REGIONAL COMMITTEE ON MARKING AND TAGGING
48TH MEETING

DAY 2

APRIL 22 - 24, 2025

Santa Rosa, CA

Day 2: MS Teams Tips

Please mute yourself when not speaking.

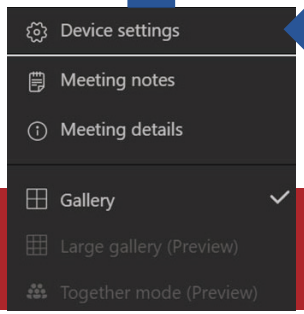
Use *6 to mute phone audio.

Use the microphone icon on the control bar to mute computer audio.

Desktop view

Browser view

You can use chat or raise your hand



If you are having problems with audio/video, check your device settings.

Day 2: Welcome and Introductions

- For those not present on Day 1:
  - RCMT members
    - in-person
    - virtual, please keep camera on as feasible
  - Other attendees and guest presenters
    - in-person
    - virtual, please use the CHAT (name & affiliation) and leave camera off unless speaking

Westport WA boats, Stan Allen

Selective Fishery Evaluation Committee

Ryan Lothrop, U.S. Chair

Washington Department of Fish and Wildlife: Columbia River Fishery Manager

SFEC duties

- The PSC established the SFEC to assess impacts of mass marking and mark-selective fisheries on the viability of the coded wire tag (CWT) program.
- The SFEC has three components:
  - Oversight Committee, composed principally of the Co-Chairs of the PSC SFEC, Coho, Chinook, and Data Sharing Committees;
  - Analytical Work Group (SFEC AWG), which is responsible for developing methods and conducting analyses of impacts of mass marking and mark-selective fisheries on the viability and efficacy of the CWT program;
  - Regional Coordination Work Group (SFEC RCWG) which coordinates information sharing on mass marking and regional sampling programs, including electronic tag detection.
- Evaluates and reports on MM and MSF proposals and if they occurred.
- Reports progress and issues to the PSC.

2025 Report to PSC – Mass Marking

- The planned Mass Marking for 2025 included:
  - Coho proposals included a region-wide total of approximately 36.4 million MM fish, a decrease of 0.8 million fish from 2024.
  - Chinook proposals included approximately 141.8 million MM fish, an increase of approximately 7.1 million from 2024, mostly due to production increases of Columbia River fall Chinook program.

Agency	Coho (in millions)		Chinook (in millions)	
	2024	2025	2024	2025
ADF&G			3.3	2.8
CDFO	3.5	3.7	11.6	11.5
USFWS	1.6	1.5	27.1	27.8
WDFW/Tribes	25.9	23.7	67.9	72.1
ODFW/Tribes	6.2	7.5	24.8	26.7
Total	**37.2**	**36.4**	**134.7**	**141.8**

2025 Report to PSC – Mass Marking

- 2024 and 2025 estimates include U.S. hatchery production to increase Southern Resident Killer Whale prey.
- Canada is continuing to explore the potential for new MM and MSF opportunities.
- In the U.S., Chinook and Coho DIT groups are limited to Puget Sound, the Washington Coast, and the Columbia River. WDFW, USFWS, and NWIFC are the agencies tagging DIT groups. In Canada, the only DIT program which began tagging in 2024, is on Big Qualicum Chinook in the Strait of Georgia.
- AutoFish trailers continue to be added in Canada and the U.S. to allow increased and more efficient marking and tagging with lower tag-loss rates.

2025 Report to PSC – Mark Selective Fisheries

- Planned MSFs for 2025:
  - Two fewer Coho MSF proposals than 2024. There are no new Coho MSF proposals.
  - Two more Chinook MSF proposals than 2024. The additional WDFW proposal is a sport MSF within the Humptulips River that has previously been proposed. There is one new proposal from ODFW/WDFW for a commercial MSF in the lower Columbia River targeting summer Chinook.

Agency	Coho		Chinook	
	2024	2025	2024	2025
ADF&G	0	0	0	0
CDFO	9	9	5	5
WDFW	16	14	29	30
ODFW	7	7	5	5
ODFW/WDFW	3	3	5	6
IDFG	0	0	0	0
Lummi Nation	0	0	1	1
Nisqually Indian Tribe	0	0	1	1
Total	**35**	**33**	**46**	**48**

2025 Report to PSC – new and emerging issues

- Given recent Chinook CYER workgroup recommendations, requirements for tagging and fishery sampling have changed for Chinook. Different requirements for Chinook versus Coho may lead to confusion from management entities regarding requirements under the PST.
- Given the result of the CYER WG evaluation indicating strong performance of single index tags (SIT) methods for Chinook, and the state of CWT recoveries for Coho in mixed stock fisheries, a joint SFEC-CoTC workgroup has been formed to review the value of double index tagging DIT and recoveries for Coho.
- The 2004 SFEC MOU is being considered for amendment given adopted CYER working group recommendations regarding reporting protocols for MSF regulations and data.

2025 Report to PSC – new and emerging issues

- SFEC proposes streamlining data requests by limiting them to data necessary for SFEC's review and analysis, recognizing that additional data should be transferred directly from the management agencies to CTC and CoTC, as needed. SFEC steering committee (CTC, CoTC, Data Sharing, and SFEC co-chairs) will be engaged in this process.
- Given the emerging information on release mortality rates, SFEC recommends the technical committees update release mortality rates used for Chinook and Coho. These rates are part of the evaluation of mark rates and assessment of MSF impacts.
- There are times and areas where Chinook and Coho MSFs are being prosecuted but the mark-rates submitted to SFEC are low. This raises concerns around incidental mortality and the benefit of MSF over non-MSF, as well as impacts to non-retention or non-target species. We recommend agencies ensure mark rates are considered when deciding to implement MSFs in these situations.

2025 Report to PSC – ongoing

- Complexity of MSF regulations, particularly mark-and-size mixed bag regulations, will challenge evaluation of MSF impacts. We recognize that the mixed fishery adjustment developed by CYER WG addresses the mixed bag complexity for Chinook MSFs but does not address mark-and-size regulations.
- Lack of electronic CWT sampling for Coho in some areas (i.e., Canada, and Alaska fisheries) where DIT groups are expected to be encountered results in lack of sampling of unmarked fish.
- Some Canadian CWT recoveries include inaccurate information regarding the regulation type that the catch occurred in.
- There are continuing concerns with monitoring programs for certain MSFs.

2025 Report to PSC – ongoing

- Increased scrutiny of U.S. hatchery programs has resulted in litigation that is affecting hatchery production, including marking and tagging.
- Potential expansion of pre-terminal Chinook MSFs in BC (potentially changing mark rates in subsequent fisheries).
- Hiring and retention of staff, particularly for marking, tagging, and sampling activities, continues to be a challenge for all management entities.
- Hatcheries continue to face challenges from climate change including elevated water temperatures, water supplies, and impacts from wildfires.

Year in review

- October – Request for MM and MSF proposals (following year activities) to parties
- November – SFEC annual meeting to review proposals and complete prior year's annual report
- February – Briefing to the PSC on proposed activities and issues/successes
- June – Parties provide updates to 'proposals' (e.g., planned fisheries) and early notification of new proposals
- September – submit annual workplan to PSC

June – updates to ‘proposals’

- Reasons for changes (MSF time/area/regulation change or no longer considering MSF) from proposals the prior fall to planned fisheries
  - Forecasts and expected mark rates
  - Harvest control rules may be informed by abundances
  - Sharing between parities (e.g., PSC or domestic)
  - Annual negotiations between parties
  - Sampling programs
  - Public input
  - Some proposals are placeholders.
    - Provides the option even if implementing a MSF in that time/area is highly unlikely

June – updates to ‘proposals’

- 2025 planned fishery updates are not yet available.
  - Example components of 2024 proposals (October 2023) and updates (June 2024)
    - Alaska/Idaho – no MSFs planned (as compared to none proposed)
    - Washington – 31 MSFs (as compared to 34)
      - Recreational Humptulips Chinook MSF was planned but was not proposed the prior fall.
    - Oregon – 10 MSFs planned (as compared to 12)
    - Columbia River (Washington/Oregon) – 9 MSFs (as compared to 9)
      - Recreational Buoy 10 Chinook MSF dates were updated.
    - Nisqually Tribe – 1 MSF (as compared to 1)

California: New Hoopa Valley Tribal Hatchery & Reestablishment of Coho (Alex Eaton /Hoopa-Valley Tr)

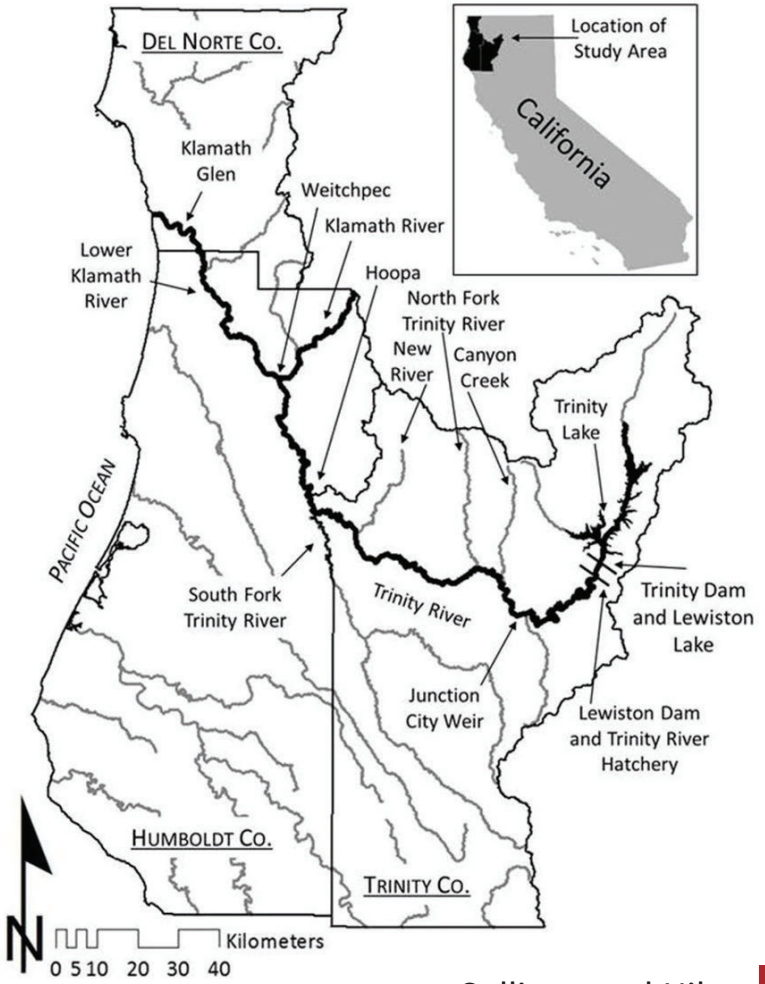
CWT Trailer Irongate Hatchery-Hornbrook CA
Credit: Nancy Leonard

Revitalizing Natural Coho Salmon Populations with a Tribal Conservation Hatchery Program

Alex Eaton
Fisheries Biologist I
Hoopa Valley Tribal Fisheries Department

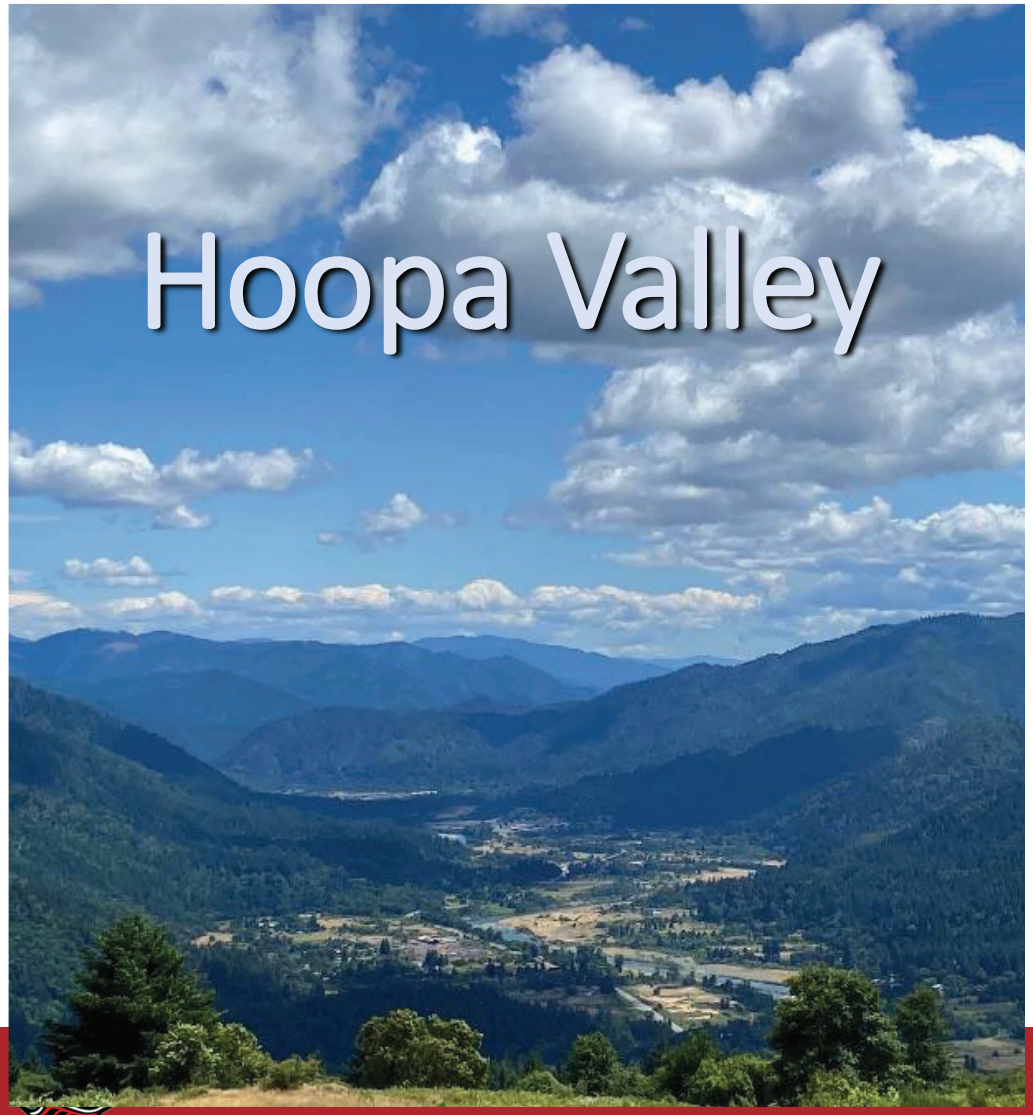
The Trinity River

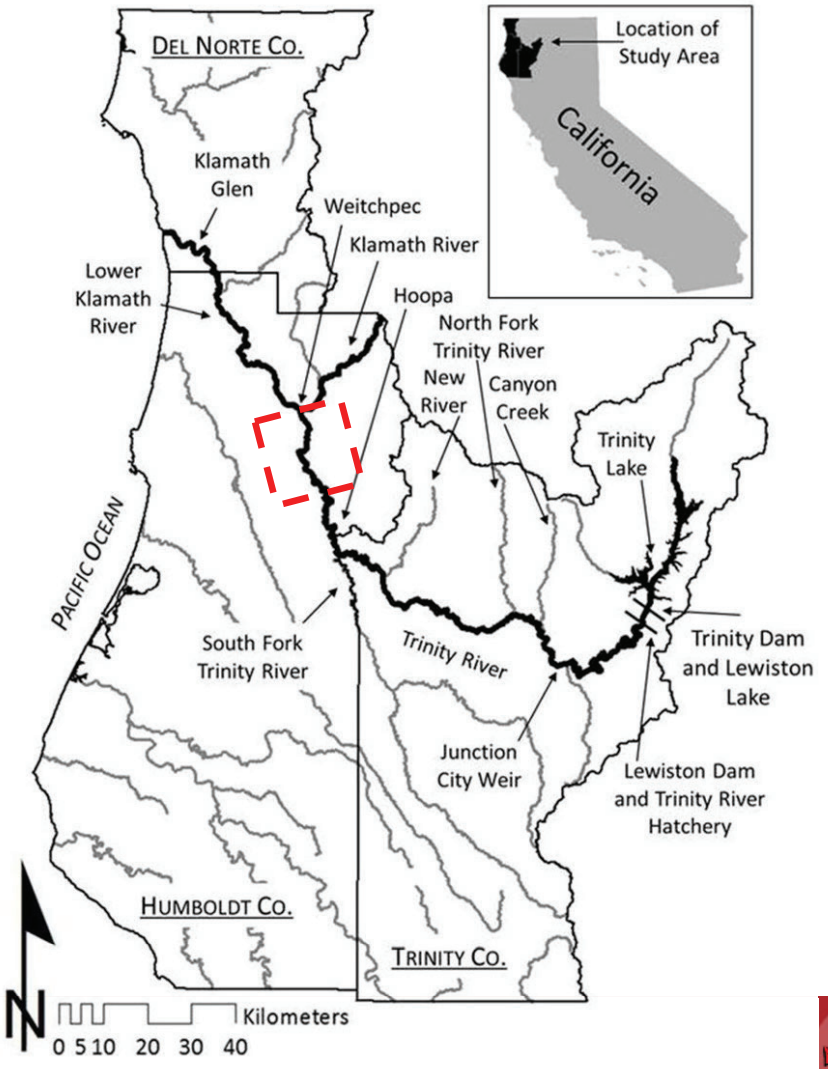
- Largest Tributary of the Klamath River
- Drains much of Humboldt and Trinity Counties
- Forms the Southern boundary for the Klamath Basin



