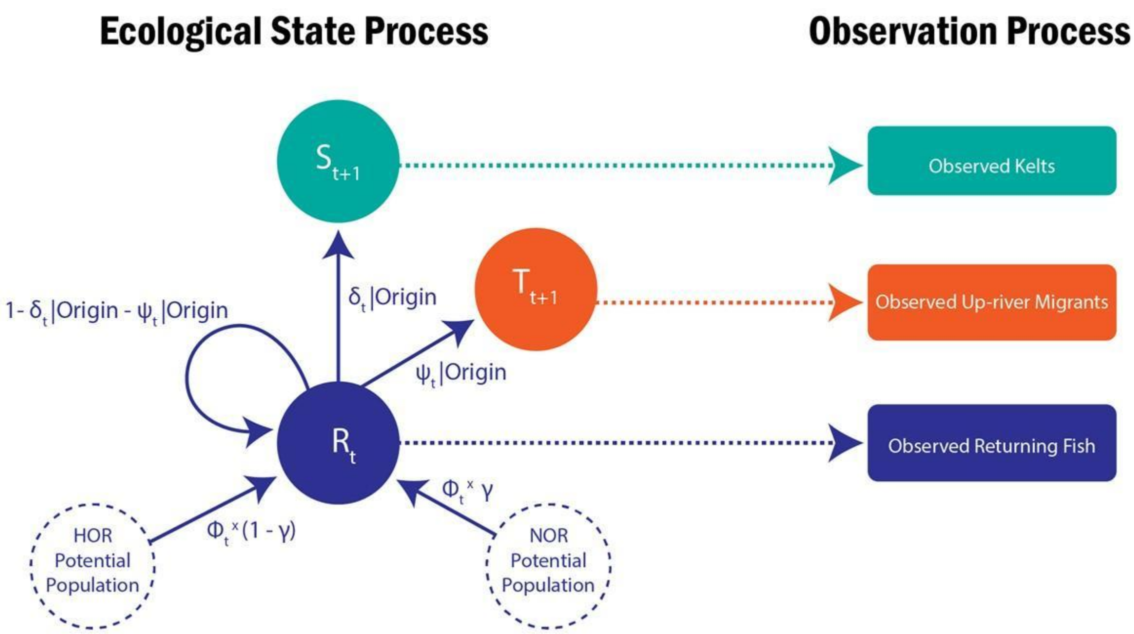
Merwin trap
- 2,210 captures
- 10 recaptures
- 86% HOR

2025

Angling
- 17 angling events
- 104 captures (45% residuals)
- 0 recaptures

Merwin trap
- 1,398 captures
- 8 recaptures
- 90% HOR


Surplus
Excess BWT
Brood
NOR + BWT
Excess NOR & Spawned (bPIT)
NOR + BWT
Trap
Merwin Dam
Spawning Population
(observed returning fish+ bPIT)
Observed Up-river Migrants
Kelt Only
Lower Lewis River
Upper Lewis River


Ecological State Process
Observation Process
S_{t+1}
Observed Kelts
δ_t|Origin
T_{t+1}
Observed Up-river Migrants
1- δ_t|Origin - ψ_t|Origin
ψ_t|Origin
R_t
Observed Returning Fish
$\Phi_t^x\gamma$
$\Phi_t^x(1-\gamma)$
HOR
Potential
Population
NOR
Potential
Population

Model Results

Parameter	Median	95% CI	SD	$\hat{R}$	
pHOS	0.69	0.61 – 0.76	0.04	1.00	Lower River
NOR spawners	119	92 – 147	14.4	1.00	
HOR spawners	269	238 – 297	15.3	1.07	
Resid. spawner ratio	0.44	0.34 – 0.55	0.05	1.00	
NOR entered	246	219 – 274	14.4	1.00	Basin-wide
HOR entered	1,520	1,489 – 1,548	15.3	1.07	
Female ratio	0.49	0.44 – 0.54	0.03	1.00	
Residual female ratio	0.06	>0.01 – 0.15	0.04	1.00	
Residual male ratio	0.13	0.03 – 0.20	0.04	1.00	

MOUNT HOOD ENVIRONMENTAL PACIFICORP.

