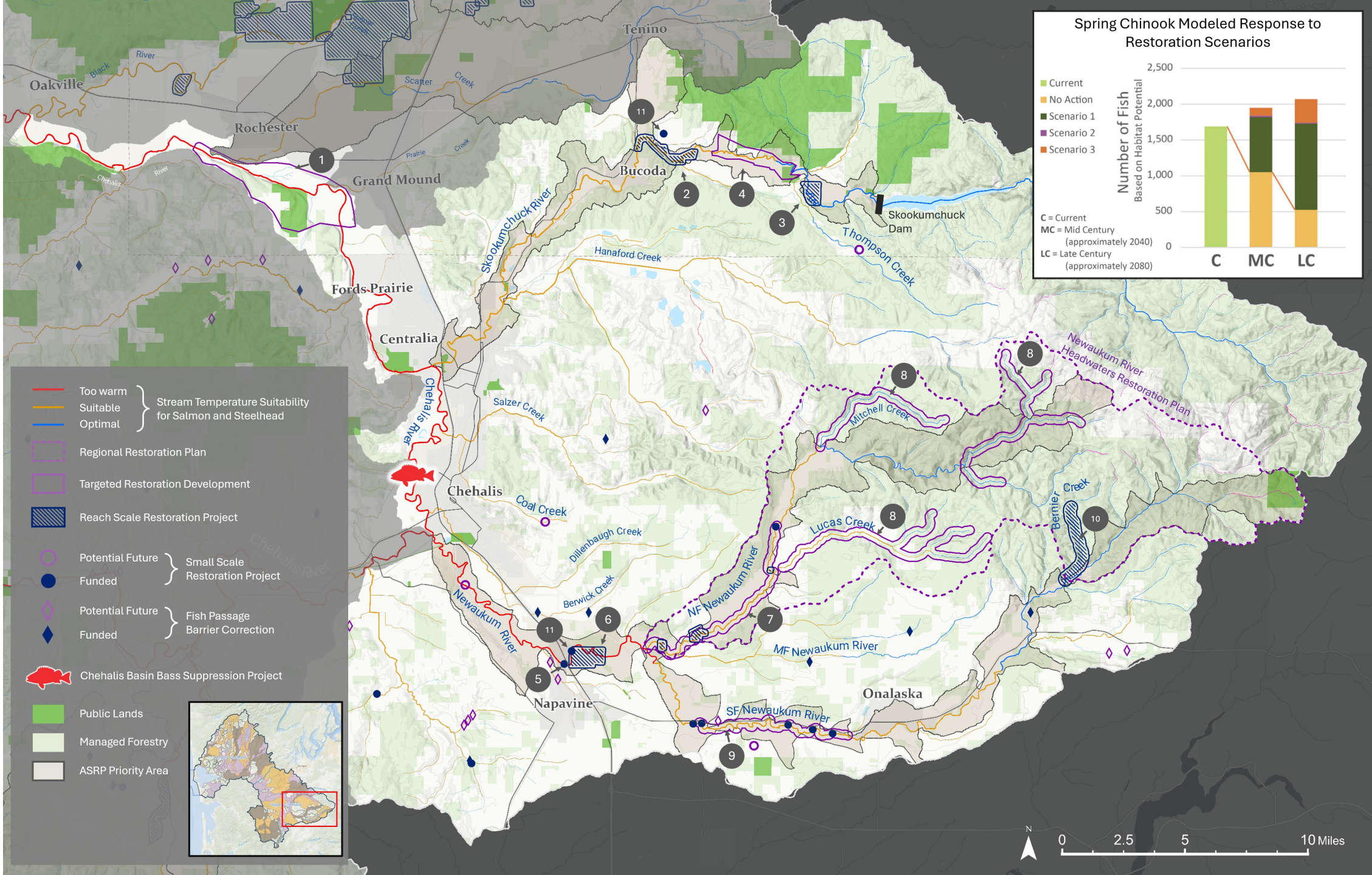
Upper Basin Spring Chinook

Facilitators:
Nat Kale &
Kiza Gates

Session 1:
10:15 to
11:45



Key Issue	2025 Recommendations	2026 progress and updates
Summer water temperature in larger rivers and streams	Create cold-water refugia and increase shade; total scale TBD but **at least 40 miles** needed in **the lower Newaukum** watershed Working with **beavers:** outreach and restoration	About 1 mile of large wood structures and riparian plantings added to NF Newaukum Beaver were focal topics at Onalaska outreach event Currently no systematic plan to work with beaver
Water-use, water quality, and in-stream flow	Treat at least **48** miles of **upper Newaukum** watershed with wood and riparian plantings (Lead Entity Strategy) Water use modifications, water right acquisitions, stream restoration. **Scale to be determined**	Bernier Wood Placement project in design phase- could be implemented next summer Two water forbearance projects in place this summer
Non-Native fish range expansion	**Bass Suppression Pilot Project** to address uncertainties **Community Education**	Bass Suppression Pilot Project initiated Juvenile salmon survival study project initiated Currently no formal plan for Community Education
Coastal Chinook Restoration Planning	Gather people for focused discussion on the **state of the science** around Chinook conservation, and identify next steps and strategies	**Chinook Symposium** took place in October 2025 in Ocean Shores. Report published in Sep 2026



FISH SCIENCE

WDFW FISH SCIENCE STAFF &
COLLABORATORS

October 14, 2026

ASRP Progress & Planning Workshop

Office of
Chehalis Basin

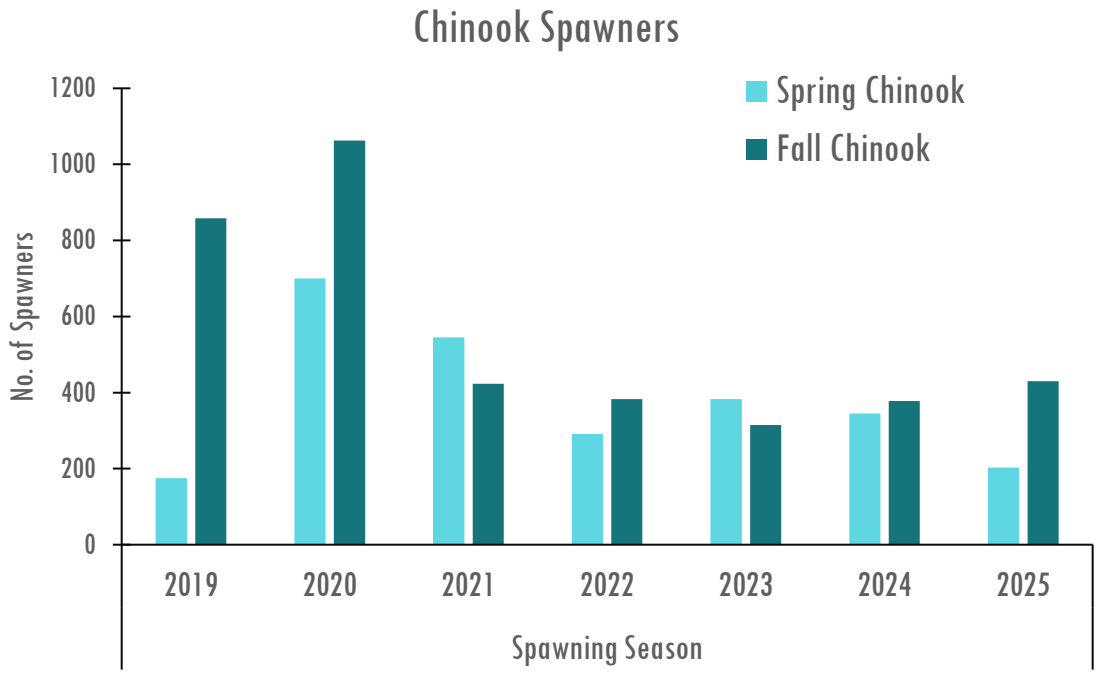
FISH SCIENCE STUDIES TO INFORM RESTORATION

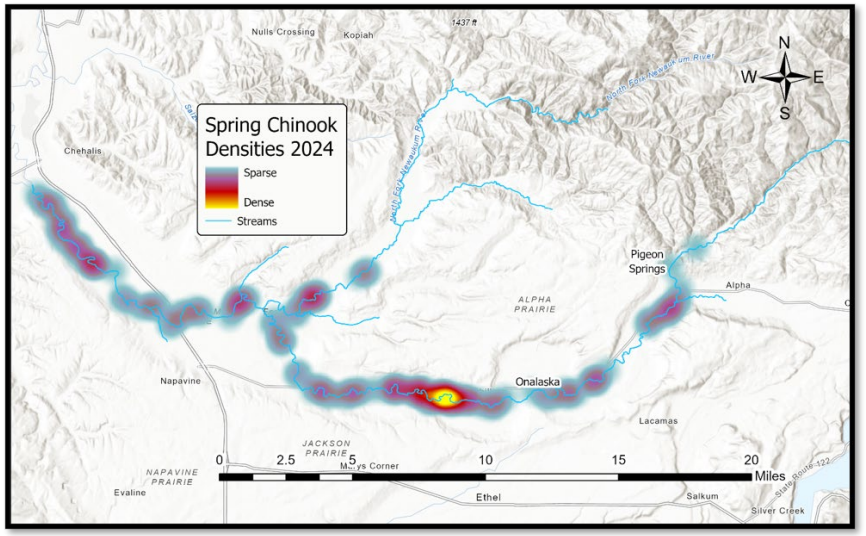
STUDY	KEY OBJECTIVES
1. **FIFO – Adults**	• Quantify adult spawner abundance, run timing, and distribution in Newaukum
2. **FIFO – Smolts**	• Quantify trends in smolt abundance in Upper Chehalis and Newaukum rivers
3. **Thermalscape**	• Characterize current and future stream temperatures across Chehalis River Basin
4. **Nonnative Ecology**	• Fill data gaps about nonnative fish predator distribution, abundance, and diets
5. **Bass Suppression**	• Initiate scientifically-informed pilot bass suppression study in mainstem Chehalis
6. **Juvenile Survival**	• Develop survival estimates in river and estuary environments
7. **Fry Trapping**	• Decrease flow in Skookumchuck to reduce hybridization of spring/fall Chinook