Sullivan and Hileman 2020

Hoopa Valley

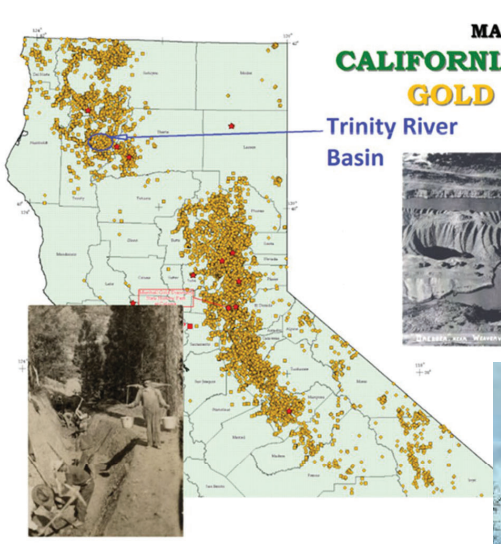





Degradation of the Trinity

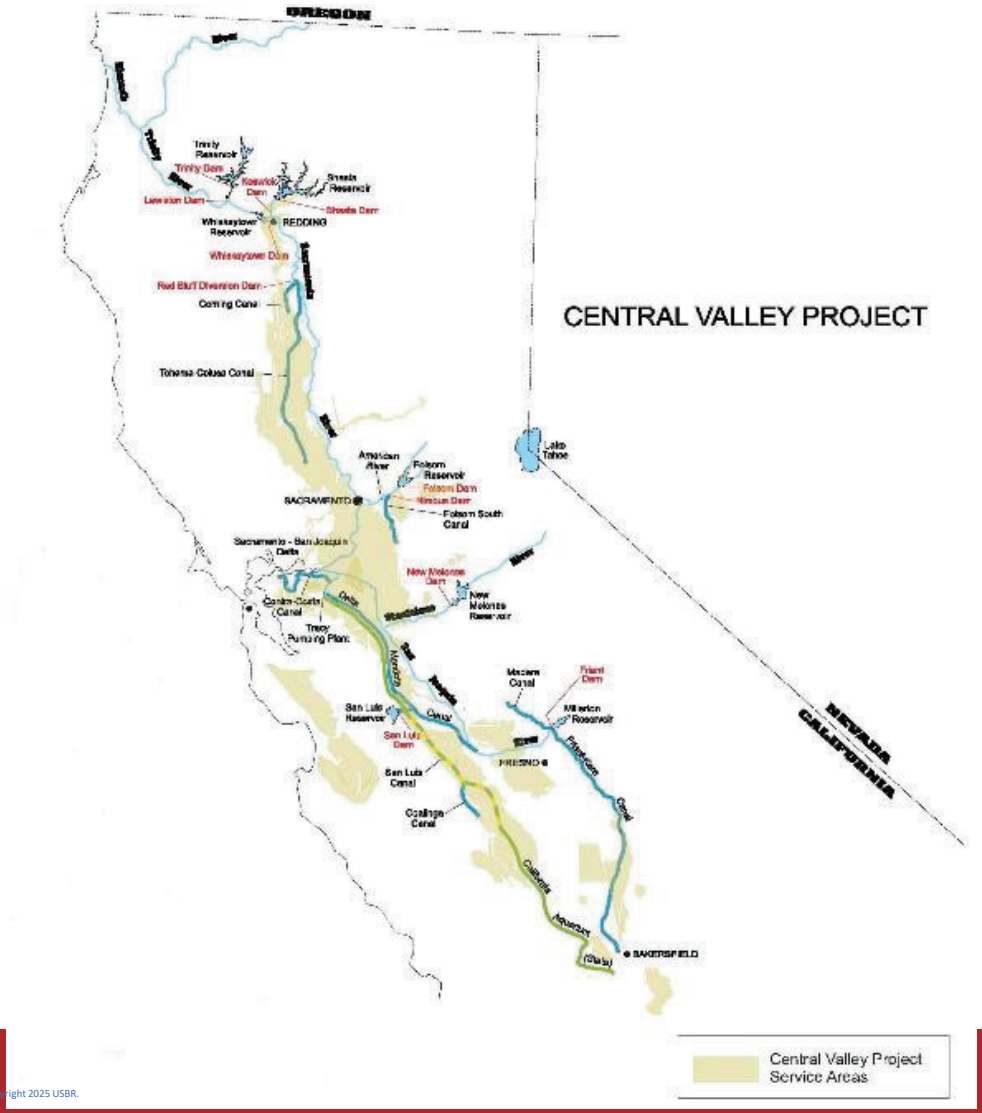
Degradation of the Trinity – Resource Extraction

- **Gold Mining**
- **Overfishing**
- **Logging**



Degradation of the Trinity – Dams and the CVP

- **In 1955 the Trinity River Division (TRD) was formed**
- **Part of the Central Valley Project**
- **In 1963 Trinity and Lewiston Dams constructed**
- **109 miles of spawning habitat lost**
- **Trinity River Hatchery (TRH) built the same year**
- **Initial diversions were up to 90% of flow from the upper basin**



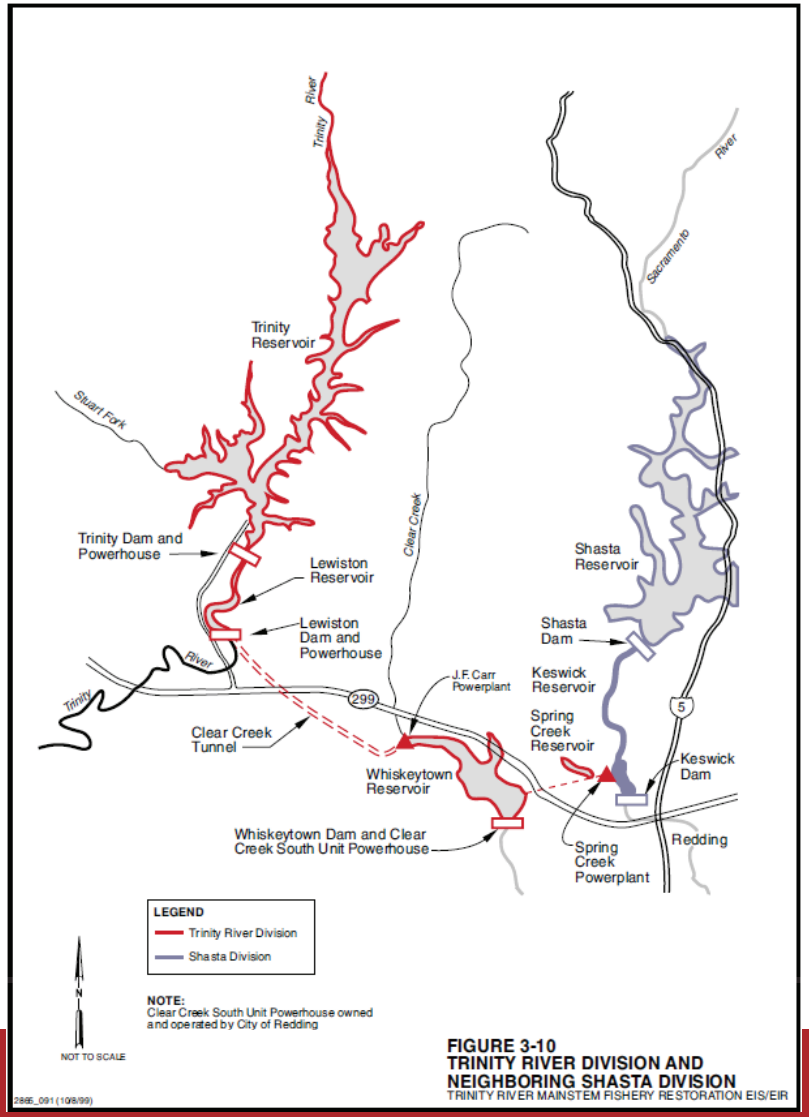


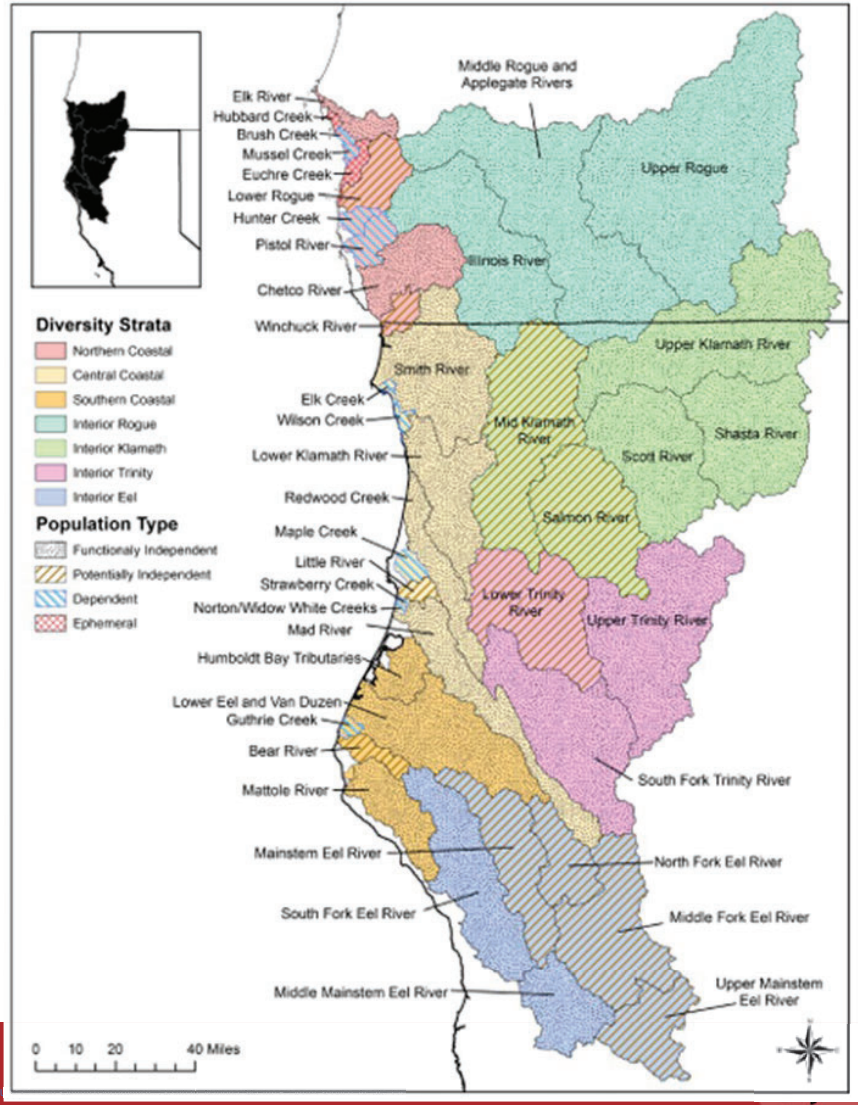
FIGURE 3-10
TRINITY RIVER DIVISION AND NEIGHBORING SHASTA DIVISION
TRINITY RIVER MAINSTEM FISHERY RESTORATION EIS/EIR

286E_091 (10/8/99)

Coho Salmon in the Trinity River

SONCC Coho

- **Southern Oregon Northern California Coast (SONCC) Evolutionary Significant Unit (ESU)**
- **Spans watersheds South of Cape Blanco (OR) to Cape Mendocino (CA)**
- **SONCC Coho were listed as a threatened species in May of 1997**
- **3 populations in the Trinity River**



6. SONCC coho salmon ESU core and non-core 1 populations and their current risk of extinction." by National Marine Fisheries Service. 2014. Final Recovery Plan for the Southern Oregon/Northern California Coast Evolutionarily Significant

SONCC Coho

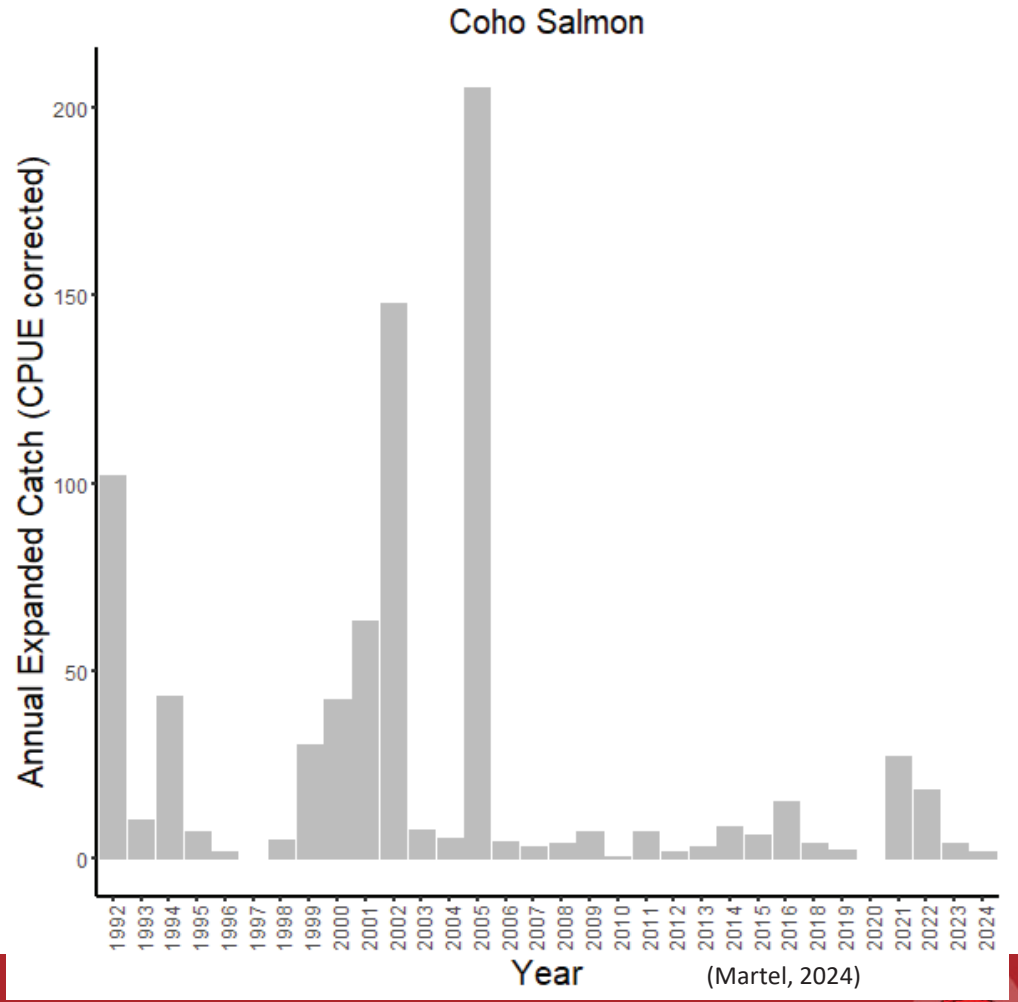
- **Natural-origin annual run size last 5 years (2018-2023) has been an average of 299 fish**
- **2018 saw the natural-origin run size estimate plummet to a mere 60 fish**
- **The last 5 years (2018-2023) an average of only 8% was natural origin and 92% Hatchery origin**
- **Lower Trinity and South Fork Trinity Population segments listed at high risk of extinction**

		Run-size estimate			
Year	Origin	Jacks[b]	Adults	Total	% of total
2018	Natural	18	42	60	4%
	TRH	409	1,017	1,426	96%
	TOTAL	**427**	**1,059**	**1,486**	100%
2019	Natural	5	104	109	10%
	TRH	5	960	965	90%
	TOTAL	**10**	**1,064**	**1,074**	100%
2020	Natural	47	173	220	7%
	TRH	1,927	1,214	3,141	93%
	TOTAL	**1,974**	**1,388**	**3,362**	100%
2021	Natural	12	209	221	5%
	TRH	311	4,161	4,473	95%
	TOTAL	**323**	**4,371**	**4,694**	100%
2022	Natural	25	550	575	9%
	TRH	591	5,384	5,976	91%
	TOTAL	**617**	**5,934**	**6,551**	100%
2023	Natural	3	608	611	11%
	TRH	155	4,870	5,025	89%
	TOTAL	**158**	**5,478**	**5,636**	100%
2018-23 Averages	Natural	18	281	299	8%
	TRH	566	2,934	3,501	92%
	TOTAL	**585**	**3,215**	**3,800**	100%

6. SONCC coho salmon ESU core and non-core 1 populations and their current risk of extinction." by National Marine Fisheries Service. 2014. Final Recovery Plan for the Southern Oregon/Northern California Coast Evolutionarily Sig

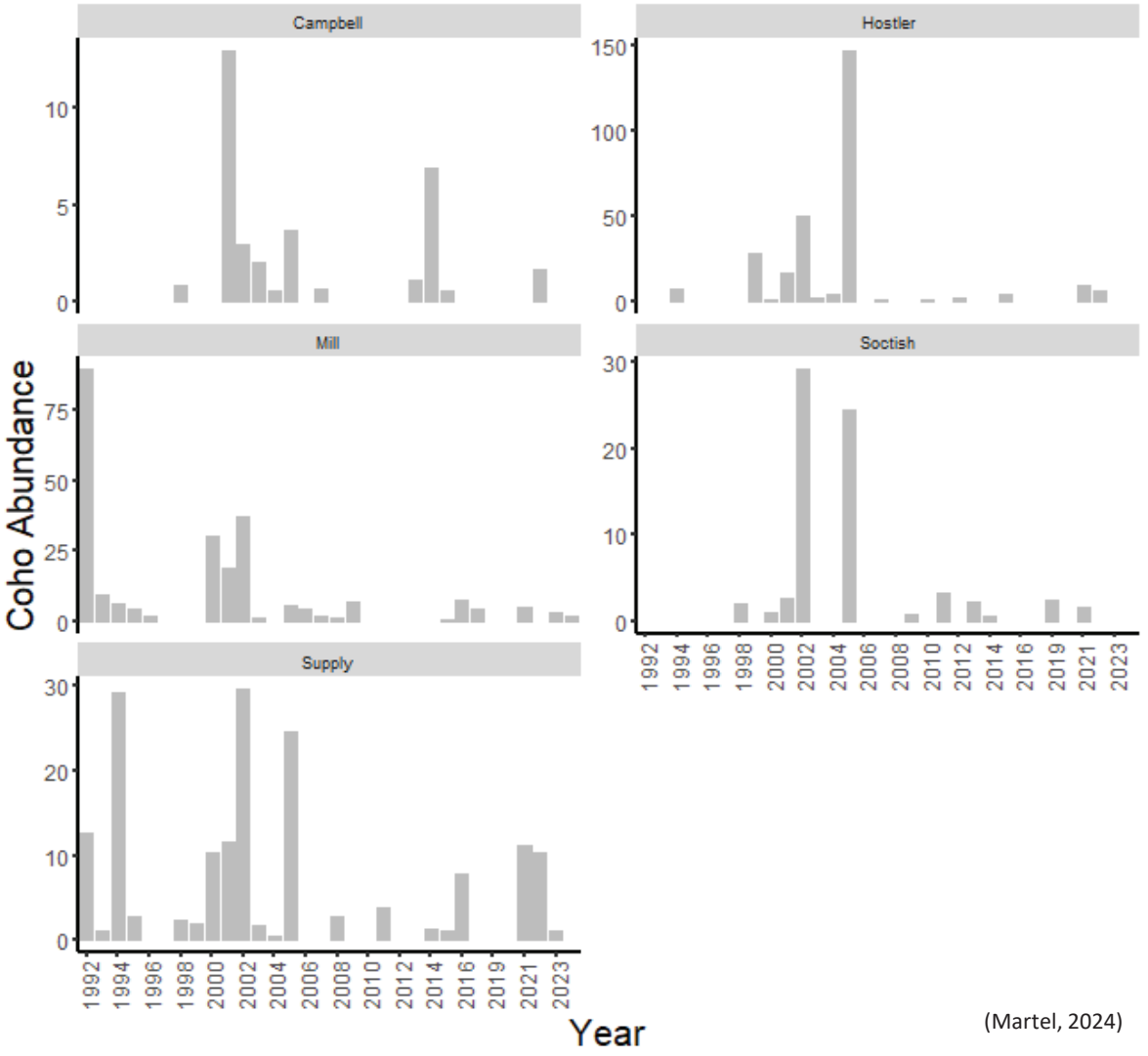
Coho populations within the Reservation

- **Part of the Lower Trinity Population of SONCC Coho**
- **Suitable spawning and rearing habitat present in HVR tributaries**
- **Hardly any spawners**
- **Outmigrant catches in fyke traps have seen a decline over the 32-year dataset**
- **The current natural spawners within HVR tributaries are likely TRH stray fish**

