



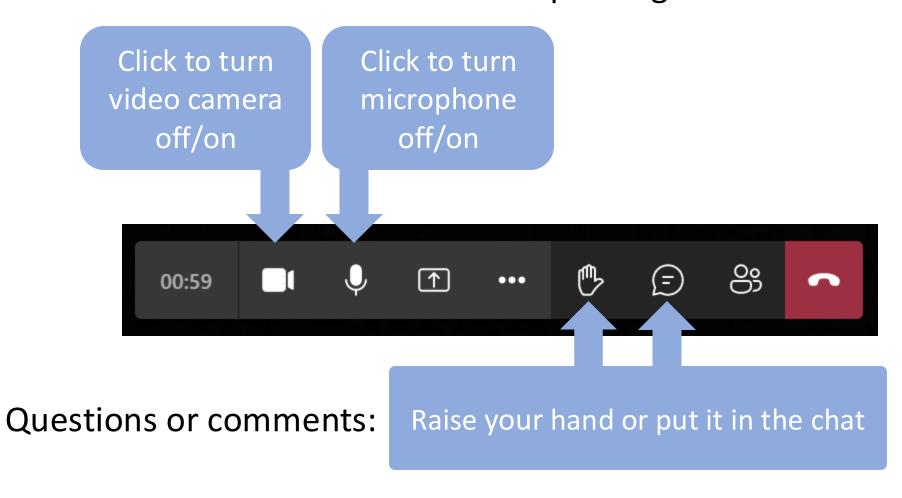
StreamNet Executive Committee & PNAMP Steering Committee Joint Session

October 22-23, 2025



Microsoft Teams Tips

Please turn camera and mic off when not speaking.





Introductions

- Virtual: We will call on you, turn your camera on and introduce yourself with name and affiliation
- In-person: We will go around the table clockwise, same format as virtual



Contribute to fostering an open and welcoming environment:

Be Respectful **Be Accountable**

Communicate Effectively

Value Differences

Collaborate





Partner Presentation:

The Salmon Recovery Funding Board (SRFB) Monitoring Program — monitoring to recovery salmon and advance our restoration practice

Greer Maier



SRFB Monitoring in Washington State



WASHINGTON STATE RECREATION AND CONSERVATION OFFICE

Governor's Salmon Recovery Office





Team Members

- Erik Neatherlin, Director
- Jeannie Abbott, Program Manager
- Tara Galuska, Orca
 Recovery Coordinator
- Greer Maier, Science
 Coordinator
- Erin Souza, Executive
 Assistant
- Elizabeth Spaulding,
 Habitat Policy Specialist



WASHINGTON STATE
RECREATION AND CONSERVATION OFFICE

Governor's Salmon Recovery Office

Our Role

Coordinate with agencies, tribes, and partners to advance salmon and orca recovery

Areas of Focus

- Federal and Legislative Affairs
- Governor's Salmon Strategy
- Southern Resident Orca Recovery
- Regional Federal Recovery Plans

- Biennial State of Salmon Report
- Riparian Conservation
- Science and Monitoring
- Tribal Relations

Salmon Abundance | 2024

IN CRISIS	NOT KEEPING PACE	MAKING PROGRESS	APPROACHING GOAL	
SNAKE RIVER SPRING/SUMMER CHINOOK PUGET SOUND CHINOOK	SNAKE RIVER BASIN STEELHEAD LOWER COLUMBIA RIVER CHINOOK	COLUMBIA LOWER COLUMBIA RIVER STEELHEAD	HOOD CANAL SNAKE RIVER FALL CHINOOK	
LAKE OZETTE MIDDLE COLUMBIA RIVER STEELHEAD	UPPER COLUMBIA RIVER SPRING CHINOOK	UPPER COLUMBIA RIVER STEELHEAD	LOWER COLUMBIA RIVER COHO	
PUGET SOUND STEELHEAD*		SHIFTS FROM 2022 TO 2024: Lower Columbia River coho improved. Columbia River chum improved. Upper Columbia River steelhead improved. Upper Columbia River spring Chinook improved. Middle Columbia River steelhead declined.		

^{*} Lacks complete data.

Data and analysis by Washington Department of Fish and Wildlife

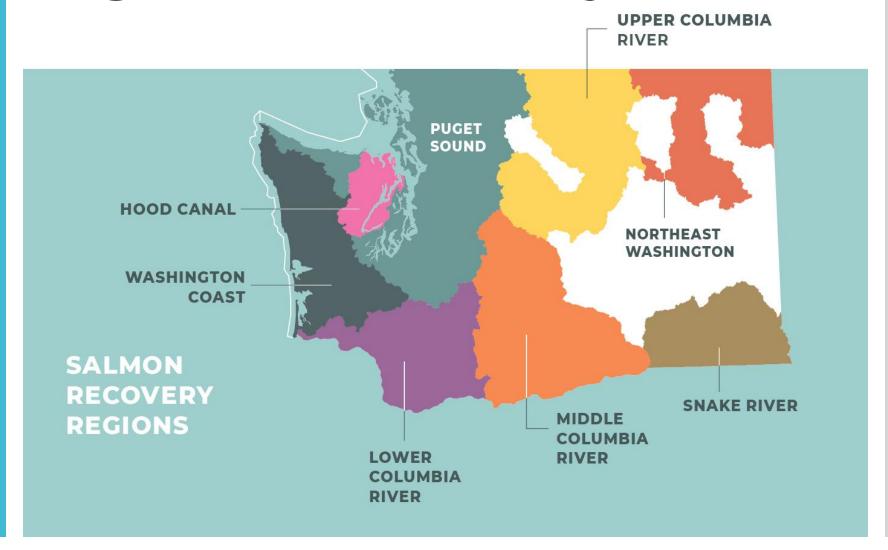
Strategy Action:

"Strengthen science, monitoring and accountability"

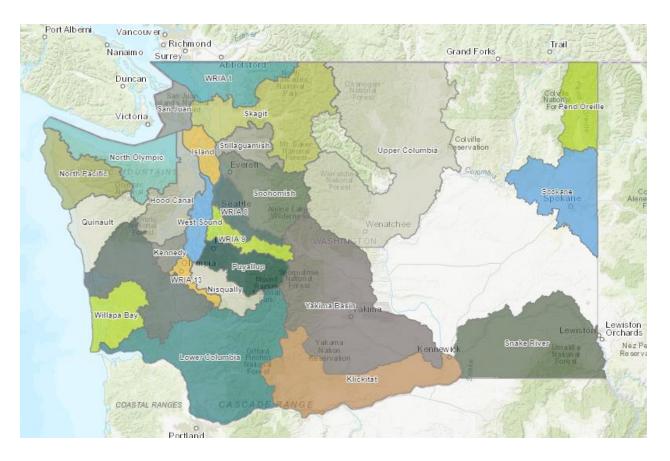


Regional Recovery Boards

Washington's Salmon Recovery Act (RCW 77.85) Bottom-Up Approach "The Washington Way"



Lead Entities



Lead Entities

- Develop watershed scale recovery actions
- Build Partnerships and Trust
- Combine Local Science and Community Priorities
- Prioritize Projects to Maximize Public's Investment



Tribes

- Sovereign Nations
- Federally and Non-Federally Recognized Tribes
- Tribal Treaty Rights
- Leaders in salmon recovery
- Science and technical expertise
- Keepers of ecological knowledge



Salmon Recovery Funding Board (SRFB)

- Backbone of Salmon Recovery
- Funds Voluntary Habitat Restoration Projects
- Federal & State Funding



Science Advisory Panel (SAP)

Pete Bisson, Bisson Aquatic Consulting LLC

Ken Currens, Anadromous Analytics

Tracy Hillman, BioAnalysts, Inc.

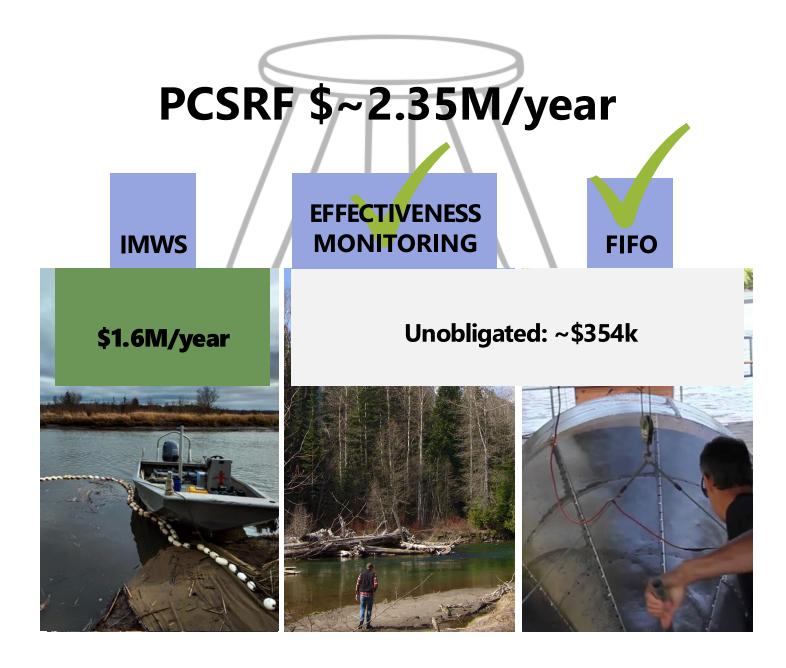
Jeanette Smith, Pacific Watershed Institute

Micah Wait, Wild Fish Conservancy

PCSRF MONITORING FUNDING Until 2024

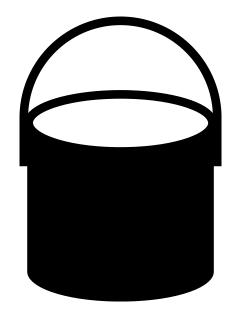
+Regional Grants

\$350k/year

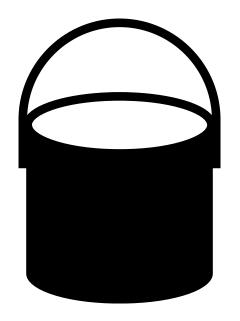


SRFB MONITORING PROGRAM

STATEWIDE PROJECTS
SRFB Directed



GRANT PROGRAM Regional Scale







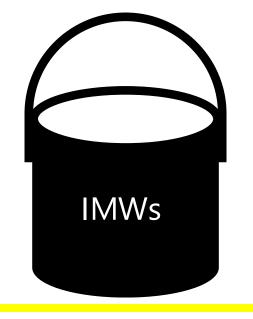


PROGRAM GOALS

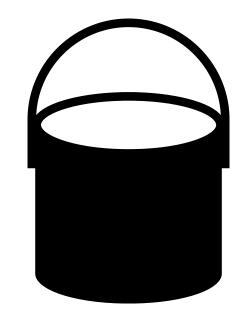
- 1. Generate **strategically consistent information** applicable to state, regional, and local decision makers.
- **2. Guide habitat restoration and protection** and recovery plan implementation.
- 3. Support and implement an **adaptive approach** to focus on the most timely and relevant questions and monitoring needs.
- **4. Communicate** data, information, and knowledge in a meaningful way.
- **5. Collaborate** with partners to leverage programs and results.

SRFB MONITORING PROGRAM

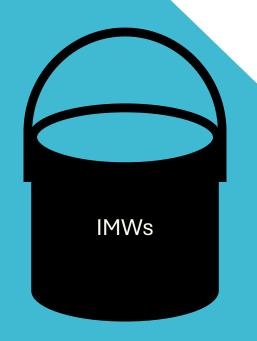
STATEWIDE PROJECTS
SRFB Directed



GRANT PROGRAM Regional Scale

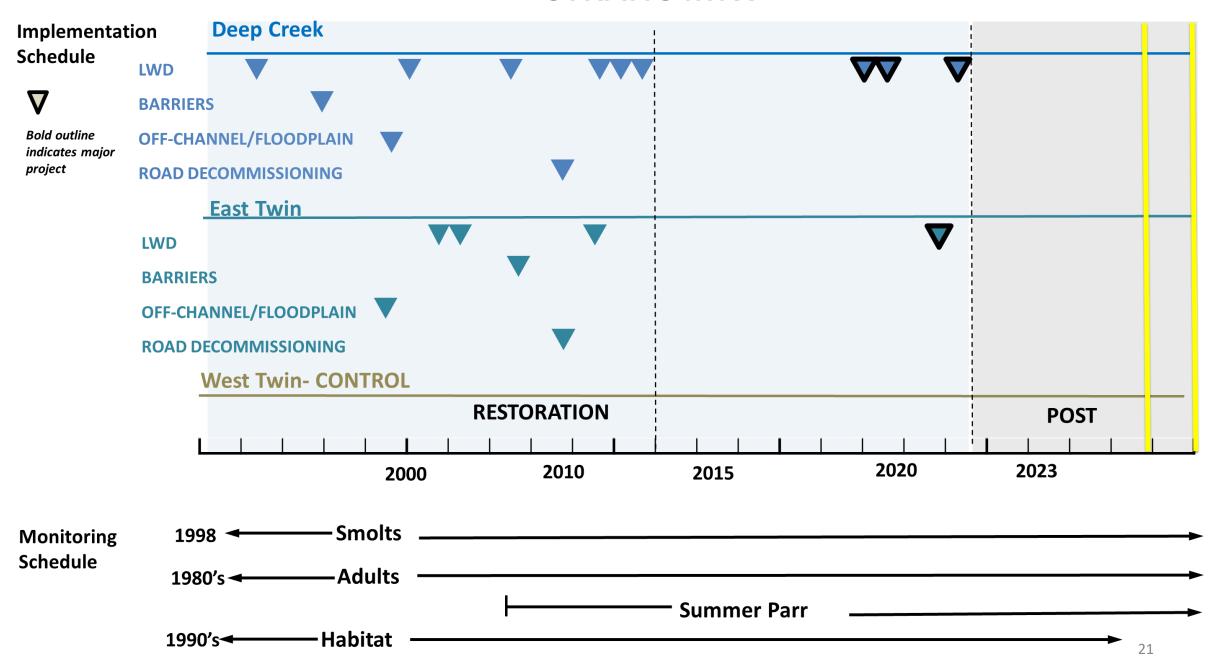


SRFB IMWs



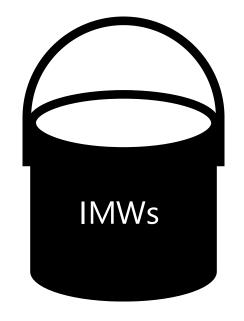
IMW	End Year
Lower Columbia IMW – WDFW Fish and Habitat Programs	2032
Hood Canal IMW – WDFW Fish and Habitat Programs	2028
Straits IMW – Lower Elwha S'Klallam Tribe, NOAA, and WDFW Habitat Program	2028
Skagit IMW –Skagit River Systems Cooperative, NOAA, WDFW Fish Program	2041