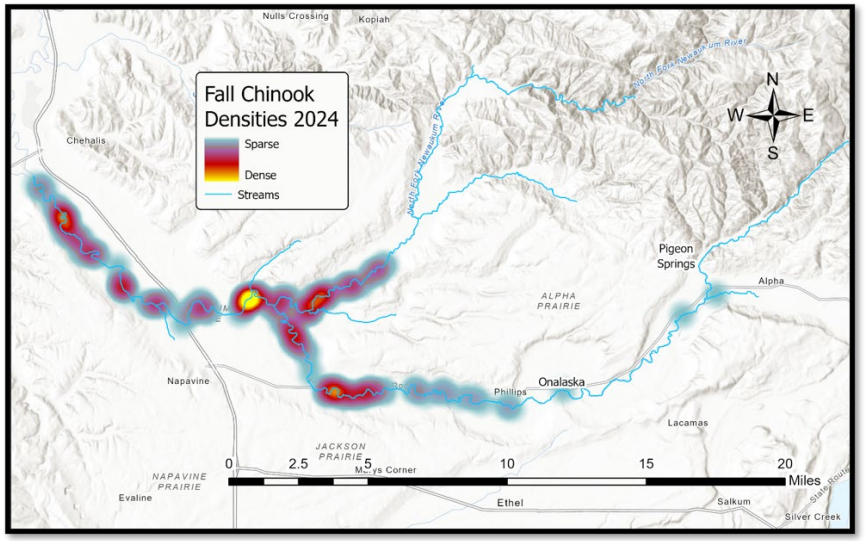
FISH IN / FISH OUT – ADULTS AND SMOLTS

MARISA LITZ, LEA RONNE, JONATHAN SCHROEDER, WASHINGTON DEPARTMENT OF FISH AND WILDLIFE

CHINOOK SPAWNERS DECLINING AND DISTRIBUTION LIMITED BY LOW FLOW



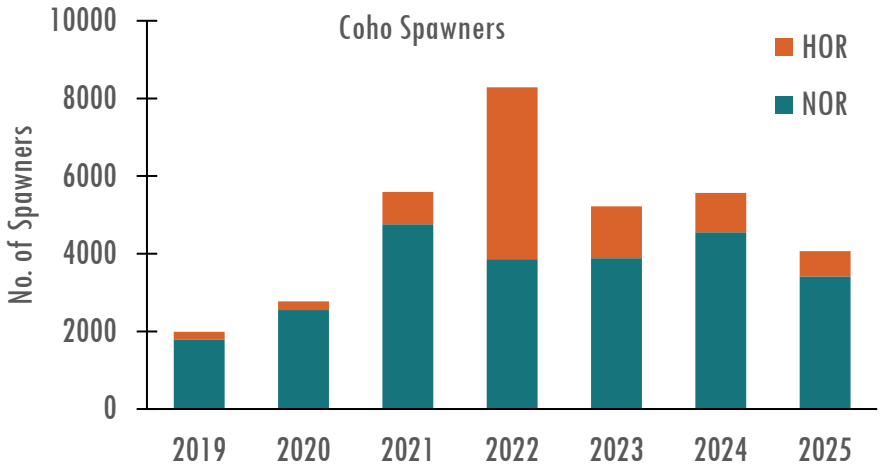


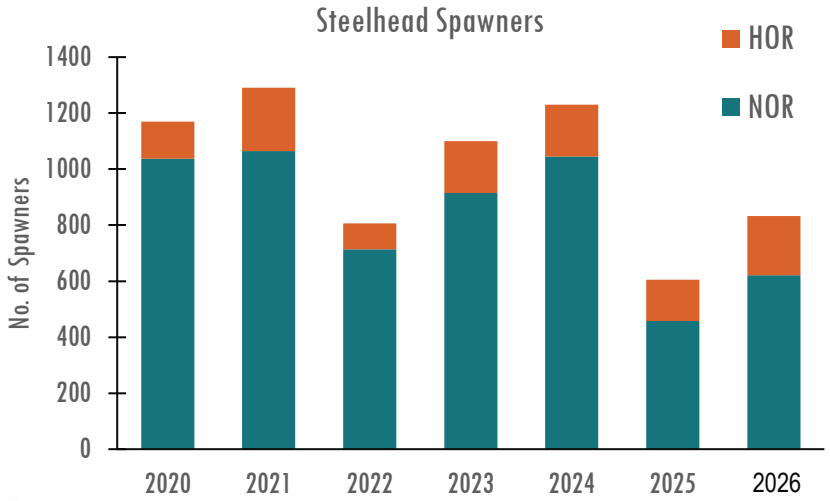


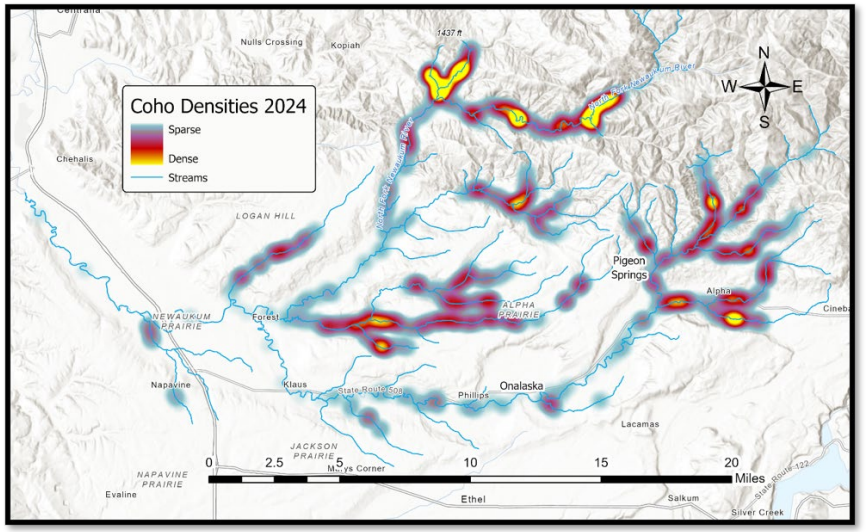
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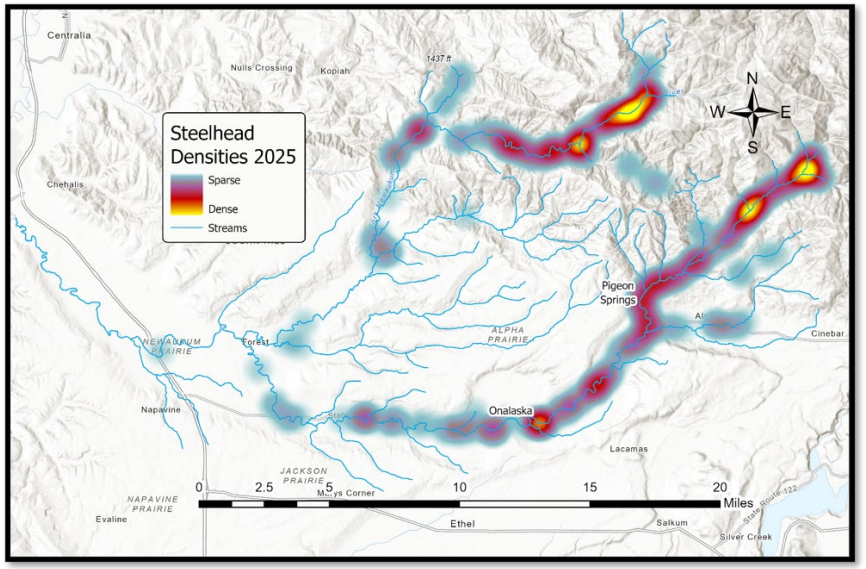
Ronne et al. 2021, 2022, 2023, 2024, 2025, *in prep*

COHO & STEELHEAD SPAWN IN UPPER WATERSHED AND TRIBUTARIES





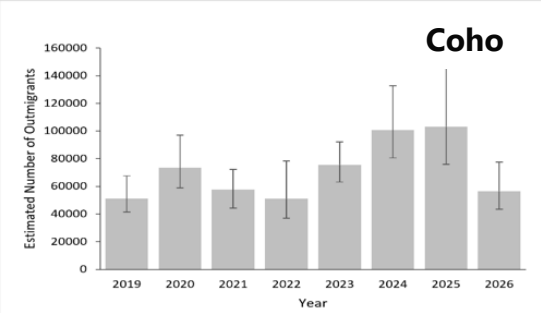


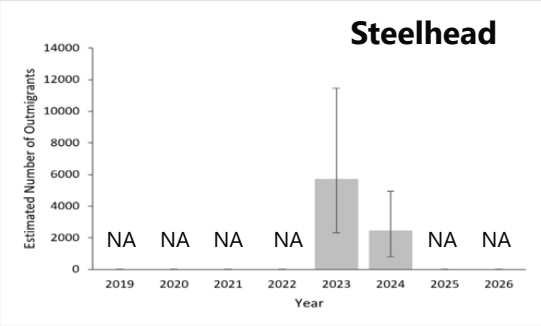


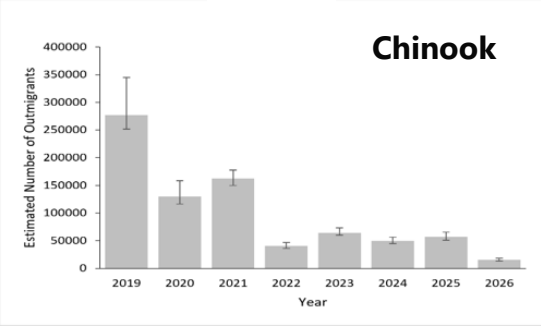
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CHINOOK SMOLTS DECLINING IN THE NEWAUKUM RIVER (2019-2026)

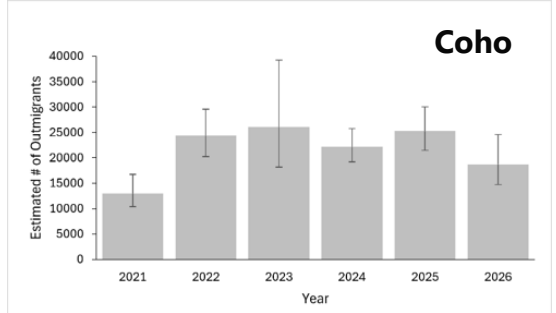
Newaukum

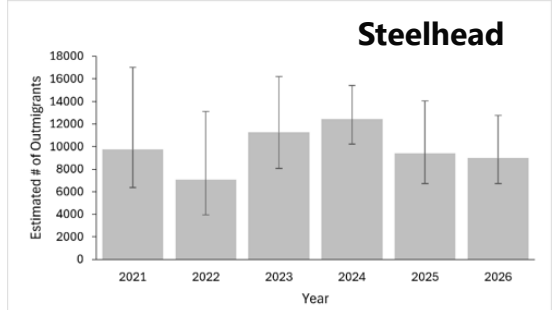


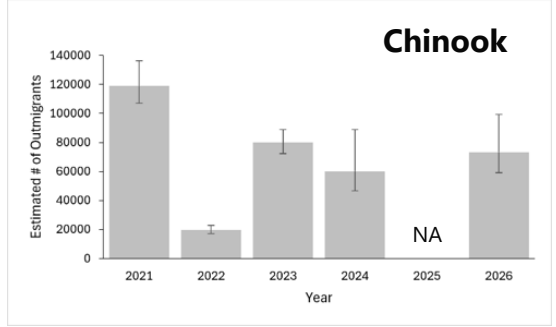




Upper Chehalis











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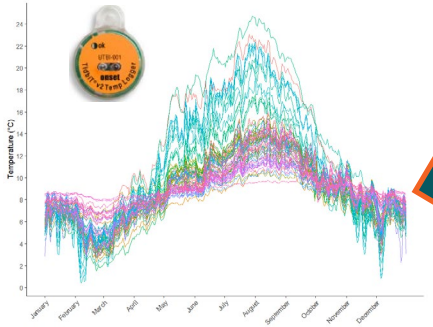
West et al. 2020; Olson et al. 2021, 2023, 2024; Schroeder & Litz 2025