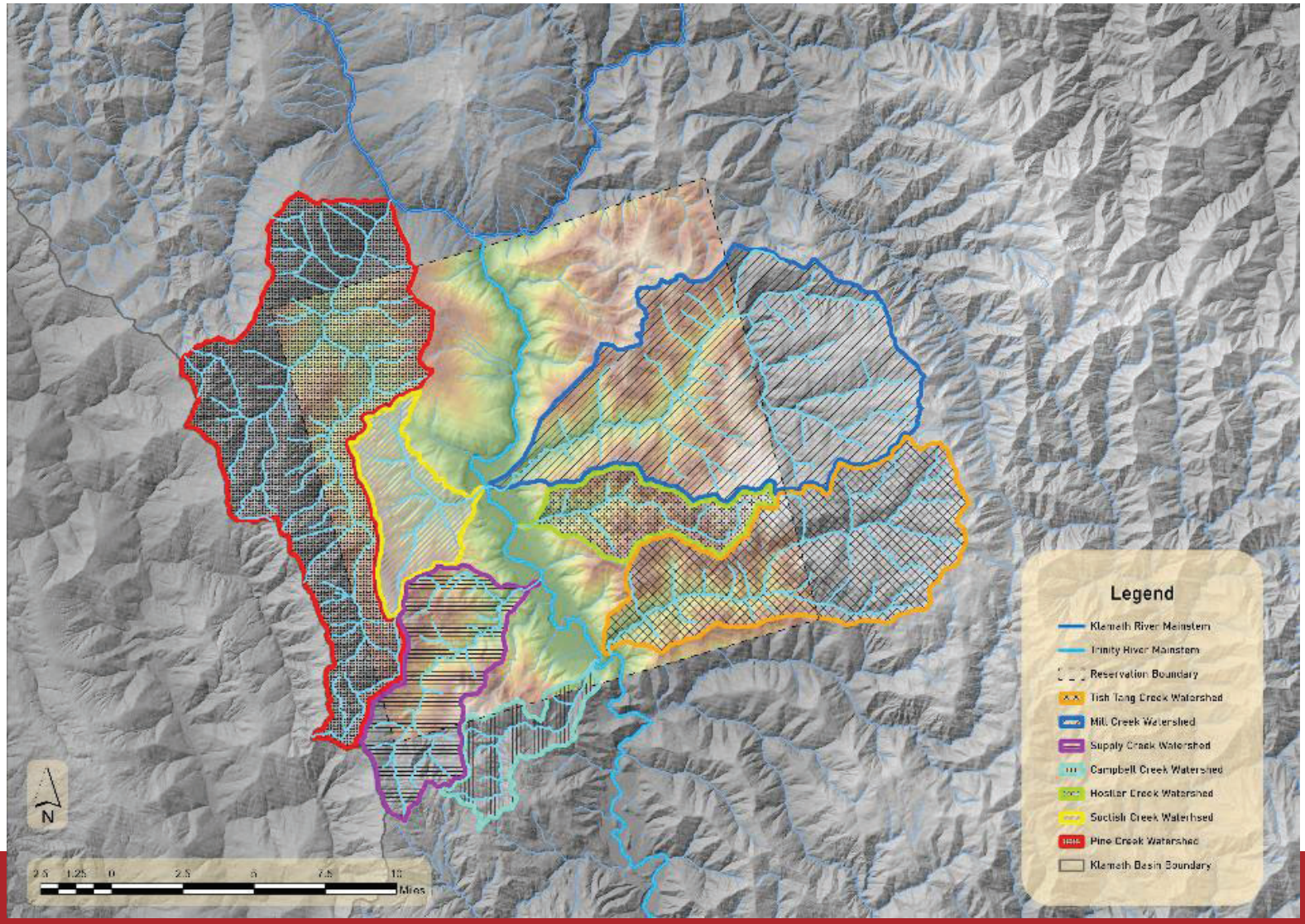


(Martel, 2024)

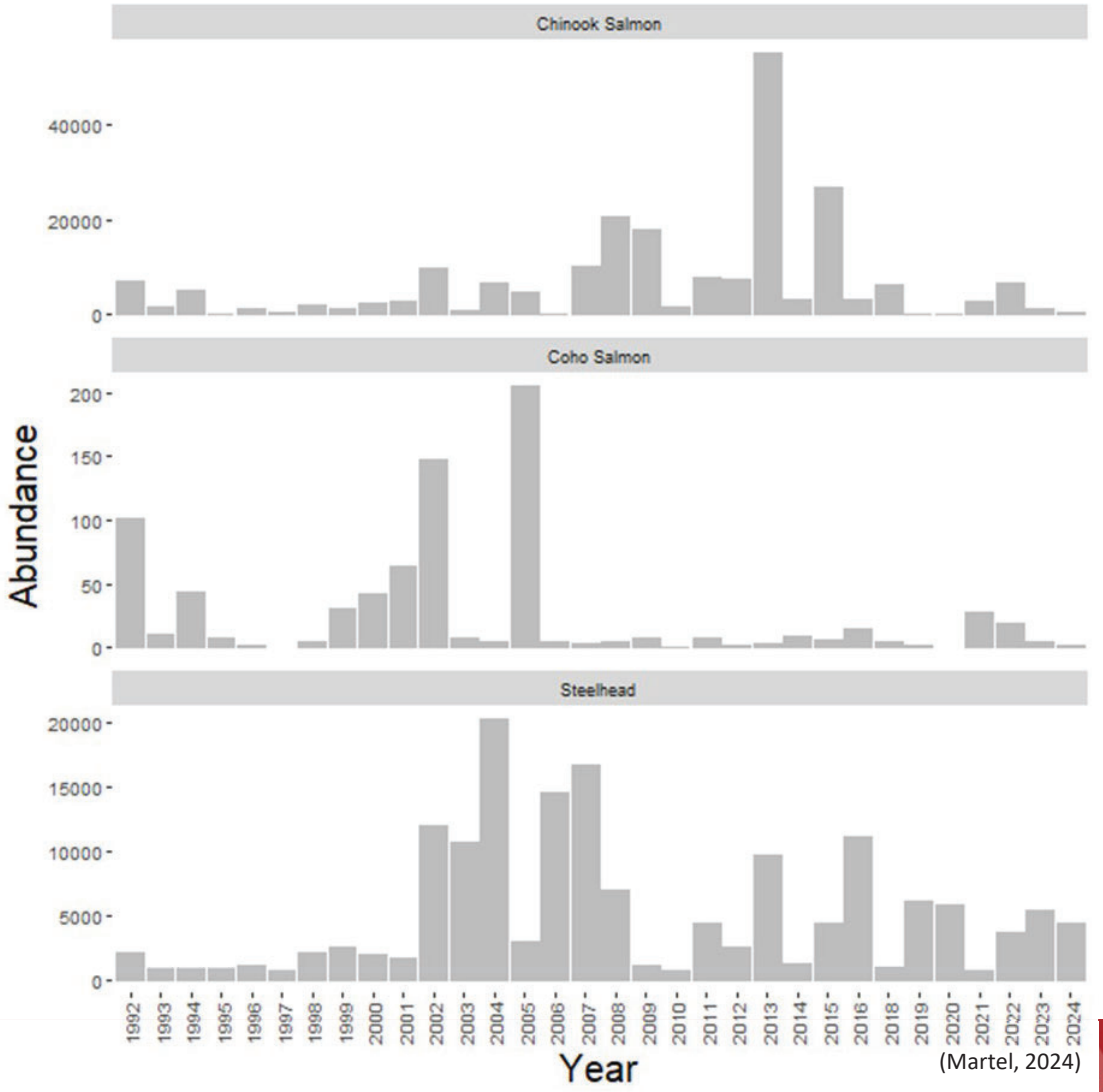
Coho Outmigrant Estimates from our Outmigration Traps from 1992-2024



(Martel, 2024)


Legend
Klamath River Mainstem
Trinity River Mainstem
Reservation Boundary
Tish Tang Creek Watershed
Mill Creek Watershed
Supply Creek Watershed
Campbell Creek Watershed
Hostler Creek Watershed
Scotish Creek Watershed
Pine Creek Watershed
Klamath Basin Boundary
N
Miles

Outmigrant Estimates for Reservation Tributaries



(Martel, 2024)

Hoopa Hatchery

Overview of the Facility

- Located on the premises of HVTFD
- Total of 104 Heath Tray Incubators that fit into 3.5 incubator stacks
- Four 450-gallon round tanks
- Two 70-gallon troughs
- 160-gallon insulated aluminum transport tank
- Facility is equipped with a backup generator in case of power outage
- Water source is well water

History of the Hoopa Hatchery

- **Original facility constructed in 1978 by USFWS**
- **Facility raised Steelhead and Chinook until 1993**
- **In February 2020 HVTFD applies for a BIA Tribal Resilience Program Grant to refurbish the old hatchery facility**
- **June 2020 the Biological Opinion for the Hatchery and Genetics Management Plan (HGMP) for the Coho program at TRH is published**
- **August 2021 HVTFD submits an HGMP for its own Coho program**

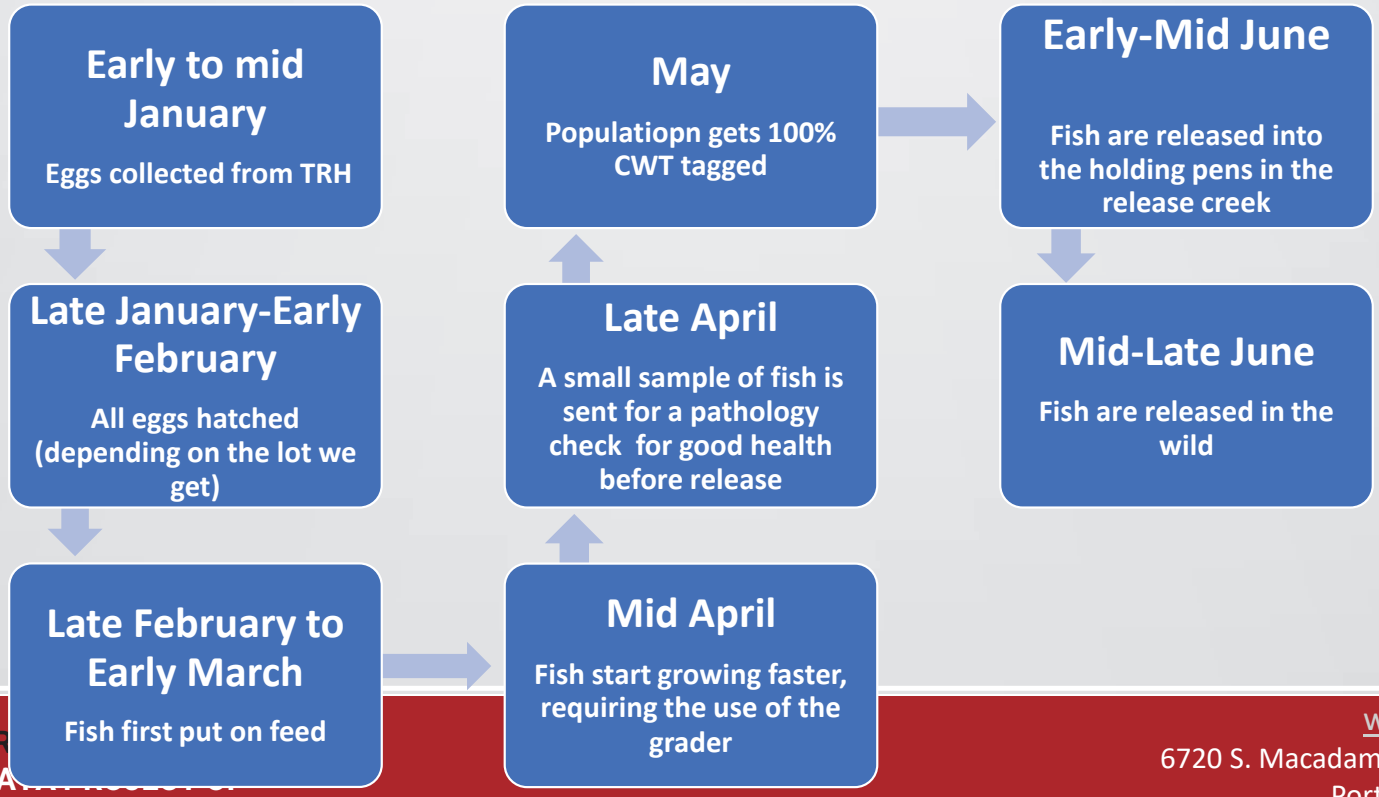
History of the Hoopa Hatchery

- **January 2022 HVTFD gets their HGMP approved by National Marine Fisheries Service (NMFS)**
- **January 2023 HVTFD gets its first batch of TRH Coho eggs (~5000)**
- **July 2023 HVTFD releases ~4500 parr into Mill Creek**
- **January 2024 HVTFD gets ~11,000 eggs for year 2**
- **June 2024 HVTFD releases ~9,900 parr into Mill Creek**

Hoopa Hatchery – The Overarching Goal

- **Goal is to rear TRH surplus Coho eggs and release as parr into restored HVR Creeks**
- **Hoping to kickstart self sustaining populations**
- **Eventually eliminate the need for the program with natural spawning success**

Rough Timeline on a given year



www.rmpc.org
6720 S. Macadam Ave., Suite 200
Portland, OR 97202

Hurdles Overcome and System Upgrades

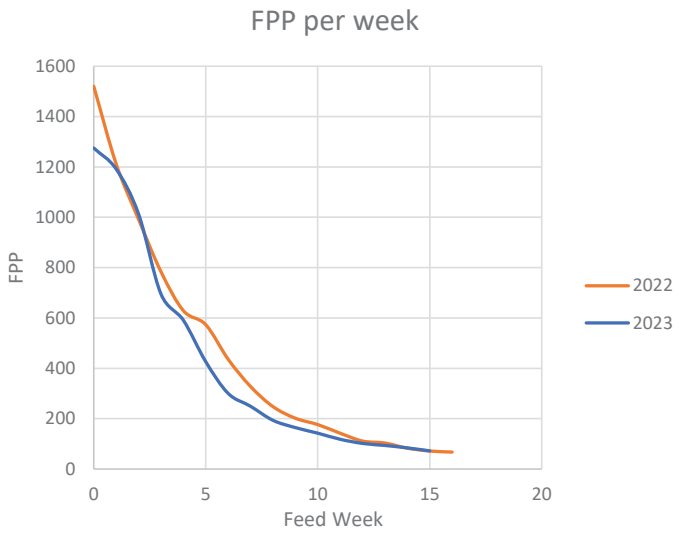
- **Thiamine deficiency complications in the first year – with excellent survival**
- **System failures in year one that did not result in any mortalities**
- **Made improvements to the plumbing and overall facility on a VERY restricted budget**
- **Made a mobile CWT tagging station to CWT tag 100% of fish from scratch**
- **Made a grading station and modified it to work with the facility from scratch**

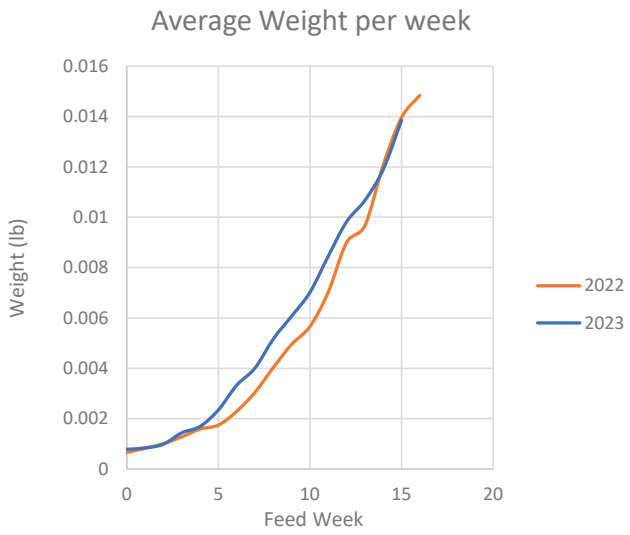
Thiamine Fish

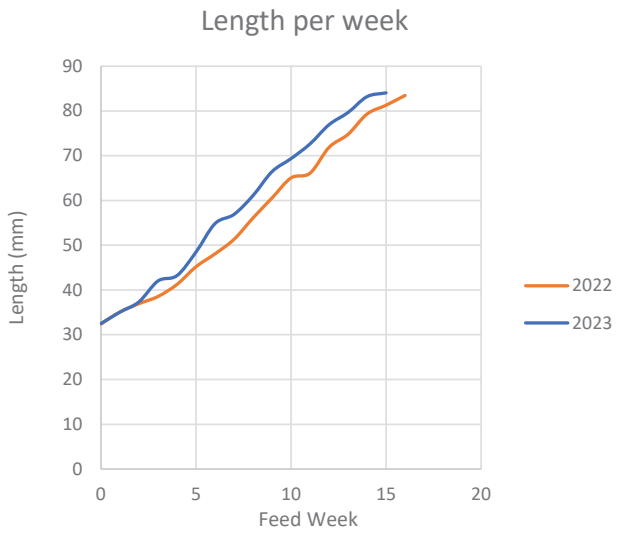
Before…

After…

Growth


FPP per week
FPP
1600
1400
1200
1000
800
600
400
200
0
0
5
10
15
20
Feed Week
2022
2023