STRAITS IMW

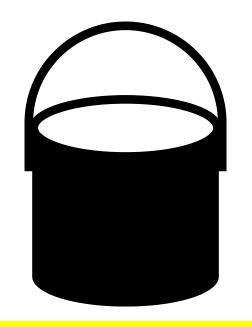


SRFB MONITORING PROGRAM

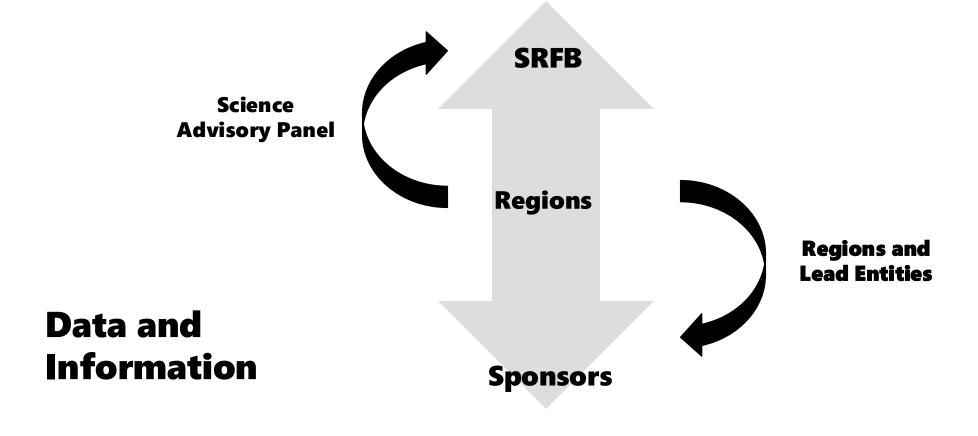
STATEWIDE PROJECTS
SRFB Directed



GRANT PROGRAM Regional Scale

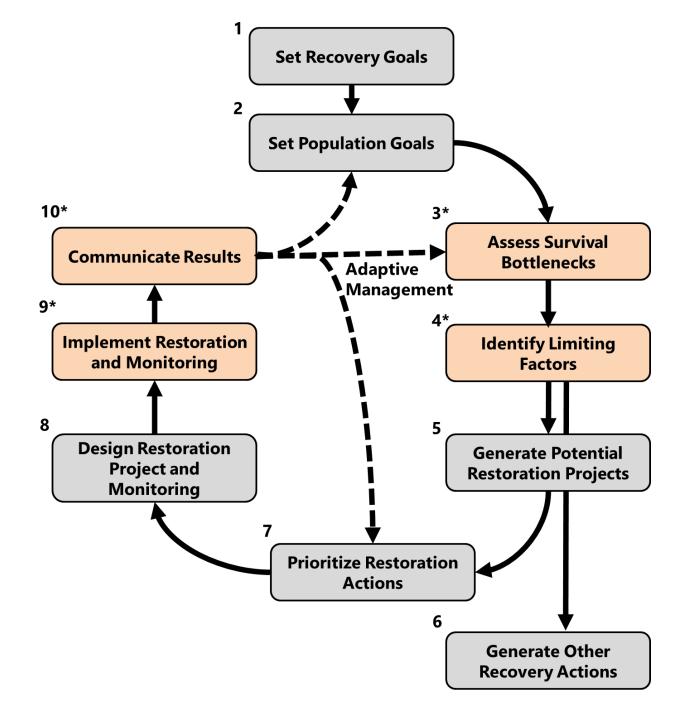


Regional Focus for Monitoring



2025/2027 Framework to Focus our Strategic **Priorities**

*Steps 3,4,9, and 10 in orange are tied to monitoring



2025-2030 STRATEGIC PRIORITES

- *Life Stage Bottlenecks (e.g. fry)
- *Limiting Factors (e.g. high water)
- *Project Effectiveness (did we create high water refugia?)

OTHER THINGS TO KNOW

- The SRFB Monitoring Grant Program is a biennial grant program.
- Applicants must be regions or other entities on behalf of the region
- Requests cannot \$300,000 in any given grant round.
- Regions cannot submit more than two applications per year.
- Each region has its own process for selecting projects.
- There is no match requirement.
- Monitoring projects shall not exceed 3 years.

REVIEW CRITERIA

- **✓Importance to recovery**
- √ Scientific merit
- **✓ Transferability of results**
- **✓** Consistency and leveraging
- √ (LIKELY NEW Alignment with strategic priorities)



USER GUIDE



https://rco.wa.gov/wp-content/uploads/2024/12/MON-Manual18M.pdf



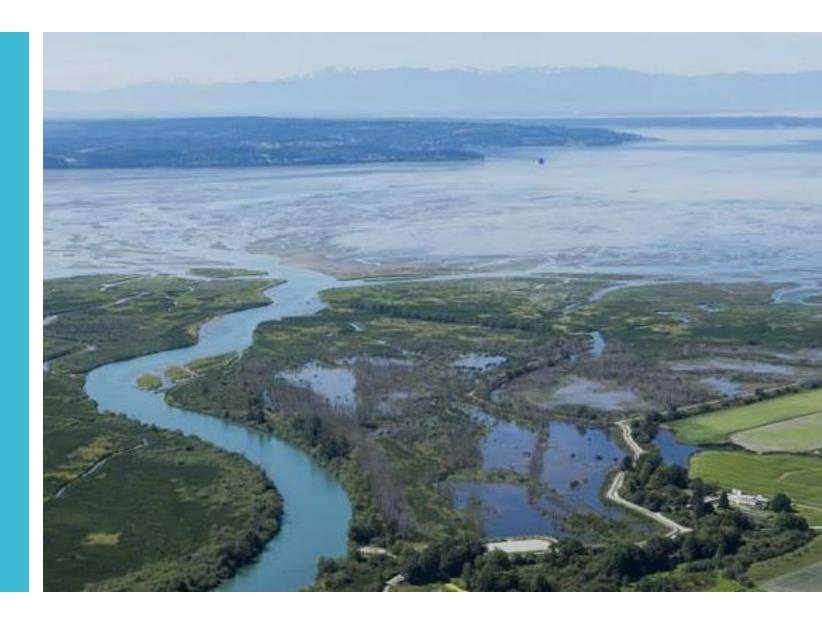
2025 Grant Round



Rank	Regional Organization	Project Name	Grant Request	Request Running Total
1	Puget Sound	Port Susan Restoration Effectiveness Monitoring	\$300,000	\$300,000
2	Lower Columbia	Lower East Fork Grays Sediment Transport	\$241,046	\$541,046
3	Puget Sound	Puget Sound Juvenile Salmon Offshore Monitoring	\$299,978	\$841,024
4	Yakima Basin	Yakima River Mobile Passive Integrated Transponder Tag Detection Surveys	\$299,987	\$1,141,011
5	Lower Columbia	Spawning Survey and Escapement in Lower Columbia	\$199,735	\$1,340,746
6	Upper Columbia	Life Stage Survival of Juvenile Steelhead in the Wenatchee	\$294,290	\$1,635,036
7	Upper Columbia	Methow Subbasin Habitat Status and Trend Monitoring	\$270,000	\$1,905,036
8	Coast	Smolt Residency Rime and Survival Through Grays Harbor Estuary	\$300,000	\$2,205,036
9	Coast	Species Distributions for Willapa Bay Tributaries	\$299,987	\$2,505,023

Questions?

greer.maier@gsro.wa.gov





PNAMP Project Short Updates: Next Generation of Effectiveness Monitoring

Erin Benham, Jen Bayer, Tim Copeland





Next Generation of Effectiveness Monitoring

- Submit abstract for symposium at Western Division AFS
 - Focus: Status of Effectiveness Monitoring/IMWs
 - Salmon Recovery Conference speakers and others
 - Panel discussion to set stage for what's next



Next Generation of Effectiveness Monitoring

Where do we go from here?

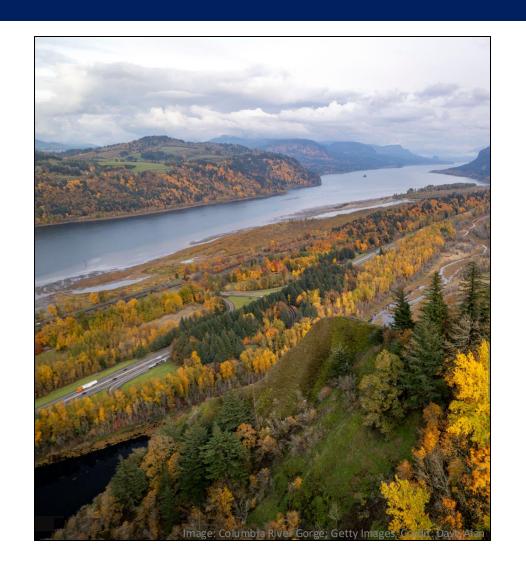
- How do we continue to guide restoration?
- How can we apply lessons learned from IMWs and effectiveness monitoring to broader restoration monitoring efforts?
- Is there interest in new methods to monitor restoration (e.g., remote sensing)?
- How can we ensure engagement of all parties interested in restoration and monitoring?

Next Steps



Western Division AFS in May 2026

- Suggestions for speakers or panelists?
- Other opportunities for engagement and learning?
- Funding?



PNAMP Project Short Updates: MonitoringResources.org

Sam Cimino





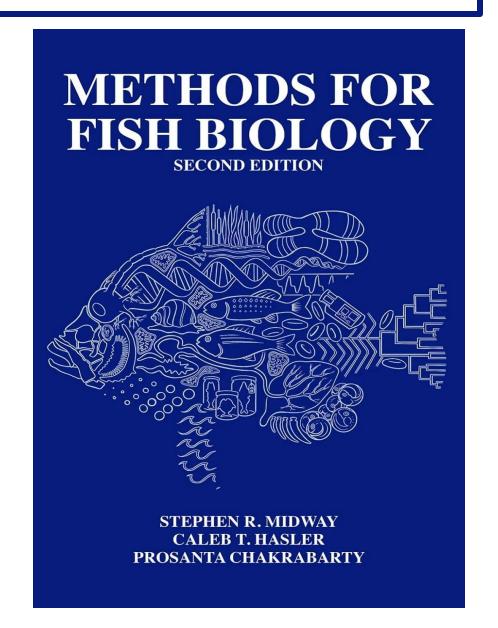
Monitoring Resources User Support

Recent Accomplishments

- Added Mari Williams to the Monitoring Resources team to assist with User Support
- Provided 1-to-1 user support work sessions
- Gave a Monitoring Resources Orientation to StreamNet staff

What's Happening Next

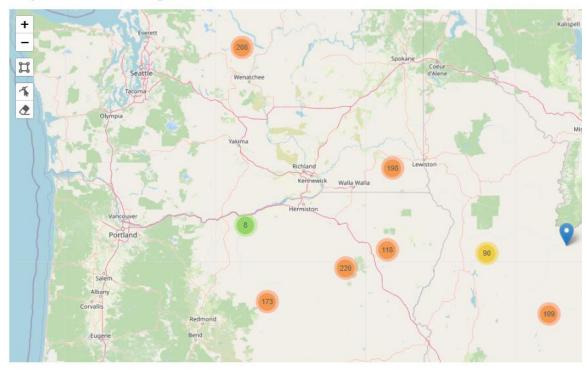
- TRYING SOMETHING DIFFERENT! Reaching out to Project Sponsors individually to help them fulfill BPA contracting requirements
- Continued support for PNAMP, StreamNet, and BPA working groups
 - Salmon Data Mobilization, CAP/HCAX, FMWG, etc.
- Further documentation of best collection/analysis practices
 - AFS Methods for Fish Biology and AFS Fisheries Techniques
 - PSMFC Columbia River Basin Fish Field Guide
- Update any necessary guidance and training
- A survey to users to determine what support or training is most desired



Monitoring Resources Development

- Recent Accomplishments
 - Added Focal Species to Sample Design
 - Updated Data Collection Events Map
 - Easier to filter and search
 - Metrics and Indicators, Focal Species, Program, Org., etc.
 - Allow users to extend end date on Sample Designs
- What's Happening Next
 - Continue to simplify the documentation process and access to the metadata
 - Ownership and citation updates
 - Libraries that highlight best practices
 - Auto populate metrics from uploaded datasheets
 - An image library for species identification
 - Linking Monitoring Resources to StreamNet and CBFish
 - Update map layers, standardized layers/symbology
 - Fish Facilities Layer (now) Focal Species Polygons (Later)
 - Create greater interoperability Minimize duplication
 - MonitoringResources.org backend upgrades

Explore Monitoring Sites



List of Data Collection Events

Viewing 1279 of 8795 collection events.

Metrics and Indicators	Protocol	Sample Design	Focal Species
Q	Q	Q	Q chinook
Abundance of Habitat Types, Abund	Scientific Protocol for Salmonid Habitat	Bridge Creek Intensively Monitored Watershe	Chinook salmon - Oncorhynchu
Abundance of Habitat Types, Abund	Scientific Protocol for Salmonid Habitat	Minam Spawning and Rearing Domain Habita	Chinook salmon - Oncorhynchi
Length: Fish Species, Mark/Tag Appl	ODFW Snorkel & Dip Net Sampling & D	ODFW Snorkel & Dip Net Sampling & Data C	Chinook salmon - Oncorhynchu
Length: Fish Species, Mark/Tag Appl	ODFW Snorkel & Dip Net Sampling & D	ODFW Snorkel & Dip Net Sampling & Data C	Chinook salmon - Oncorhynchu
Length: Fish Species, Mark/Tag Appl	ODFW Snorkel & Dip Net Sampling & D	ODFW Snorkel & Dip Net Sampling & Data C	Chinook salmon - Oncorhynchi



PNAMP Steering Committee: Focus & Refresh

Nancy Leonard



Why now?

PNAMP is entering its 22nd year and is now part of the Pacific States Marine Fisheries Commission.

The PNAMP Charter has remained unchanged, but there are updated Business Practices that appended the charter to provide additional details on operation and administration. Last update was in 2019.

The Strategic Plans are updated in 5-year sequences. The last strategy was completed in 2019.

Pending 2026 amendment to Northwest Power and Conservation Council Fish and Wildlife Program

Turnover in staff and evolving agency/tribal priorities

Other?





pacific northwest aquatic monitoring partnership



Questions to Consider:

What does the future look like for the PNAMP Steering Committee?

How can PNAMP support you and your agency or Tribe?

What is the best use of the PNAMP Steering Committee's resources?

Who is missing from this Committee and how do we fill in the gaps?







Type of	Partner Entities	Representative and (Alternates)
Representative		
Signatory	Bonneville Power Administration	Jody Lando (Jonathan McCLoud, Russell
,		Scranton)
Signatory	California Department of Fish and Wildlife	
Signatory	Columbia River Inter-Tribal Fish Commission	Denise Kelsey
Signatory	Confederated Tribes of the Colville Reservation	John Arterburn
Signatory	Idaho Department of Fish and Game	Tim Copeland (John Cassinelli)
Signatory	NOAA-Northwest Fisheries Science Center	Chris Jordan (Katie Barnas)
Signatory	NOAA-West Coast Region	Greg Sieglitz
Signatory	Northwest Indian Fisheries Commission	Bruce Jones
Signatory	Northwest Power and Conservation Council	Patty O'Toole (Heather Hendrixson)
Signatory	Oregon Watershed Enhancement Board	Courtney Shaff (Ken Fetcho)
Signatory	Pacific States Marine Fisheries Commission	Lara Erikson (Mari Williams)
Signatory	U.S. Army Corps of Engineers	
Signatory	U.S. Bureau of Land Management	Mike Brown
Signatory	U.S. Bureau of Reclamation	
Signatory	U.S. Environmental Protection Agency Region 10	Lisa Kusnierz
Signatory	USDA Forest Service, Region 6	Mark Raggon
Signatory	U.S. Geological Survey Northwest Region	Steve Waste
Signatory	Washington Department of Fish and Wildlife	Phil Sandstrom (Brodie Cox)
Signatory	Washington State Department of Ecology	Ed Krynak
Signatory	Washington Governor's Salmon Recovery Office	Greer Maier

Type of Representative	Partner Entities	Representative and (Alternates)
Courtesy	Regional Coordinator Yakama Nation Fisheries	Tom Iverson
Courtesy	CRITFC Columbia Basin Fish and Wildlife Library	Tami Wilkerson
Courtesy	Idaho Governor's Office of Species Conservation	Mike Edmondson
Courtesy	USDA Natural Resources Conservation Service	
Courtesy	U.S. Fish and Wildlife Service	
Courtesy	Puget Sound Ecosystem Monitoring Program	
Courtesy	Oregon Department of Fish & Wildlife	Jamie Anthony

Questions to Consider:

Who is missing from this Committee and how do we fill in the gaps?

How do we address Signatory/Courtesy members with no representatives for multiple years?

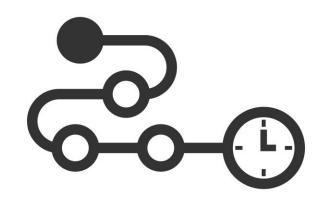
What are the expectations for participation or how PNAMP engages them?

Research/academic engagement?

Courtesy to Signatory?