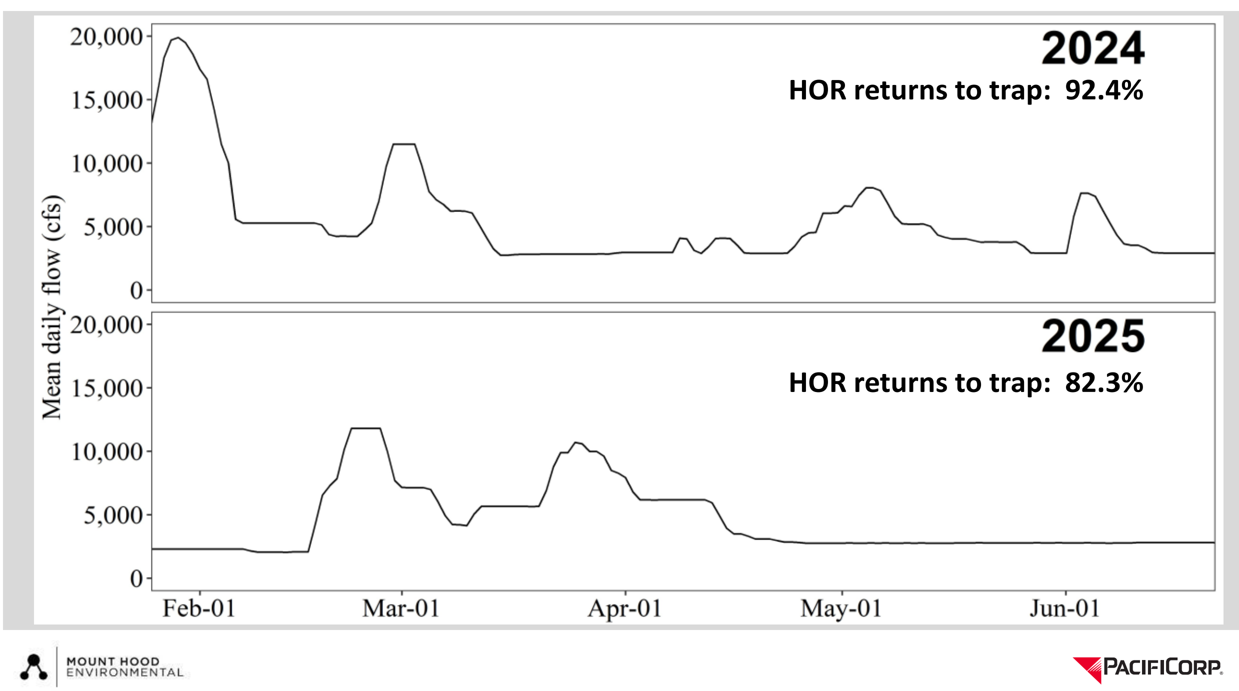
Comparison to Previous Results

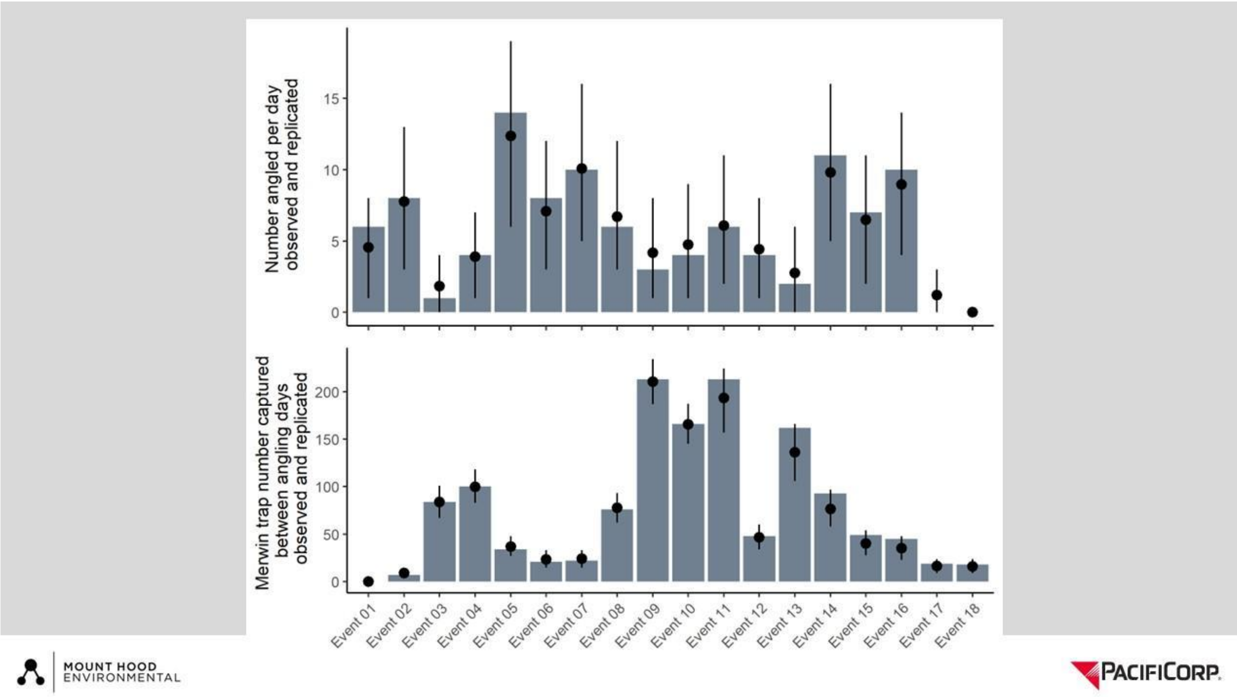
	PIT Tagged Fish	Spawner Est. (H+W)	pHOS	Residuals
2016	42	375	51.0% (41.3-60.4)	0.7% (f) 7.7% (m)
2018	73*	492	27.2% (21.1-33.9)	1.6% (f) 2.4% (m)
2024	79	369 (293-439)	39.2% (29.9-48.7)	1.4% (f) 6.1% (m)
2025	104**	388 (330-444)	69.3% (62.0-76.3)	5.8% (f) 13.5% (m)

* Total netted. Number PIT tagged fish not reported.
**Includes two 2024 recaps

MOUNT HOOD ENVIRONMENTAL PACIFICORP.

Roes noted that in addition to the discussion surrounding the residuals and higher proportion of hatcher-origin spawners (pHOS), another difference for this year was lower flows, which affected the proportion of fish that moved from the tagging location to Merwin Trap. He reported that last year, the proportion was 92.4%, while this year, it is 82.3%, which he said was a notable decrease. He clarified that it is important to note that this does not correct for residuals. He said running the calculations for the same value to look at homing to the trap that considers residuals, which would yield 96% returns for last year and 92.5% for this year.