CHEHALIS THERMALSCAPE

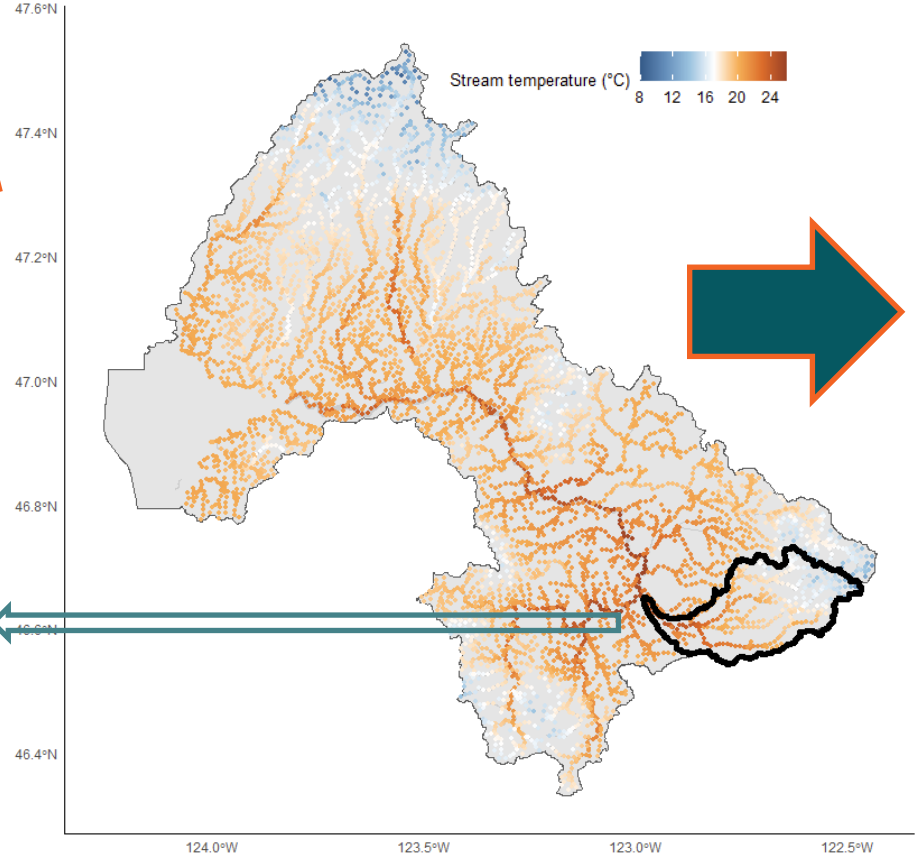
JOHN WINKOWSKI, WASHINGTON DEPARTMENT OF FISH AND WILDLIFE

METHODS AND APPLICATIONS

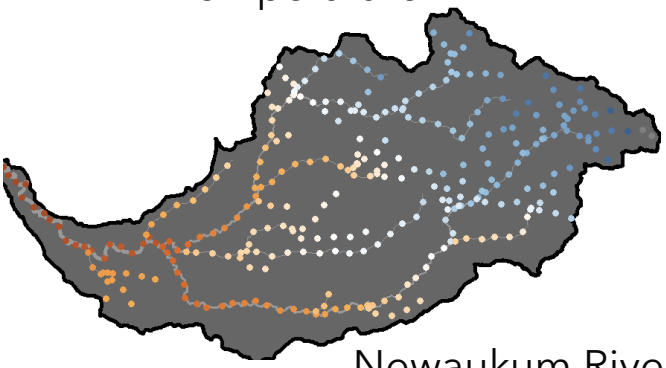
Collect stream temperature data



Thermalscapes and climate change projections (>12,000 river kilometers)



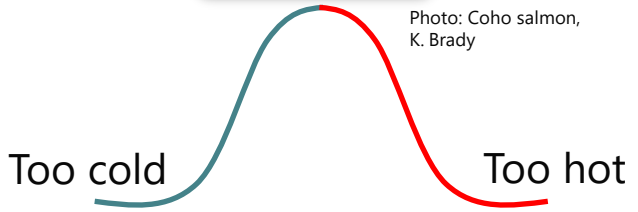
1-km resolution stream temperature



Newaukum River



Photo: Coho salmon, K. Brady



Address biological and restoration questions:

- Spatial distributions, thermal thresholds
- Life cycle, HARP models
- Prioritization:
  - Locations for reducing summer stream temperatures
    - Expand juvenile salmon rearing, limit bass distributions
  - Culverts
  - Integrate climate change

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Winkowski et al. 2024

ECOLOGY OF NONNATIVE FISH/ BASS SUPPRESSION

JOHN WINKOWSKI, PAUL RAMSEY, ROBERT MOLLENHAUER, MARISA LITZ, TODD SEAMONS, LISA CROSSON, WASHINGTON DEPARTMENT OF FISH AND WILDLIFE
JULIAN OLDEN, PAT LEWIS, UNIVERSITY OF WASHINGTON

METHODS

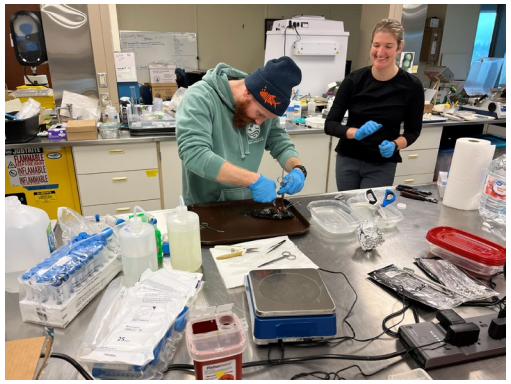










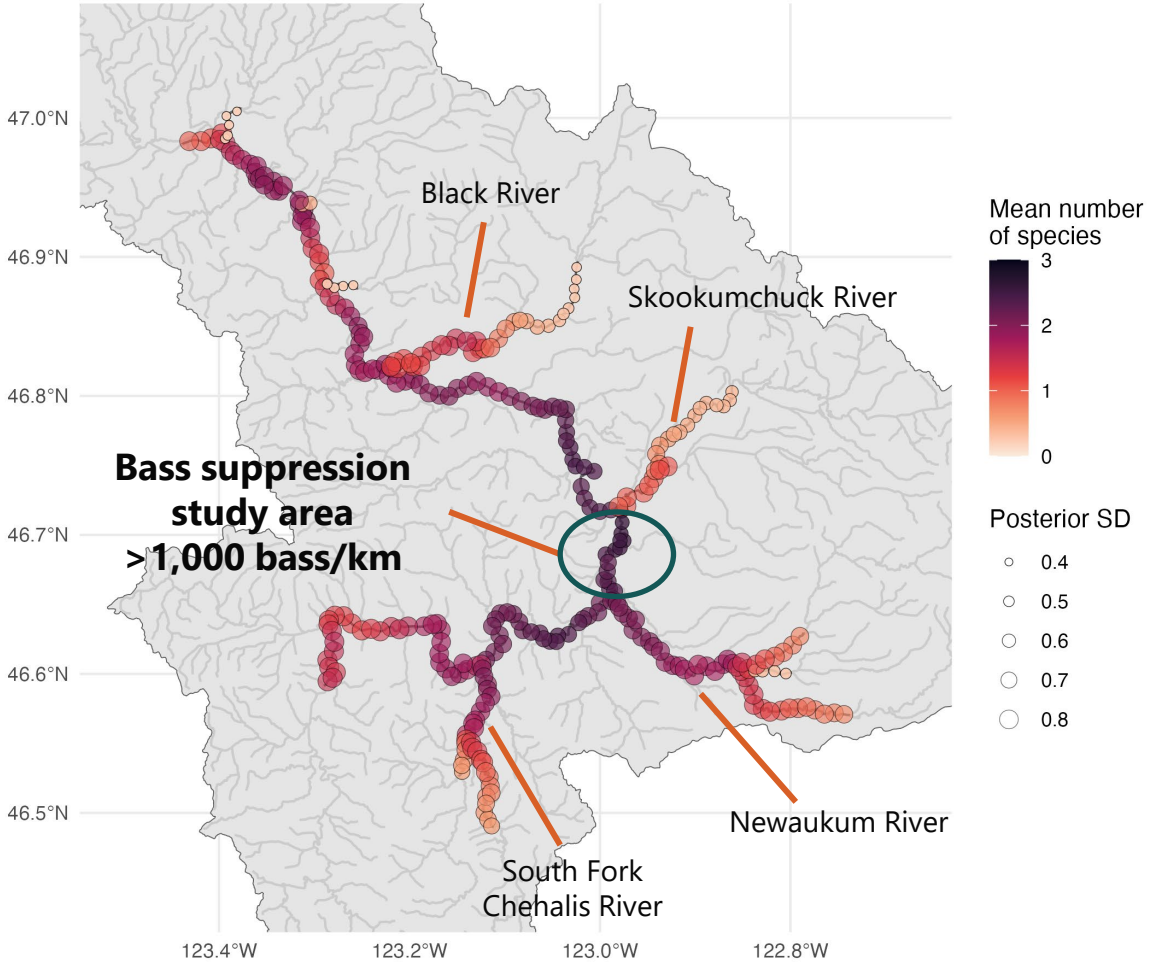


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- **Abundance**
  - Electrofishing
  - Mark-recapture
- **Distribution**
  - Environmental DNA qPCR
  - DNA metabarcoding
  - Snorkel
- **Diet**
  - DNA metabarcoding
  - DNA mixture modeling
  - Bioenergetics
- **Behavior**
  - Radio telemetry
- **Suppression**
  - Electrofishing

ECOLOGY OF NONNATIVE FISH/SUPPRESSION STUDY

DISTRIBUTION: WHERE ARE BASS?