Proposed Approach and Timeline

- Winter 2026 Compiling input
 - Conduct one-on-one meetings with signatory members and their alternate
 - Send out survey to Courtesy Members and PNAMP newsletter recipients
- Spring 2026 PNAMP SC Meeting
 - Summarize input received
 - Present and discuss during mid-year PNAMP SC meeting
 - Draft revised Strategic Plan and if needed the Charter
 - Share draft via email
 - Schedule additional PNAMP SC meetings to finalize
- June 2026 Draft BPA SOW
 - Revised to reflect new strategic plan
- Fall Joint PNAMP / StreamNet Executive Committee meeting
 - Update on 2027 tasks that aligns with new SOW and BPA plan





Welcome!

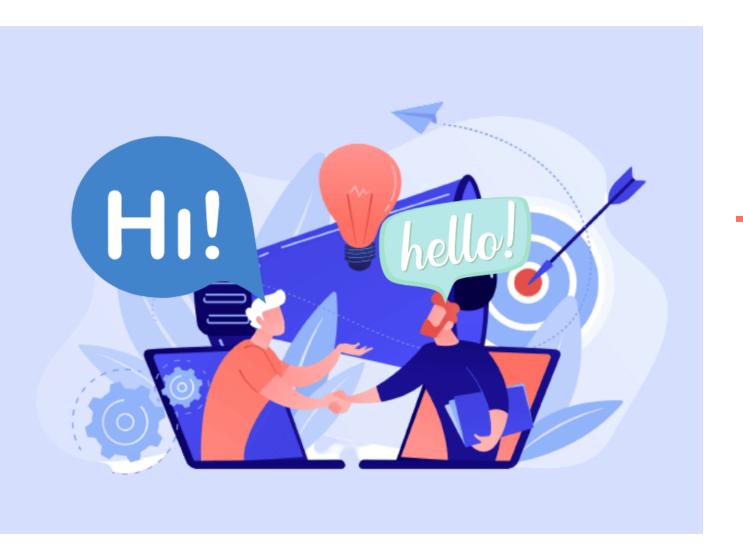
Morning Session

Joint Session of the StreamNet Executive Committee & PNAMP Steering Committee



Image: M Willian





Introductions Morning Session

Introduce yourself with name and affiliation

- Virtual: We will call on you, turn your camera on please
- In-person: We will go around the table

Contribute to fostering an open and welcoming environment:

Be Respectful

Be Accountable

Communicate Effectively

Value Differences

Collaborate



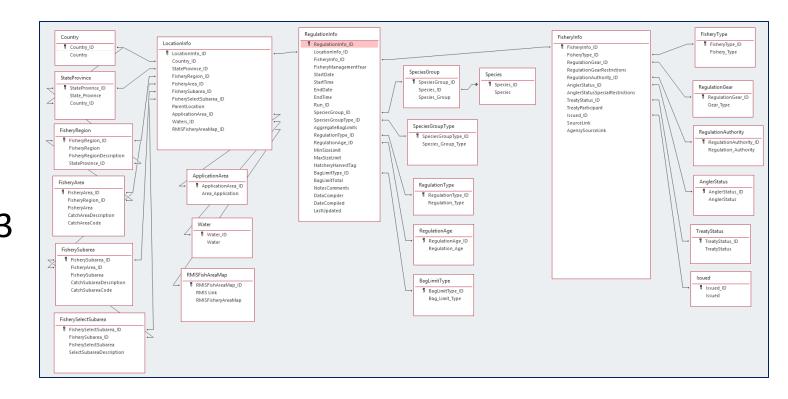
Project Background

- Developing a database that is a central access point for coastwide salmon fishing regulations
 - Help facilitate implementing mark-selective algorithms in PSC exploitation analysis.
- Prioritizes OR, WA & AK, MSF chinook and coho data from 2009-2015
 & 2022-present.
- Child product of RMIS Links regulations data to RMIS recovery data.
- Scalable for other states, species, and analysis efforts.



2024 Database Development

- Assessed availability of historical regulation sources
- Developed a SQL Server relational database
- Tested the schema with 2023 data entry for 5 salmon & steelhead, all fishery types, kokanee, cutthroat trout





Regulations Data Progress

- Completed data compilation:
 - MSF, Mixed, Non-Selective & Closures
 - 2023 OR & WA Marine sport/commercial/treaty
 - 2023 OR & WA Columbia River & Tribs sport/commercial/treaty
 - 2023 SE Alaska sport
 - MSF Chinook & Coho
 - 2009-2013 & 2022 Columbia River & Tribs sport/commercial/treaty/test
 - 2016-2017 SE Alaska test

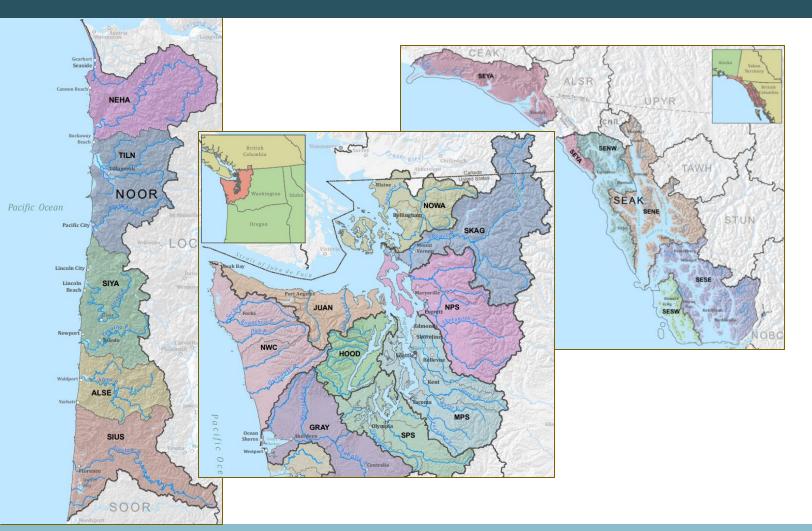
SpeciesGroup_ID -	RegulationAge_ID -	MinSizeLimi •	MaxSizeLim +	HatcheryHarvestTag	+	BagLimitType_ID -	BagLimitTotal 🔻
Coho salmon	Jack	15.00	20.00			Possession	2
Coho salmon	Adults	20.01	0.00			Daily	2
Coho salmon	Adults	20.01	0.00			Annual	20
Coho salmon	Adults	20.01	0.00	$\overline{\smile}$		Annual	
Coho salmon	Jack	15.00	20.00			Daily	5
Coho salmon	Jack	15.00	20.00			Possession	2
Coho salmon	Jack	15.00	20.00			Daily	5
Coho salmon	Adults	21.00	0.00	lacksquare		Annual	
Coho salmon	Adults	21.00	0.00			Annual	20
Coho salmon	Adults	21.00	0.00			Daily	2
Chinook salmon	Adults	24.01	0.00			Annual	20
Chinook salmon	Adults	24.01	0.00	lacksquare		Annual	
Chinook salmon	Jack	15.00	24.00			Daily	5
Chinook salmon	Jack	15.00	24.00			Possession	2
Chinook salmon	Jack	15.00	24.00			Daily	5
Chinook salmon	Adults	24.01	0.00	\bigcirc		Annual	
Chinook salmon	Adults	24.01	0.00			Annual	20
Chinook salmon	Adults	24.01	0.00			Daily	2
Chinook salmon	Adults	24.01	0.00			Daily	2
Chinook salmon	Adults	24.01	0.00			Annual	20



Compiled Data So Far:

- Currently 18,076 regulations in the database
- 10,824 are mark-selective
- Working to QAQC all data
- Capturing annual/daily/aggregate bag/possession limits and quotas, resident and age specific regs, harvest tags, & subsistence tiers
- Fisheries including sport hook & line, commercial troll/tangle/gillnet, test/research, and treaty fisheries





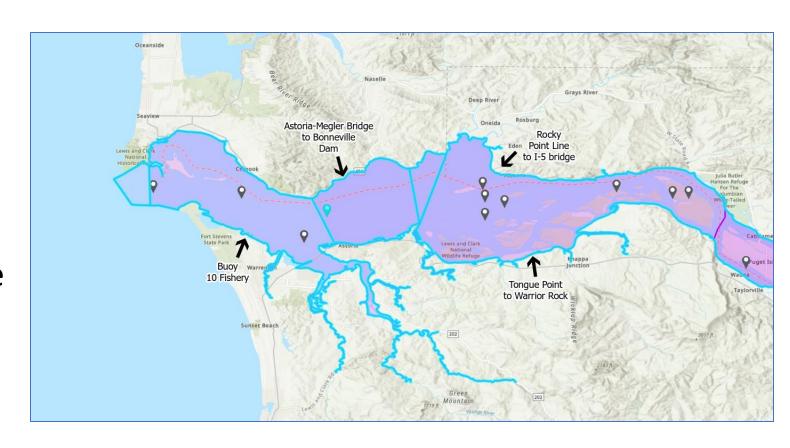
RMIS Data Connection

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



Fishing Regulations Database Summary

- Pilot project connecting existing regional data
- Focused on Columbia River as a test area
- Improved database structure for easier data sharing
- Created interactive maps showing key fishing zones





Authoritative Boundaries

- Fishing areas are defined using standardized mapping data
- Boundaries match the official descriptions from published regulations
- Maps are cross-checked with agency sources to ensure consistency





Layers of Granularity

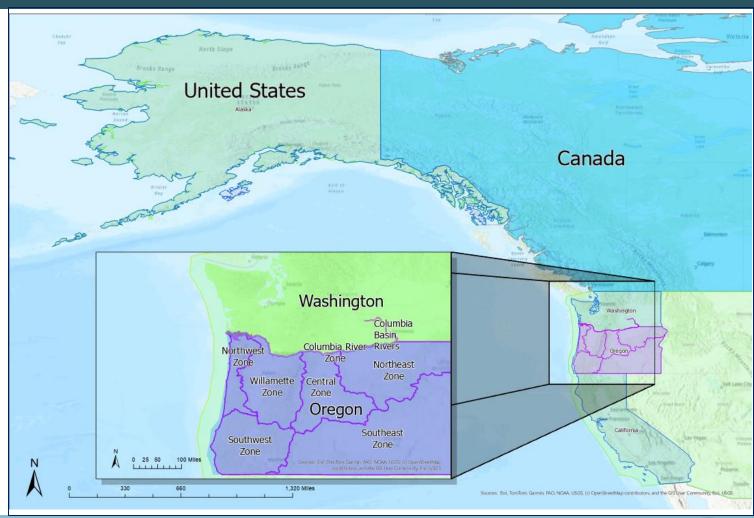
- Regulations apply at multiple spatial levels from regional to local
- Our database supports six levels of geographic detail
- This structure allows regulations to be organized and mapped consistently

FisheryArea_ID	-77	FisherySubarea_ID	*	FisherySelectSubarea_ID
Columbia River Mainstem OR	Hei	rman Cr Lagoon		
Columbia River Mainstem OR	Hei	rman Cr Youth and Disabled Angler Angling Area		
Columbia River Mainstem OR	Boi	nneville to Hood R Bridge		
Columbia River Mainstem OR	I-5	bridge to Bonneville Dam		Tanner Creek Closure
Columbia River Mainstem OR	I-5	bridge to Bonneville Dam		South Nav Lock Closure
Columbia River Mainstem OR	I-5	bridge to Bonneville Dam		Rooster Rock Closure
Columbia River Mainstem OR	Ro	cky Point Line to I-5 bridge		Big Creek RR Trestle

Layers of Granularity

- The broader location levels include Country, State, and Region
- Most fishing regulations apply at more detailed levels

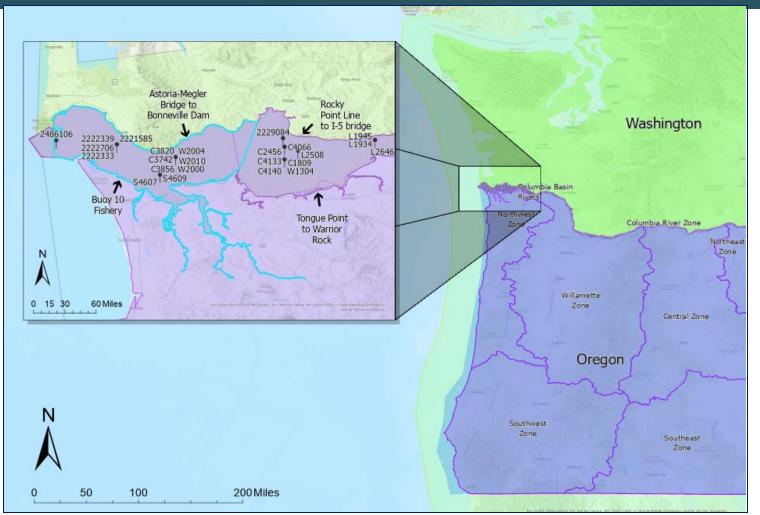
 Area, Subarea, and Select
 Subarea
- This structure allows information to be organized consistently across scales





Layers of Granularity

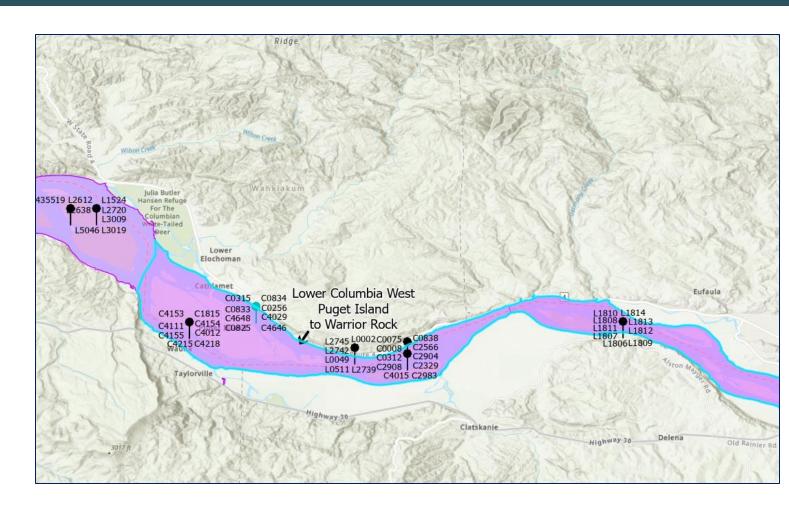
- Most regulations apply at the more detailed levels — Area,
 Subarea, and Select Subarea
- Rules at these detailed levels take priority over broader regional rules





RMIS Connection

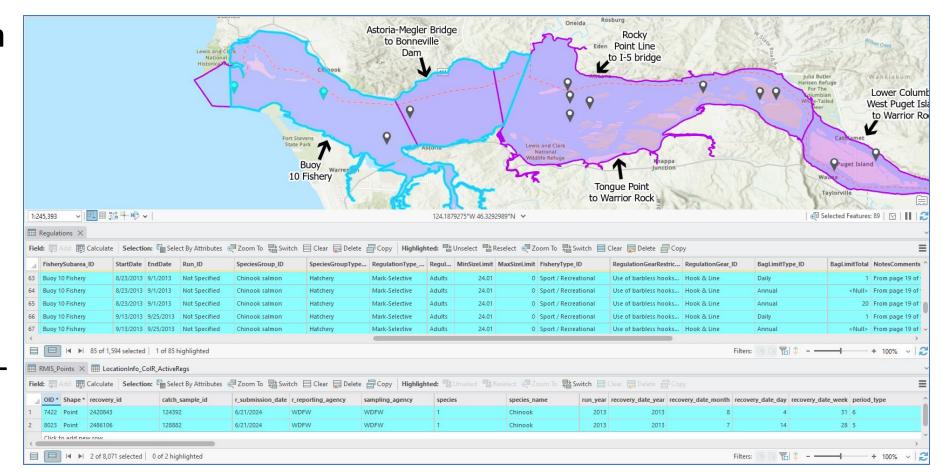
- Fishing regulation areas and RMIS data points are linked using spatial overlap
- The output combines both datasets into a single table
- This allows queries by species, location, date, and more