Number angled per day observed and replicated
Merwin trap number captured between angling days observed and replicated
Event 01
Event 02
Event 03
Event 04
Event 05
Event 06
Event 07
Event 08
Event 09
Event 10
Event 11
Event 12
Event 13
Event 14
Event 15
Event 16
Event 17
Event 18
MOUNT HOOD ENVIRONMENTAL
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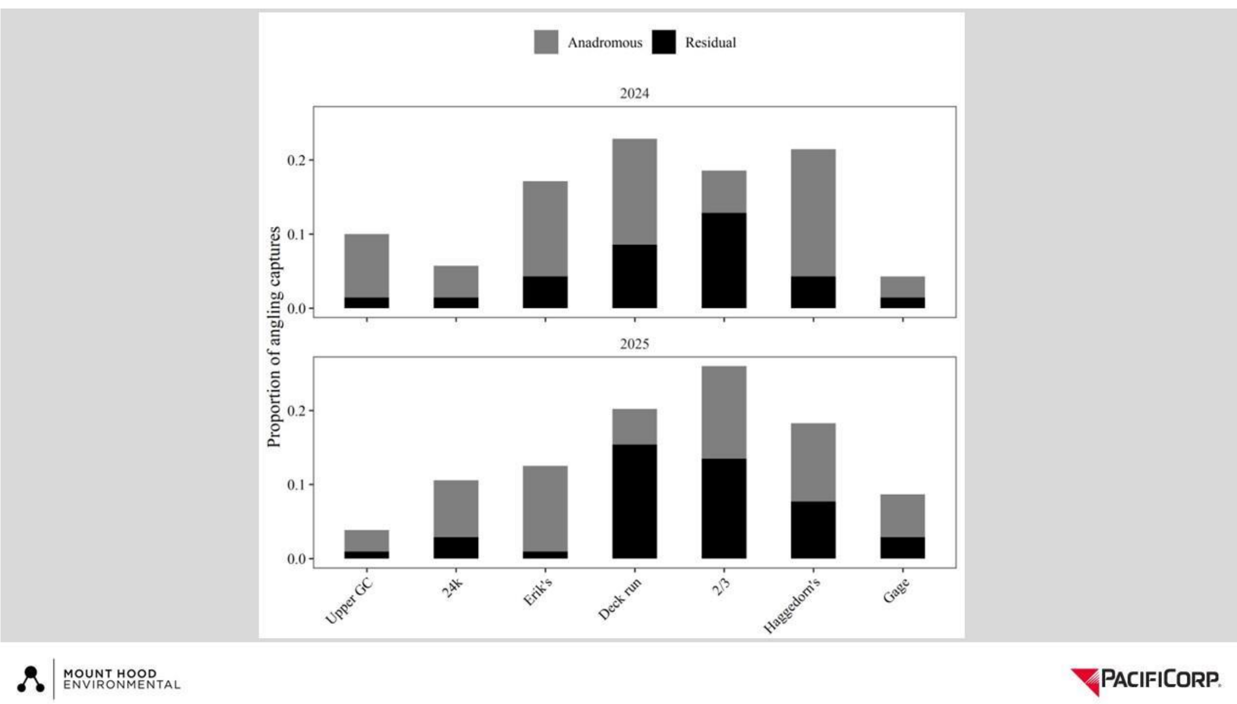
Anadromous
Residual
2024
2025
Proportion of angling captures
Upper GC
24k
Erik's
Deck run
2/3
Haggedorn's
Gage
MOUNT HOOD ENVIRONMENTAL
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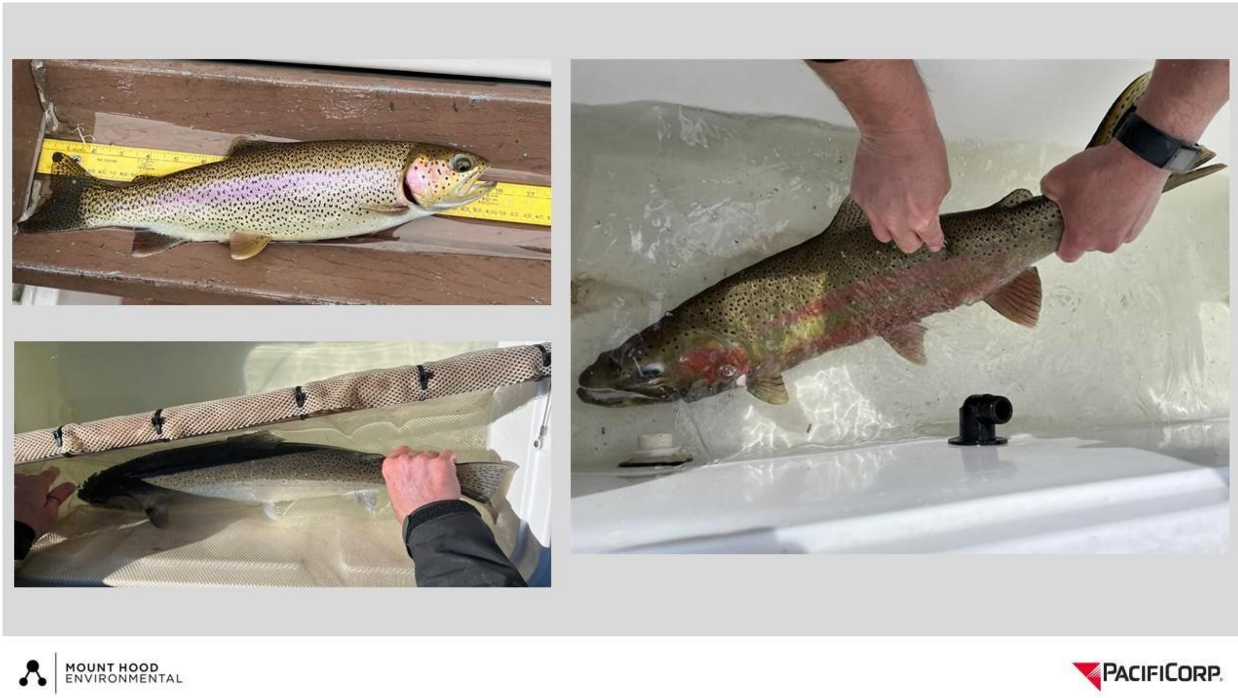

Bentley asked for clarification on the residual spawner ratio and what proportion of spawners are considered residuals. Roes replied that this is an important point and explained that residuals were reported as a component of all fish that enter the study area. He referenced the listed ratios, that 6% and 13% of the males tagged were residuals, and said that they made the assumption these residuals are not entering the trap and staying in the Lower Lewis River. This also means that there are many fish that were tagged that are not residuals. All fish that travel upstream from the trap are not eligible to be considered residuals, and the ratios reflect only those that are constrained to the lower river. Bentley then asked if residuals, under this definition, are all hatchery-origin return (HOR) or if they can be natural-origin return (NOR) as well. Roes replied they can be either and that the model does not distinguish based on origin, despite evidence suggesting that HOR fish residualize at a much higher rate. Bentley said that this work is largely excluding factors in the Upper Lewis River Basin. Roes said that those fish are outside the study area, but that it is important to consider.

Courter said that it is worth acknowledging that this methodology estimates the number of potentially mature residual fish in the population and calls them spawners, despite the expectation that some number of these fish will not spawn. He said this could have a substantial impact on pHOS and suggested the group work to address this. He asked the group to think about consistency concerning situations where pHOS is estimated using spawning surveys and related methods that do no consider residual fish.

Bentley agreed and said his agency has methods of generating these estimates. He suggested it would be helpful to piece apart these methods to assess and make them comparable but had no specific recommendation in the moment. He said that correcting for HOR residuals that are not spawners in the Lower Lewis River would lower pHOS and would also lower total spawner abundance. He suggested the most important piece is estimating abundance and making sure that metric is meaningful in terms of recovery thresholds. He also highlighted that according to this presentation, 93% of the fish that returned last year were HOR, so this calls for basin-wide estimates, not just estimates for the Upper and Lower Lewis River. He suggested assessing the transport strategy for steelhead and paying attention to capacity in the Upper Lewis River Basin.

Lesko asked whether total spawners are male and female. Roes confirmed and reported a near 50/50 split between sexes, which is an improvement from 39% female ratio observed the year prior.

Josua Holowatz asked whether the fish in this analysis included Chambers Creek-origin fish. Doyle it does not, meaning that the definition of “hatchery fish” in this context includes those with stubby dorsal fins or blank wire tag-equipped individuals. Glaser reminded that a transition to a new Stepping Stone Program variant is happening this coming May, so staff may encounter adults in the future that are fish categorized as residual but with a clipped adipose fin (ad-clip) resulting from this change in management. Roes acknowledged Glaser’s comment and said this topic was discussed during analysis. Kevin Young (WDFW) said the first release for this new Stepping Stone Program was released in May of 2025, so returns are anticipated in winter of 2027 and into 2028 with the possibility of residuals in 2026. Roes said their team would be prepared.