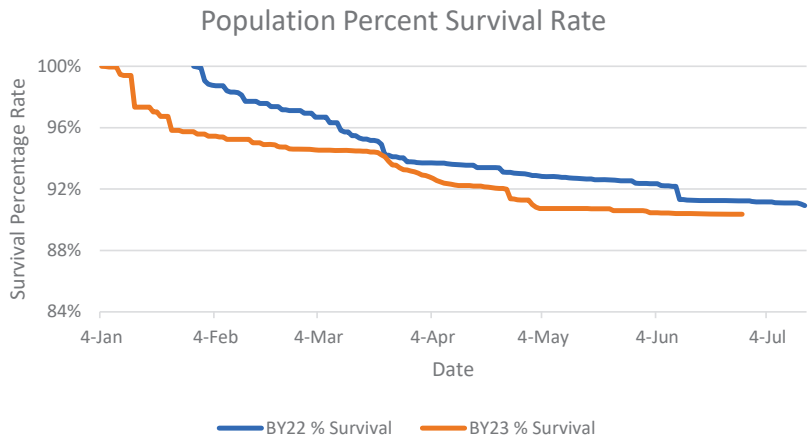

Average Weight per week
Weight (lb)
0.016
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
0
5
10
15
20
Feed Week
2022
2023

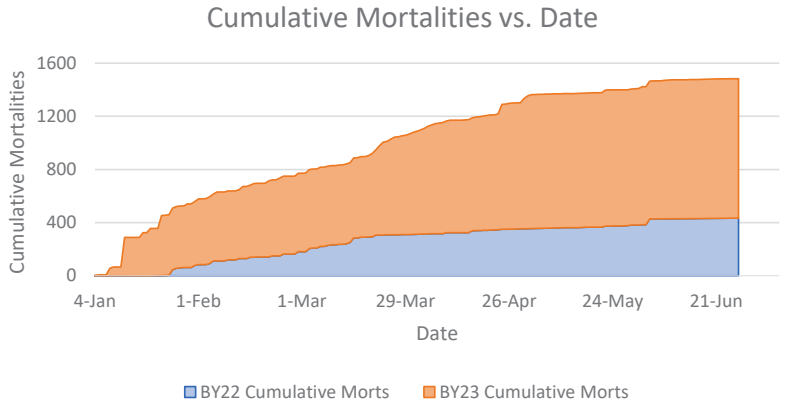

Length per week
Length (mm)
90
80
70
60
50
40
30
20
10
0
0
5
10
15
20
Feed Week
2022
2023

Mortalities

Number of Mortalities Broken Up by Category BY22	
Transport from TRH	2
Incubator	76
Trough	238
Round Tank	75
Release Site Mortalities	5
Miscellaneous (Sacrifices for Tag Placement and Pathology)	50

Number of Mortalities Broken Up by Category BY23	
Transport from TRH	2
Incubator	452
Trough	156
Round Tank	331
Release Site Mortalities	1
Miscellaneous (Sacrifices for Tag Placement and Pathology)	107





	Wednesday	Thursday	Friday	Saturday	Sunday	Monday	Tuesday		
	Feed Week Day								
	1	2	3	4	5	6	7		
New FPP	881	846	813	782	752	724	697		
New Population weight (lb)	6.31	6.57	6.84	7.11	7.40	7.69	7.98		
New Average Length (in)	1.52	1.54	1.56	1.58	1.61	1.63	1.65		
% Body Weight	4.12	4.07	4.01	3.96	3.91	3.86	3.81		
Total Weight to Feed (lb)	0.25	0.26	0.26	0.27	0.28	0.29	0.29		
Feed Size	#0	#0	#0	#0	#0	#0	#0		

	Time Fed								
	#1	#2	#3	#4	#5	#6	#7	#8	#9
Friday:									
Saturday:									

Frequency of feedings per day by FPP	
FPP	**Frequency**
1500	9
1000	8
750	7
500	6
250	5
125	3

Tagging -100% CWT with AD-Clip

- **We CWT tag and ad-clip 100% of our Coho we release**
- **Continually looking to improve**
- **Current setup allows for about ~10,000 fish to be tagged in ~3 days**
- **Grading fish beforehand allows for ease of tagging and better tag placement**

Tagging - 100% CWT with ad clip


e helpful
(530) 629-2425

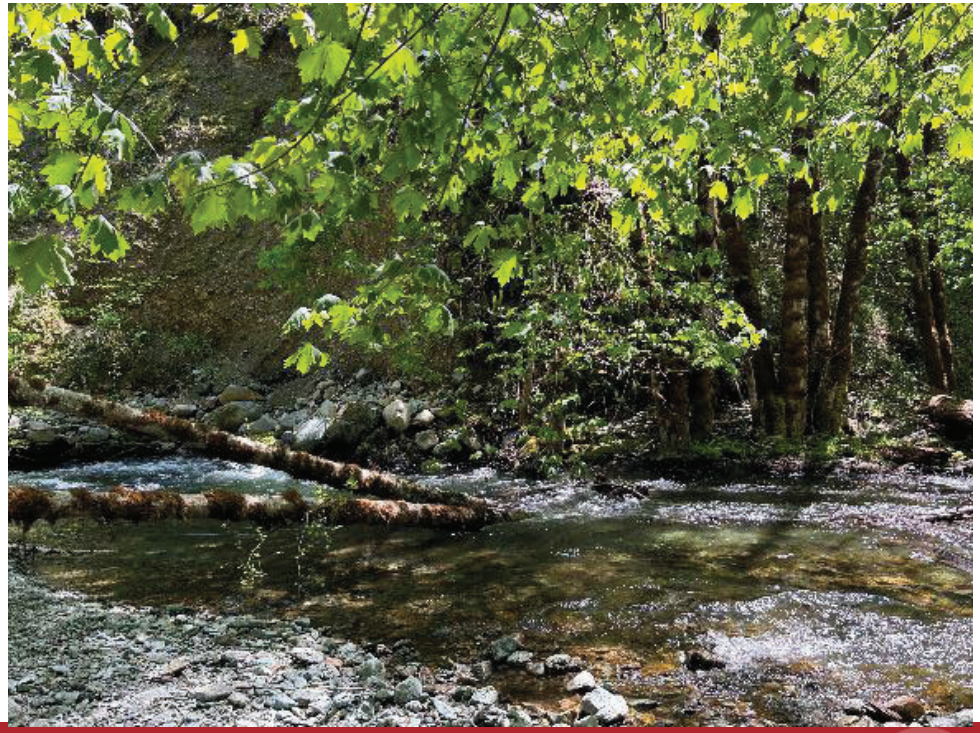

ACE

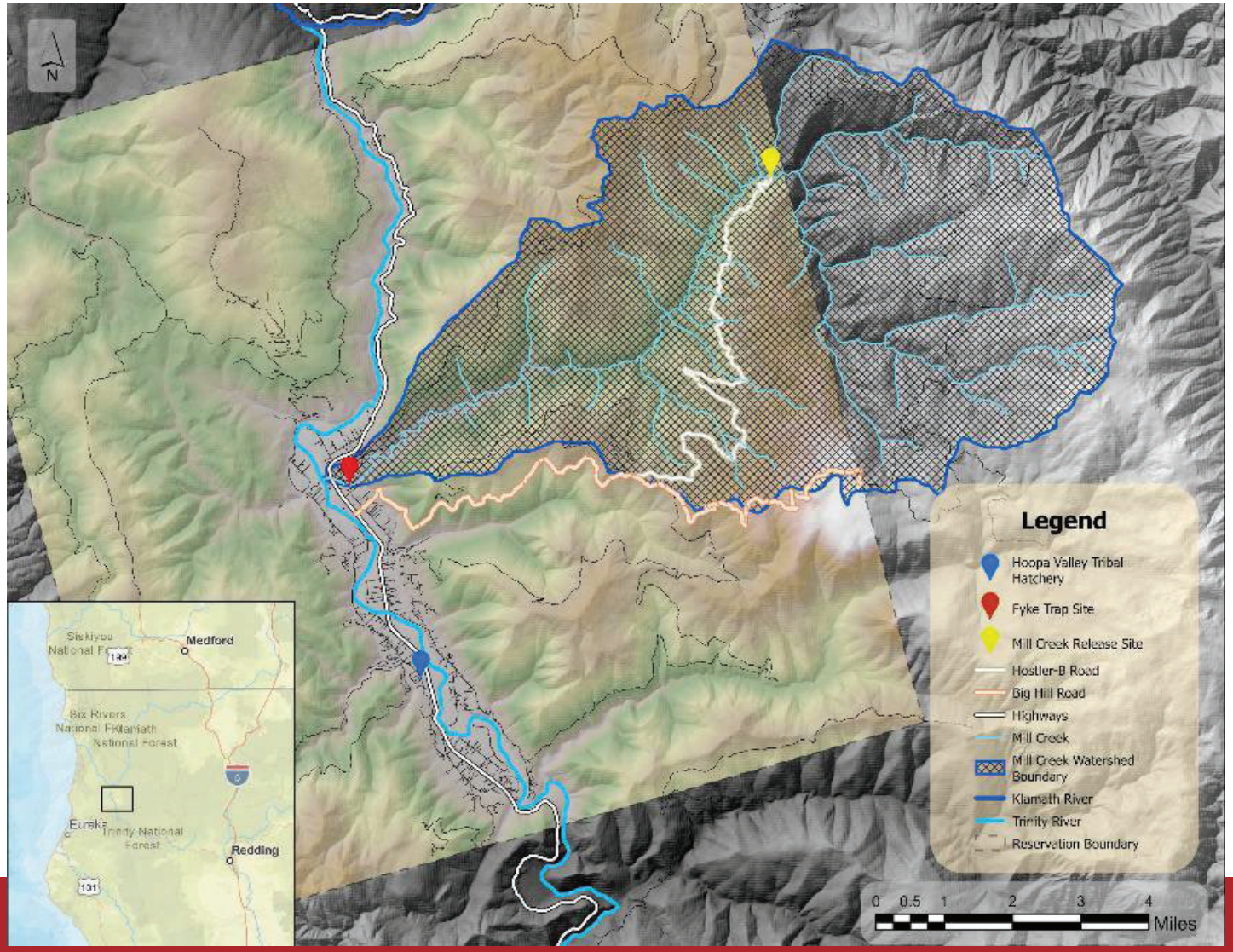
Pathology

- **Our Coho are sent to the CalNeva Fish Health Center in Anderson, CA to be cleared for good health prior to release**
- **Includes sacrificing a few fish for this procedure**
- **This is done just before release**

Note: From: *Laura Mahoney/USFWS, Public Domain, https://www.fws.gov/media/petri-dish 2025*

Release Site – Mill Creek

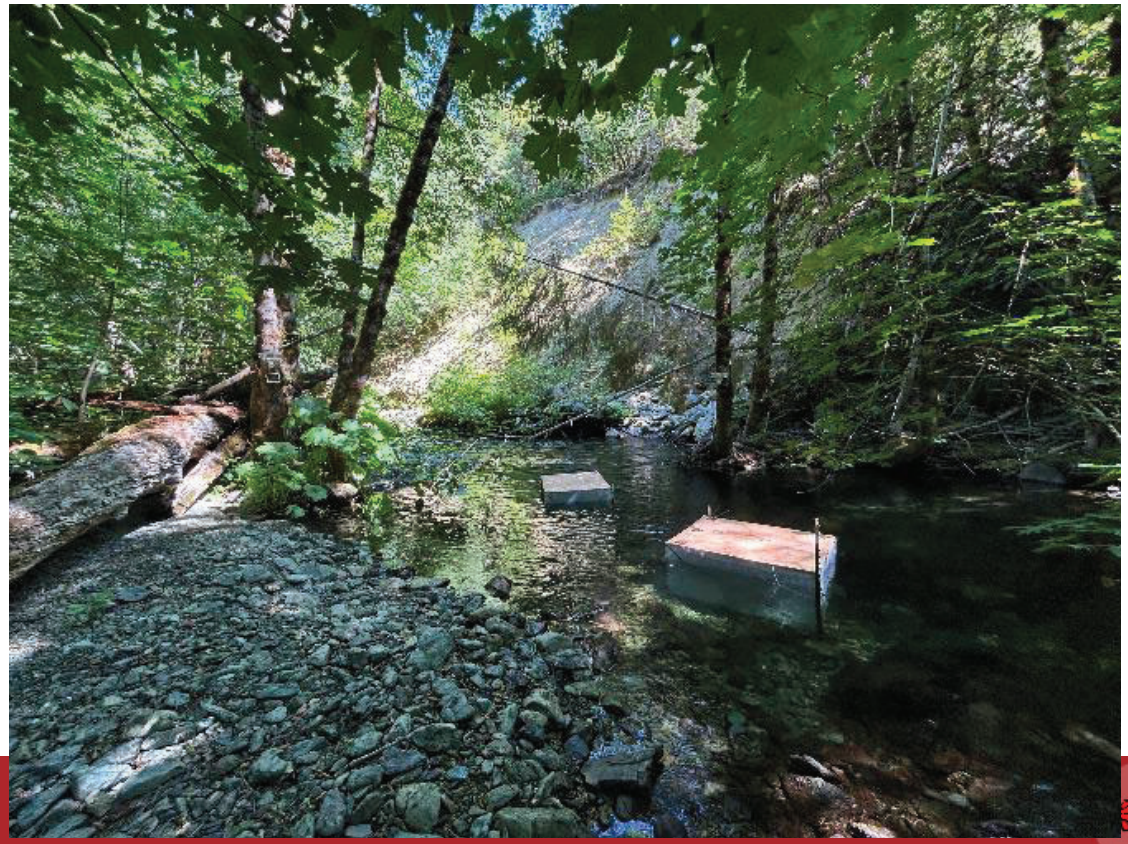



N
Legend
Hoopa Valley Tribal Hatchery
Fyke Trap Site
Mill Creek Release Site
Hostler-B Road
Big Hill Road
Highways
Mill Creek
Mill Creek Watershed Boundary
Klamath River
Trinity River
Reservation Boundary
0 0.5 1 2 3 4
Miles
Medford
Six Rivers National Forest
Trinity National Forest
Redding
Eureka
101
5

Release Site – The Setup

Release Site – Net Pens and Holding

Release Site – 2023 (year 1)



Release Site – 2024 (Year 2)

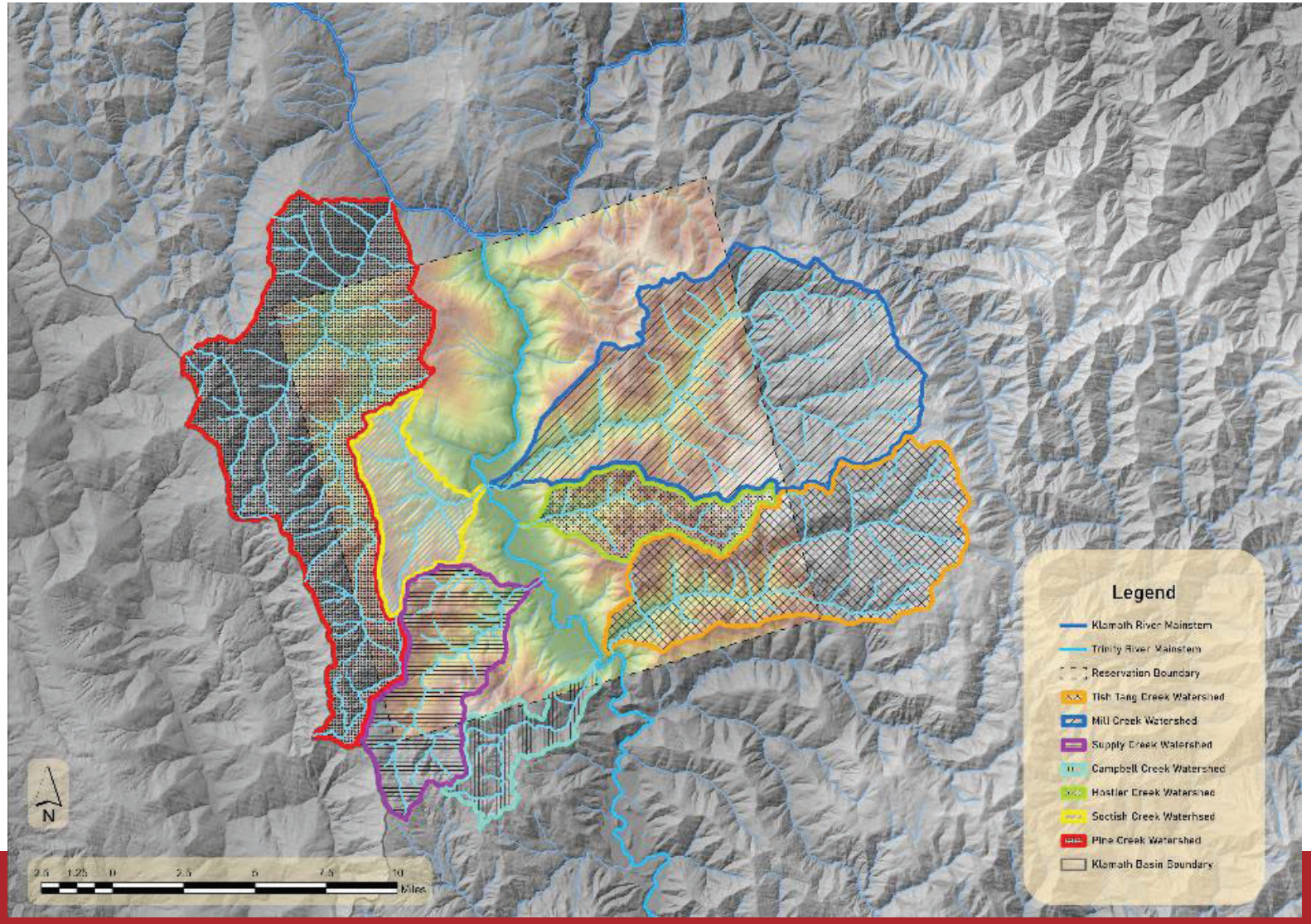
Future Plans

PIT Tag array into Mill Creek

- **With limited funds we have not been able to get a PIT Tag array for our fish**
- **One of the first things on our list to get for our hatchery fish**
- **Looking to do site visits for potential locations May once flows recede from rains and snowmelt**