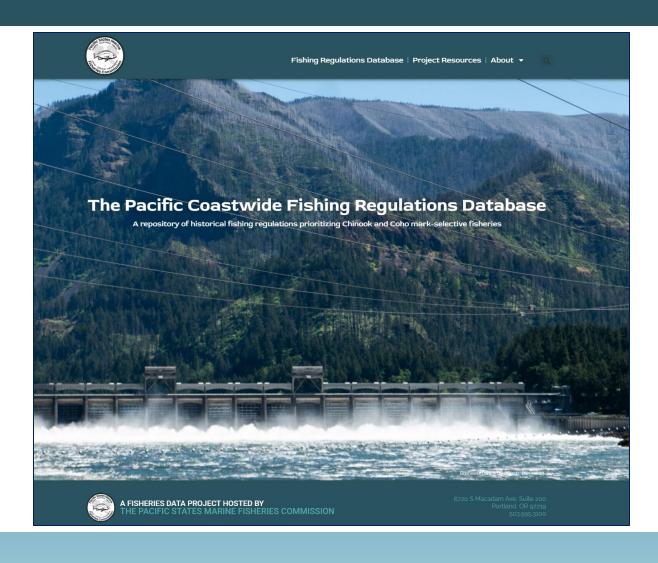


CWT Recovery Data

- Fine tuning regulations to RMIS recovery data intersect
- Verifying CWT locations
- Potential for AGOL Geodatabase development







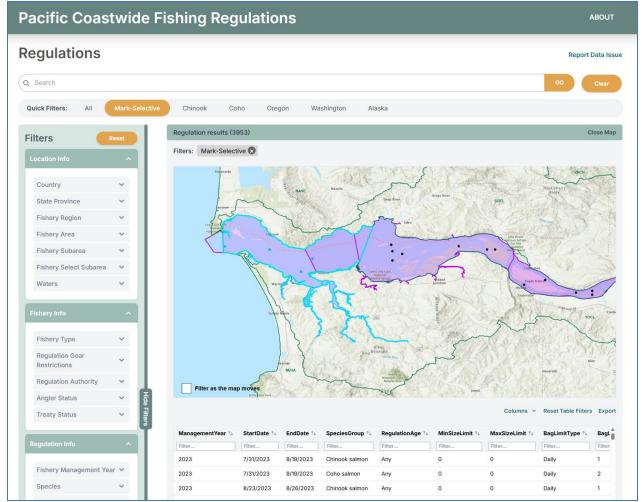
Project Website

- https://fishregs.psmfc.org/
- Points to the Data Query
- Will house project info, metadata, documentation, etc. as project grows



Regulations Data Query

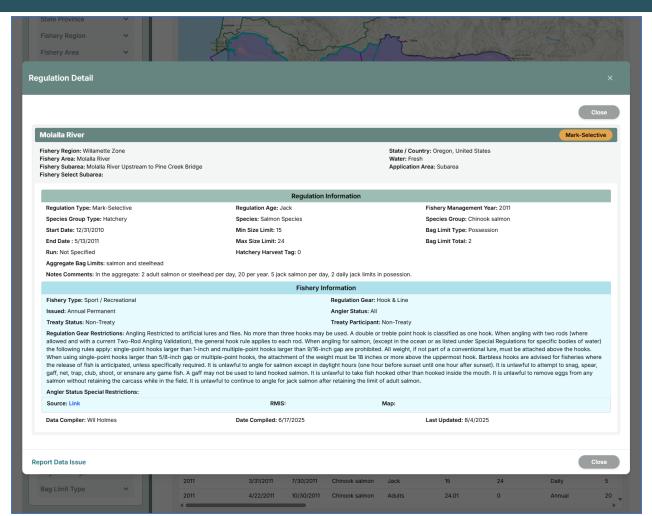
- Web based data query in final stages of development
- Styled to better handle large amounts of tabular data
- Map viewer for location GIS layers
- CSV & JSON Data Exports
- Data Query Link





Regulations Data Query

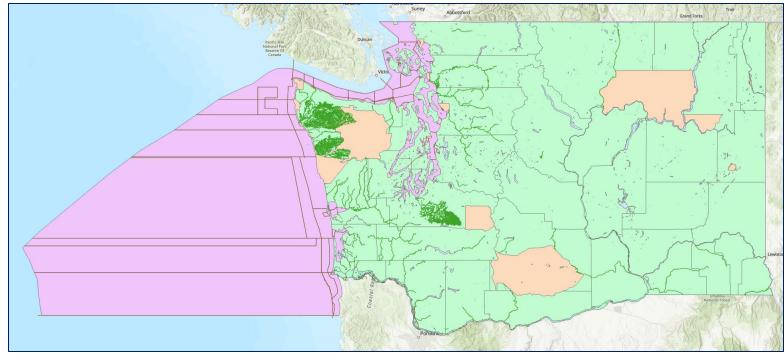
- Expanded and condensed view of individual records
- Sources linked and archived with Columbia Basin Fish & Wildlife Library
- Developing data entry form & API for eventual data submission and access
- Data Query Link





WDFW's Sportal Data Integration

- WA sport regulations for 2024/2025
- GIS layer integration
- Tabular data pipeline
- Historical sport regulations



	RegulationName	SpeciesGroup	Gear	StatewideRules	Species	Details	BagLimit	SizeInInches	MaxSizeInInches
1	2024/2025	NULL	2-Pole not allowed,Ramp Access	NULL	NULL	NULL	-1	-1	-1
2	2024/2025	Trout	NULL	NULL	{"category_name":"Game Fish","species":"Rainbow	Release wild rainbow trout and wild cutthroat trout.	10	8	-1
3	2024/2025	Other Game Fish	NULL	{"Regulation_Id":"d6bfe9ee-dff2-11ee-9ffb-3f35028	{"category_name":"Game Fish","species":"Rainbow	NULL	-1	-1	-1
4	2024/2025	Largemouth Bass	NULL	NULL	NULL	Max. size 12", except 1 over 17" may be retained.	10	0	-1
5	2024/2025	Salmon	NULL	NULL	{"category_name":"Food Fish","species":"Chinook S	Up to 2 adults may be retained. Release all salm	6	12	-1
6	2024/2025	Smallmouth Bass	NULL	NULL	NULL	Only 1 over 14" may be retained.	15	0	-1



AI Development for Data Compilation

- Large Language Model (LLM) to parse regulations source documents
 - Goal to compile data into current DB Structure
- 2025 Work: proof of concept
 - Q1: What is the size limit for jack Chinook salmon in the Columbia River mainstem in Oregon?
 - Answer:

The size limit for jack Chinook salmon in the Columbia River mainstem in Oregon is 15 to 24 inches. This information is specified under the salmon length limits on page 15 of the regulations. Additionally, please note the following:

- **Columbia River Zone:** Refer to the Columbia River Zone regulations for any specific exceptions or additional rules that might apply to the harvest of Chinook or coho salmon in this area.
- **General Regulation:** All sockeye are considered adults, and different size limits apply for other salmon species such as coho.

	JACK*	ADULT		
Chinook**	15 to 24 inches	longer than 24 inches		
Coho	15 to 20 inches	longer than 20 inches		
Sockeye All sockeye are considered adults				

COLUMBIA RIVER ZONE REGULATIONS							
SPECIES	BAG LIMIT	SIZE LIMIT AND OTHER SPECIFICATIONS					
Salmon and Steelhead	In the aggregate: 2 adult salmon or steelhead per day, 20 per year. 5 jack salmon per day, 2 daily jack limits in possession.	 See Exceptions in Columbia River Zone to determine where harvest of any Chinook or coho salmon is allowed. Harvest of wild steelhead is not permitted in the Columbia River Zone. Closed for sockeye and chum salmon. There is no annual limit on hatchery salmon or hatchery steelhead so long as the appropriate number of Hatchery Harvest Tags have been purchased to record the catch. Barbless hooks are required. 12 inch minimum size limit for jack salmon. Additional Chinook seasons are determined on an annual basis. Visit myodfw.com for more information and regulation updates before you fish. 					





LLM Data Compilation Goals

- Shift to LLM data comp & human QAQC
- Test & refine LLM accuracy
 - Start with Puget Sound
- Use LLM to fill in data gaps for the rest of OR, WA & SE AK

Early Development LLM Output:

FisheryRegion	MarkSelective	AnglerStatus	StartDate	EndDate	BagLimitTotal	BagLimitType_ID	RegulationType	Pages
Columbia Basiı	["hatchery"]	["all"]	["February 15", "Aug	["Nov 30", "Jun 15"	["5 hatchery trout pe	["Seasonal"]	["Open", "Closed", "Special	[49, 50, 51, 74, 77]
Columbia Basiı	["hatchery"]	["all"]	["February 15", "Aug	["Nov 30"]		["Seasonal"]	["Open", "Closed", "Statewi	[24, 38, 50, 74, 77]
Columbia Basiı	["hatchery"]	["all"]	["Feb 15", "Aug 1", "	["Nov 30", "Jun 15"	["no individual angler	["Seasonal"]	["Open", "Closed"]	[49, 50, 51, 74, 76]
Columbia Basiı	["hatchery"]	["all"]	["February 15"]	["Nov 30"]	["5 hatchery trout pe	["Seasonal"]	["Open", "Closed", "Special	[24, 49, 50, 74, 77,
Columbia Basiı	["hatchery"]	["all"]	["All year", "Aug 1"]	["Nov 30", "Oct 31'	["5 hatchery trout pe	["Seasonal", "Daily	["Open", "Closed", "Special	[49, 50, 51, 54, 77]
Columbia Basiı	["hatchery"]	["all anglers"	["February 15", "Janı	["June 15", "Nov 30	["3 adult steelhead po	["Daily", "Seasona	["Mark-Selective", "Special'	[28, 36, 38, 44, 50,
Columbia Basiı	["hatchery"]	["all"]	["February 15"]	["Nov 30"]		["Seasonal"]	["Open", "Closed"]	[30, 49, 55, 74, 77]
Columbia Basiı	["hatchery coho s	["all"]	["Feb 15", "Jan 1"]	["Nov 30", "Nov 30	", "Nov 30", "June 15"	["Seasonal"]	["Open", "Closed"]	[30, 38, 55, 74, 77]
Columbia Basiı	["hatchery coho s	["all"]	["February 15"]	["Nov 30", "Nov 30	["5 hatchery trout pe	["Seasonal"]	["Open", "Closed"]	[30, 38, 49, 55, 74,
Columbia Basiı	["hatchery"]	["all"]	["February 15", "All y	["Nov 30"]	["5 hatchery trout pe	["Seasonal"]	["Open", "Closed"]	[28, 33, 49, 55, 74,
Columbia Basiı	["hatchery coho s	["all"]	["Feb 15", "Jan 1", "[["Nov 30", "Nov 30	["5 hatchery trout pe	["Seasonal"]	["Open", "Closed", "Special	[10, 32, 49, 54, 74,
Columbia Basiı	["hatchery steelhe	["all"]	["February 15", "Aug	["June 15", "Nov 30	["3 adult steelhead po	["Seasonal", "Daily	["Open", "Closed", "Mark-S	[10, 28, 33, 36, 38,
Columbia Basiı	["hatchery coho s	["all"]	["February 15"]	["Nov 30"]		["Seasonal"]	["Open", "Closed"]	[30, 44, 74, 76, 77,
Columbia Basiı	["hatchery"]	["all"]	["February 15"]	["Nov 30"]		["Seasonal"]	["Open", "Closed", "Genera	[30, 44, 74, 76, 77]
Calinada'a Basii	fills = 4 = ls = = = ls =	ru_11111	[film 2011 Ilm 20		[][C	[0 0	[20 40 54 74 76



Next Steps

- Continue data entry!
 - Leverage LLM to compile data with human QAQC
 - WA Sportal data gaps commercial/tribal
 - Gap fill remaining MSF data for participating states
- Fishing Regulations Geodatabase
- Web Query:
 - Regulations & RMIS Recovery Data Access
 - Query by mapped locations



Shared Project Short Update: Emerging Technologies Information Sessions

Sam Cimino







Emerging Technologies Information Sessions (ETIS)

Webinar Series January 8 – February 5, 2025

- Modeling and Analysis, AI and ML, Data QA/QC, Genetics, and Remote Sensing
- Presentations are available on the PNAMP YouTube channel
 - More than 150 attendees during the live presentations
 - More than 700 views on YouTube









Emerging Technologies Information Sessions (ETIS)

In-person (Hybrid) Event:

- October 26-28, 2026
- Skamania Lodge

Planning Committee:

- Putting together a planning committee
 - Meet once a month until we get closer to the event









Next steps and lunch details – Afternoon session starts at 1:30 pm





Welcome Back Afternoon Session

Joint Session of StreamNet
Executive Committee and PNAMP
Steering Committee

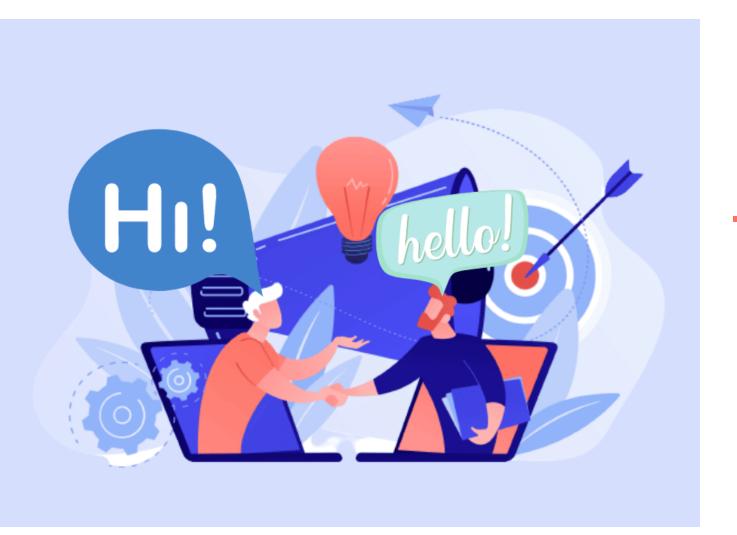






AGENDA

1:30	Welcome Back: Afternoon Session		
1:35	Spotlight: RDA and Highlights of Salmon Data Mobilization		
2:05	Salmon Data Discovery Tool		
2:25	PNAMP Fish Monitoring Work Group		
2:40	Updates on Coordinate Assessments Partnership		
2:55	2026 Conferences		
3:05	BREAK		
3:20	Round Robin		
4:50	Wrap Up: Day 1		
5:00	ADJOURN		



Introductions Afternoon Session

- Virtual: We will call on you, turn your camera on and introduce yourself with name and affiliation
- In-person: We will go around the table clockwise, same format as virtual

Contribute to fostering an open and welcoming environment:

Be Respectful Be Accountable

Communicate Effectively

Value Differences

Collaborate

Salmon Data Mobilization & Research Data Alliance

Lara Erikson, Tom Bird, Graeme Diack







Salmon Research and Monitoring IG Introduction to RDA Membership and Working Group Development

Lara Erikson, Tom Bird, Graeme Diack

What is RDA?







Chairs:

- Lara Erikson, USA lerikson@psmfc.org
- Tom Bird, Pacific Canada tom.bird@dfo-mpo.gc.ca
- Graeme Diack, UK
 graeme@atlanticsalmontrust.org





Why did we start this Interest Group?



International Year of the Salmon 2023 'Information Systems' theme session



Peer-support network to mobilise data



Social incentives for making data accessible



Promote best practices



Provide toolkits and methods libraries



Enable security and longevity of data repositories



Enable continuous funding to re-use (and evolve) tools



Enable thorough documentation for confidence in appropriate reuse

"Salmon Data Mobilization", Diack, G., Bird, T., et al, 2024 Paper: https://doi.org/10.23849/npafcb7/x3rlpo23a



NPAFC Bulletin No. 7

Johnson and van der Stap

Table 4. The number of citations for each of the IYS datasets published to the Ocean Biodiversity Information Facility and Global Biodiversity Information Facility as of August 21, 2024.