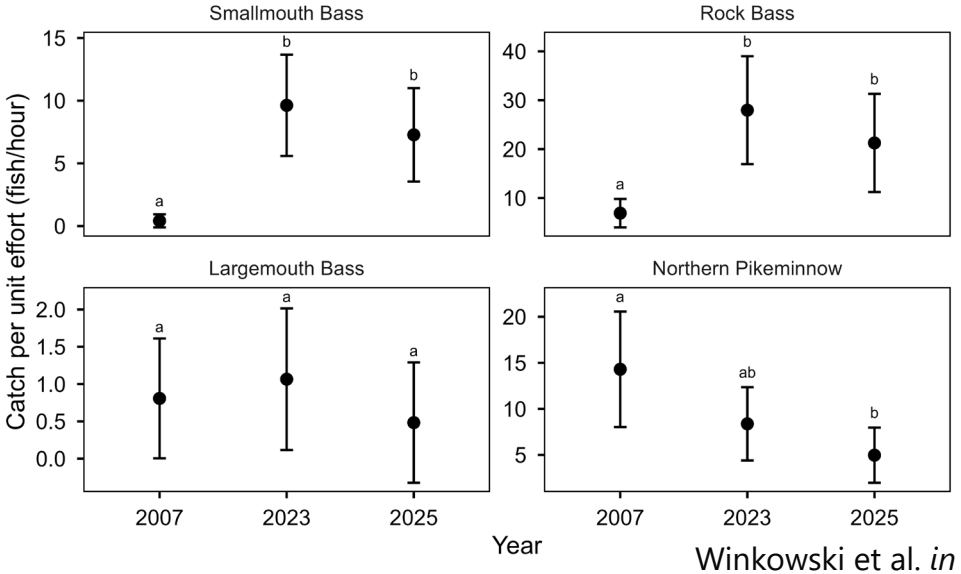


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Lewis et al. *in prep*

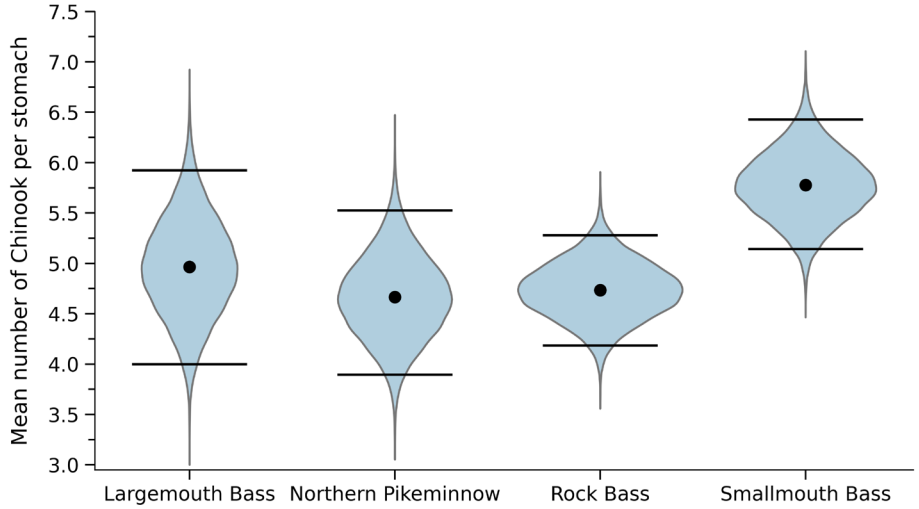
RELATIVE ABUNDANCE:

SMALLMOUTH AND ROCK BASS HIGHER NOW COMPARED TO 2007



Winkowski et al. *in press*

DIET: HOW MANY JUVENILE CHINOOK ARE BASS EATING?



Winkowski et al. *in prep*

JUVENILE SALMON SURVIVAL STUDY

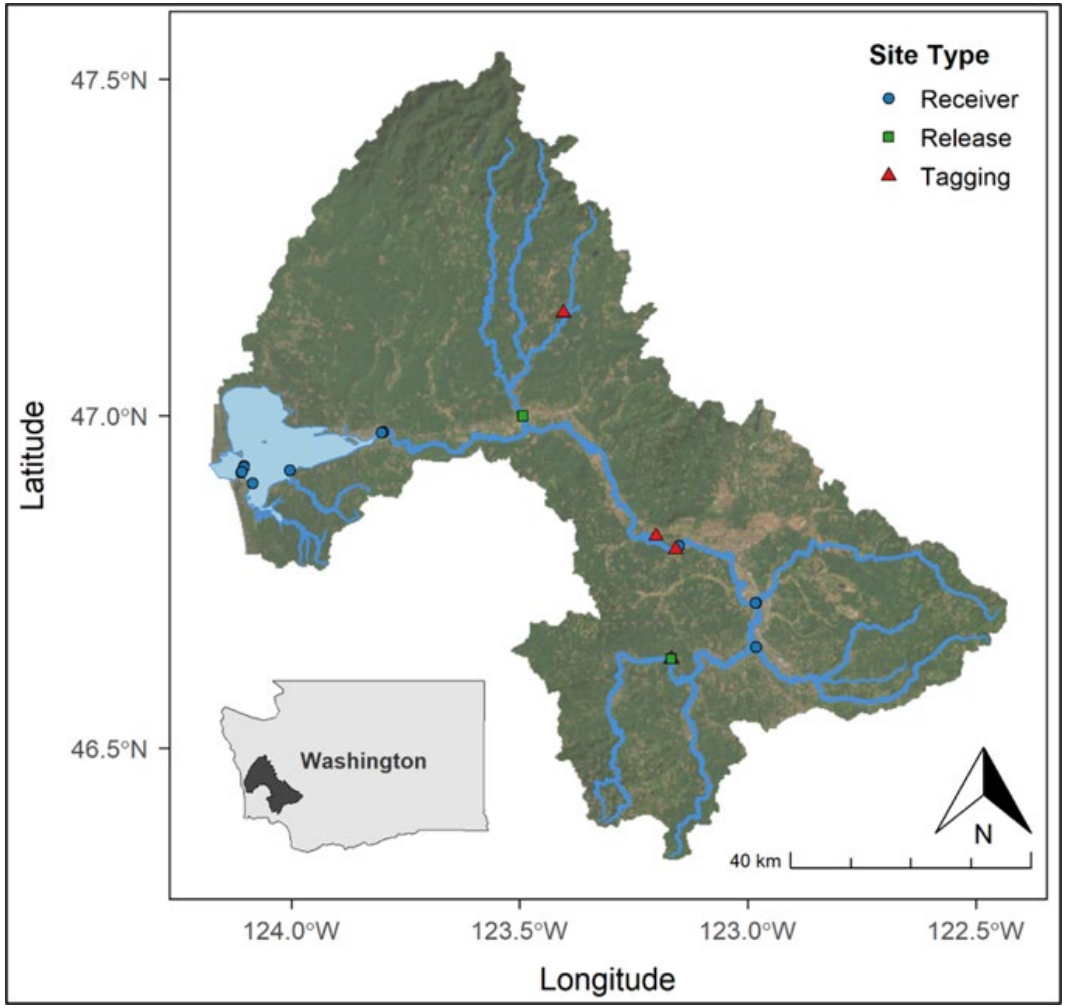
TOBY KOCK, RANDI BOWMAN, BRIAN EKSTROM, CLAIRE COUCH, U.S. GEOLOGICAL SURVEY
SYDNEY GONSALVES, JOHN FERGUSON, ANCHOR QEA
COLLEEN PARROT, SHAWN ORTIVEZ, TODD DELAMETER, HECTOR CANALES, JAKEB HOYLE, JESSE MCMAHAN, TARA LIVINGOOD-SCHOTT, CHEHALIS TRIBE
MARISA LITZ, KATIE CLARK, JONATHAN SCHROEDER, WASHINGTON DEPARTMENT OF FISH AND WILDLIFE
REGAN MCNATT, ROGER PETERS, JEFF JOHNSON, U.S. FISH AND WILDLIFE SERVICE

*Preliminary results available Oct 2026

DOWNSTREAM MIGRATION BEHAVIOR AND SURVIVAL OF JUVENILE SALMON AND STEELHEAD IN THE CHEHALIS RIVER AND GRAYS HARBOR, WASHINGTON (APRIL 22 – JUNE 25, 2026)

- Describe outmigration behavior and develop survival estimates in river *and* estuary environments?
- Identify if/where survival bottlenecks occur at the reach level?
- Chinook salmon, coho salmon, and steelhead. Lamprey in the future?

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Species	# Released
Coho (HOR)	202
Coho (NOR)	131
Steelhead (NOR)	61
Chinook (NOR)	11

SKOOKUMCHUCK FLOW MANIPULATION STUDY

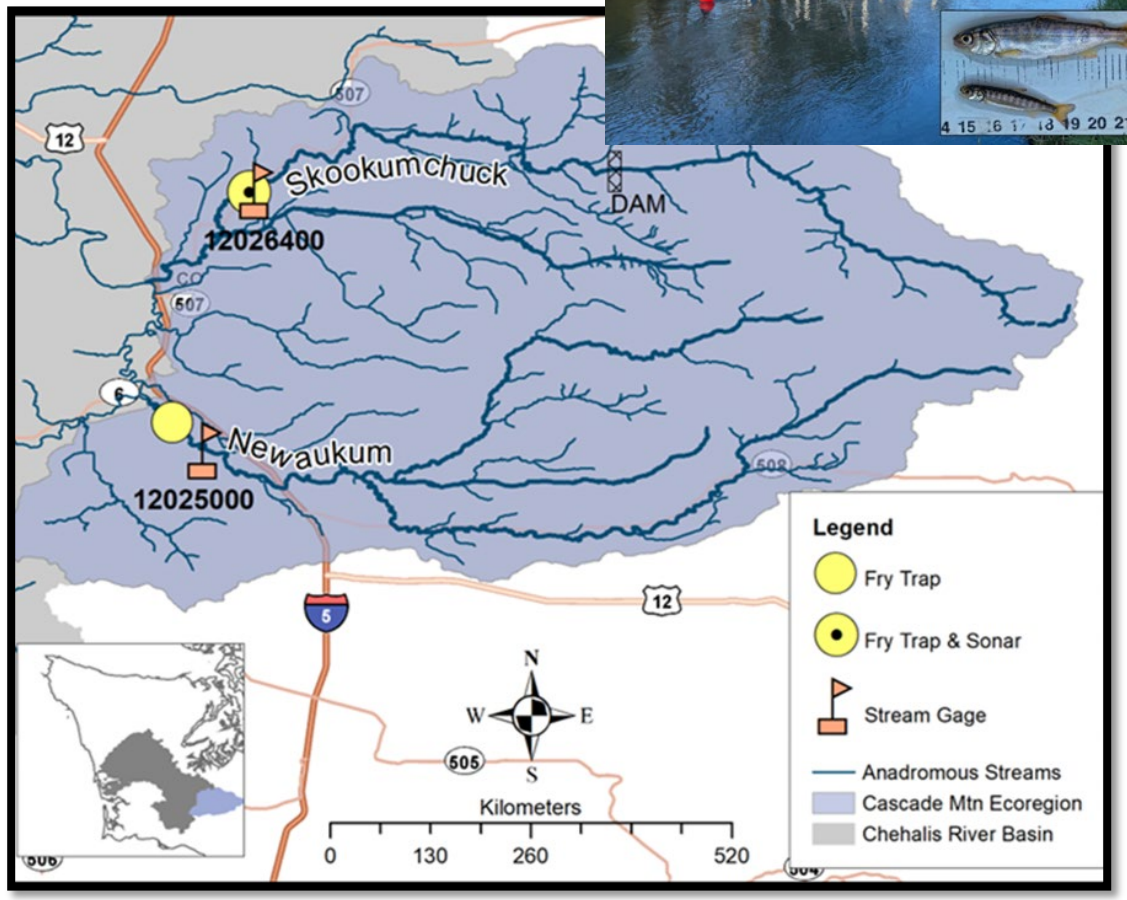
MARA ZIMMERMAN, MARISA LITZ, TODD SEAMONS, WASHINGTON DEPARTMENT OF FISH AND WILDLIFE
PHIL PETERSON, JARROD YATES, WEST FORK ENVIRONMENTAL
LARRY LESTELLE, BIOSTREAM ENVIRONMENTAL
JOHN FERGUSON, ANCHOR QEA
NAT KALE, WASHINGTON DEPARTMENT OF ECOLOGY
GARY MORISHIMA, TECHNICAL ADVISOR FOR NATURAL RESOURCES AND THE ENVIRONMENT TO THE PRESIDENT OF QUINAULT INDIAN NATION
TARA LIVINGOOD-SCHOTT, CONFEDERATED TRIBES OF THE CHEHALIS RESERVATION

FLOW MANIPULATION STUDY QUESTIONS

- Are higher spawning flows leading to more hybridization of spring and fall Chinook?
- Will reducing spawning flows increase the proportion of spring Chinook and reduce the proportion of hybrids?