Infrastructure Improvements

- **Looking to have construction funds approved for expanding facility**
- **Hope to contract an aquaculture consultant**
- **Increase the inflow capacity within the facility (currently at ~30GPM)**
- **Get more tanks running and increase rearing capacity**
- **Create more tagging stations to tag more fish**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Klamath River Mainstem
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Tish Tang Creek Watershed
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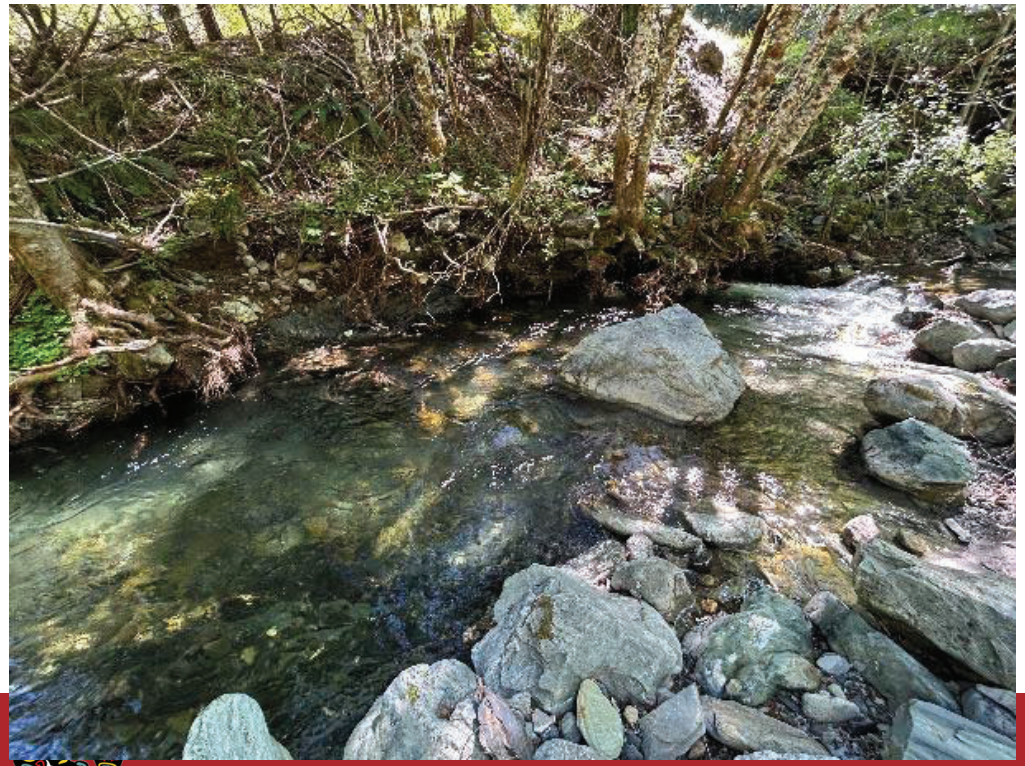
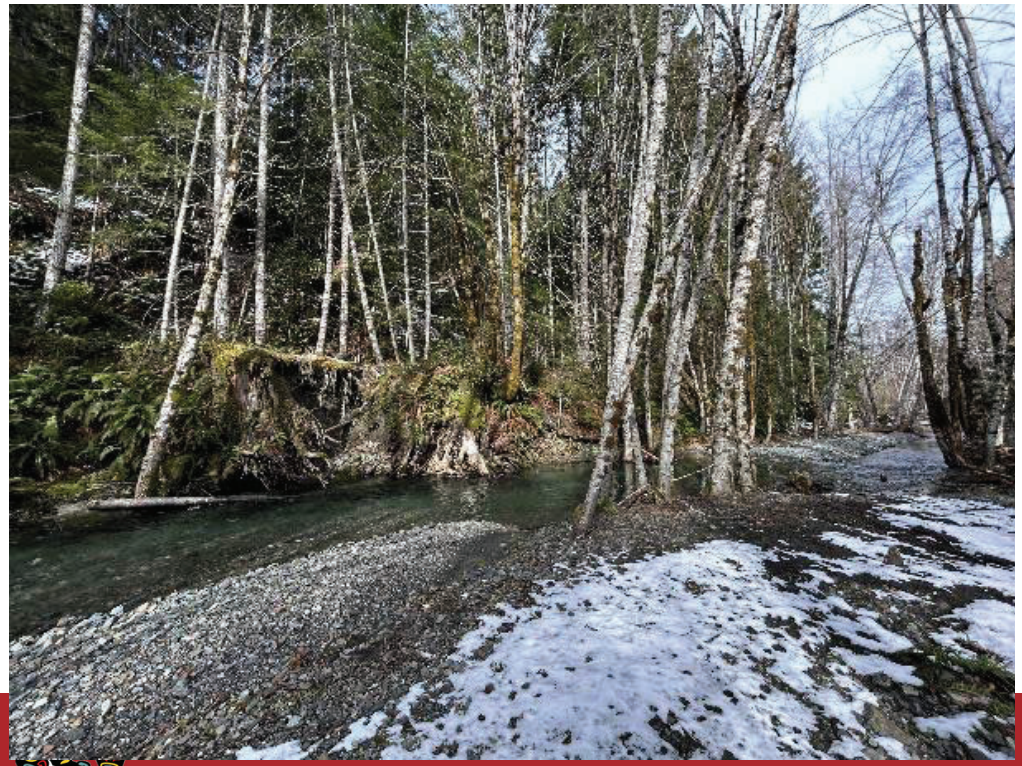
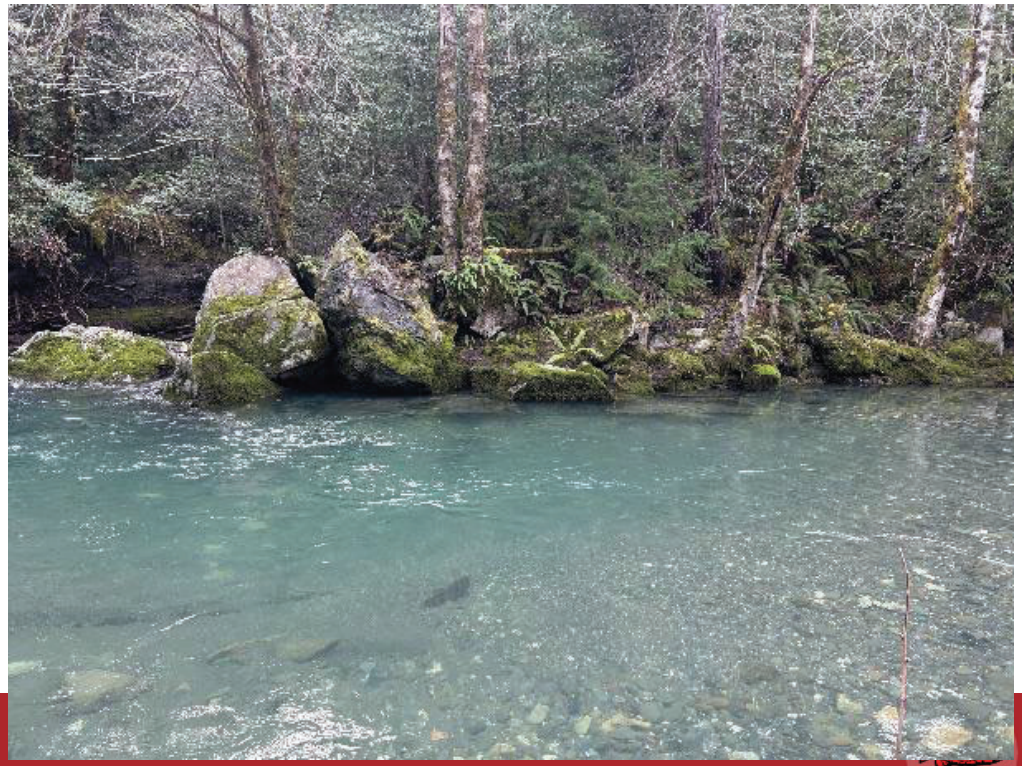
Supply Creek Watershed
Campbell Creek Watershed
Hostler Creek Watershed
Scotish Creek Watershed
Pine Creek Watershed
Klamath Basin Boundary
N
2.5 1.25 0 2.5 5 7.5 10
Miles

Potential Future Release Site – Supply Creek



Potential Future Release Site – Pine Creek





End Goal

- **Create self-sustaining populations of Coho in our reservation tributaries and negate the need for this hatchery**
- **Increase production in the future**
- **Release Coho into other reservation tributaries (Supply, Tish Tang, Campbell, Hostler, and Soctish Creeks)**
- **Increase monitoring efforts and set up a life cycle monitoring station**

Our Partners in this Project

Acknowledgements

HVTF Fisheries Staff

Billy Matilton - Senior Fisheries Biologist

Karl Seitz - Fisheries Management Division Lead

George Kautsky - Fisheries Advisor

Bob Campbell Jr. – Fisheries Technician IV

Scott Searles Jr – Biotech

Seth Brenton – Fisheries Technician III

Robert Baldy – Fisheries Technician II

Brian Jordan – Fisheries Technician IV

This effort would not have been possible without you all and many others!


Any Questions?

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Recruitment & Retention of CWT Field Staff

Stan Allen, Sr. Program Manager

Lara Erikson, Program Manager

PSMFC, George Nandor

California Spring Chin Reintroduction on San Joaquin R (Mike Grill, CDFW)

CWT Trailer Irongate Hatchery-Hornbrook CA
Credit: Nancy Leonard

Adjourn Day 2

- See you tomorrow at 9am (PT)

- For those in Santa Rosa:
  - 1:30pm meet to carpool:
  - 2pm Field Trip to Armstrong RedWoods Park
  - 5pm restaurant dinner stop in Guerneville

Regional Committee on Marking and Tagging
48th Meeting

Day 3

April 22 - 24, 2025

Santa Rosa, CA

Day 2: MS Teams Tips

Please mute yourself when not speaking.

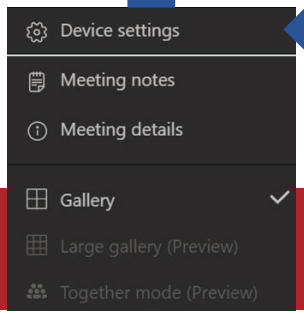
Use *6 to mute phone audio.

Use the microphone icon on the control bar to mute computer audio.

Desktop view

Browser view

You can use chat or raise your hand



If you are having problems with audio/video, check your device settings.

Pacific Coast-Wide Fishing Regulations Database

Megan Griffiths

Pacific Coast-Wide Fishing Regulations Database

Purpose

Facilitate accounting for mark-selective impacts in salmon species exploitation rate and other analyses by developing links between fishing regulations and existing catch information systems (e.g., Regional Mark Information System [RMIS]).

→ Example Use Case: Assess mark-selective impacts in the Chinook Technical Committee (CTC) exploitation rate analysis (ERA).

Goal

Compile Pacific salmon fishing regulations in a structured database to enable fishery recovery data to be linked to specific regulations.

→ Prioritizing Chinook mark-selective fishery (MSF) regulations from 2009 to present.

Text Source: CoastwideChinookCohoFishingRegulationsDB-Fy25_Final.doc

Pacific Coast-Wide Fishing Regulations Database

Project Objectives

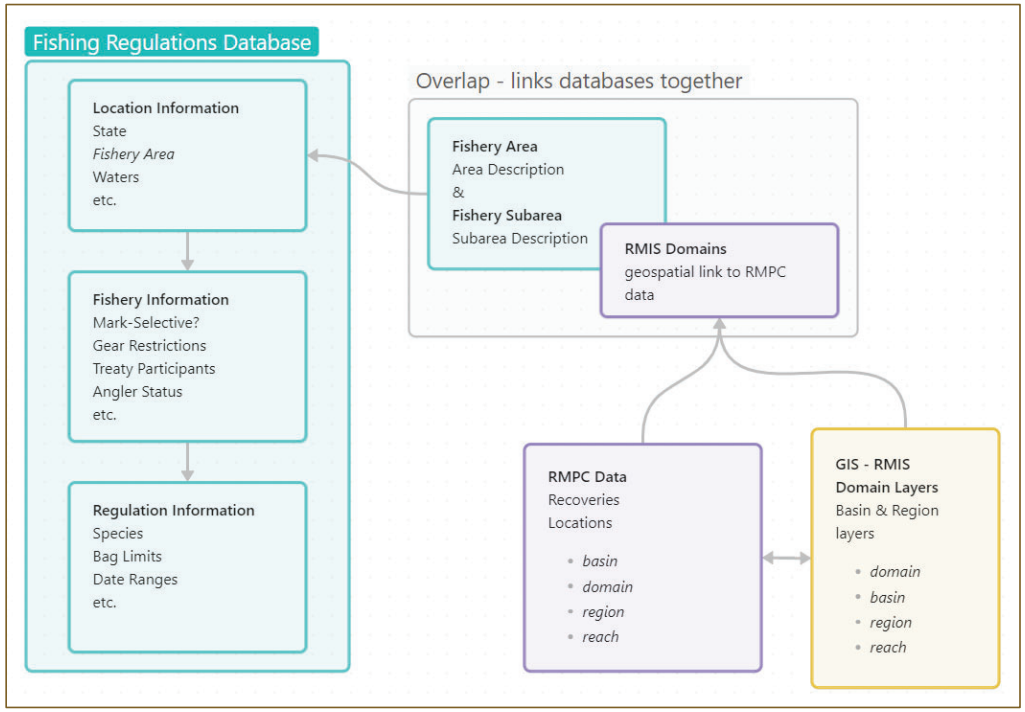
- PSMFC hosted database
- Back-end database schema development
- Front-end development, data submission and data query user interfaces
- Prioritize data entry
- Data pipelines from state internal databases
- Develop a project website
- Link regulations data and RMIS catch/sample data

Image Source: Pacific Coast-Wide Fishing Regulations Data Query

Pacific Coast-Wide Fishing Regulations Database

Progress

- Data compilation:
  - 2024 – 2 Pilot Data Sets
  - 2025 – Spring Data Entry Sprint
- Database front-end:
  - Data entry form development
  - Data query development
- SQL relational database schema
- Metadata documentation
- Mockup connection to RMIS data



Pacific Coast-Wide Fishing Regulations Database

2024 Data Compilation

- Pilot Datasets:
  - **WA & OR Ocean Regulations** – Commercial and Recreational
  - **Columbia River Mainstem Regulations** – Commercial and Recreational

TABLE I-1. Summary of actual ocean non-Indian commercial troll salmon fishing regulations for 2023. (Page 1 of 2)

Area and Season	Salmon Species	Actual Quota Chinook	Actual Quota Coho	Special Restrictions[a/]
U.S./Canada Border to Cape Falcon, OR				
(U.S./Canada Border to the Queets River)	All except coho	26,000 with [b/] sub-allocation by area	-	Chinook minimum size limit of 27 inches total length. Weekly landing and possession limits in place and modified inseason.Salmon Troll Yelloweye Rockfish Conservation Area, Cape Flattery and Columbia Control Zones closed. Vessels must land and deliver their fish within 24 hours of any closure of this fishery and landings were generally restricted to area of catch. Refer to complete 2023 ocean salmon regulations for detailed landing and notification requirements.
May 1-10; May 17-June 21; June 24-29				
(The Queets River to Cape Falcon, OR)				
May 1-June 21; June 24-29				
July 1-Aug. 2; Aug. 17-Sept. 30	All salmon	13,000	30,400 [c/]	Chinook minimum size limit of 27 inches total length. Coho minimum size limit of 16 inches total length. All coho must be marked with a healed adipose fin clip through August 25. No chum retention north of Cape Alava beginning August 1. Weekly landing and possession limits for Chinook and coho in place and modified inseason. Coho quota was modified inseason to allow for non-mark selective retention. Salmon
				nservation Area, Cape Flattery and Columbia Control Zones closed. Grays essels must land and deliver their fish within 24 hours of any closure of this erally restricted to area of catch. Refer to complete 2023 ocean salmon g and notification requirements.
				All salmon, through the earlier of September 30 or reaching the 10,000 non- l salmon except coho thereafter. Coho minimum size limit of 16 inches total h size limit of 28 inches total length. All vessels fishing in the area must land regon. Beginning October 1, open shoreward of the 40-fathom regulatory ok allowed per vessel per landing week (Thurs.-Wed.) Coho quota of 10,000 than 75 coho allowed per vessel per landing week (Thurs.-Wed.).
				Chinook minimum size limit of 26 inches in total length. Daily landing and k per vessel. Landings restricted to Port Orford. Redfish Rocks Marine

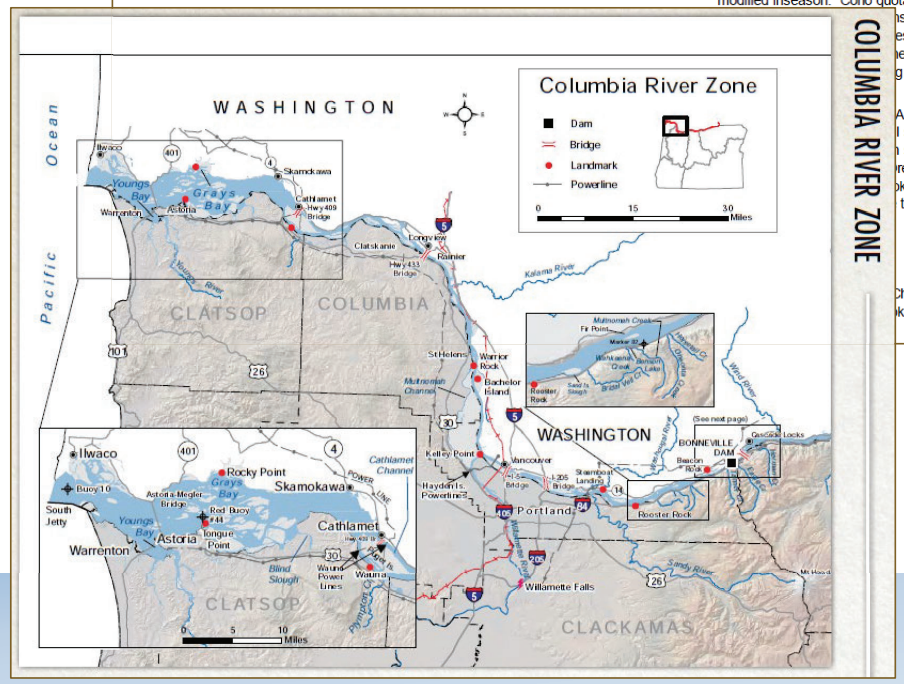


Image Sources: Pacific Fishery Management Council. 2024 Review of 2023 Ocean Salmon Fisheries & WDFW Sport Fishing Regulation Pamphlet 2023