	Dataset	URL	Number of Citations	Number of Downloads
	Zooplankton Bongo Net Data from the 2019 and 2020 Gulf of Alaska International Year of the Salmon Expeditions	https://www.gbif.org/dataset/d80c46be-b600-44d5-9758-ef5159d40002/activity	38	5825
	Trawl Catch and Species Abundance from the 2019 Gulf of Alaska International Year of the Salmon Expedition	https://www.gbif.org/dataset/7f1bf640- dd56-41e2-a827-a3175aed4d95/activity	32	5658
	Trawl Catch and Species Abundance from the 2020 Gulf of Alaska International Year of the Salmon Expedition	https://www.gbif.org/dataset/084feec5-77dc-4fad-9037-42880f2a3214/activity	28	5518
	Trawl Data from the R/V Bell M. Shimada during the 2022 International Year of the Salmon Pan-Pacific Winter High Seas Expedition	https://www.gbif.org/dataset/42221846- d81b-4602-8895-869d5593783a/activity	16	3842
	Juday Net Zooplankton Data from the 2020 Gulf of Alaska International Year of the Salmon Expedition	https://www.gbif.org/dataset/13b1bb11- 25d4-4a7d-8e42-7b7c761e2c21/activity	16	4142
	Trawl Data from the R/V TINRO during the 2022 International Year of the Salmon Pan-Pacific Winter High Seas Expedition	https://www.gbif.org/dataset/7b33ed5e- 160a-483d-acd8-8a73391d862b/activity	12	3369
	Juday Net Zooplankton Data from the 2019 Gulf of Alaska International Year of the Salmon Expedition	https://www.gbif.org/dataset/92c9ae64- 2267-4747-98d4-48dc7ae459be/activity	15	3978
	Trawl Data from the CCGS Sir John Franklin during the 2022 International Year of the Salmon Pan-Pacific Winter High Seas Expedition	https://www.gbif.org/dataset/e6300f6f- 987b-4b33-983d-cfe1e1b9e002/activity	12	3721
	Trawl Data from the F/V Northwest Explorer during the 2022 International Year of the Salmon Pan-Pacific Winter High Seas Expedition	https://www.gbif.org/dataset/01991f5d-a715-48bc-8162-c06651f14ca9/activity	11	3512
	Bongo Zooplankton Data from the R/V TINRO, NOAA Bell M. Shimada and F/V Northwest Explorer during	https://www.gbif.org/dataset/e45afc03- 4897-4bdf-ade1-bc07198674e7/activity	10	3270
	the 2022 International Year of the Salmon Pan-Pacific Winter High Seas Expedition	doi: <u>10.23849/npafcb7/6a4ddpde4</u>		

An SDM success: 42,835 downloads, 190 citations.



Alkalinity Fecundity NPS Marine Currents Alkalinity Fecundity NPS Marine Currents Condition Ichthyoplankton Indices Suspended Solids Abundance Water Temperature Age Structure Age Structure Air Temperature Sex Ratio Morphology Dissolved Oxygen Nutritional State Zooplankton Biomass and Diversity Phytoplankton Biomass and Diversity

What are Salmon Data?

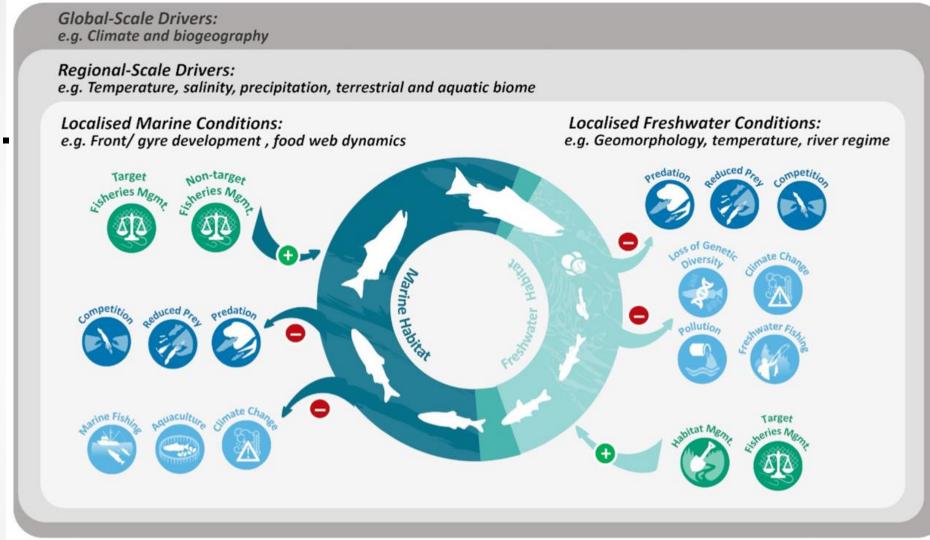
- Salmon Traits
- Biological Processes
- Physical Environment

Broad Scope + Multidisciplinary

- Methods
- Tools



... they're complicated.



Bull et al., 2022 https://doi.org/10.1093/icesjms/fsac099
Graphic elements developed by Natascia Tamburello at ESSA Technologies



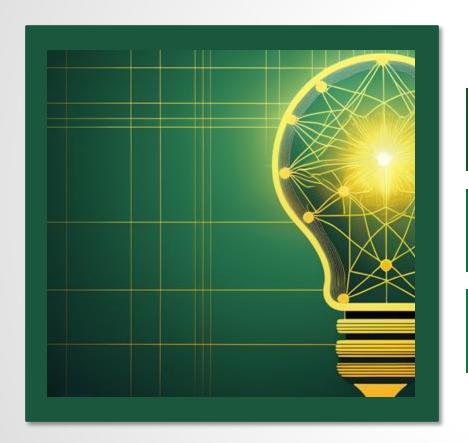
Build a Data Community

- Create, promote, and sustain a peersupport network to mobilise data
- Social incentives for making data accessible and for contributing to the development of consistent vocabularies and standards
- Promote best practices with examples that can be replicated





Why the Research Data Alliance?



6 Guiding Principles are at the heart of the RDA community

OPENNESS

COMMUNITY-DRIVEN

CONSENSUS

NON-PROFIT AND
TECHNOLOGY-NEUTRAL

HARMONISATION

INCLUSIVITY

JOIN THE RDA

https://www.rd-alliance.org/register/



The RDA Community produces...

Surveys

Guidelines

Recommendations

Data Tools



Most (if not all!) Developed by RDA Working Groups



Structure and Function: Salmon Research and Monitoring Interest Group

Aiming for 8 Chair Persons

Work as a social network

Link ideas across time zones

Pacific and Atlantic 'Chapters'





Structure and Function: Salmon Research and Monitoring Interest Group

Learn from the RDA Community

Employ existing collaboration strategies

 Develop tools and processes that can be shared in return

e.g., https://github.com/salmon-data-mobiliszation



Terms of Reference

Scope, Structure, Expected Outputs, etc...



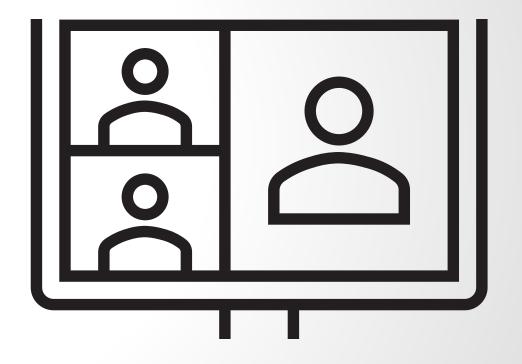
Working Groups

IG Output Generation

Clear, Concise Goal and Output

Independent Structure

Open Call for Topics



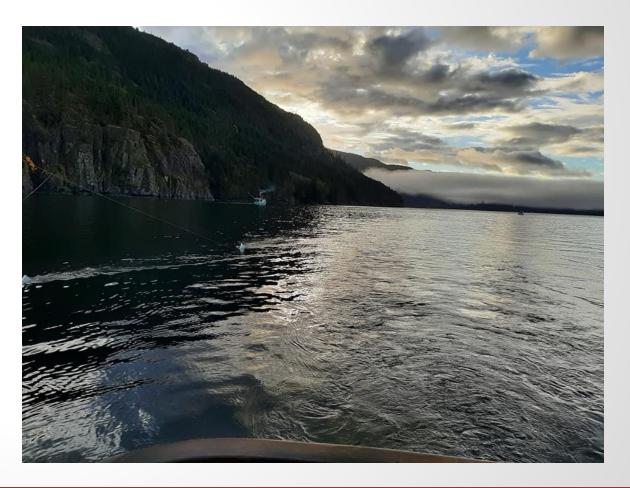


Structure and Function: Salmon Research and Monitoring IG/WG

- Working Groups
 Brief (≤18 months) with well-defined outcome
- Meetings

Regular representation at plenaries
Working Group meetings = ~Monthly
IG Meetings = ~Quarterly

Time Zones





How Do Working Groups Work?

https://www.rd-alliance.org/working-groups/ https://www.rd-alliance.org/wg-case-statement-development/



Life cycle

Complete within 12-18 months

Regular Meetings

RDA Plenaries



Invocation

'Statement of Work'
Review process
Outcome – Endorse or

Revise



Management

2 – 4 Chairs
Online workspace
Open Documentation



Outputs

Upload to workspace
Hosted openly where most appropriate



Working Groups - Proposed Topics

- Salmon Ontology WG
- Monitoring Methods Ontology WG

Migration Timing Data WG

Long Term Monitoring Data WG





Current IG and WG Meeting Schedule

Interest Group Regular Meeting

09:30 Pacific Time once a quarter – 3 December 2025

Salmon Research and Monitoring Interest Group | AddCal

Salmon Ontology Working Group

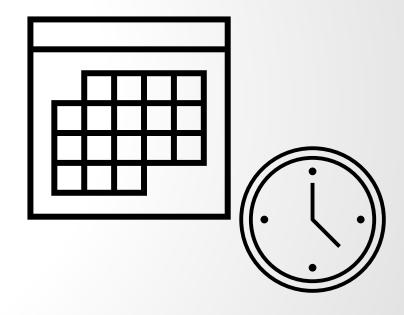
09:30 Pacific Time every six weeks – 22 October 2025

Salmon Ontology Development Working Group | AddCal

 Biochronology of Otolith and Scale Samples (BOSS) Working Group

08:00 Pacific Time every month – 10 November 2025

Biochronology of Otolith and Scale Samples (BOSS) WG | AddCal





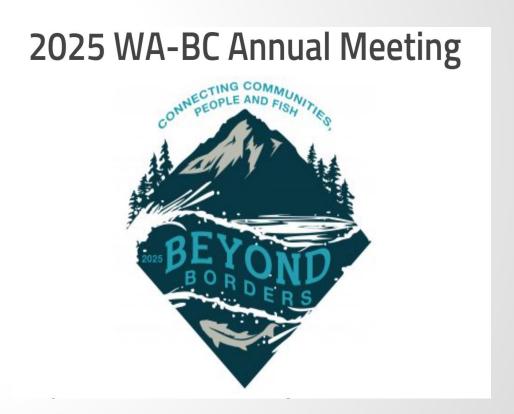
'RDA Poll' results
https://www.menti.com/alecs9ywc16n



Salmon Ontology Working Group Fishing for Clarity Workshop

 Brought salmon data practitioners together to share work towards overcoming salmon data integration issues

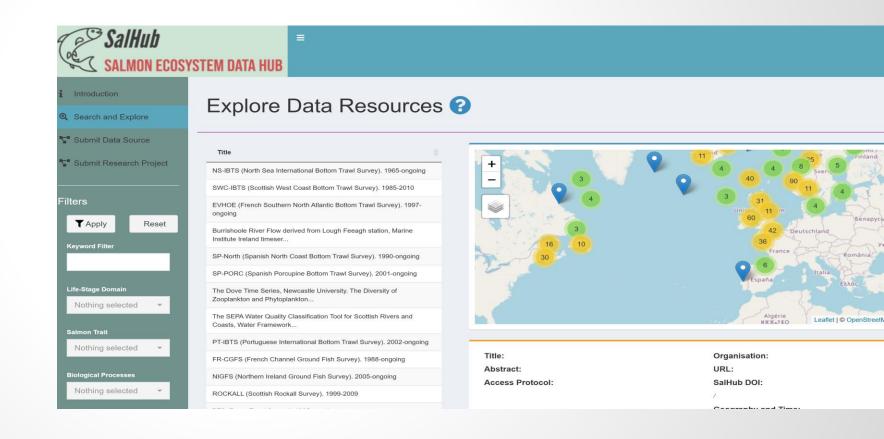
 Demonstrated a knowledge modeling approach to formally connecting between different datasets





Approaches to integrating across different salmon datasets

- Data cleaning
 Pacific Salmon Foundation
 Solv Consulting
 Fisheries and Oceans Canada
- Knowledge graphs
 Salhub





Knowledge Modeling

Data are used to represent measurements of entities and their characteristics

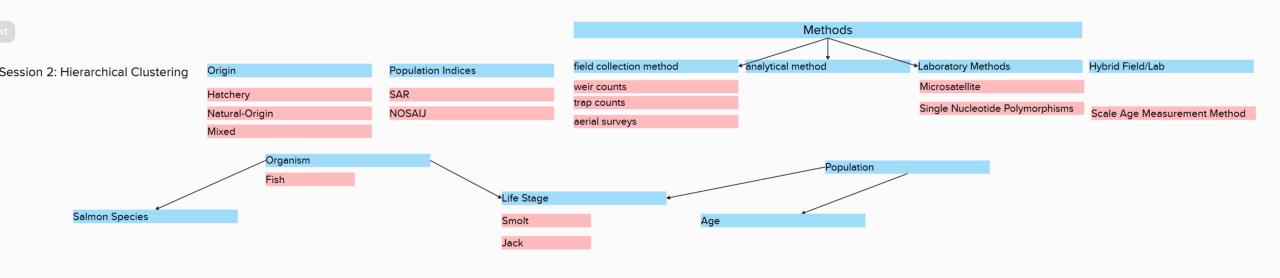
The context around these measurements determines whether they can be compared or combined to answer research questions

Population Group (Run+Species+Geography+ Timing+Stock+ LifeStage+Age-Class)

Run Origin Species Geography Timing Genetic Hatchery Natural-Origin Age Stock Mixed



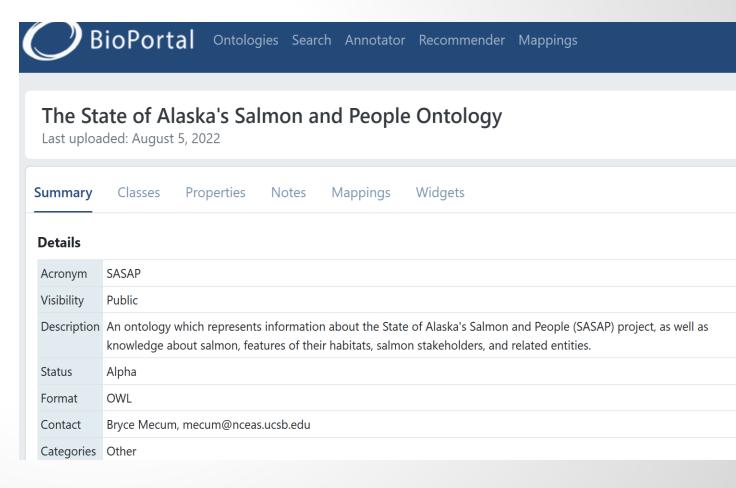
Concept decomposition and Hierarchical Clustering





Next Steps: Representation as Ontology

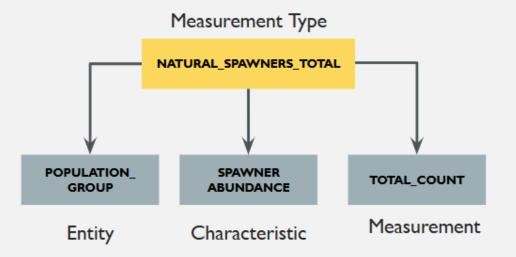
- Formalizing these concepts into an ontology allows them to be repeatable
- Following the SASAP example