Courter said it seems that if fish are being mass marked, then the issue with residualized hatchery fish will likely resolve itself when the public is allowed to retain ad-clipped hatchery fish. He said that going forward, HOR fish of both anadromous and residual life histories will be marked and identifiable to the public and will be removed from the population over time. Glaser confirmed that is the intent; however, there will still be the Conservation Program component of the population that will be blank wire tagged with adipose fins intact.

Glaser said that this year, any ad-clipped steelhead being handled would be a Chambers Creek-origin fish, because all the Conservation Program fish are blank wire tag-equipped fish with their adipose fins intact. Courter confirmed and asked whether it would then be safe to assume there will be no ad-clipped Chambers fish returning in subsequent years because the program has been discontinued. Bentley confirmed this, and Young clarified the year after next should see this change. He said that next winter (2025/2026) is expected to be the last returning year of the two salts, with some three salts potentially returning in 2026/2027.

Holowatz said that in the Lewis River there is a trout retention slot limit between 14 inches and 20 inches. These fish being harvested do not need to be ad-clipped, so there is some possibility of harvest pressure on smaller adult steelhead.

Bentley asked Roes a question about the confidence in the Angling and Trap Results based on a reported eight total recaptures. Roes answered that the confidence comes from the Merwin Dam Trap data. Bentley suggested an offline conversation to help him further understand that aspect of the analysis.

Lesko asked about the pHOS and whether there is a threshold where it is too high and changes are needed. Glaser referred to the Transition Plan that outlines thresholds for moving to local adaptation. Currently the agency is operating in a reintroduction phase to rebuild the NOR population upstream of the dams. Because it is a single population in the basin, the pHOS for the entire population is the appropriate metric to assess; this is the metric that would be consulted on in an Hatchery Genetic Monitoring Plan (HGMP) process with National Oceanic and Atmospheric Administration (NOAA) Fisheries.

Bentley said fish are passed upstream based on an informal calculation of what capacity may be for steelhead. He said there is no integrated population model (IPM) yet, so capacity cannot be quantified using data from the time-series since reintroduction. He said it can be based on information from other watersheds and that method reported diminishing returns of putting additional adults upstream. He suggested this be something to develop a strategy before going to NOAA Fisheries for any consultation on an HGMP.

Bentley noted that data being presented are focused on upper river transport and do not consider fish inhabiting lower river tributaries like Cedar Creek. This is currently a monitoring gap with no estimates of abundance for those tributaries and as a result do not have pHOS data for those tributaries. He said that WDFW carried out some of this monitoring in the form of spawning ground surveys that inform a spatial/temporal model. This will need a couple years of data to generate estimates.

IV. Coho Salmon Integrated Population Model Update

Russell Perry (U.S. Geological Survey [USGS]) presented information on the Coho Salmon IPM and stated that he has been exploring its use to determine the carrying capacity of adult Coho Salmon in the Upper Lewis River Basin in response to a request from WDFW staff to inform management decisions concerning Coho Salmon and Bull Trout interactions in the basin. His presentation is included below.

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science for a changing world

What is the Carrying Capacity of Coho Salmon in the Upper Lewer River? (and related questions)

Russell W. Perry

John M. Plumb

Lewis R. ATS meeting

28 July 2025

U.S. Department of the Interior
U.S. Geological Survey

Background

- 2024 - Completed initial integrated population model
  - 2013 – 2023
  - Difficulty estimating juvenile capacity
  - Relied on literature to develop informative prior on capacity
- Information needed about adult carrying capacity
  - To inform adult Coho transportation decisions
- Questions:
  - Can we calculate capacity in terms of adults instead of juveniles?
  - Are current assumptions about capacity consistent with observed data?
  - Can we estimate capacity with some simplifying assumptions?
  - What about other metrics (Equilibrium abundance)

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Overview

- Primer on stock-recruitment models
- Capacity based on Integrated Population Model (IPM)
  - Plumb and Perry 2025
  - Used parameters from multistage IPM
- Simplified estimate of pre-collection recruitment
  - How many juveniles were available to be collected?
  - Is IPM consistent with these estimates?
- Fit Beverton-Holt to pre-collection recruitment
  - Estimate productivity, capacity, and equilibrium

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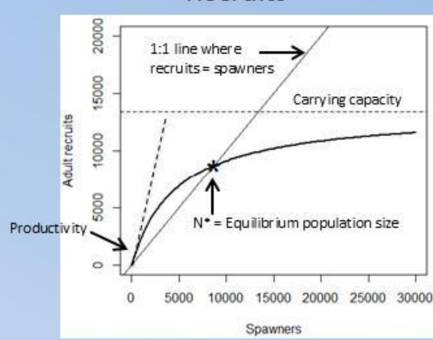
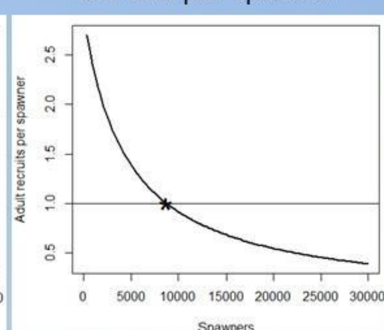
Beverton-Holt Model, key concepts

Recruits



Recruits per spawner



- Recruits approach capacity as spawners approach infinity.
- Productivity is population growth rate at low abundance (no density dependence)
- Equilibrium population size = Abundance where recruits just replace spawners (recruits / spawner = 1).
  - Population tends toward equilibrium in the long-run under stable environment.
  - When N < N*: recruits > spawners, recruits/spawner > 1, and population increases.
  - When N > N*: recruits < spawners, recruits/spawner < 1, and population decreases.

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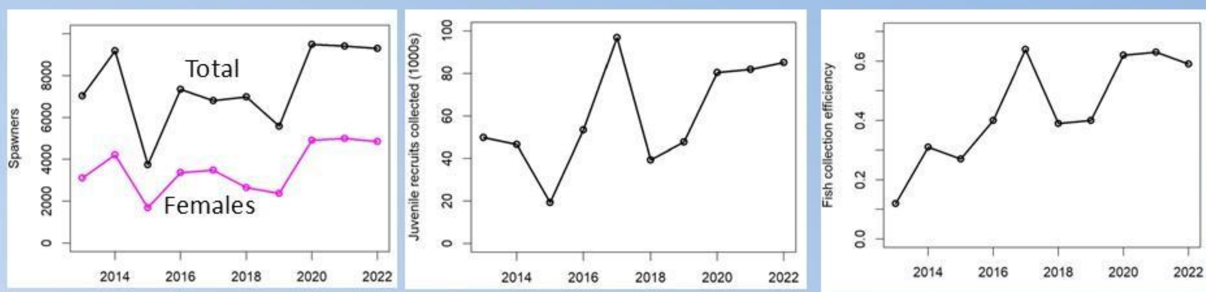
Data Summary