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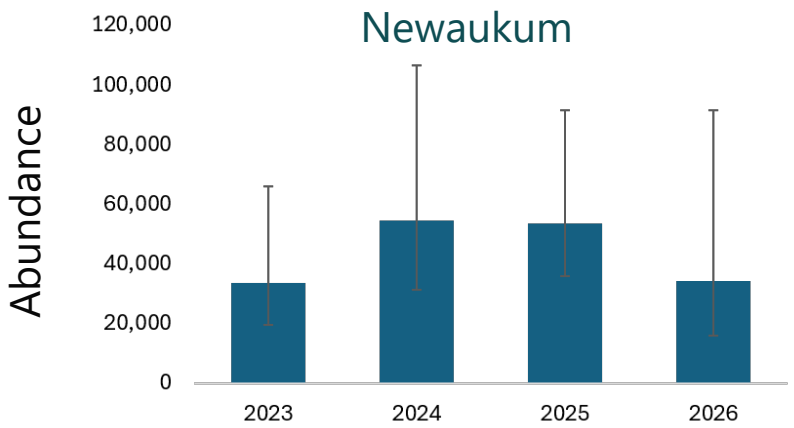


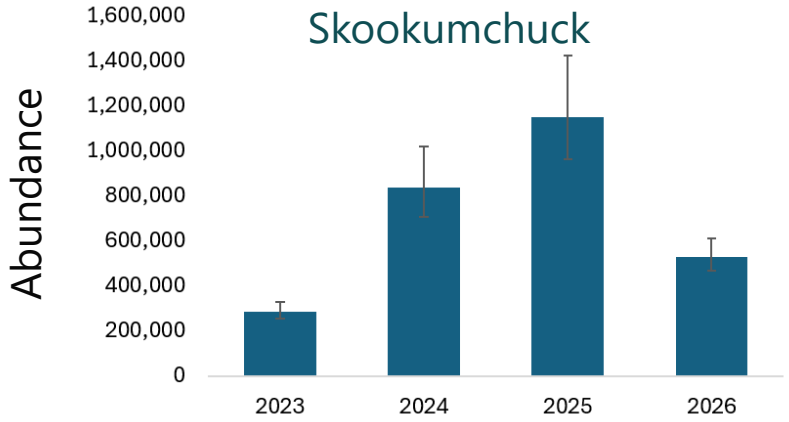


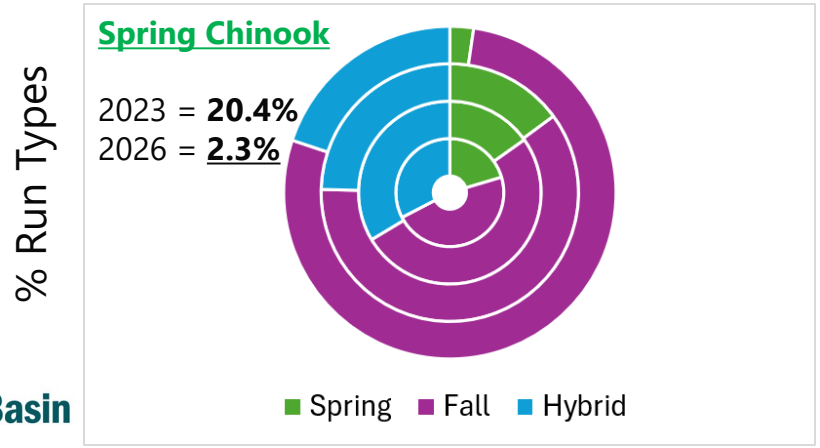
Zimmerman et al. 2023; 2025, *in prep*

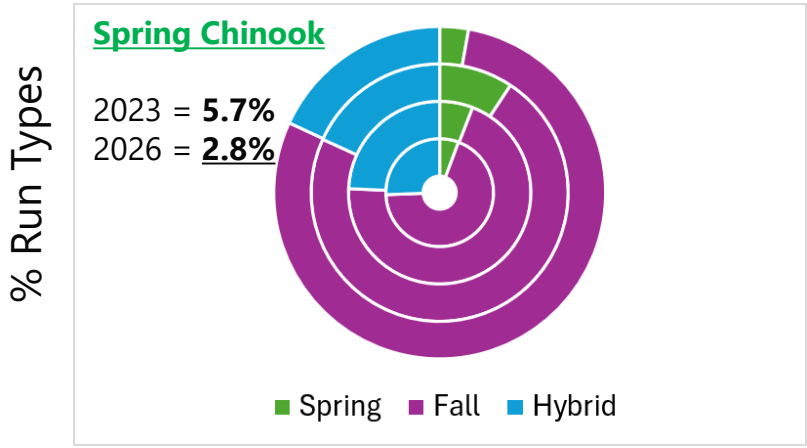
SKOOKUMCHUCK = MORE FRY / NEWAUKUM = HIGHER % SPRING

DECLINING ABUNDANCE & % SPRING CHINOOK IN 2026









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FISH SCIENCE STUDIES INFORM RESTORATION

- Continued **Fish-In/Fish-Out** study observations in the Newaukum can be used to evaluate project effectiveness now that the first major in-river restoration work has been completed
- Declining trends in Chinook salmon, and particularly proportions of spring Chinook measured in the **fry trapping** study, should be used as evidence to prioritize projects that reduce stream temperatures and the frequency and magnitude of extreme flow events
- Nonnative fish abundance & distributions expanding with increasing stream temperatures (**thermalscape** and **ecology of nonnative fish** studies)
- The 2026 **bass suppression** and **juvenile salmon survival** studies will help identify predation hotspots to inform management actions

ACKNOWLEDGEMENTS



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HABITAT SCIENCE - STATUS AND TRENDS

Tristan Weiss, Reed Ojala-Barbour, Daniel Trovillion, Julie Tyson, Aimee Mcintyre

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- Inform basin- and sub-basin wide status & trends
- Inform restoration for specific species
- Avoid siting projects in reaches of importance
- Minimize disturbance when disturbance cannot be avoided

S&T: WDFW SPECIES MONITORED

- Stream-associated amphibians
- Western toad
- Freshwater mussels

Coastal Tailed Frog





Torrent Salamanders





Giant Salamanders





Western Toad





Freshwater Mussels



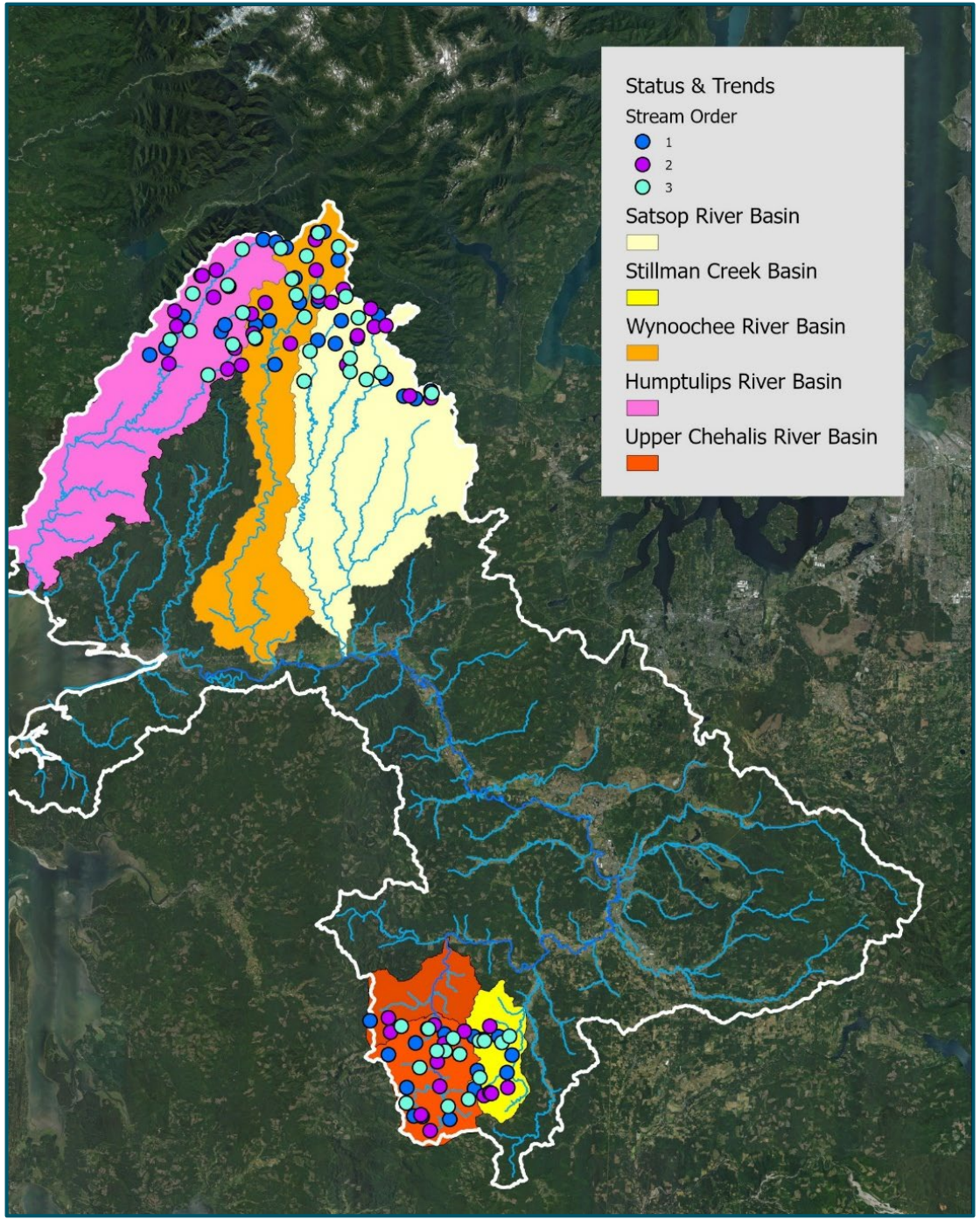


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S&T: STREAM-ASSOCIATED AMPHIBIANS

- Represents headwaters
- Changes in occupancy and abundance
- Describe relationships between amphibians and site characteristics (e.g., land use, canopy, substrate, wood loading, and stream temperature)
- Inform restoration options beyond protection & acquisition