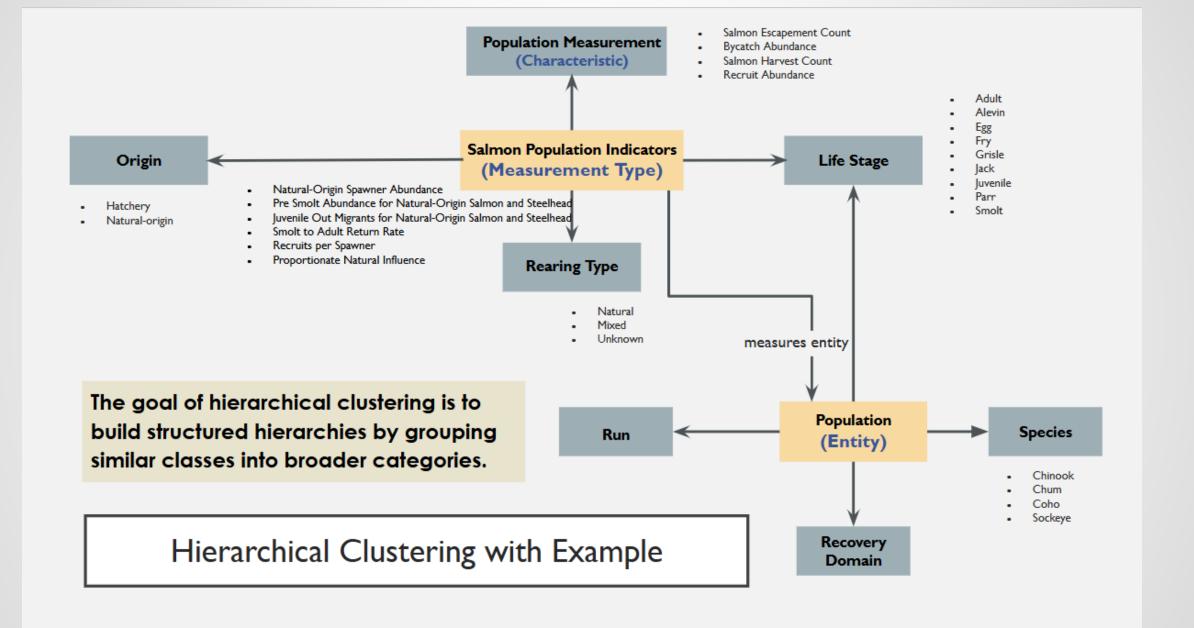


Example of Concept Decomposition

StreamNet NOSA: NATURAL SPAWNERS_TOTAL









Next Steps: Representation as OntologyLeverage existing data sets



Some examples with which we are familiar





- **Monitoring Resources**
- StreamNet
- FINS
- **RMIS**
- **PTAGIS**
- **KBFC**







Other Working Groups

 Biochronology of Otolith and Scale Samples (BOSS) WG

Salmon Data Mobilization Best Practices Paper



Biochronology of Otolith and Scale Samples (BOSS) WG

- Structure archiving
- Data archiving
- Potential uses
- Focus
- Get involved through our WG







Salmon Data Mobilization Best Practices: Johnson et al in prep

- Salmon Data Best Practices Paper
- Guides data stewards & developers to establish governance, adopt standards, and enable open APIs
- Emphasizes how to implement FAIR principles using salmon specific controlled vocabularies.
- Get involved through our WGs





PSMFC Support: SharePoint and Teams

- Lara Erikson
- Mari Williams: <u>mwilliams@psmfc.org</u>
- Sam Cimino
- Get and stay involved

Salmon Data Mobilisation - Home



Salmon Data Mobilization: Other Supported Efforts Likely to be shared at future FMWGs





Salmon Data Mobilization: Other Supported Efforts Likely to be shared at future FMWGs



THE NORTH PACIFIC OCEAN KNOWLEDGE NETWORK DEMO LAUNCHES NOVEMBER 2025



Thank you





MONICA DIAZ¹, NANCY J LEONARD¹, AND KATIE BARNAS²

- 1 PACIFIC STATES MARINE FISHERIES COMMISSION
- 2 NOAA- NORTHWEST FISHERIES SCIENCE CENTER



Data Frustrations!

- Soooo much data
 - Speed of data creation
 - Difficult to find
- Can't search data that isn't public!

We need to collaborate to make data useable and public







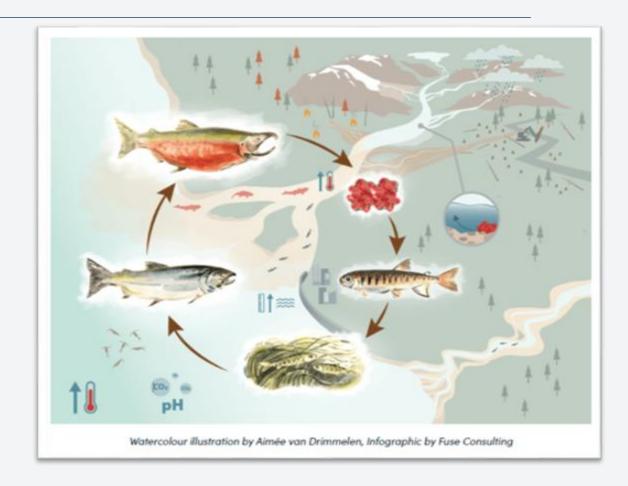


Problems:

- Ecosystem level data is siloed
- Juvenile, adult and spawner data are kept as separate time series
- Storing data with the reports and published papers

Solution:

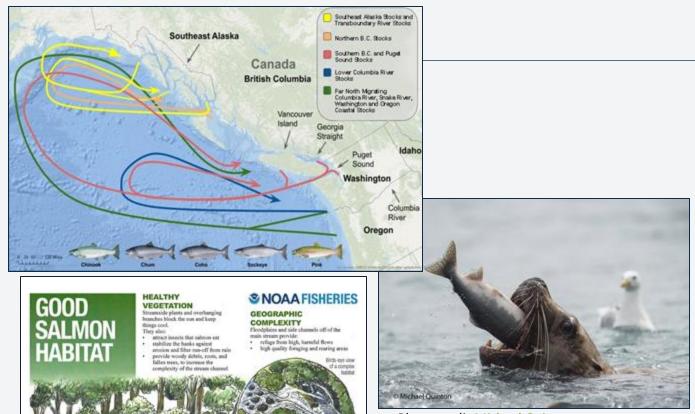
Develop a web-based tool where salmon datasets and derived products from across all ecosystems and life cycles can be accessed











sed salmon streams have wood, rocks, pools

Photo credit Michael Quinton

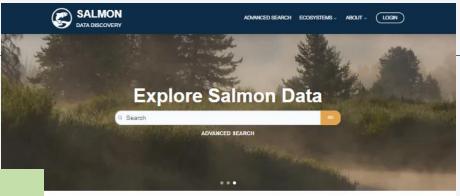
Scope:

- Geographic West Coast of North America waters with Pacific salmon
- Species habitat, prey/predator/competitor or critical ecosystem indicator (e.g.ocean plankton, run size, etc., relating to salmonids)
- Contributors
 - Initial pilot phase: NOAA-centric
 - Next phase: collaborate with organizations to meet broader data needs

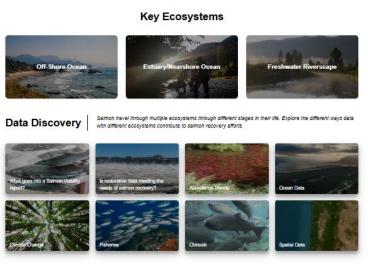








Explore data across the different ecosystems.



Browse pre-filtered data, relating to reports, published documents and more







User Management

- •Admin controls to track accounts, track log ins, file uploads, assist with log in help.
- •Email verification and built in bot protection to prevent creation of fake accounts .

Data Management

- •Users can edit their content at any time. Captured and displayed using a minor version (decimal, 0001) control to track and changes.
- •Can upload multiple version of data (Ex. time series or yearly water quality) under the same title. Captured and displayed using major version (version 1, version 2, etc.).
- •In the event a user no longer has an account, the admin can make edits to uploaded files.
- •2GB file size limit to help with slowing the system down.

Quality Control

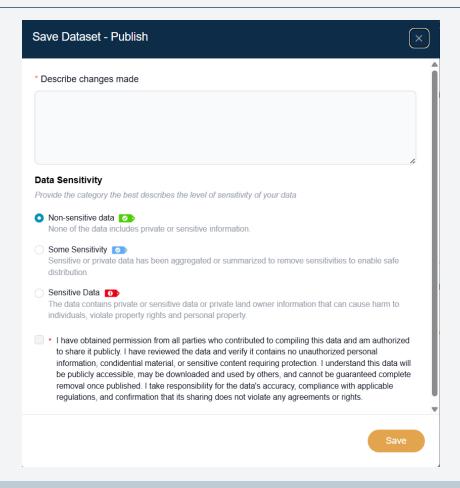
- Files can be reported for errors. Notification sent to data owner and admin, once corrected, the admin republishes the data.
- •User Guide created to assist with file uploading.
- •Only Non-sensitive Data can be uploaded.
- •User must agree to the acknowledgement stating they have obtained permissions from all data contributors, taken responsibility for the data accuracy, and regulations before publishing.
- Focus on proper data documentation and citation: required fields in the Citation section when uploading file and ability to u pload metadata file (provide a template for users)







Quality Control

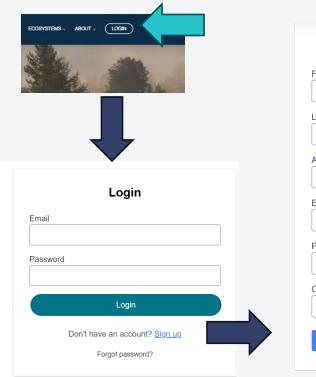


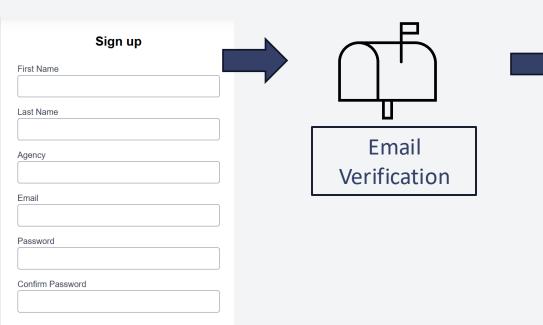






User Management- Create Account and Log In





Sign Up

Already have an account? Login



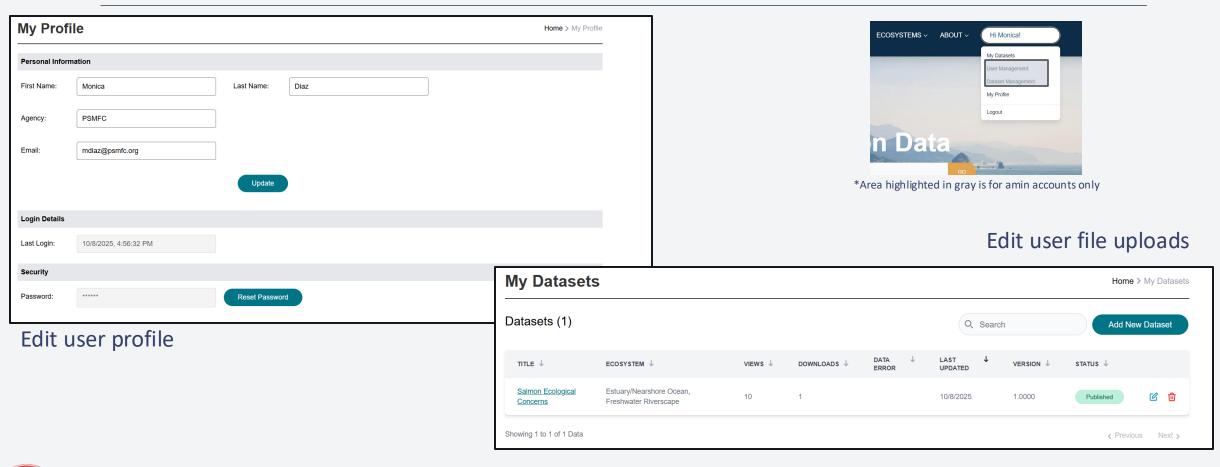
*Area highlighted in gray is for amin accounts only







User Management and Data Management











Linking relevant files with Documents

Viability Report (5 Year Status Review)

Find all you need in one location:

- 1. Report
- 2. Data
- 3. Spatial Layers
- 4. GitHub code





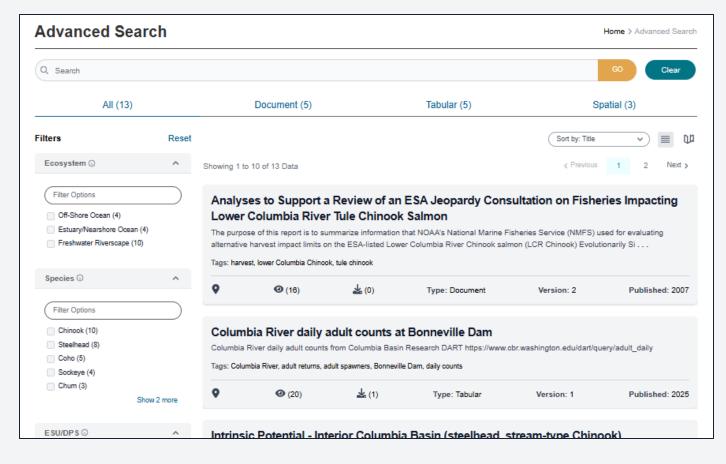




Updated Advance Search

Four ways to search:

- Keywords in the Search Bar
- Filters on the side bar
- By type of file
- Spatially (next slide)



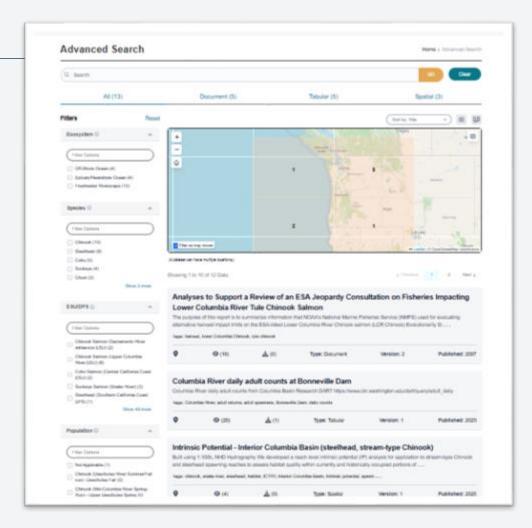






Spatial Search

- Geographically explore data using the Location Explorer
- Give almost any data or document a spatial area
- Data can have multiple locations on the map









Report data feature to help with QC

Home > Advanced Search > Dataset Datails

Intrinsic Potential - Puget Sound (steelhead)

Report this data

About Dataset

Go track to Advanced Search

Built using 1.100k, NHD Hydrography We developed a reach level intrinsic potential (IP) analysis for application to steelhead spawning reaches to assess habitat quality within currently and historically occupied portions of the Puget Sound steelhead DPS. This approach enabled us to formulate a baseline sses, and spawning use, we built a locally adapted Geographic Information System (GIS) based model. The GIS was used for the

Relevant information about the file: ESU's to Species, When data is collected, tags, image

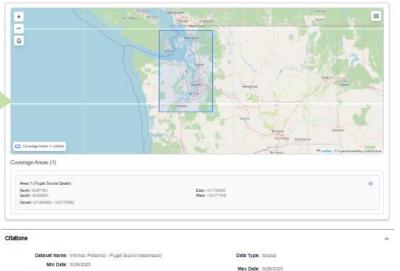
ntation, management and modeling of spatially referenced data. Geomorphological characteristics were assigned to unique categories of and these classes were given IP scores that reflect relative steelhead spawning preferences based on observed densities within those . Additionally, we identified natural stream blockages and scored reaches above waterfalls, cascades, and DEM calculated gradients nges: 9/28/2025 - 9/28/2025 soles: Steelhead IDP & Steelhead Salmon (Puget Sound) stion: Steelhead (Puget Sound) - Baker River. Steelhead (Puget Sound) - Canyon Creek; Steelhead (Puget Sound) - Deer

Annecs and tice A Download Contacts Damon Holzer steelhead Salish Sea Intrinsic potential IP Puget Sound summer-run winterun

View all downloadable files: metadata, versions of data, etc

View the geographic boundary of the data







Data Type: Spatial

Dataset DOI: Steelhead

Version:

Vear Published: 2025

Access Date: 12/31/1969

Document DOI:

Contact information. Can list as many people needed that can answer questions about the file.

If the file is associated with a paper, or other uploaded files, they can be viewed/linked here.