Brood year

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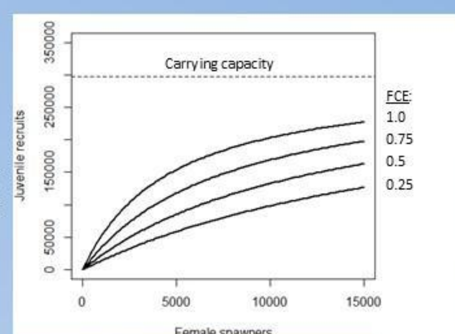
Results from Current IPM (Plumb and Perry 2025)

Table 1. Summary statistics for posterior distributions for the two-stage life cycle model of Lewis River Coho Salmon showing parameters for the Beverton-Holt model, smolt-to-adult return rate, observation, and process error, as well as the autorcorrelation coefficients. Also shown is the estimated mean productivity should FCE = 1 and capacity when estimated with an informed and weakly informed prior distribution. Notice all estimates are provided while estimating the effect of FCE on juvenile productivity is included in the model.

Parameter	Lower 95% CI	Median	Upper 95% CI	Mean	SD
Beverton-Holt stock-recruitment model					
θ_0 (intercept)	1.465	2.196	2.829	2.193	0.337
θ_1 (FCE effect)	0.247	1.962	4.079	2.062	0.958
* θ_2 (pHOS effect)	-3.445	-1.013	1.473	-0.972	1.243
* θ_3 (Early effect)	-0.660	0.444	1.791	0.531	0.683
* θ_4 (Max winter flow effect)	-0.233	0.072	0.321	0.053	0.181
* θ_5 (Min summer flow effect)	-0.590	-0.332	0.071	-0.301	0.185
Productivity at FCE = 1($\alpha_{FCE=1}$)	10.370	64.023	245.794	94.870	159.163
K (capacity) informed prior	84,584	297,901	812,488	361,546	237,765
K (capacity) weakly informed prior	58,373	645,779	1,903,420	781,146	564,100
Smolt-to-Adult return rate (SAR)	0.001	0.0449	0.130	0.058	0.064
Process error					
$\sigma_{P,A}$ (adults)	1.094	1.882	3.038	1.983	0.554
$\sigma_{P,J}$ (juveniles)	0.084	0.217	0.410	0.231	0.093
Autocorrelation					
ϕ_A (adults)	-0.306	0.266	0.853	0.255	0.309
ϕ_J (juveniles)	-0.999	-0.511	0.431	-0.415	0.466

*Included as a stand-alone effect in addition to the effect of FCE on productivity.



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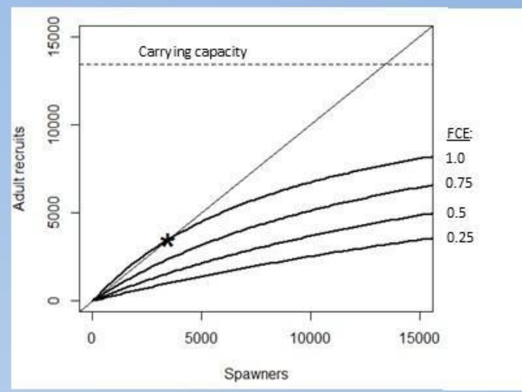
Composite Beverton-Holt across all life stages

$$R_n = \frac{P_n S}{1 + \frac{P_n}{C_n} S}$$ Multistage Beverton-Holt (Moussalli and Hilborn 1986)

$$P_n = \alpha \cdot SAR$$ Cumulative Productivity

$$C_n = K \cdot SAR$$ Cumulative Capacity

$$N^* = \frac{K}{\alpha}(\alpha \cdot SAR - 1)$$ Equilibrium abundance



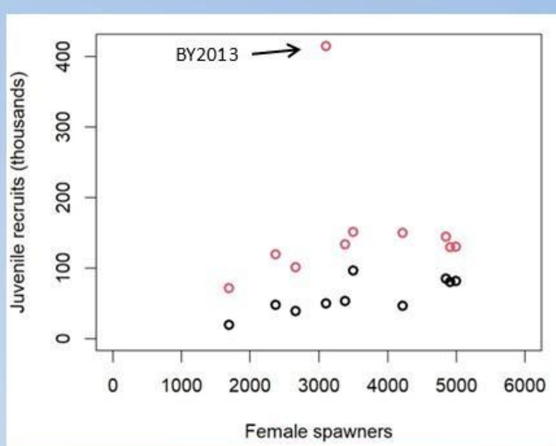
C_n = Adult capacity = 13,405 adults
N* = Equilibrium abundance = 3,493 adults

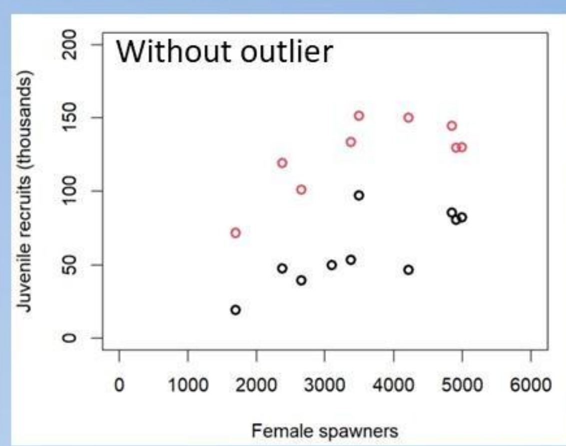
USGS
Preliminary data. Do not cite.

6

Is IPM Consistent with Expected Pre-collection Recruitment?

Simplified estimate of pre-collection recruitment:
Pre-collection recruitment = total juveniles collected from brood year y / FCE experienced by yearling juveniles





Black circles = Recruits collected at Swift Dam
Red circles = Simplified estimate of pre-collection recruitment

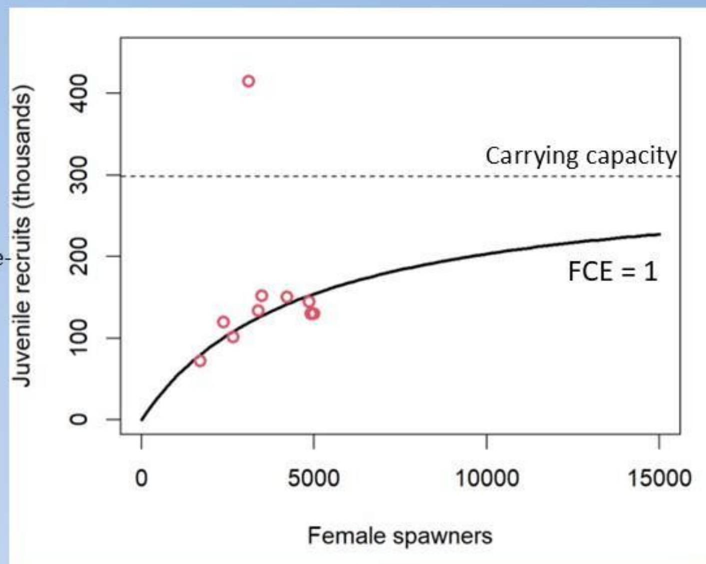
USGS
Preliminary data. Do not cite.