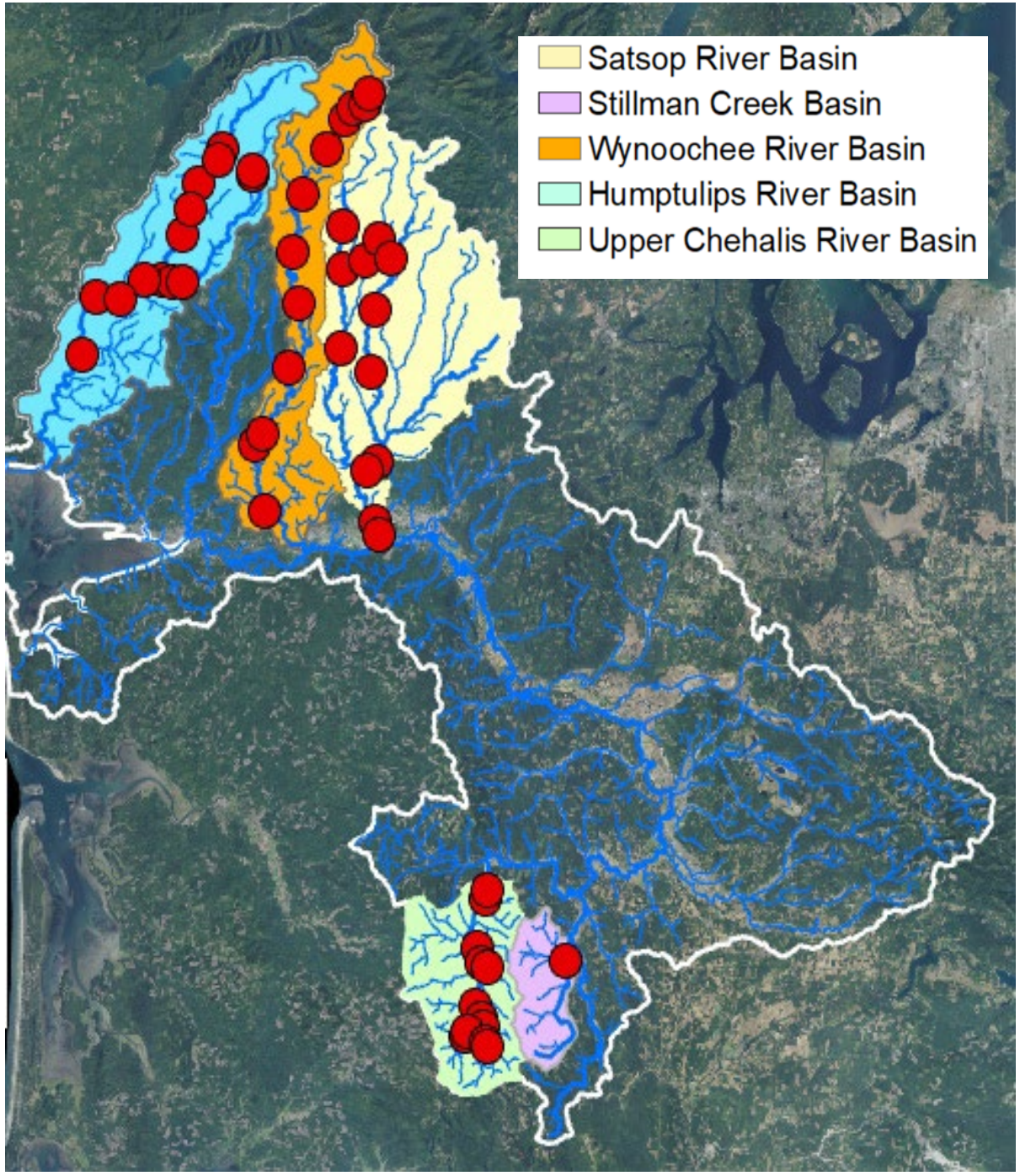
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S&T: WESTERN TOADS

- Represents medium sized rivers
- Changes in occupancy and abundance
- Explore relationships between toads, climate, land use and habitat
- Describe relationships between amphibians and site characteristics (e.g., canopy, substrate, wood loading, and stream temperature)
- Inform restoration options that benefit toads

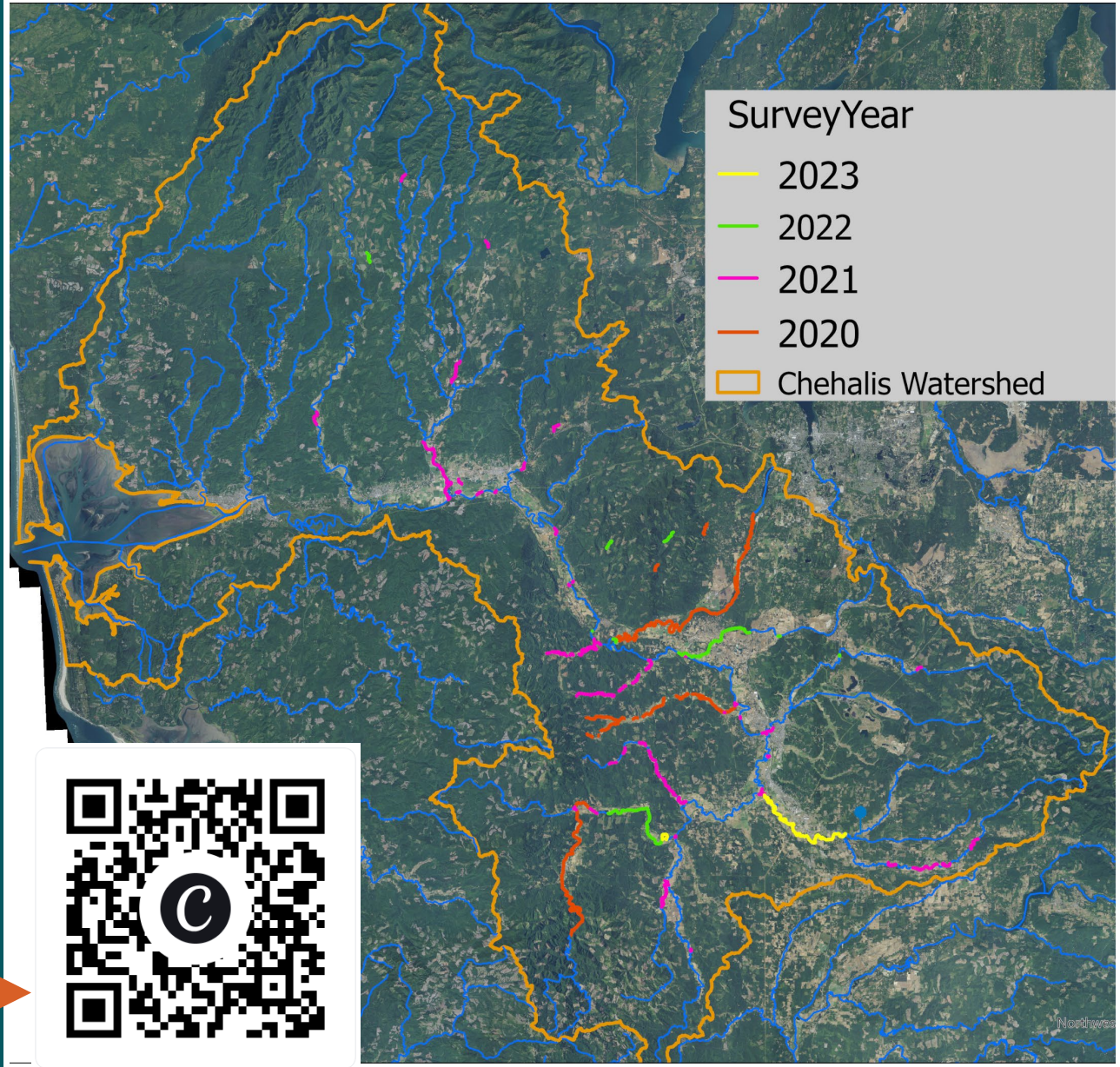
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S&T: FRESHWATER MUSSELS

- Detect and monitor mussel beds
- Track bed size and health
- Explore relationships between mussels and stream conditions
- Avoid or minimize disturbance when developing and implementing restoration projects
- Inform triggers for mussel declines
- Chehalis Freshwater Mussel Restoration Strategy document

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A STRATEGIC FRAMEWORK FOR PRIORITIZING RESTORATION IN THE CHEHALIS BASIN