Area 1 (Puget Sound Basin

Center: (47.052000, -122.717205)

Dataset Name: Intrinsic Potential - Puget Sound (steelhead)

Citation Notes: This dataset was used in the analysis of population

with minor edits thereafter.

identification and viability assessment for the Puget Sound

Steelhead DPS. Most of this dataset was completed by 2007,

Min Date: 9/28/2025

Contact Organization: NOAA Fisherica

Data Collectors: PSTRT

Data User(s):

Citations

Contacts

CONTACT NAME 4

Showing 1 to 1 of 1 Data

Under Construction

Dataset Used In

TITLE +

Access and Use Information



Questions

Email me if interested in uploading data mdiaz@psmfc.org

NANCY LEONARD

SENIOR PROGRAM MANAGER

NLEONARD@PSMFC.ORG

MONICA DIAZ

PROJECT MANAGER

MDIAZ@PSMFC.ORG

KATIE BARNAS

FISHERIES BIOLOGIST

KATIE.BARNAS@NOAA.GOV





PNAMP FMWG Updates

Meg Dethloff, Mari Williams, & Sam Cimino





Task Team Updates

Active tasks:

- Carrying Capacity Standards
- PIT Tag Array Data and Related Data Analyses
- Rotary Screw Trap (RST) Data Collection

Completed task:

Update Terms and Definitions Used in CAP Data Standards

Coming soon:

- Focal Species Draft Polygon Maps
- SAR/SAs



Task Leadership



Task Lead	Task #	<u>ACTIVE</u>
Mike Banach (PSMFC)	6, 10	1. Carrying Capacity Standards
Jen Bayer* (consultant)	1, 10	2. Rotary Screw Trap (RST) Data Collection
Kasey Bliesner* (ODFW)	2, 6, 9	3. PIT Tag Array Data and Related Data Analyses
Morgan Bond (NOAA)	1	
Evan Brown (IDFG)	8	COMPLETED
Tim Copeland (IDFG)	1	4. Data Display
Megan Dethloff*	1-9	5. Data Display: Implementation
Marika Dobos* (IDFG)	2, 3, 9	6. CAP DES Juvenile Outmigrant Refinement: Define Smolt Equivalent
Lara Erikson* (PSMFC)	5, 7	7. MAFAC and NPCC SPI
Polly Gibson (ODFW)	9	8. Fish Management Units Boundaries and Attributes
Van Hare (PSMFC)	8	
Kris Homel (NPCC)	7	Juvenile Density (Snorkel & Electrofishing)
Tom Iverson (consultant)	4	10. Update Terms and Definitions Used in CAP Data Standards
Nancy Leonard* (PSMFC)	2, 4, 5, 7	UPCOMING
Russell Scranton* (BPA)	1, 2, 3, 6, 9	11. Focal Species Polygon Maps
Mari Williams* (PSMFC)	10	12. SAR

^{*}indicates participation in FMWG Core Team

Resources

Find information on tasks on the FMWG page

Tasks

Each task has its own page giving a description and information about the task, status, task leads and contact info, product links, and event pages with meeting materials. Please note that some tasks are in development and annotated with draft status; these will be updated as materials are finalized.

Current Tasks

- Carrying Capacity Standards
- Rotary Screw Trap (RST) Data Collection
- PIT Tag Array Data and Related Data Analyses

Completed Tasks

- Data Display
- Data Display: Implementation
- CAP DES Juvenile Outmigrant Refinement: Define Smolt Equivalent
- MAFAC and NPCC SPI
- Fish Management Units Boundaries and Attributes
- Juvenile Density (Snorkel & Electrofishing)
- Update Terms and Definitions Used in CAP Data Standards



Pacific Northwest Aquatic Monitoring Partnership

The PNAMP Fish Monitoring Work Group supports collaboration, communication and coordination among fish monitoring practitioners in the Pacific Northwest for effective monitoring and assessment methods and efficient data sharing. We also support the CAP and StreamNet Program by facilitating discussions among data providers and reporting/decision makers related to fish monitoring data sharing and reporting needs. Check out the FMWG Charter for more about how we function.

About ▼ Events Projects ▼ Documents Q

The FMWG meets virtually the third Thursday of January, April, and October, from 10-11-20 Pacific time. Each meeting will include a Tech Talk, updates on current

scheduled as meeting details.

Related Documents

Search:

FILE	DESCRIPTION	FILE DATE
FMWG PIT Workshop Staton GitHub Slides 2025- 05-01		2025-05-01
FMWG PIT Workshop Dobos EXCEL Handout 2025_04_24	Supporting document for Marika Dobos's presentation - Detection Data Management with EXCEL - at the April 24 session of the FMWG PIT Tag Data & Analysis 2025 Webinar Series	2025-04-24
FMWG PIT Workshop Dobos EXCEL Exercise FINAL 2025_04_24	Supporting file for Marika Dobos's presentation - Detection Data Management with EXCEL - at the April 24 session of the FMWG PIT Tag Data & Analysis 2025 Webinar Series	2025-04-24
2025 FMWG Webinar Series Program V2	Program for the PNAMP Fish Monitoring Work Group PIT Tag Data and Analysis 2025 Webinar Series	2025-04-02
FMWG 2025 Webinar Series Program	Program for the PNAMP Fish Monitoring Work Group PIT Tag Data and Analysis 2025 Webinar Series	2025-03-13
	22 files 1 2	3 4 !

Completed



Starting Your Journey with PIT Tag Data

Thursday, April 24th, 2025

GitHub for Data Analysis Projects

Thursday, May 1st, 2025

Applications: Clean & Organize Your PIT Tag Data

Thursday, May 8th, 2025

Columbia Basin Research: Data Access in Real Time and Tools

Thursday, May 15th, 2025

Beyond PTAGIS: More on applying R and Other Regional PIT Tag

<u>Systems</u>

Thursday, May 22nd, 2025

Starting Your Journey with PIT Tag Data

- Using the PTAGIS advanced reporting system to query and download PIT tag data Nicole Tancreto;
 Pacific States Marine Fisheries Commission/PTAGIS
- Managing PIT Tag Detection Data with Microsoft Excel Marika Dobos; Idaho Department of Fish and Game

GitHub for Data Analysis Projects

Live Tutorial for Using and Navigating GitHub for Data Analysis Projects – **Ben Staton**; Columbia River Inter-Tribal Fish Commission

Applications: Clean & Organize Your PIT Tag Data

- Wrangling and Preparing PIT Tag Data using PITcleanr Kevin See; Washington Department of Fish and Game
- Strategies for Bringing PTAGIS to the Masses Brian Maschhoff; Salmonetics

Columbia Basin Research: Data Access in Real Time and Tools

Columbia Basin Research: DART & Tools – Susannah Iltis, Matt Carter, Rich Townsend, Jennifer L. Gosselin, and Rebecca Buchanan; Columbia Basin Research, School of Aquatic and Fishery Sciences, University of Washington

Beyond PTAGIS: More on applying R and Other Regional PIT Tag Systems

Beyond PTAGIS: Using R for biological data management, visualization, and reporting – Jennifer Fredrickson, Jennifer Rowe; U.S. Geological Survey, Forest and Rangeland Ecosystem Science Center)

LIGHTNING TALKS:

- Klamath Basin Fisheries Collaborative Database **Monica Diaz**, Pacific States Marine Fisheries Commission;
- Bottlenecks to Survival Data System & Orphan Tag Database Brahm White-Gluz, Pacific Salmon Foundation;
- Using PIT tags to guide salmon recovery in the Green River Chris Gregersen, King County



Update Terms and Definitions Used in CAP Data Standards

Purpose: This task will focus on review and update of terms and definitions in StreamNet Data Standards that support CAP data (CAX HLI DES and HCAX DES) and StreamNet Fish Monitoring Trends DES to effectively convey the terms' intent and provide consistency between DESs.

- CA DESs 765 uses of terms, with 197 items flagged
- Task group reviewed and developed recommendations
- DDTs for Natural and Hatchery DESs convened twice, with two surveys
- HCA DES updates partially included in version 07282025
- NCA DES updates to come in next version







Task Leads:

Mari Williams (PSMFC) mwilliams@psmfc.org

Jen Bayer (PNAMP) jen.pnamp@gmail.com

Mike Banach (PSMFC) mbanach@psmfc.org



Carrying Capacity Standards

Review of carrying capacity estimation methods, including: Habitat expansion, stock-recruit models, quantile regression, Individual based models, and food web modeling.

Authors: Morgan H. Bond, Timothy Copeland, Tim Beechie, Sean M. Naman, Joe R. Benjamin, J. Ryan Bellmore, Kevin E. See, Correigh Greene, Jennifer M. Bayer, Megan Dethloff, and Russell Scranton

Progress:

• Final edits, gathering reviewers, and journal selections are being made

Next Steps:

- Full draft of document for external review
- Completion of peer review process
- Submission to journal

Task Leads:

Morgan Bond (NOAA) morgan.bond@noaa.gov

Tim Copeland (IDFG) tim.copeland@idfg.idaho.gov

Russell Scranton (BPA) rwscranton@bpa.gov

Meg Dethloff (PSMFC) mdethloff@psmfc.org



PIT Tag Array Data and Related Analyses

Purpose: This task is focused on documenting and recommending improvements to data management and analytical methods and tools for PIT tag array data.

Progress:

Successful completion of the webinar series

Next Steps:

- Evaluate comments from surveys
- Reaching out to specific entities and individuals that were recommended for presentations
- Determining how to coordinate an in-person workshop (focused on analysis) or another webinar-based series (with topics about emerging PIT tag technology or novel ways to make management easier)



Task Leads:

Marika Dobos (IDFG) marika.dobos@idfg.idaho. gov

Russell Scranton (BPA) rwscranton@bpa.gov

Meg Dethloff (PSMFC) mdethloff@psmfc.org



Rotary Screw Trap (RST) Data Collection

Purpose: A comprehensive resource for Columbia River Basin rotary screw trap specific information from multiple regional systems and sources.

Progress: working to develop the dashboard as a tool for connecting facility data, location info, contact info for management entity, etc.

Work has begun again on this task! Sam will share more on the next slide.

Task Leads:

Sam Cimino (PSMFC) scimino@psmfc.org

Kasey Bliesner (ODFW) kasey.bliesner@odfw.oregon.go

Russell Scranton (BPA) rwscranton@bpa.gov

Nancy Leonard (PSMFC) nleonard@psmfc.org

Meg Dethloff (PSMFC) mdethloff@psmfc.org

Mari Williams (PSMFC) mwilliams@psmfc.org



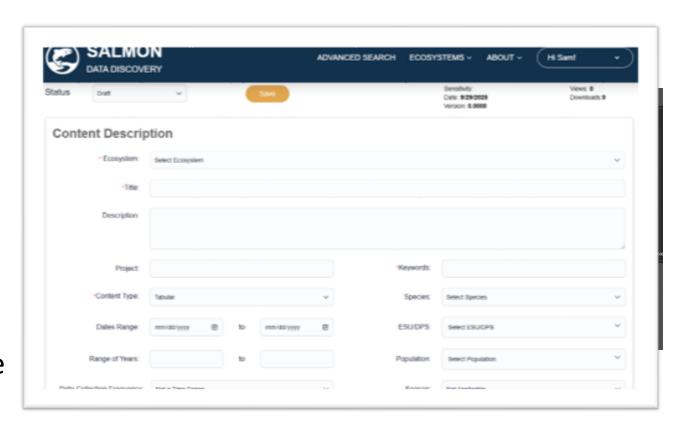
Rotary Screw Trap Dashboard

Updating the RST info

- Reaching out to contacts and bios to get the correct data
- Reestablishing the FMWG Task

Shared Space and Revamp:

- Working with our developers to provide a better user experience and interface
 - Salmon Data Discovery Tool
 - Fish Regs Tool





SAR – SAS Data in the CAX

Purpose: Review CA SAR Data Exchange Standard fields and submitted data to identify and distinguish between Smolt to Adult Return data and Smolt to Adult Survival data in the CAX.

Current Status: Identifying task group to begin this winter.



Task Leads:

Mari Williams mwilliams@psmfc.org

Kasey Bliesner Kasey.bliesner@odfw.Oregon.gov

Bekki Waskovich Rebecca.Waskovich@idfg.Idaho.gov

Evan Brown evan.brown@idfg.ldaho.gov

+ you?

ISAB SAR and SAS Metrics Report



Gathering input on Fish and Wildlife Program Focal Species Draft Polygon Maps

Purpose: Develop focal species polygon maps (HUC 12 scale) for use by BPA CBFISH, Monitoring Resources, and other regional partners that build upon StreamNet-PSMFC Fish Distribution layers.

Layers to be included, as feasible::

- Distribution (extant, extirpated, extinct, or as relevant)
- Stream habitat use (migratory, rearing, spawning (if not possible designate as present/absent))
- Layers for stock grouping from NOAA MAFAC Columbia Basin Task Force Partnership - Phase 2 report

Task Leads:

Sam Cimino scimino@psmfc.org

Nancy Leonard nnleonard@psmfc.org

Process

- Locate existing layers and information, working with StreamNet partners and PSMFC
 GIS team
- Draft polygon layers and fully document sources
- Share draft polygons and information sources with StreamNet partners for review
- Work with PNAMP Fish Monitoring Workgroup new Polygon taskgroup to get expert review of the draft polygon layers
- Package layers and make available for use by BPA CBFish and MonitoringResources.org

Future - As StreamNet partners become able to provide additional layers using PSMFC Fish Distribution Mapper, the polygons will be updated with their layers





Sequenced List of Focal Species for Map Development

(sequence informed by available content and CBFish needs)

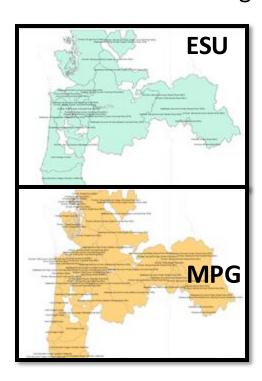
Species	Species
Spring and Spring/Summer Chinook	Add additional attributes to complete (e.g., MAFAC stock names, ESA status)
Fall Chinook	
Summer/Fall Chinook	
Summer Chinook	
Coho	
Sockeye	
Steelhead	
Chum	Create new draft polygon layers using available content from multiple expert sources (e.g., biologists, agency layers, publications)
Pink Salmon	
Bull Trout	
Yellowstone and Westslope Cutthroat Trout	
Rainbow Trout	
Kokanee	
White Sturgeon (includes Kootenai), Green Sturgeon and	
Burbot	
Pacific Lamprey	
Northern Pikeminnow	

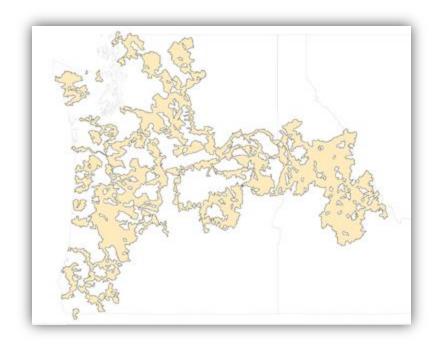
Create new polygon layers with associated attributes

Use available layers and attributes and dissolve at agreed to HUC polygon level

- Fish distribution and habitat use
- CAP HLI Populations
- Population / management unit
- ESA status, ESU/MPG
- NOAA MAFAC Columbia River Partnership Task Force stock names Migratory corridors
- Historical range as available
- Other attributes







Work begins on this task in 2025! FMWG task group initiates Summer 2026

CAP Updates

Mari Williams & Meg Dethloff





Coordinated Assessments Partnership



FY25 Accomplishments

- Hatchery Coordinated Assessments (HCA)
 - First DES update since the pilot ver 20250728
 - User Training Workshop at AFS WA/BC (March 2025) with Canada DFO: "Tracking hatchery data from eggs to spawners across regions"
- Use PNAMP Fish Monitoring Work Group to support CAP needs
 - Terms and Definitions task completed, partially included in HCA vers 20250728 and will inform the next vers of both HCA and NCA DESs

Records updates – 2110 new records in CAX

Coordinated Assessments Partnership



FY26 Planned Tasks

- HCA Metric Refinement HCA DDT
 - HOSA type table
- Implement changes informed by 2023 CAP Workshop
 - Complete integration of Terms and Definitions task into DESs
 - Consider new standards emerging from FMWG
 - Modernize metadata publishing
 - Connecting CAX to systems such as Monitoring Resources, RMIS, PTAGIS, and other webservices
- Use PNAMP Fish Monitoring Work Group to support CAP needs
 - SAR/SAS Task Group
- Outreach: WD/OR AFS 2026 "Perspectives"

Conferences 2026

Mari Williams







Conference Participation 2026/FY26

Attend and promote:

- 9th Annual Lamprey Information Exchange
- Northwest Fish Culture Concepts
 74th Annual Meeting
- PSMFC 2025 Steelhead Meeting

Coordinate and Collaborate:

- AFS WD/OR Portland May 2026
 - Data Symposia
 - IMW?
- ETIS hybrid October 2026









Member Updates/Round Robin

<u>Share your news!</u> Just keep it short – please stay under 3 minutes.