Pacific Coast-Wide Fishing Regulations Database

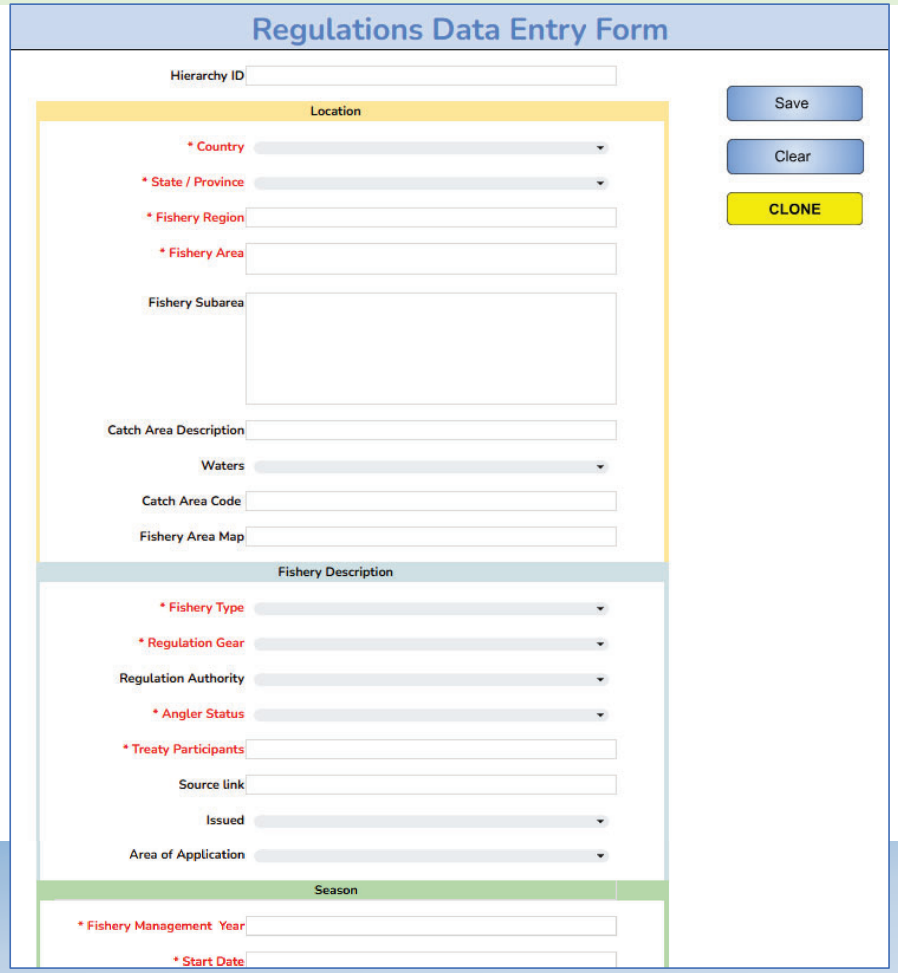


Image Source: QW Data Entry Form

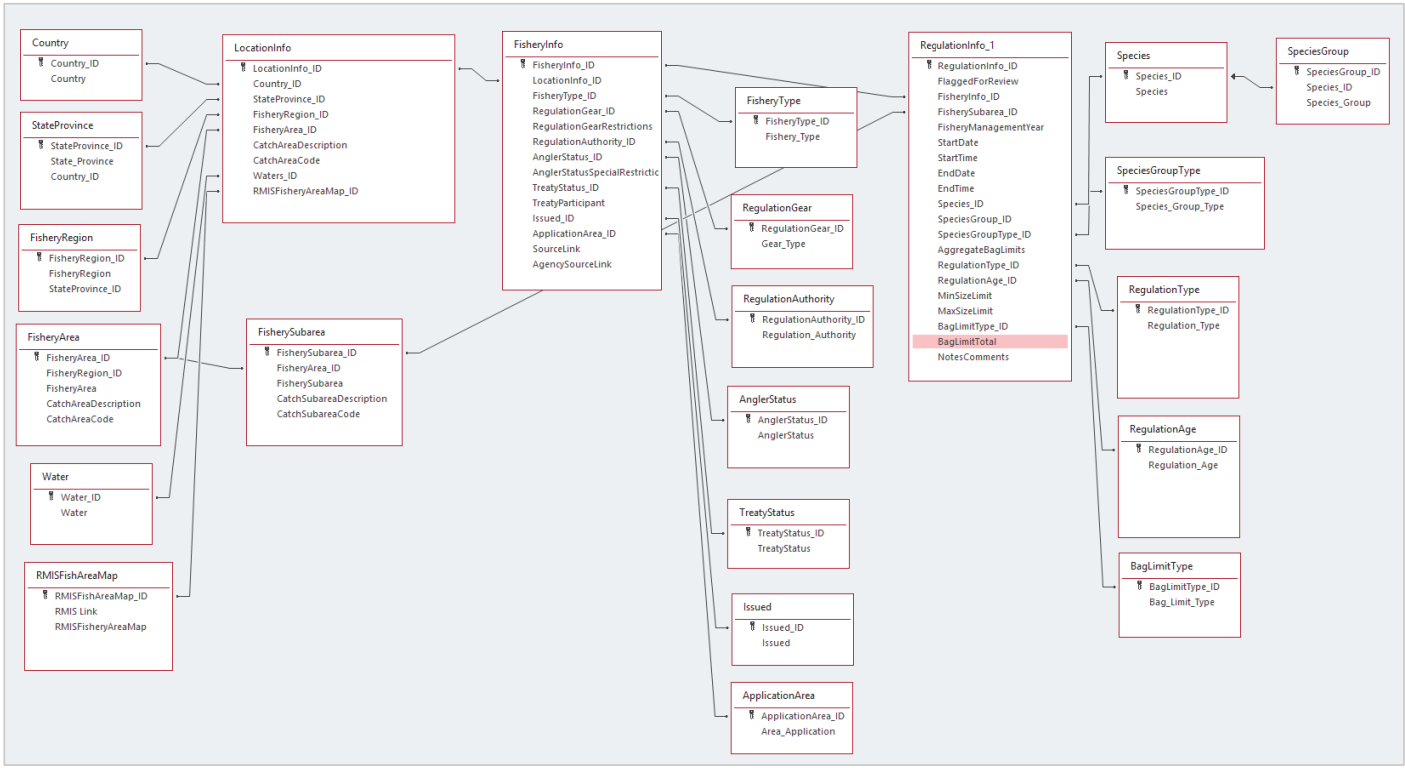
Data Entry & Form Front End Development

- Ocean data entry - in Google Sheets/Forms
- Highlighted a need for:
  - Relational database schema
  - SQL Server database
  - Data entry form with stand-alone functionality

Pacific Coast-Wide Fishing Regulations Database

Developed Relational Database

- Moved to SQL Server
- Better capture regulation hierarchy
- Improve data entry efficiency and accuracy



Pacific Coast-Wide Fishing Regulations Database

TABLE I-2. Summary of actual treaty Indian commercial ocean and Area 4B troll salmon seasons for 2023.

Tribe and Area	Seasons[a/] Salmon Species	Dates	Days	Minimum Size Limit (Inches) Chinook	Coho	Special Restrictions
Quinault						
Areas 2-3	All except coho	May 1-June 30	61	24	-	Six nautical mile radius from the mouth of the Queets River and two nautical mile radius from the mouth of the Quinault River: closed to commercial fishing.
	All	July 1-Sept. 15	77	24	16	
Hoh						
Areas 2-3	All except coho	May 1-June 30	61	24	-	Six nautical mile radius from the mouth of the Hoh River: closed to commercial fishing.
	All	July 1- Sept. 15	77	24	16	
Quileute						
Area 3	All except coho	May 1-June 30	61	24	-	
	All	July 1-Sept.15	77	24	16	
Makah						
Areas 3, 4 and 4A	All except coho	May 1-June 17	61	24	-	
		June 18-June 30	61	24	-	1,000-foot closure around stream mouths.
	All[b/]	July 1- Sept. 15	77	24	16	1,000-foot closure around stream mouths.
Area 4B	All[b/]	Jan. 1-Apr. 15	105	22	16	
	All except coho	May 1-June 17	61	24	-	
		June 18-June 30	61	24	-	1,000-foot closure around stream mouths.
	All[b/]	July 1- Sept. 15	77	24	16	1,000-foot closure around stream mouths.
S'Klallam						
Area 4B	All[b/]	Jan. 1-Apr. 15	105	22	16	Troll gear must not be operated closer than 1,000 feet away from any stream or river mouth in area 4B, or within a 1,000 yard radius from the mouth of the Elwha River.
	All except coho	May 1-June 30	61	24	-	
	All[b/]	July 1- Sept. 15	77	24	16	
	All[b/]	Nov. 1-Dec. 31	61	22	16	

a/ The overall quotas for these fisheries during the May 1-Sept. 15 ocean salmon management period were 45,000 Chinook and 57,000 coho. These quotas include troll catches by the S'Klallam and Makah tribes in Washington State Statistical Area 4B from May 1-Sept. 15. The overall Chinook quota was divided preseason to provide 22,500 Chinook for the May 1-June 30 Chinook-directed season and 22,500 Chinook for the July 1-Sept. 15 all-salmon season. The balance of the Chinook quota from the spring period was added to the summer period inseason. Single point, single shank barbless hooks were required in all ocean fisheries.

b/ Retention of steelhead prohibited; retention of chum prohibited beginning August 1.

2024 Data Entry Continued

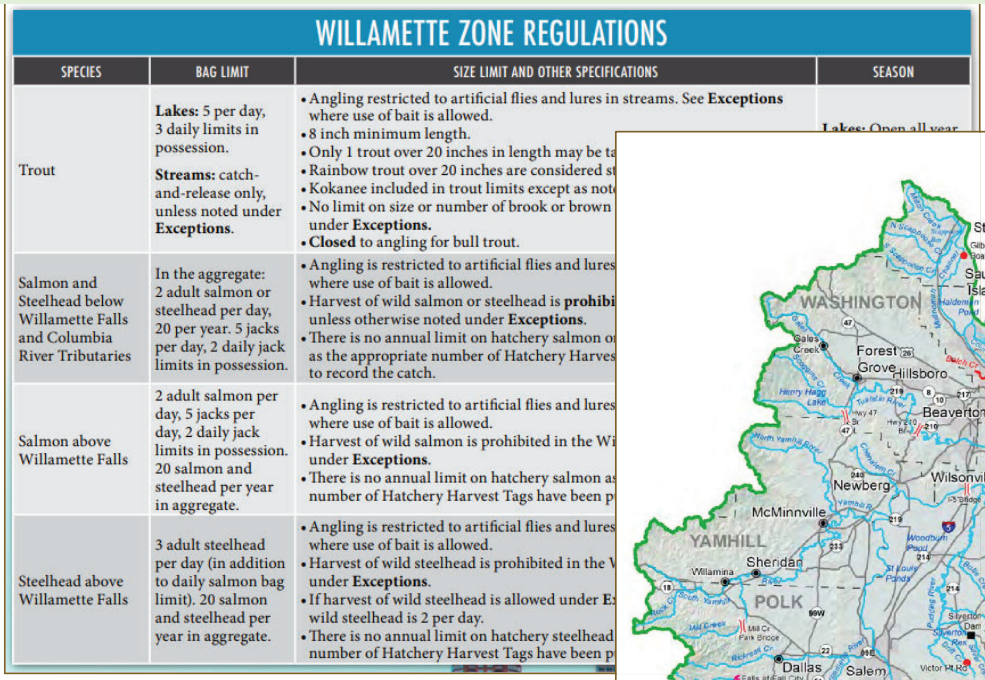
- Columbia River Mainstem Regulations – sport & commercial
- Quicker in new relational database
- Better captures hierarchy in regulations and area of application

Image Source: Pacific Fishery Management Council. 2024. Review of 2023 Ocean Salmon Fisheries

Pacific Coast-Wide Fishing Regulations Database

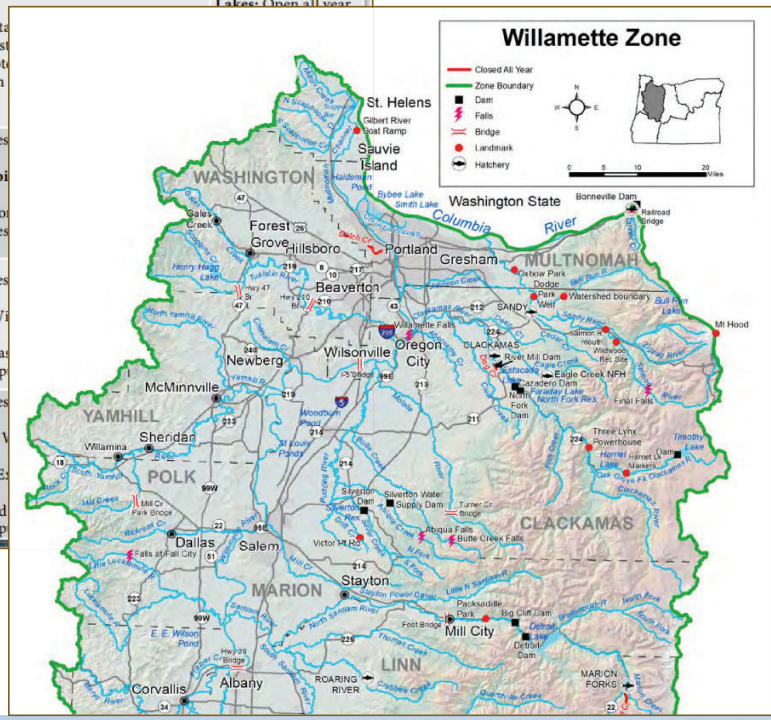
2025 Data Compilation

- SE Alaka 2023 Recreational
- OR Columbia River Tributaries 2023 Recreational
  - Col R, Central, NE, Willamette Zones
- SE Alaska 2023 Commercial
- Columbia River Mainstem 2001-2009 Commercial and Recreational – MSF only



WILLAMETTE ZONE REGULATIONS

SPECIES	BAG LIMIT	SIZE LIMIT AND OTHER SPECIFICATIONS	SEASON
Trout	**Lakes:** 5 per day, 3 daily limits in possession. **Streams:** catch-and-release only, unless noted under **Exceptions**.	• Angling restricted to artificial flies and lures in streams. See **Exceptions** where use of bait is allowed. • 8 inch minimum length. • Only 1 trout over 20 inches in length may be ta • Rainbow trout over 20 inches are considered st • Kokanee included in trout limits except as not • No limit on size or number of brook or brown under **Exceptions.** • **Closed** to angling for bull trout.	**Lakes:** Open all year
Salmon and Steelhead below Willamette Falls and Columbia River Tributaries	In the aggregate: 2 adult salmon or steelhead per day, 20 per year. 5 jacks per day, 2 daily jack limits in possession.	• Angling is restricted to artificial flies and lures where use of bait is allowed. • Harvest of wild salmon or steelhead is **prohibi** unless otherwise noted under **Exceptions**. • There is no annual limit on hatchery salmon o as the appropriate number of Hatchery Harves to record the catch.	
Salmon above Willamette Falls	2 adult salmon per day, 5 jacks per day, 2 daily jack limits in possession. 20 salmon and steelhead per year in aggregate.	• Angling is restricted to artificial flies and lures where use of bait is allowed. • Harvest of wild salmon is prohibited in the Wi under **Exceptions**. • There is no annual limit on hatchery salmon as number of Hatchery Harvest Tags have been p	
Steelhead above Willamette Falls	3 adult steelhead per day (in addition to daily salmon bag limit). 20 salmon and steelhead per year in aggregate.	• Angling is restricted to artificial flies and lures where use of bait is allowed. • Harvest of wild steelhead is prohibited in the W under **Exceptions**. • If harvest of wild steelhead is allowed under E wild steelhead is 2 per day. • There is no annual limit on hatchery steelhead number of Hatchery Harvest Tags have been p	