SCOTT COLLYARD, EDWARD KRYNAK, CHAD LARSON, DANIEL NELSON

October 14, 2026

ASRP Progress & Planning Workshop

Office of Chehalis Basin

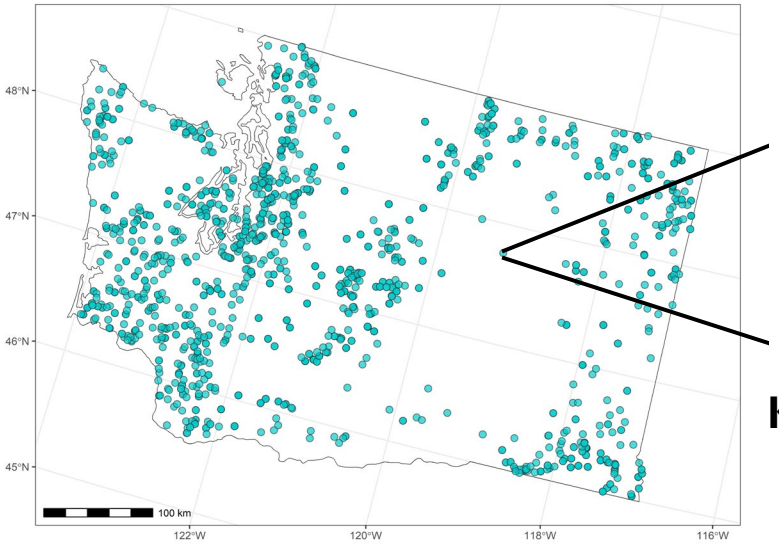


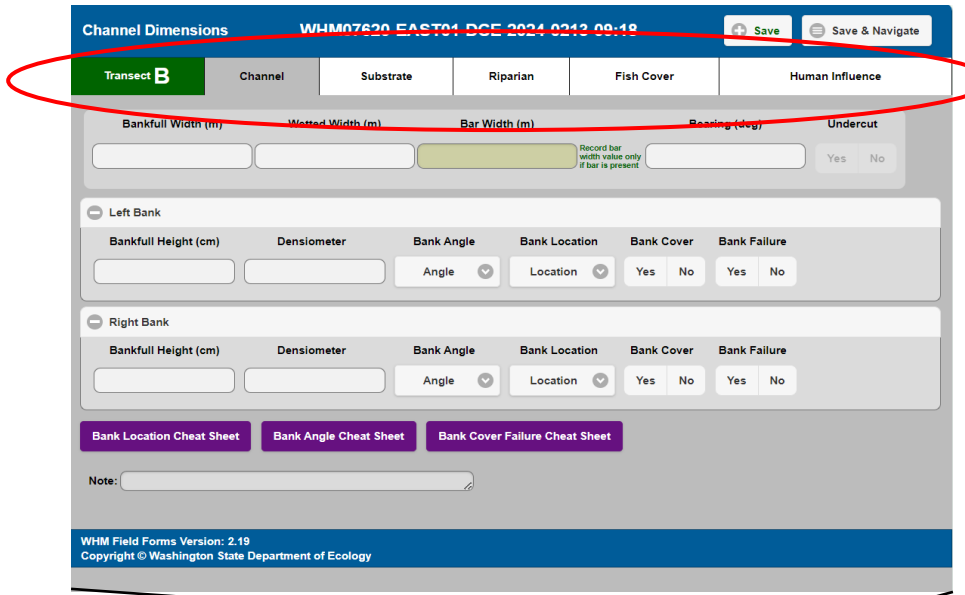


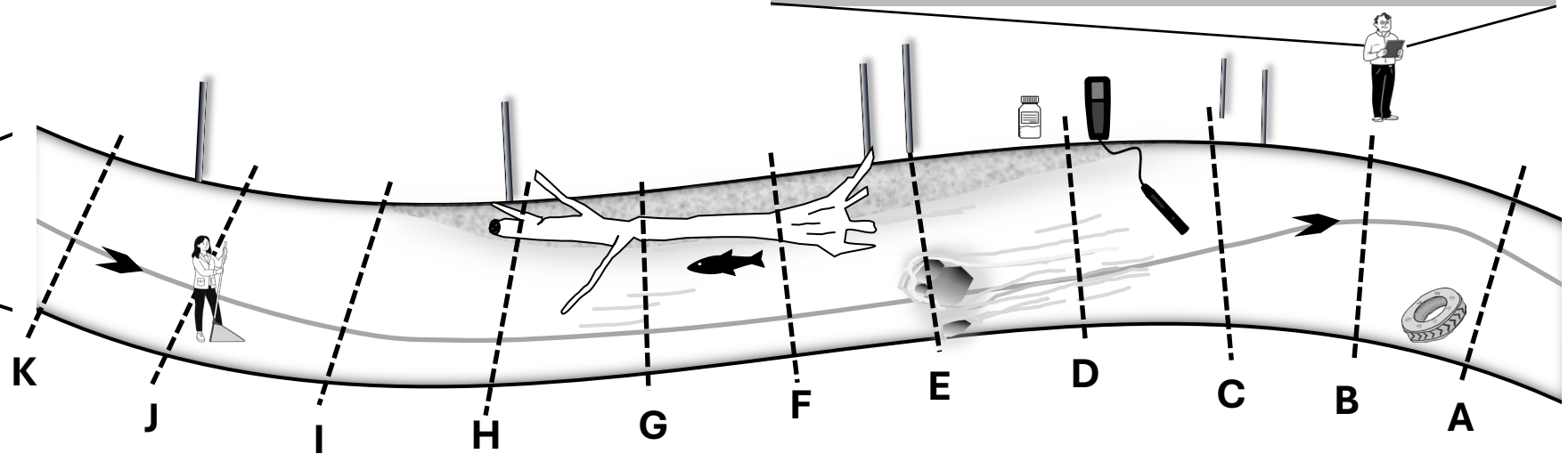
- Identify **stream reaches where restoration/protection** will most benefit anadromous salmonids using stream macroinvertebrates
- Highlight **key habitat constraints**: temperature, availability of pools and spawning substrate with existing habitat data
- Provide a **transparent, science-based framework** for strategic conservation decisions

WATERSHED HEALTH & EFFECTIVENESS MONITORING

- Statewide monitoring
- Standardized habitat and biological protocols
- Electronic field data collection
- Data QA/QC
- Open data, freely accessible online
- 200+ habitat metrics produced for every site



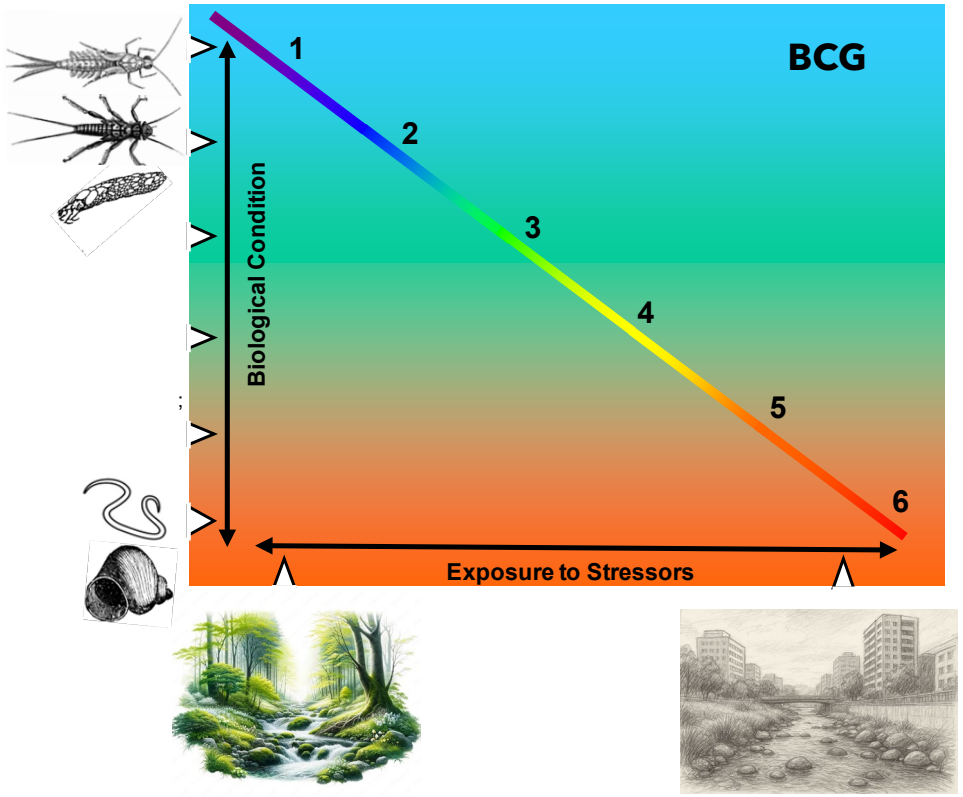


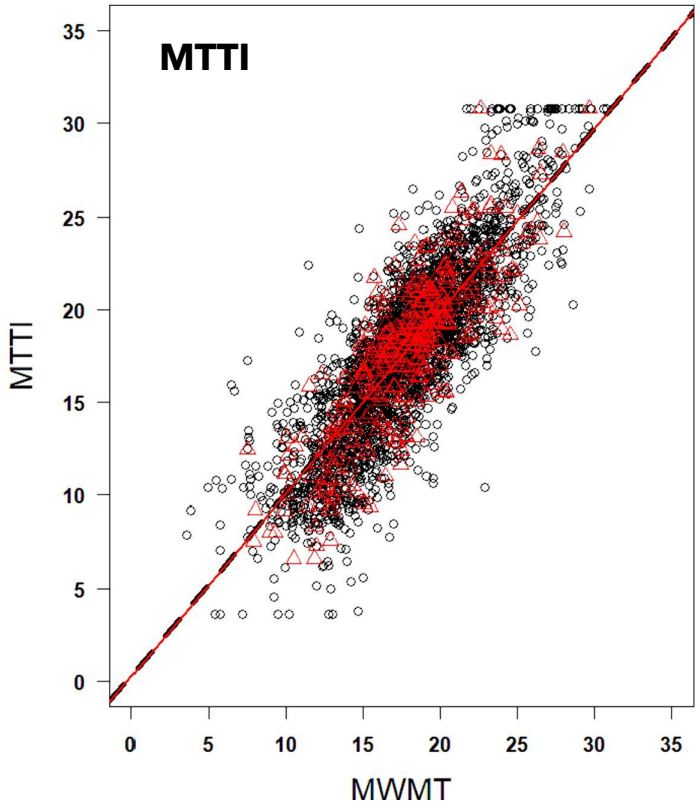


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Biology | **Fish Cover** | **Large Wood** | **Riparian Structure** | **Channel Morphology** | **Water Quality** | **Human Influence** | **Substrate**

MACROINVERTEBRATE RESPONSE

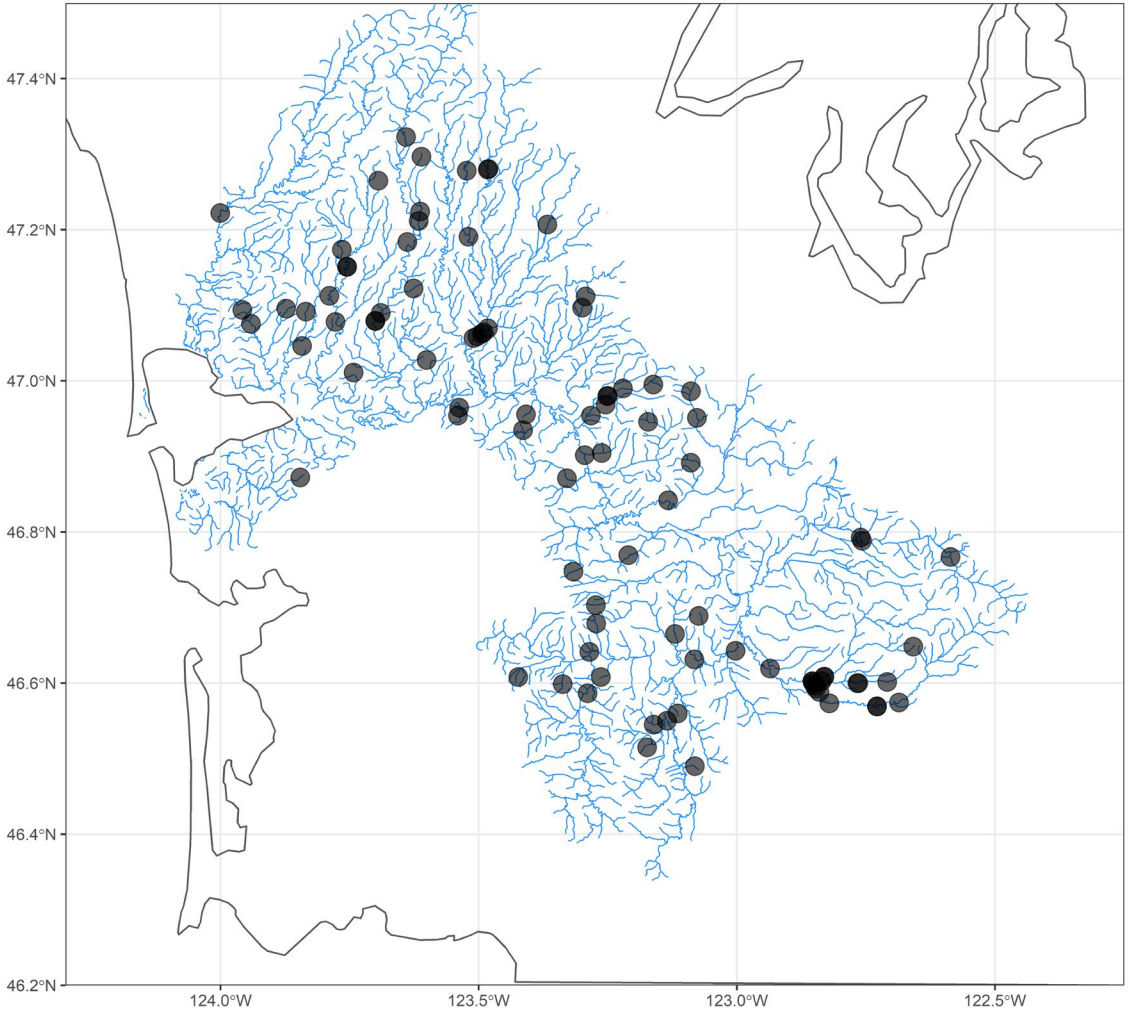




- Utilized existing **Status & Trends** monitoring data
- Calculated **Biological Condition Gradient (BCG)** and **Macroinvertebrate Thermal Tolerance Index (MTTI)**
- Visualized BCG and MTTI to evaluate **biological health** and **thermal regimes**
- Applied a **decision tree framework** to prioritize management actions