We will rotate between in-person and virtual participants, raise your hand online to be queued for your update

StreamNet ExCom Members *indicates participation with PNAMP SC

- Jody Lando*, BPA
- John Arterburn*, Colville Tribes
- Donella Miller and Sheryn Olson, CRITFC
- John Cassinelli, IDFG
- David Schmetterling, MFWP
- Heather Hendrixson, NPCC
- Greg Sieglitz*, NOAA Fisheries
- Katie Barnas, NOAAF Northwest Fisheries Science Center
- Ian Tattam* and Art Martin, ODFW
- John Netto, USFWS
- Phil Sandstrom*, WDFW



High-level notes are taken during this section.

Please email mwilliams@psmfc.org with your updates to ensure they are accurately represented in the meeting notes.

Member Updates/Round Robin

<u>Share your news!</u> Just keep it short – please stay under 3 minutes.

We will rotate between in-person and virtual participants, raise your hand online to be queued for your update

Additional PNAMP Steering Committee Signatory Members

- Denise Kelsey, CRITFC
- Tim Copeland, IDFG
- Chris Jordan, NOAA-Northwest Fisheries Science Center
- Courtney Shaff, OWEB
- Mike Brown, US BLM
- Lisa Kusnierz, US EPA
- Mark Raggon, USFS
- Steve Waste, USGS
- Ed Krynak, WA Ecology
- Greer Maier, WA GSRO

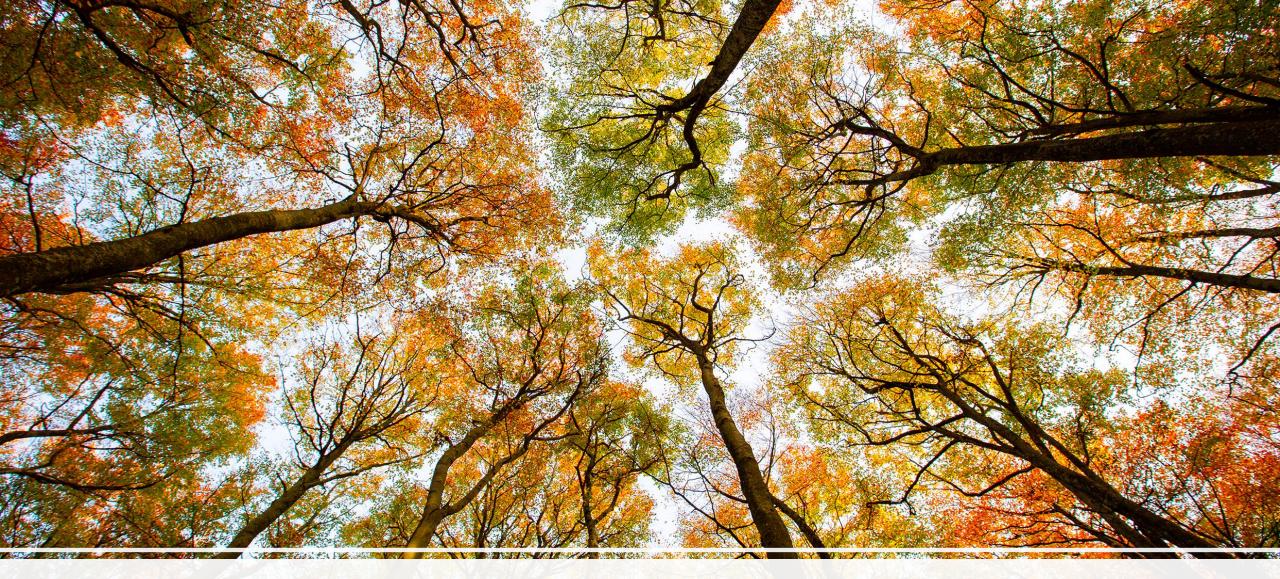


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Please email mwilliams@psmfc.org with your updates to ensure they are accurately represented in the meeting notes.

Wrap Up and Next Steps

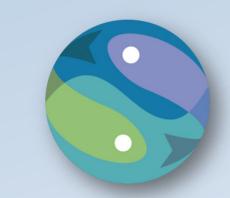




ADJOURN Day 1 – StreamNet Executive Committee meets at 9am

Networking Event:
Buffalo Gap





StreamNet Executive Committee Meeting

October 23, 2025



Welcome

Please leave web cameras on to facilitate discussion

Click to turn video camera off/on

Please turn mute when not speaking.

Click to turn microphone off/on



Check device settings

if you are having problems with audio/video

Raise your hand or put it in the chat

Questions or comments





Agenda

(times are approximate, Pacific Time)

	October 23, 2025
TIME (PT)	AGENDA ITEM
9:00	Welcome and introductions
9:10	StreamNet Tech Team Updates
9:30	CAP Strategic Plan
10:00	Break
10.00	Dicak
10:15	CAP Strategic Plan
11:00	Member Updates
12:00	Adjourn





All online participants, please use the chat to provide your name and affiliation

All participants, introduce yourself when your name is called

- In-room participants
- MS Team participants

Please leave web cameras on to facilitate discussion







StreamNet Executive Committee Updates on Action Items from 2024

Nancy Leonard





Action Items from 2024

- 1) Data Sharing / Use Agreements update from HCA EPA EN grant
 - Finalized and posted throughout StreamNet's website
- 2) Hatchery Coordinated Assessments web query and API access
 - Web Query in development
 - API access March 2025
- 3) CAP 5-year plan Strategic Plan
 - Final Draft for review and approval today
- 4) DataStatus Table for CA data
 - Implemented as part of HCA DES version 07282025







The Photo is licensed under CCYYSA.

StreamNet Tech Team Updates

Sam Cimino





Tech Team Updates

Membership:

- Sam Cimino is the new StreamNet Tech Team Coordinator
- We've updated the current members
 - StreamNet TT, SN DDT, and the CAP (Natural and Hatchery) DDTs
 - Vacant team chairs looking for partners who want more involvement

Charter:

Updating and reorganizing the charter

Next Meeting Tuesday, January 13th, 2026



The Photo is licensed under CCYYSA.





Tech Team/DDTs Meeting Updates

July 28th, 2025 - Tech Team DDT(s) Meeting:

 Meeting notes and slide deck available – StreamNet Sharepoint or upon request

Hatchery HLI DES version 20250728:

- Effective October 5, 2025
- Available on the StreamNet Website
 - Relatively small changes in this version Time Series Info Table, Terms and Definitions update, catching the DES up with practices already adopted
 - Soon A more extensive update to the Hatchery DES
 - Want to participate on the next version?- Let me and/or Mike Banach know.





Tech Team/DDTs Updates Meeting

Natural HLI DES

 TimeSeriesInfo table is live – you can add your data to it, will appear in the next version

Updated terms and definitions in Draft NCA DES

SAR and SAS Task Team

- Ad hoc (FMWG) group to work on definitions and fields needed to appropriately categorize SAR and SAS, including removals
 - Response to ISAB Report Published in April







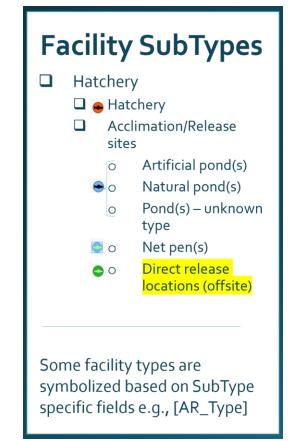
SN Tech Team Layers

Fish Facilities Layer

- Added facility subtype to support referencing data from "Direct release locations (offsite)"
 - Locations that are not "facilities"
- Cleaning up categorization of dams

Extirpated Areas to the Fish Distribution Layer

- See where historical runs existed for potential restoration efforts
 - States can extrapolate/obtain some of this data for some pops.
 - O Do we pull data from the Feds (NOAA)?







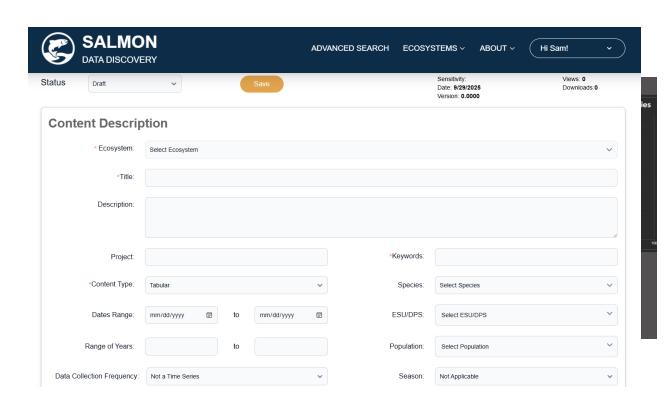
Rotary Screw Trap Dashboard

Updating the RST info

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Shared Space and Revamp:

- Working with our developers to provide a better user experience and interface
 - Salmon Data Discovery Tool
 - Fish Regs Tool









Nancy Leonard





CAP Core Team contributed and reviewed multiple drafts

StreamNet Ste

Final Draft!

Next Steps

ExCom revi

••		_
	ADAPTIVE MANAGEMENT FLOW	
5.	DATA PROVIDERS	-19
6.	STRENGTHS, WEAKNESSES, OPPORTUNITIES, AND THREATS ANALYSIS	-2
7.	BUDGET	-2
APPENDIX A: ACRONYMS2		2
APPENDIX B: PROPOSED DATA CATEGORIES FOR NEW OR REVISED DES2		
	t will be pested on the web	

nated Assessments rship Strategic Plan

2026 to December 31, 2030

- Final document will be posted on the web
- Yearly review of tasks and accomplishments
 will occur in alignment with goals
 i... COORDINATE
 ii... MISSION STAT
 milestones in the plan

	1.1.	MISSION STATEMENT
	1.2.	VISION STATEMENT
		GENERAL APPROACH
	1.4.	SUMMARY
-	,	COALS OBJECTIVES AND STRATEGIES

GOAL 2: MAINTAIN AND REFINE EXISTING DATA EXCHANGE STANDARD

CAP Core Team contributed and reviewed multiple drafts

StreamNet Ste

Final Draft!

Next Steps

ExCom revi

••		_
	ADAPTIVE MANAGEMENT FLOW	
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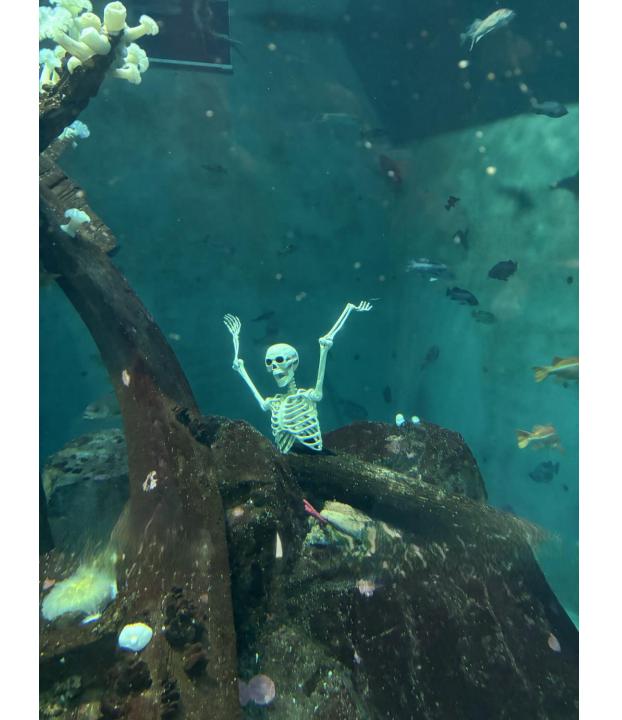
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	1.4.	SUMMARY
-	,	COALS OBJECTIVES AND STRATEGIES

GOAL 2: MAINTAIN AND REFINE EXISTING DATA EXCHANGE STANDARD

Break — return at 10:15



Nancy Leonard





- CAP Core Team contributed and reviewed multiple drafts
- StreamNet Steering Committee reviewed
- Final Draft!
- Next Steps
 - ExCom review and approve
 - Final document will be posted on the web
 - Yearly review of tasks and accomplishments will occur in alignment with goals and milestones in the plan

Coordinate Partnershi

January 1, 2026

2.

.1.	MISSION STATEMENT	
.2.	VISION STATEMENT	
.3.	GENERAL APPROACH	
.4.	SUMMARY	
GOALS, OBJECTIVES, AND STRATEG		
.1	GOAL 1: MAINTAIN, UPDATE, AND AU	

COORDINATED ASSESSMENTS PAR

- - GOAL 2: MAINTAIN AND REFINE EXIST
 - GOAL 3: INTEROPERABILITY WITH OTH
 - GOAL 4: PROMOTE SUSTAINABLE KNO
 - GOAL 5: DEVELOP STRATEGIC GUIDAN
 - GOAL 6: STRENGTHEN TRIBAL ENGAGE

GOAL 7: REGIONAL DATA PRIORITIES A

- GOAL 8: EFFECTIVE COORDINATION AN
- GOAL 9: COORDINATED ASSESSMENTS
- GOAL 10: CAP DATA ARE REGULARLY
- 2.11 GOAL 11: SUSTAINABLE MODERNIZAT

MILESTONES AND ADAPTIVE MAN

- MILESTONE 1: DATA FLOW COORDINA
- MILESTONE 2: DES MAINTAINED AND
- MILESTONE 3: DATA ARE COMMUNICA
- MILESTONE 4: OUTREACH AND COMM
- MILESTONE 5: PUBLIC DATA ARE SECU
- MILESTONE 6: TRIBAL ENGAGEMENT S
- MILESTONE 7: CAD ALIGNS WITH REG

IMPLEMENTATION APPROACH-

DATA PROVIDERS ----

- STRENGTHS, WEAKNESSES, OPPORTUNITIES, AND THREATS ANALYSIS-----

- CAP Core Team contributed and reviewed multiple drafts
- StreamNet Steering Committee reviewed
- Final Draft!
- Next Steps
 - ExCom review and approve
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Coordinated Assessments Partnership Strategic Plan

January 1, 2026 to December 31, 2030

(draft version 20 Oct 2025 for review by the StreamNet Executive Committee)

Member Updates and Announcements

Please email mwilliams@psmfc.org with your updates to help us capture it correctly in the notes

MFWP: David Schmetterling WDFW: Phil Sandstrom

IDFG: John Cassinelli, Sarah Maher NOAA NWFSC: Katie Barnas

CRITFC: Donella Miller, Sheryn Olsen NPCC: Patty O'Toole

USFWS: John Netto BPA: Jody Lando

Shoshone-Bannock Tribes: Kurt Tardy PSMFC: Barry Thom, Nancy Leonard

ODFW: Ian Tattam SDM/BECI-PSMFC: Lara Erikson, Mari

Colville Tribes: John Arterburn PNAMP-PSMFC: Nancy, Meg, Sam, Mari, Erin

NOAA WCR: Greg Sieglitz StreamNet-PSMFC: Nancy, Greg, Mike, Mari, Megan,

Sam, Meg D, Van Hare





2025 SN ExCOM meeting & Wrap Up

- Plan to hold as Joint PNAMP SC
 & SN ExCom meeting with same structure
- PNAMP will send a poll for the 2026 meeting date









ADJOURN Day 2