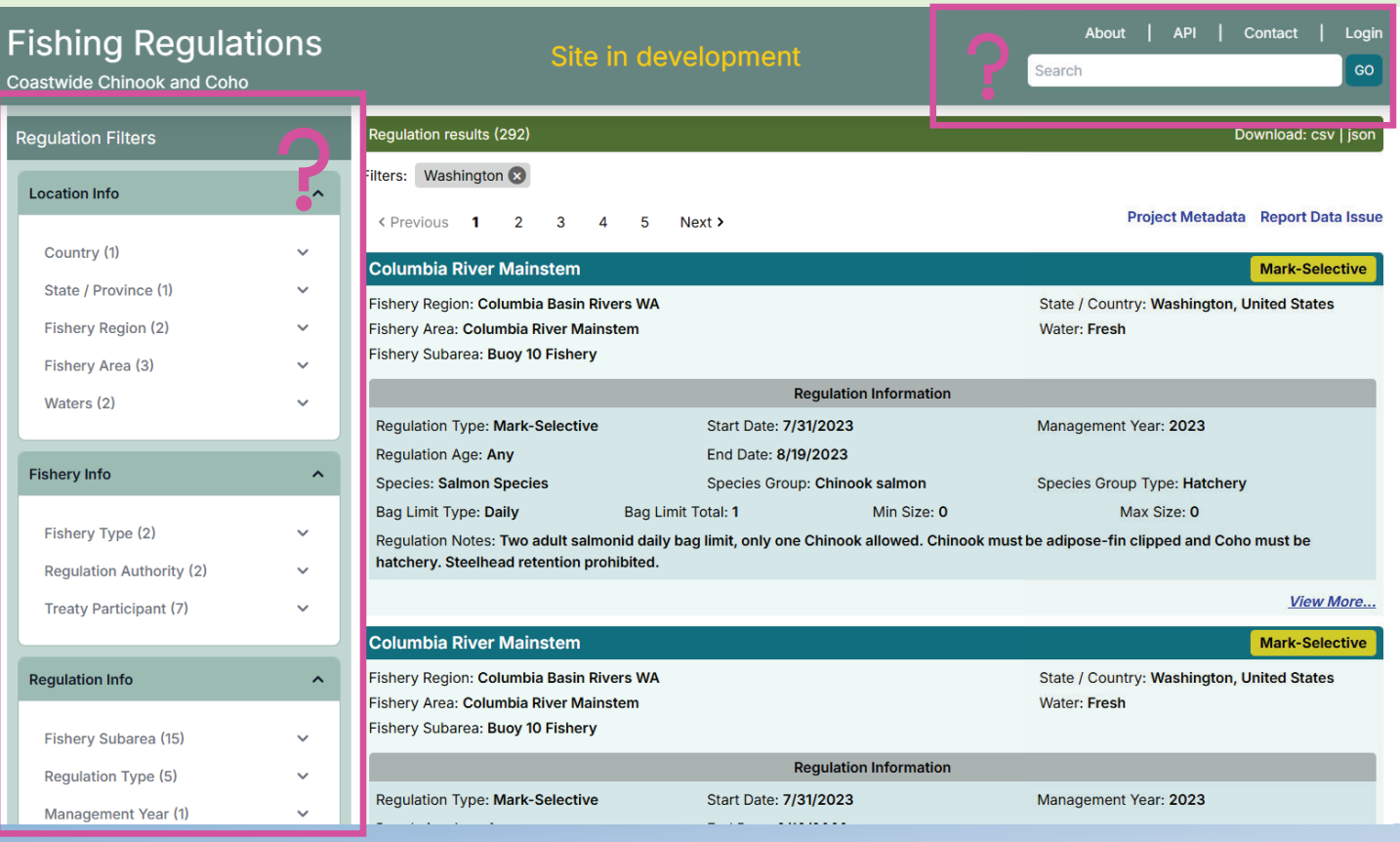
Images Source: ODFW Sport Fishing Regulation Pamphlet 2023

Pacific Coast-Wide Fishing Regulations Database

Compiled Data So Far:

- Currently 8,349 regulations in the database
- 985 are mark-selective for coho or chinook
- Capturing annual/daily/aggregate bag/possession limits and quotas, resident and age specific regs, & subsistence tiers
- Fisheries including sport hook & line, commercial troll/tangle/gillnet, and treaty fisheries

Pacific Coast-Wide Fishing Regulations Database



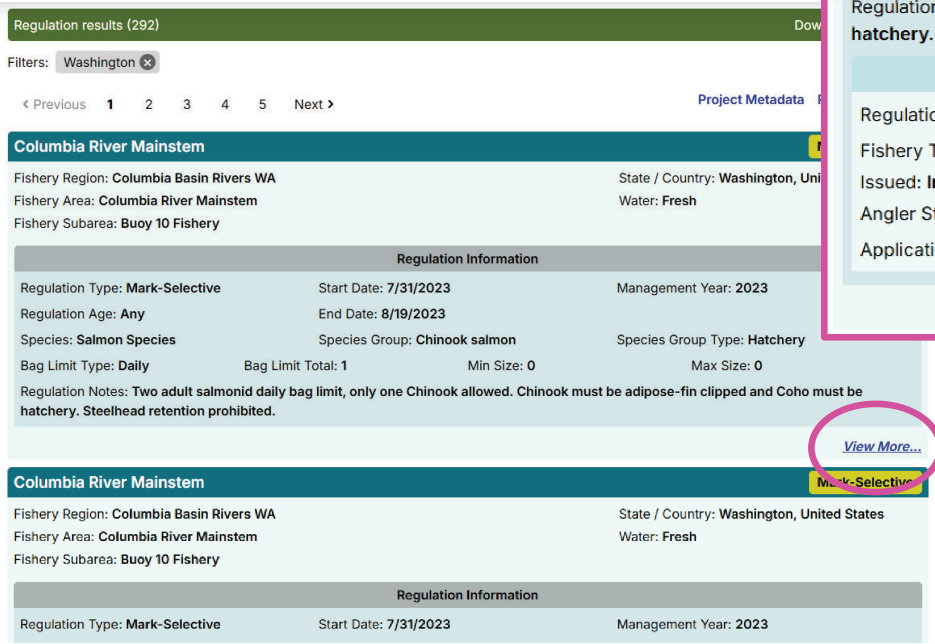
Database Front End - Data Query

- Query via:
  - searching key terms
    - ex: Washington, Columbia River, Buoy 10, Mark-selective
- Query via advanced filter selection
- Data Query Link

Pacific Coast-Wide Fishing Regulations Database

Data Query

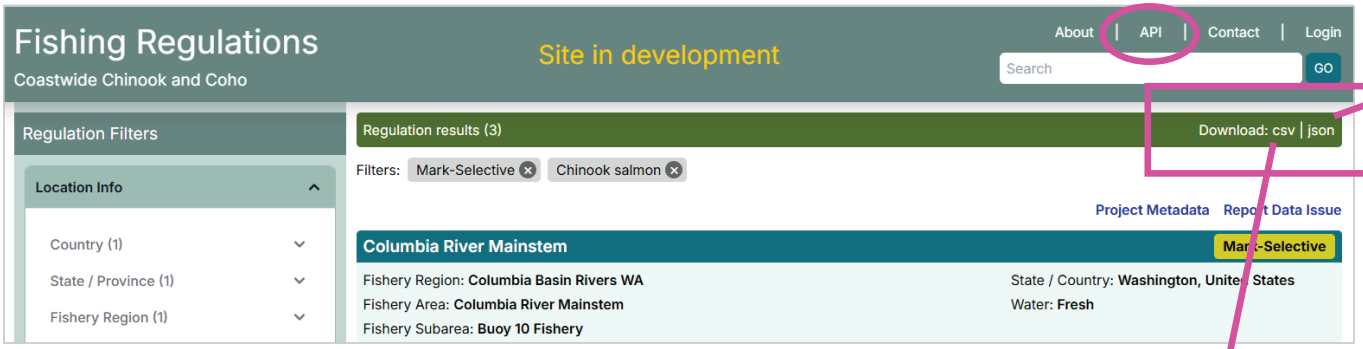
- Expanded and condensed view of regulation information



Pacific Coast-Wide Fishing Regulations Database

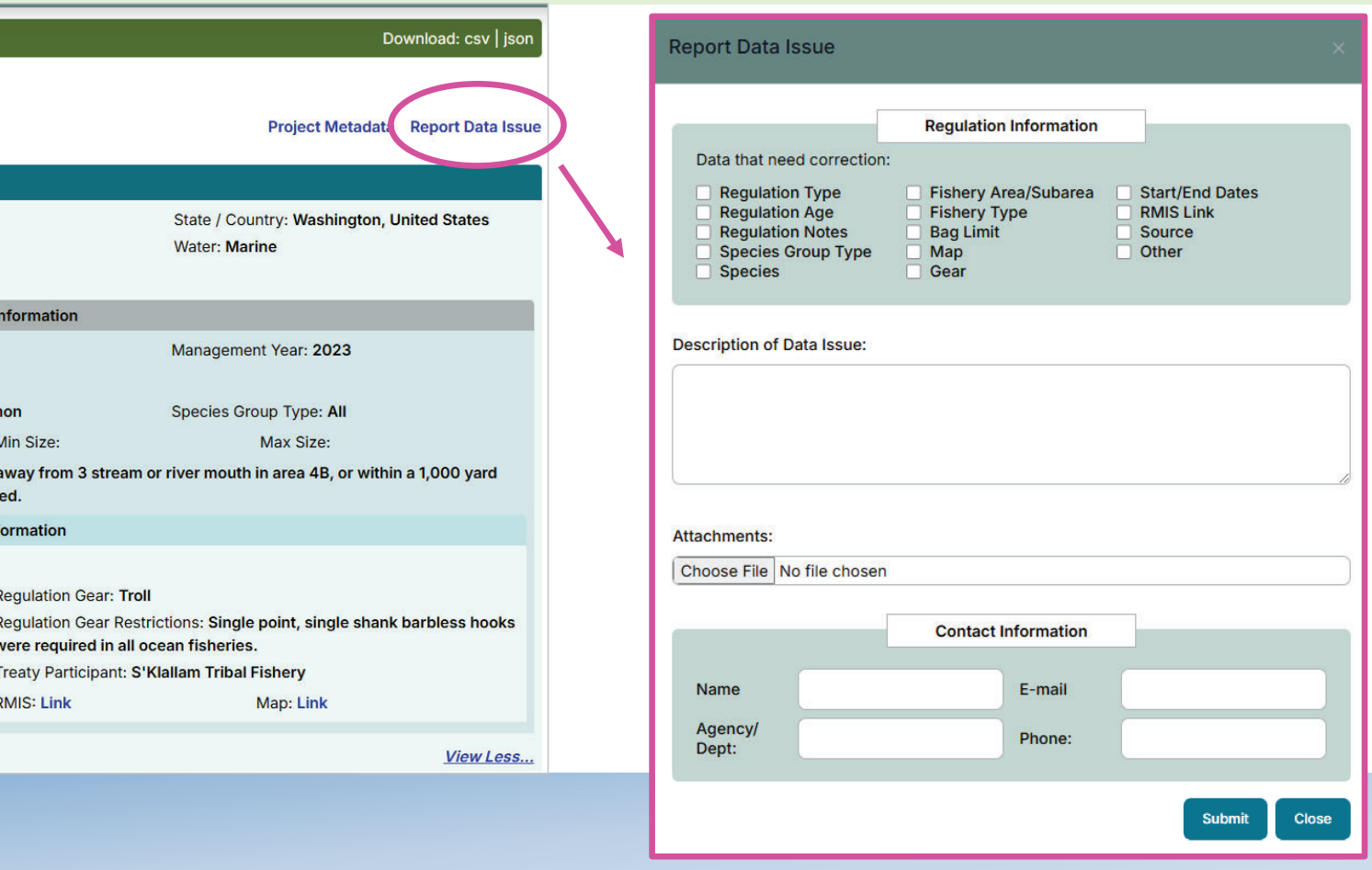
Data Query

- Data queries can be downloaded in CSV and JSON
- Eventual data submission via API



	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE
1	Country	StateProv	FisheryRe	FisheryAr	FisherySu	CatchAre	CatchAre	CatchSub	CatchSub	FisheryTy	AnglerSta	Applicatic	Issued	Regulatio	GearType	Regulatio	SourceLi	TreatyPar	BagLimitT	BagLimitT	StartDate	StartTime	EndDate	EndTime	FisheryMa	MinSizeLi	MaxSizeLi	Species	SpeciesG
2	United Sta	Washingt	Columbia	Columbia	Buoy 10 Fi	null	null	null	Buoy 10 Fi	Sport / Re	Non-Treat	Area	Inseason	Oregon De	Hook & Lir	null	https://do	Non-Treat	Daily	1	Tue Aug 0	null	Sun Aug 2	null	2023	0	0	Salmon Sp	Chinook s
3	United Sta	Washingt	Columbia	Columbia	Buoy 10 Fi	null	null	null	Buoy 10 Fi	Sport / Re	Non-Treat	Area	Inseason	Oregon De	Hook & Lir	null	https://do	Non-Treat	Daily	1	Thu Aug 2	null	Sun Aug 2	null	2023	0	0	Salmon Sp	Chinook s
4	United Sta	Washingt	Columbia	Columbia	Buoy 10 Fi	null	null	null	Buoy 10 Fi	Sport / Re	Non-Treat	Area	Inseason	Oregon De	Hook & Lir	null	https://do	Non-Treat	Daily	1	Wed Aug 3	null	Mon Sep 0	null	2023	0	0	Salmon Sp	Chinook s

Pacific Coast-Wide Fishing Regulations Database



Data Query

- Data error reporting in development
  - Will capture the query/filters in report

Pacific Coast-Wide Fishing Regulations Database

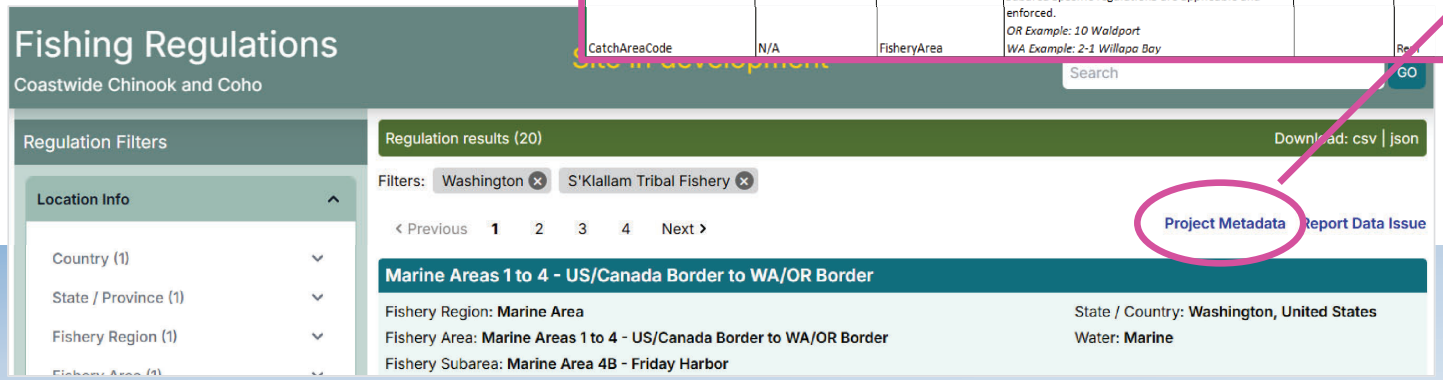
Metadata

- Created project metadata and controlled vocabulary
- Developing link to metadata from data query

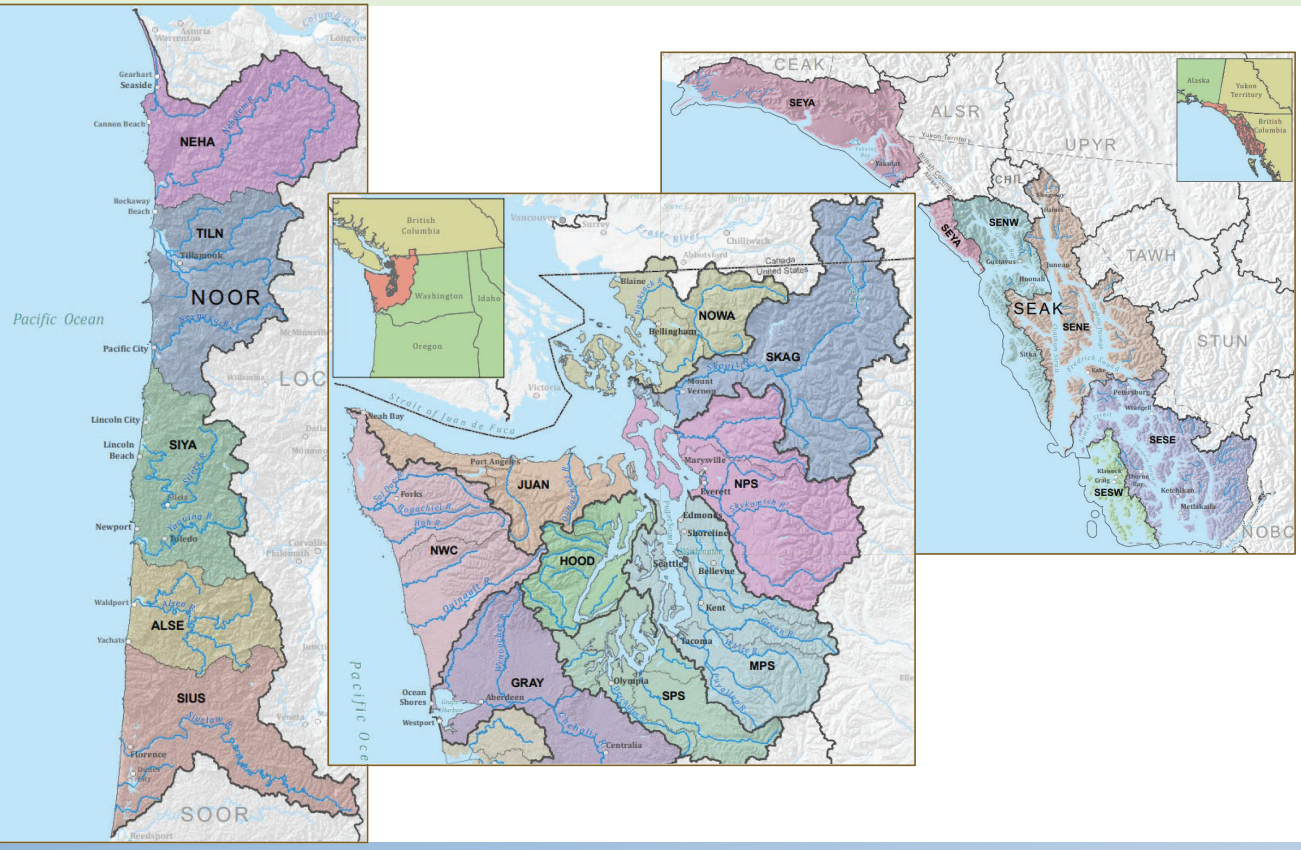
Fish Regulations Database - Draft Fields

Source: Fish Regulations Relational Database

Field Name	SQL Key	SQL Table Name	Definition	UnitOfMeasure	DataType	Accepted Values/Codes/Conventions	Required	DataEntryRules
AgencySourceLink	N/A	FisheryInfo	URL or agency website link to published fishing regulation PDF.		Hyperlink	URL or Hyperlink	Required if SourceLink is null.	URL or Hyperlink to the regulation PDF on the management agency site.
Angler_Status	AnglerStatus_ID	AnglerStatus	Categorization of the angler as a resident, or non-resident when residency is applicable, and tribal nation treaty fishery participant or non-treaty fishery participant.		Text	Resident Non-Resident Treaty Non-Treaty Not Applicable All	Required in FisheryInfo table	Populated from look up table - restricted to accepted table values which are required to validate. Query/Search Term. Can't be left blank/null.
Area_Application	AreaApplication_ID	ApplicationArea	Value used to designate if a regulation is applicable to an entire state/province, a specific region within the state/province, or a specific area within both the sate/province and region.		Text	State/Province Regional Area	Required in FisheryInfo table	Populated from look up table - restricted to accepted table values which are required to validate. Query/Search Term. Can't be left blank/null.
Bag_Limit_Type	BagLimitType_ID	BagLimitType	Categorization of bag limits by time of application, e.g. regulation applies to one day, one week, one year, etc., and type of limit e.g. possession, daily/weekly bag limit, quota. etc.		Text	Possession Possession Exception Not Applicable Daily Daily Exception Weekly Weekly Exception Annual Quota	Required in RegulationInfo table	Populated from look up table - restricted to accepted table values which are required to validate. Query/Search Term. Can't be left blank/null.
Country	Country_ID	Country	The country where the fishing regulations are published, applicable, and enforced.		Text	United States Canada	Required in StateProvince.Country_ID	Populated from look up table - restricted to accepted table values which are required to validate. Query/Search Term. Can't be left blank/null.
CatchAreaCode	N/A	FisheryArea	Numeric code used by the fishery regulation authority to designates catch area zones where area and subarea specific regulations are applicable and enforced. *OR Example: 10 Waldport* *WA Example: 2-1 Willapa Bay*		Text	######	No	Commercial catch areas should be matched to associated recreational catch areas and catch area codes where applicable.