7

Is IPM Consistent with Expected Pre-collection Recruitment? Yes!

Black line = Predicted Beverton-Holt relationship for FCE = 1 from IPM

Red circles = Simplified estimate of pre-collection recruitment



USGS

Preliminary data. Do not cite.

8

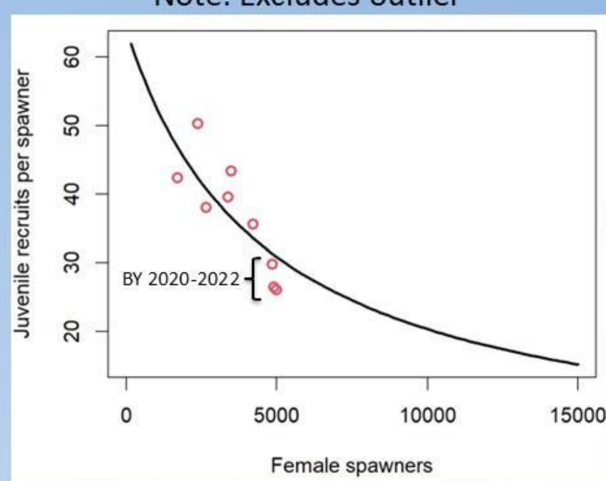
Evidence of Density Dependence

- Pattern of declinging recruits / spawner provides evidence of density dependence
- Suggests that capacity might be estimable from this data

Black line = Predicted Beverton-Holt relationship for FCE = 1

Red circles = Simplified estimate of pre-collection recruitment

Note: Excludes outlier



USGS

Preliminary data. Do not cite.

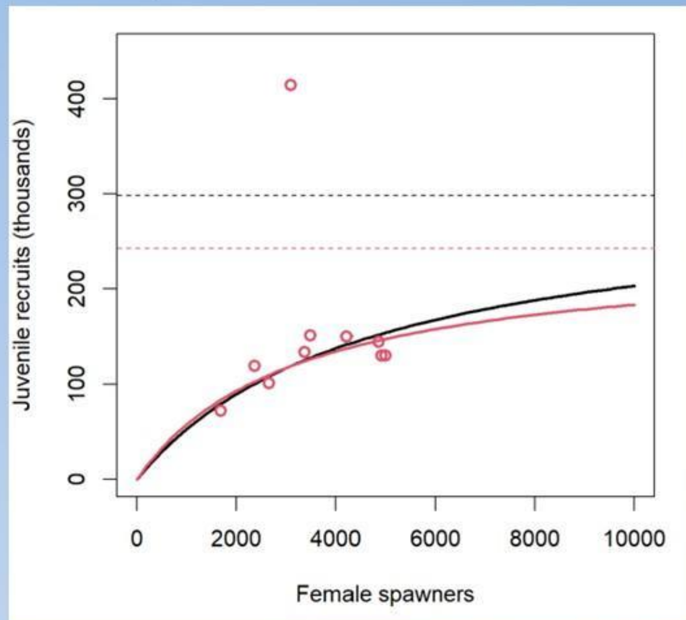
9

Beverton-Holt model fitted to pre-collection recruitment

- Productivity = 75.3 juveniles / female
  - 95% CI: 48 - 119
- Capacity = 242,648 juveniles
  - 95% CI: 158k – 372k
- Suggest lower capacity than IPM
- Nearly identical fit within the range of observed data

Black lines and symbols = Predictions for FCE = 1 from IPM model

Red lines and symbols = Beverton-Holt model fitted to simplified estimate of pre-collection recruitment, excluding outlier.



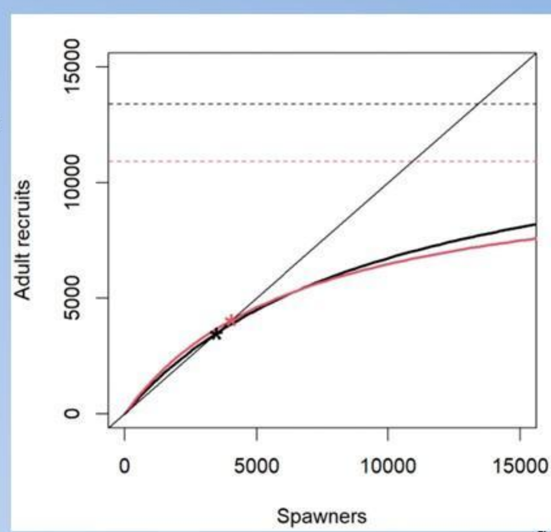
USGS
Preliminary data. Do not cite.

Composite Beverton-Holt with simplified estimate pre-collection recruitment

Based on simplified estimate of pre-collection juveniles:
C_n = Adult capacity = 10,918 adults
N* = Equilibrium abundance = 4,067 adults

Black lines and symbols = Predictions for FCE = 1 from IPM model

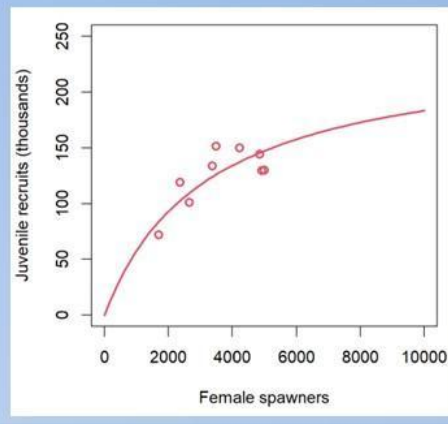
Red lines and symbols = Beverton-Holt model fitted to simplified estimate of pre-collection recruitment, excluding outlier.



USGS
Preliminary data. Do not cite.

Importance of Contrast in Stock Recruit Data

- Only 9 data points here!
- Extending the range of spawners will better inform parameters
- Low spawner abundance -> informs productivity
- High spawner abundance -> informs capacity
- Both affect estimate of N*



Adapative management

- No new insights if target is constant spawners
- Some management control over spawners
- Opportunistically extend range on both ends

USGS

Preliminary data. Do not cite.

Summary

- IPM is consistent with data
- Able to estimate capacity. Why?
  - Outlier could have affected IPM analysis
  - Added additional year of data at high abundance
- Capacity ≈ 11,000 spawners
- N* ≈ 4,000 spawners
- Estimates likely to change
  - Next year of data will be a 10% increase in sample size!
- Use adaptive management to leverage natural variation
  - Manage spawner abundance to fill in data gaps

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Next Steps

- Update Coho IPM with new data
  - Investigate outlier and determine course of action
  - Add 2024 and 2025 data
  - Use scale analysis for age structure
- Build IPM for steelhead
  - Data in hand

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Questions and Discussion

Photo credit: USFWS, Steve Martarano

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Mike Hudson asked for clarity on defining the term "capacity" for adults. Perry explained that capacity is a theoretical maximum number of spawning fish that a given watershed can support.

Thomas Buehrens (WDFW) said that, regarding Beverton-Holt recruitment curves, he has stopped referring to the R_{max} parameter as "capacity," instead using the term "equilibrium abundance." Perry agreed with Buehrens's reasoning and said that parameter is likely be more of interest to management.

Hudson asked about parameters feeding into this determination of capacity. Perry replied it is the relationship between the number of recruits (juvenile or adult) to female spawners in the IPM, with fish collection efficiency as a covariate. Hudson mentioned that this is based on 9 years of data from before the introduction of salmon and steelhead above Swift Dam and asked whether they expect the stock recruitment model for Coho Salmon to change when that reintroduction starts to show up in the capacity data. Perry referred to the slide displaying the Beverton-Holt model results and stated that it is hard to predict the outcome of these multispecies reintroductions. Development of such hypotheses would need to consider timing of life history and interactions between life stages within and between species.

Buehrens agreed and said that for having nine stock recruitment data points, there is great information on population parameters in the Upper Lewis River Basin. He pointed to higher contrast in spawner abundance than seen in most populations, likely due to ongoing recolonization efforts. He also said the data benefits from a higher level of precision than typical in areas without dam census counts. He said that the estimated parameters report numbers that are within the high mass portion of the predictive distribution for productivity and capacity for Coho Salmon. He summarized by saying these results corroborate the results of previous work and that he expects our understanding to become more refined and parameters to change.

Perry brought up changes in management and their ability to affect productivity and capacity. He mentioned the discussion of changing the release location hatchery Coho Salmon to potentially alter their distribution in the tributaries.

Bentley discussed how to move forward with this information and suggested focusing on short-term management actions concerning the Coho Salmon/ Bull Trout discussion. He expressed the desire to fold in this best available information on productivity and capacity from the IPM to generate meaningful metrics to determine the number of fish transported by origin. He acknowledged the difference between capacity and equilibrium and said they are probably shooting for somewhere between those two values for transport numbers. He brought up collection efficiency since the data presented did not take this into consideration. He said that there is a lot of information on hand and the group should turn it into prospective targets and develop a path forward.

Bentley introduced Buehrens and asked for his perspective on hatchery recovery methods. He mentioned that Buehrens had developed a framework and asked about factors prohibiting this framework from being applied to the Lewis River Basin. Buehrens gave a background on the development of the recovery phases and emphasized that context matters for pHOS goals and managing for negative effects of hatcheries on populations. He said this metric is more relevant for populations that are not of conservation concern. He said that the Hatchery Scientific Review Group stopped short of producing a blanket framework able to be applied generally. He discussed issues with data surrounding hatchery planning prior to reintroduction, which may be based on habitat models, but does not consider data coming in as they are collected and suggested using life-cycle models to estimate demographic parameters to validate assumptions before beginning a reintroduction effort.

Larissa Rohrbach thanked Perry for his presentation and closed this topic on the agenda.

V. 2025 Coho Salmon Transport Plan

Erik Lesko gave background on the topic by saying a decision document on the 2025 Transport Plan was distributed and subject to lengthy discussion at the last ACC meeting. He said a comment matrix will be used for feedback. He said that Chris Karchesky is taking the lead on this topic, but he is on medical leave at this time with Lesko acting as liaison. He said he met with Kale Bentley to discuss priorities with a focus on the transport curve. A new curve was suggested and the intent to get this plan approved by ACC at the next meeting in September, which is 2 weeks from the date of this meeting.

Bentley said that the high-level summary of the conversation is that Coho Salmon are returning and called for the need to finalize the broodstock collection and transport plans. He said a draft version has been shared and reviewed, and resulting discussions left him unclear whether there was agreement with the suggestions made. He said the Transport Plan is planned to start in a couple days, so the point of the conversation should be to finalize. He asked Lesko for input from Karchesky on the topic.

Lesko explained the differences between the transport curve currently in place and this new recommendation. He said the proposal is based on run timing of NORs rather than considering both NOR and HORs. He said that the reason for the recommendation is to avoid a situation where the redd superimposition impact threshold is approached early in the season, causing the passage of NORs to cease early, which has been a concern in the past. Bentley clarified that this proposal specifically looks at return timing to the Merwin Fish Trap, and potentially Lewis River hatcheries, for guidance on the Transport Plan to the Upper Lewis River Basin. He explained that it makes more sense from an ecological standpoint to base the timing curve off NOR fish rather than HOR fish and said that he does not see a reason to not adopt these changes.

He also discussed the tradeoffs between transporting all NORs and the goal to transport 11,500 fish total, NOR and HOR combined, set forth in the Coho Salmon/Bull Trout Decision Document. He said that NOR return timing is quite variable between years and spoke of the risk that the total goal may be reached before the NORs are done running. He said the discussion involves two main updates to the transport schedule: the specific timing and choosing how to backfill HOR fish when NOR thresholds are not met. He then spoke of the need to track and communicate in-season modifications and fold in thresholds concerning Bull Trout interactions.

Lesko said that regardless of the curve used, it all falls within the 5-year variability. He spoke of potential logistical concerns with this change to using NOR return timing and needed to coordinate with hatchery staff to ensure it would be feasible given their capabilities.

Bryce Glaser said he appreciated the flexibility and heard that there could be logistical concerns. He said that the dialogue leading up to now had led him to believe that the Utilities would make the infrastructure available if weekly run conditions called for it.

Bentley mentioned a tracking sheet developed for steelhead broodstock collection that could be used in tandem with this new Coho Salmon Transport Curve. This sheet lines out what to do based on the plan and timing and can report on both transport and broodstock collection, because these categories are mutually exclusive. This tracking sheet would inform weekly communication between WDFW and PacifiCorp. Lesko said this is not different from the current coordination that occurs, and Bentley replied that his method will facilitate more timely feedback and will create a framework for end of year reports.