Pacific Coast-Wide Fishing Regulations Database



RMIS Data Connection

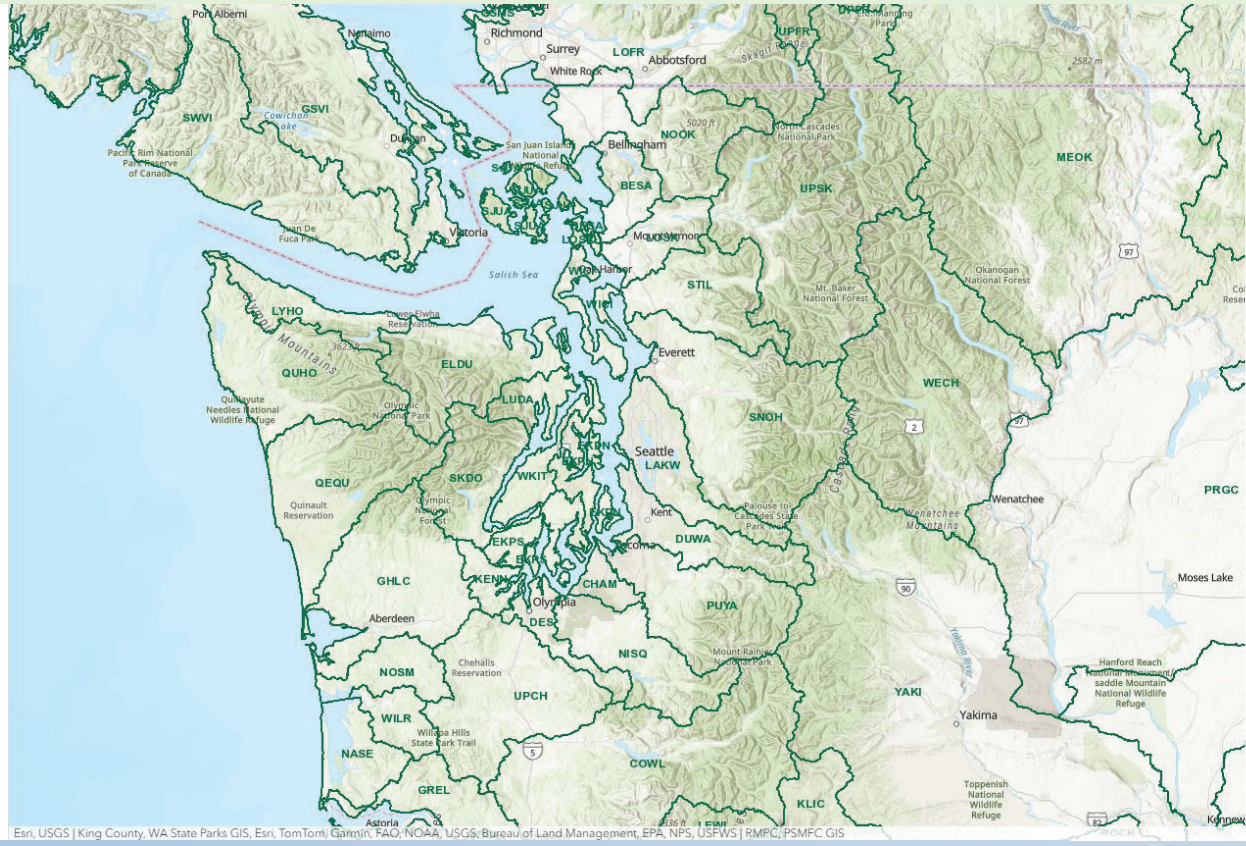
- How to link Fishing regulations to RMIS catch sample data?
- Spatial data is the glue!
  - Regs define geographic management areas that overlap with location data reported to RMIS

Image Sources: RMIS Atlas Maps

Pacific Coast-Wide Fishing Regulations Database

RMIS Data Connection

- 2024 Explored available GIS resources for mapped regulation areas and RMIS basins
- Gathering mapped fishery area resources from partners
- Plan for GIS fishery area mapping data entry



Map Citation: RMPC Domains Regions and Basins

Pacific Coast-Wide Fishing Regulations Database

RMIS Data Connection

- Assessed RMIS data and regulation data cohesion
- Time Intensive Barrier - RMIS Basins contain multiple fishery areas with both MSF and non-MSF data
- Mockup the connection to RMIS data for stakeholder review

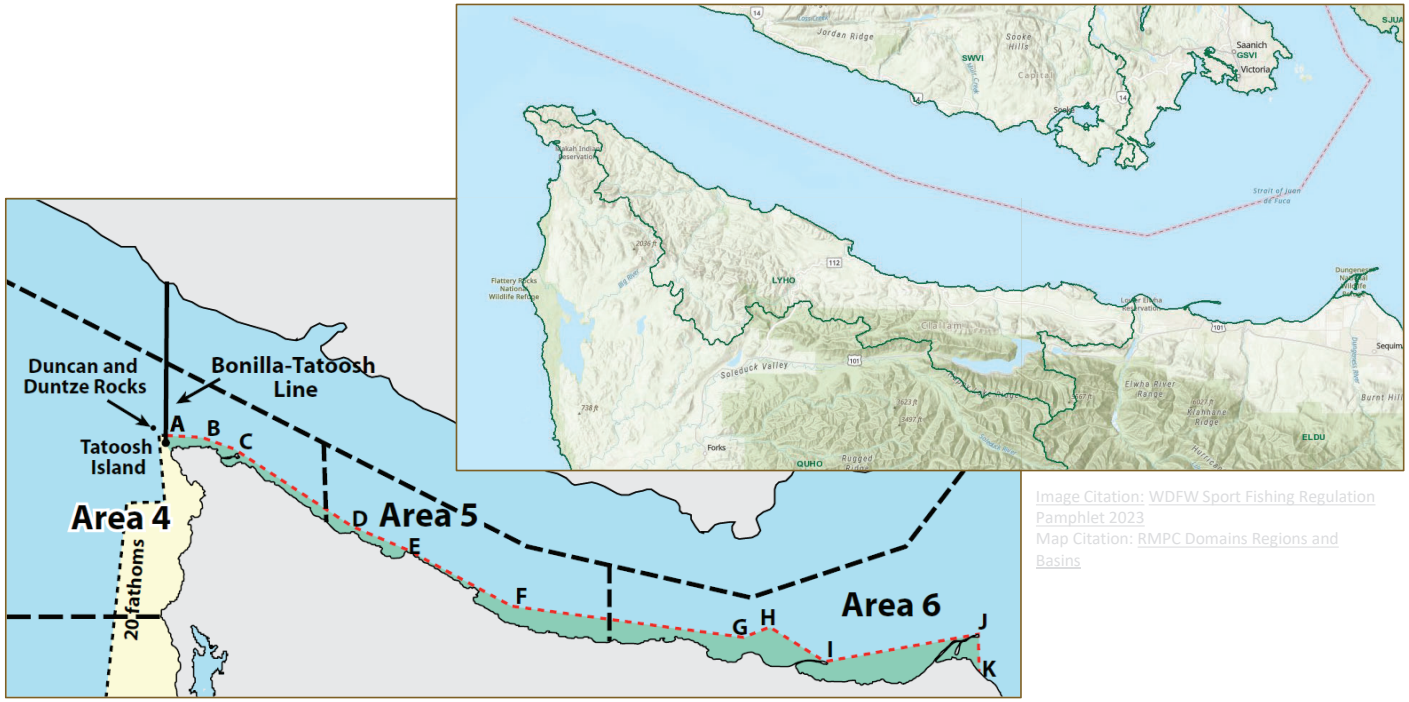


Image Citation: WDFW Sport Fishing Regulation Pamphlet 2023
Map Citation: RMPC Domains Regions and Basins

Pacific Coast-Wide Fishing Regulations Database

Decisions Made

- Initially prioritized database development
  - Improved data entry efficiency and assured data quality
- All salmon and steelhead for 2023 over MSF only
  - Needed to assure database structure could handle complex non-MSF regulations
- Started with modern regulations to assure access to data sources
- Develop database schema before regs to RMIS connection

Pacific Coast-Wide Fishing Regulations Database

Next Steps

- Continue data entry:
  - Working on finishing up SE Alaska 2023 work
  - Getting the rest of Oregon and Washington 2023 data in
  - Starting to work forwards in time from 2009 – 2015, salmon MSF regs only
- Create a mockup of the connection to RMIS Data
- Compile or create fishery management area maps
- Continue refining the data query
- Create a website for the project
- Apply for funding for continued work in 2026

2025 Working Session

Regional Committee on Marking and Tagging

Review 2025 Draft Version for RCMT Document

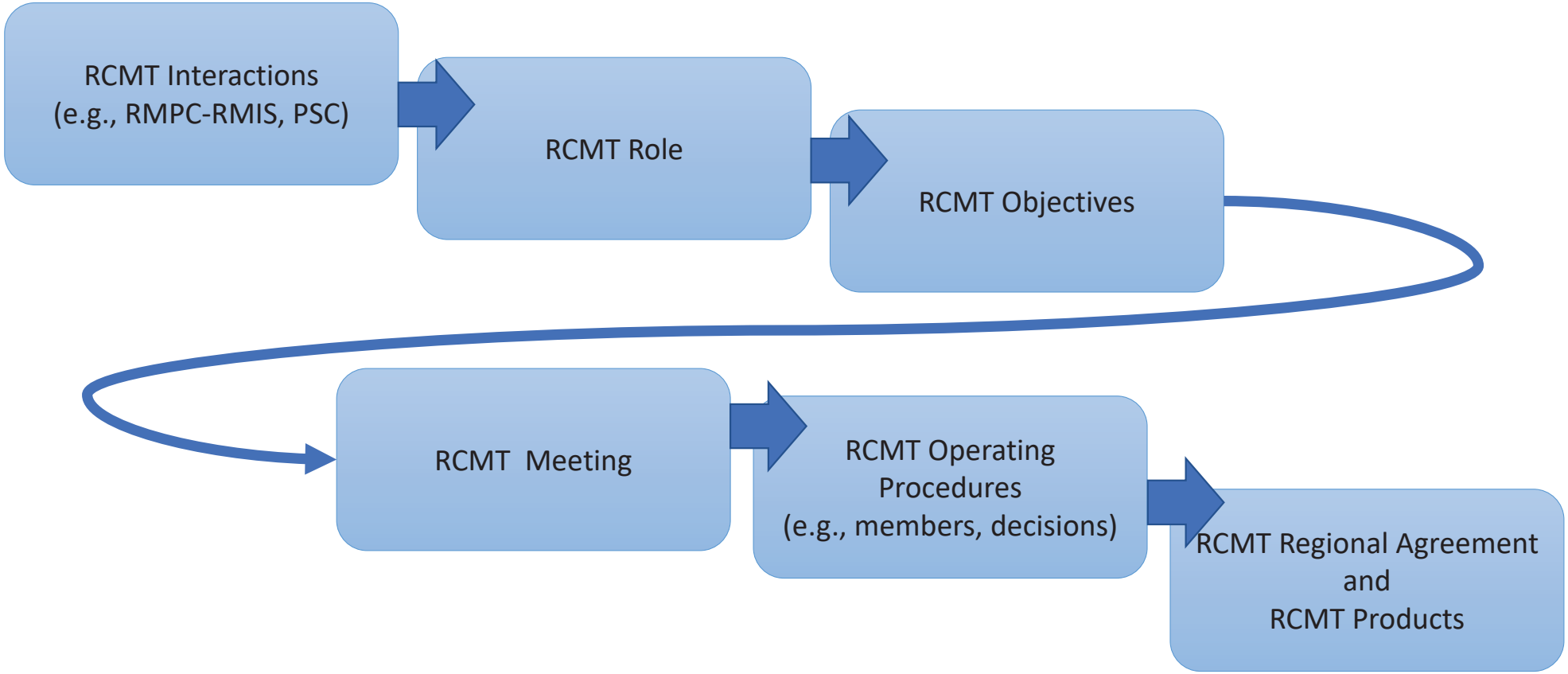
Discuss and Propose Revisions

(additions, deletions, refinements, other)

2011-2024 Revisions and Discussion Topics

- 2011 updated committee name, added genetic stock ID to overview section, updated current status on use of CWT and Ad Clip
- 2015 BC MOE & NMFS/WR members removed; Agency Update standard template
- 2022 RMPC website refresh prompting content update to Current Standard on Marking & Tagging
- 2022 – 2023 small group updated Variance Form and proposed updates to RCMT document
- 2023 –2024 RCMT discussed further edits to clarify Tag Coordinator responsibilities, RMCT roles and responsibilities, members role, section on PSC interactions, RMIS/MRP parallel data system etc

2025 Draft RCMT Document



RCMT Interactions
(e.g., RMPC-RMIS, PSC)

APPENDIX A – PSMFC AND PSC COMMITTEES INFORMING CWT USE AND ANALYZING CWT DATA

RCMT Role

RCMT Objectives

RCMT Meeting

RCMT Operating Procedures

RCMT Regional Agreement and RCMT Products

Discussion on 2025 Draft & Specific Areas Needing Input

RCMT Interactions

RCMT Objectives

RCMT Role

RCMT Meeting

RCMT Operating Procedures

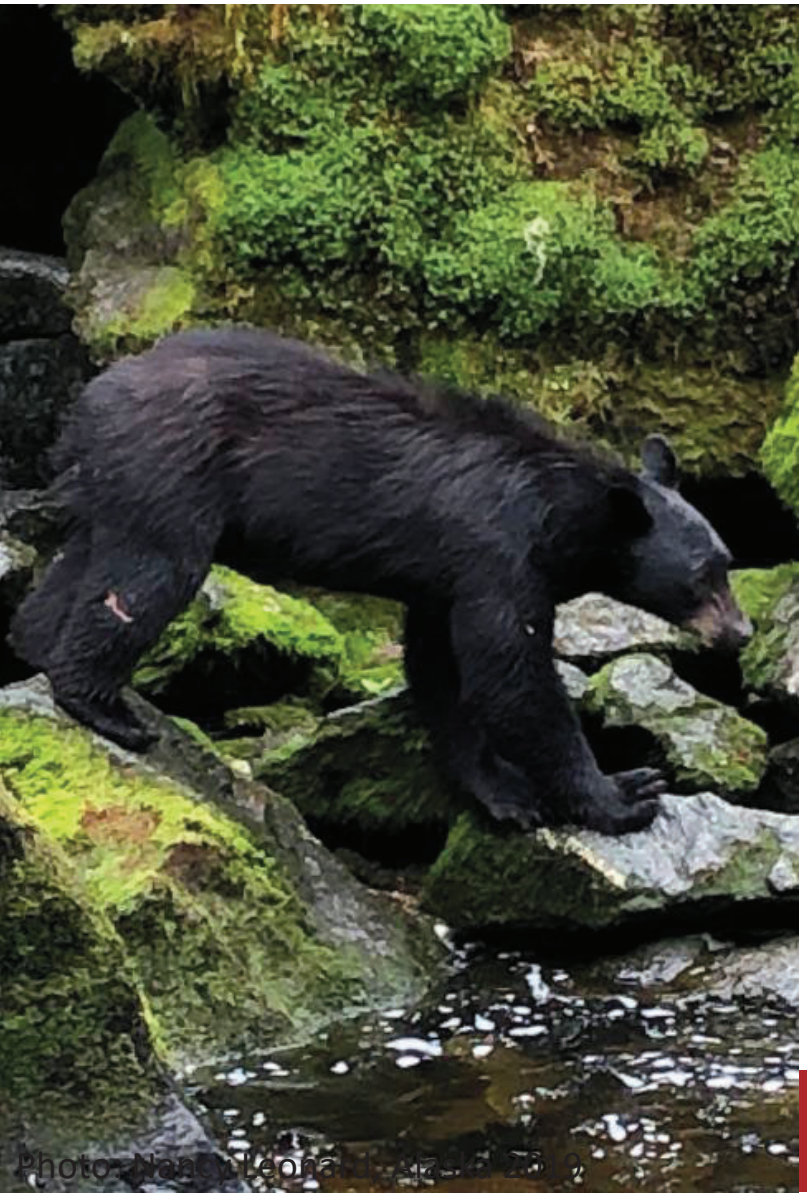
RCMT Regional Agreement and Products

- Any content missing, corrections, or that we want to remove?

open 2025 draft document

to review overall sections

and specific comment boxes added to display version



Next Steps

- 2025 tasks
  - PSMFC staff revise draft 2025 per RCMT input
  - Share revised draft for review and edit
  - Final revision prior to decision to adopt new version

- 2025 status update meeting (new/ virtual only)
  - Resolve remaining conflicting suggestions
  - Aim to adopt before end of 2025

Summarize action items and next steps

Wrap Up

Image: June's Digger. Mari Williams, 2018

Adjourn!

See you all in Idaho!

Image: June's Digger. Mari Williams, 2018