Glaser called for clarification on the discussion and said that it is the expectation of the ACC for the ATS to come to a conclusion on this topic in time for the 2025 transport season. Bentley suggested Lesko accept his comments and iterate quickly on those that cause concern. Lesko said it would be inappropriate to accept all comments without proper review and said that it will unfortunately take more time for review.

Bentley said that a strategy for HOR passage is still needed. Lesko said that strategy could be worked out adaptively, in season. Bentley reiterated the point that the ATS is supposed to provide guidance and is at a point where decisions are taking too long.

Bentley proposed two options for setting weekly transport numbers: 1) a transport goal for NORs backfilled by HORs weekly; or 2) offset transport to account for run-timing variation. Lesko suggested a call at the end of each week to discuss results and plan for the following week. Bentley suggests agreeing to try the backfill technique to keep the topic moving. Lesko said he needs to consult with internal staff before agreeing to anything.

Levi Pienovi (PacifiCorp) said that he is already in regular contact with Merwin and Lewis hatcheries.

It was agreed that Lesko would discuss with Pienovi and set up an initial discussion on the topic. Bentley said it will take a week or two to develop the in-season tracking sheet and there is a need to distribute a formalized plan soon. He shared concern about the ability to reinitiate Coho Salmon transport after it has been halted due to the redd superimposition threshold being met.

Glaser suggested WDFW staff attempt to revise the draft, highlight their changes, and facilitate conversations about these changes before the September meeting. Lesko said that he did not want to have a draft sent out without PacifiCorp review because this could be perceived that PacifiCorp supports the changes and that would be inaccurate. Lesko supported being efficient as long as there was an understanding that comments and review would be necessary prior to accepting the revised draft.

Jonathan Stumpf (Trout Unlimited) asked how long Karchesky would be out. Lesko answered that it is unknown but that he is able to talk over the phone.

Larissa Rohrbach brought the conversation to a close.

VI. ATS Workplan – Task Prioritization

Larissa Rohrbach said that this planned topic involves discussion of additional input that still has yet to be submitted and the topic will be pushed to the next meeting due to time constraints.

VII. Brief Updates

A. Hatchery Practices

Jesse Cody (WDFW) gave updates on Speelyai and Merwin hatcheries and said all stocks at Merwin are healthy and on track for growth. He spoke of annual Ichthyophonus treatments for the full facility. He said the incubation room will be emptied of fish soon, with the late-winter steelhead being moved outside. He said they treated the Stepping Stone stock for gill disease, and both the Stepping Stone and Conservation programs stocks for Columnaris. He said the Stepping Stone Program is on track for growth. He reported lower than typical rearing and egg loss in these stocks. He said adult summer steelhead brood stock collection has 2 weeks left and that this will be the last week of recycling summer steelhead back to the river.

Cody said Speelyai kokanee are doing great, with approximately 40% production after their infectious hematopoietic virus outbreak. Juvenile spring Chinook Salmon are in good shape and will be treated for Ichthyophonus in late fall. He said the first spring Chinook Salmon spawn was the day before the meetings; they took 81 females with fecundity reported to be approximately 2,800 eggs per female. He said with 611 females left on hand, they are projected to hit program goals.

John Allen (WDFW) gave his first update on the Lewis River Hatchery and said that early Coho Salmon are arriving. They sent eight fish upstream with a PacifiCorp truck and are planning to do it again next week. He said juvenile rearing is going as expected and that there are no new issues of importance right now.

Kevin Young said that spring Chinook Salmon spawners at Speelyai were experiencing lower fecundity, as anticipated. He said that program goals will likely be met, but in-season adaptations may be called for in situations where they have extra broodstock on hand. He mentioned that they have been approved for Southern Resident killer whale funds to rear an additional 100,000 subyearlings. Lesko asked for clarification that these fish would be produced at Speelyai, Young confirmed. Young clarified that there is currently no surplus of broodstock, but that the decision for what to do with any surplus will be a weekly discussion. Cody reported that their weekly coordination meetings occur on Wednesday for the first 2 weeks, then move to Mondays.

B. Fish Health

Sean Roon (WDFW) discussed the change to 100% ELISA sampling of adult spring Chinook Salmon, which started the day prior to the meeting. 81 females were sampled, and they looked good with only six showing signs of bacterial kidney disease (BKD). Their eggs are being flagged to keep track of subsequent testing. He said results from this testing are generally returned in about 3 weeks and they can then plan accordingly.

Roon said the spring Chinook Salmon juveniles currently being reared will be treated for BKD within all stocks due to some chronic loss still being observed from an outbreak earlier in the year.

Larissa Rohrbach asked about comparisons between this new ELISA sampling rate and methods used in the past. Roon replied that historically they had only sampled around 250 of the adult females, which in the past resulted in identifying females with “below-low” levels to seed all the yearling release groups with their eggs. This year, because of higher numbers BKD cases in the adults, they are sampling all females to achieve this.

VIII. Administrative Items

The next meeting of the ATS will be September 28. Larissa Rohrbach solicited input from attendees. Erik Lesko said that a date is set for the visit to the proposed alternative release sites and an agenda is forthcoming. He said to plan to meet at 9:00 a.m. at Hydro Control Center on the Friday after the next ACC meeting.

Josua Holowatz suggested that the ACC and Fish Passage Subcommittee meetings be held in person in September; he has a room reserved at Region 5 headquarters. Lesko agreed.

Rohrbach brought the meeting to a close at 1:20 p.m.

IX. List of Attendees

Name	Affiliation
Lincoln Baxter	Anchor QEA
Larissa Rohrbach	Anchor QEA
Beth Bendickson	PacifiCorp
Jeremiah Doyle	PacifiCorp
Mark Ferraiolo	PacifiCorp
Erik Lesko	PacifiCorp
Levi Pienovi	PacifiCorp
Christina Donehower	Cowlitz Tribe
Amelia Johnson	LCFRB
Ben Brisco	Mt. Hood Environmental
Ian Courter	Mt. Hood Environmental
Mark Roes	Mt. Hood Environmental
Marc Johnson	NOAA Fisheries
Jonathan Stumpf	Trout Unlimited
Robert Al-Chokhachy	USFWS
Mike Hudson	USFWS
John Allen	WDFW
Kale Bentley	WDFW
Thomas Buehrens	WDFW
Jesse Cody	WDFW
Bryce Glaser	WDFW
Josua Holowatz	WDFW

Name	Affiliation
Christopher Kopack	WDFW
Peggy Miller	WDFW
Sean Roon	WDFW
Kevin Young	WDFW
Russell Perry	USGS