EXISTING DATA IN THE CHEHALIS BASIN

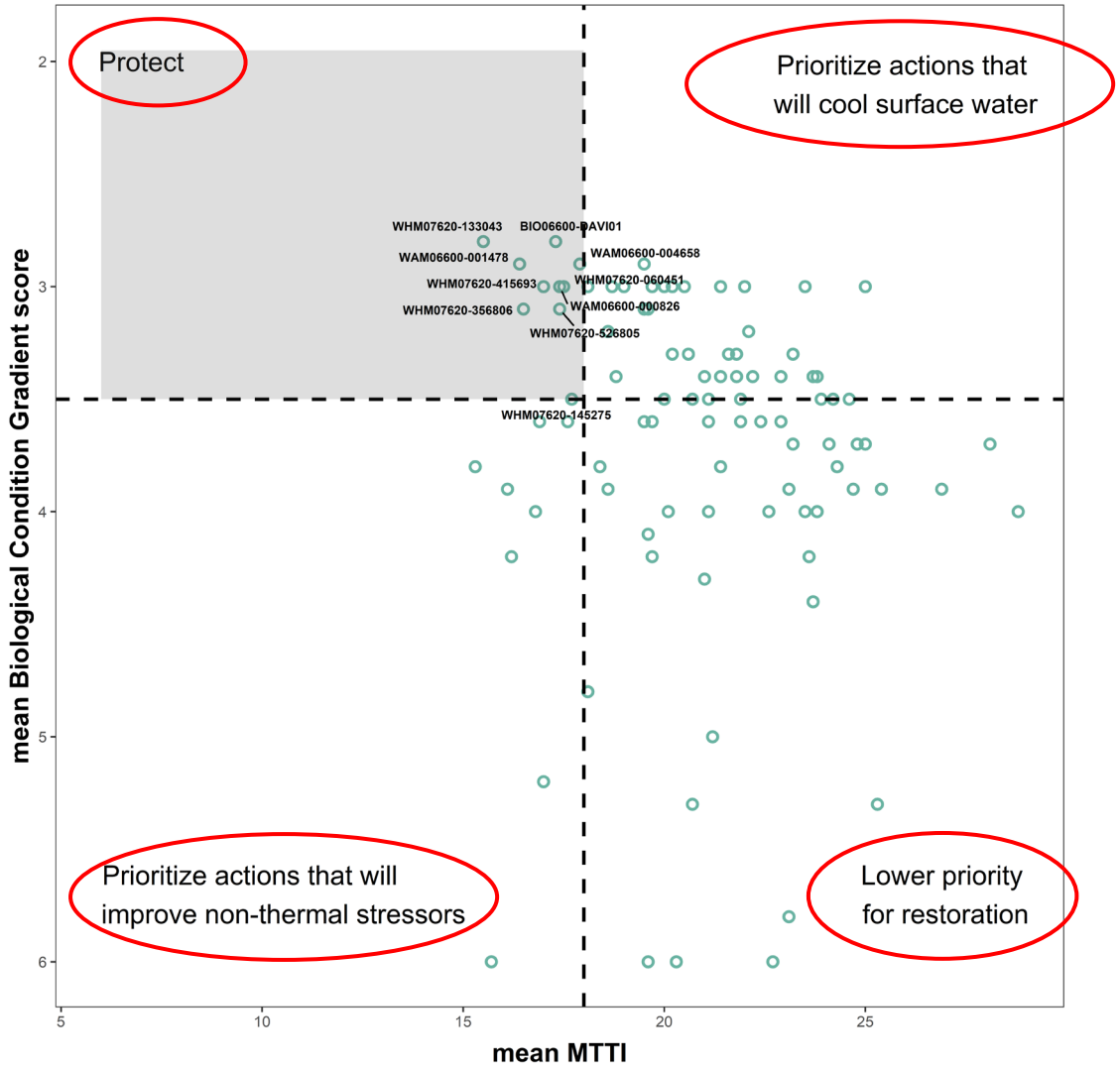
- 92 sites with existing data



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APPROACH TO PRIORITIZING RESTORATION EFFORTS

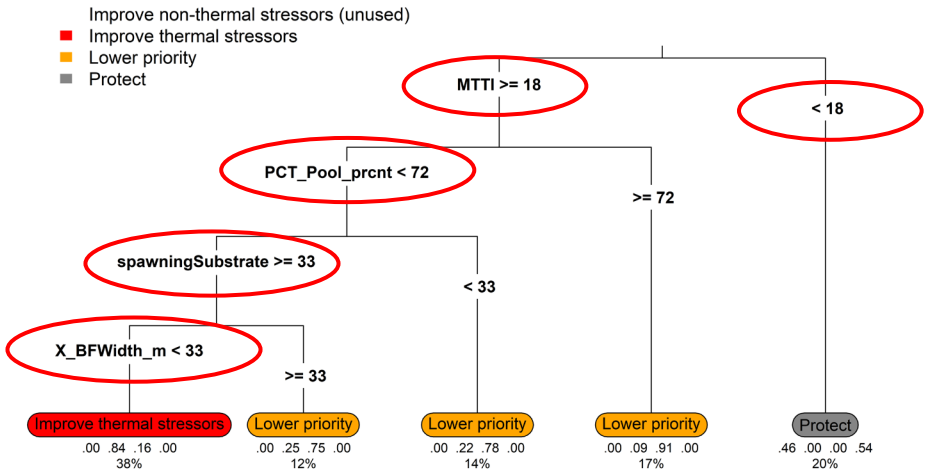
- Protection
- Improve thermal stressors
- Improve non-thermal stressors
- Lower priority for restoration

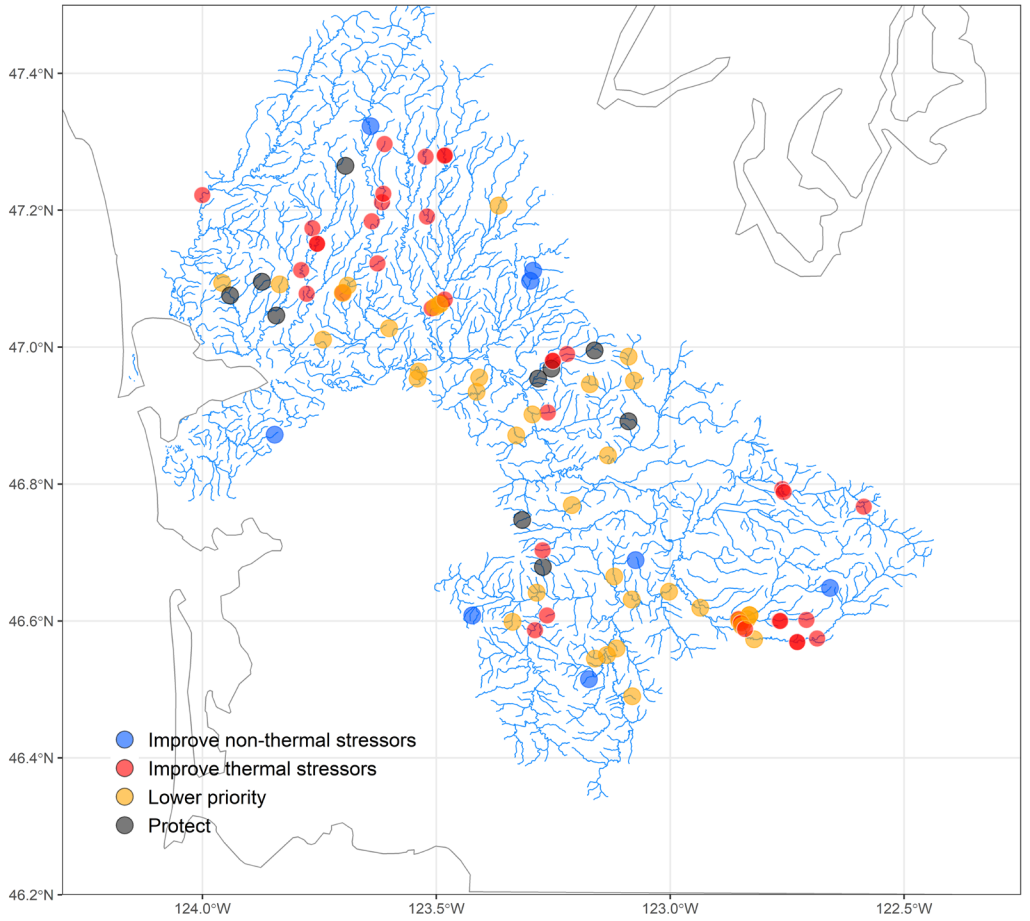


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RECOMMENDED RESTORATION EFFORTS

Decision tree





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LESSONS LEARNED/ REMAINING QUESTIONS

- Established a **transparent**, **science-based framework** for strategic conservation
- Approach can **enhance restoration effectiveness** for anadromous fish
- BCG and MTTI serve as benchmarks to **assess biological improvement** after restoration
- Working with ASRP to refine and adapt the framework for the Chehalis Basin

UPPER BASIN CLUSTER: SKOOKUMCHUCK RIVER

ASRP Progress &

Planning Workshop

October 14, 2026

PAUL CEREGHINO

MARA HEALY

JOEY BURGESS

ALEX PAPIEZ

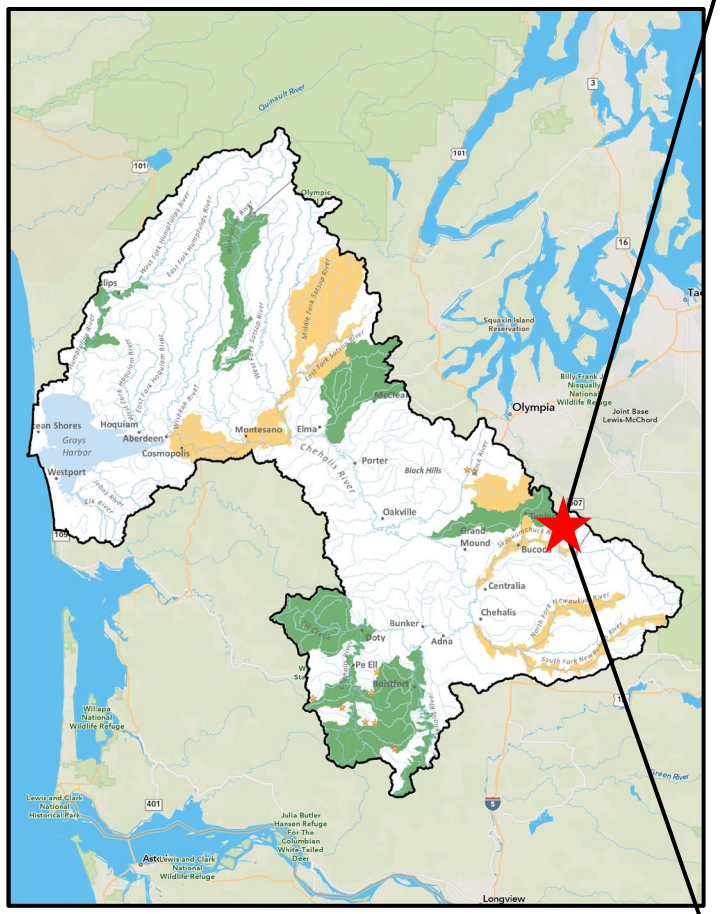
Office of Chehalis Basin

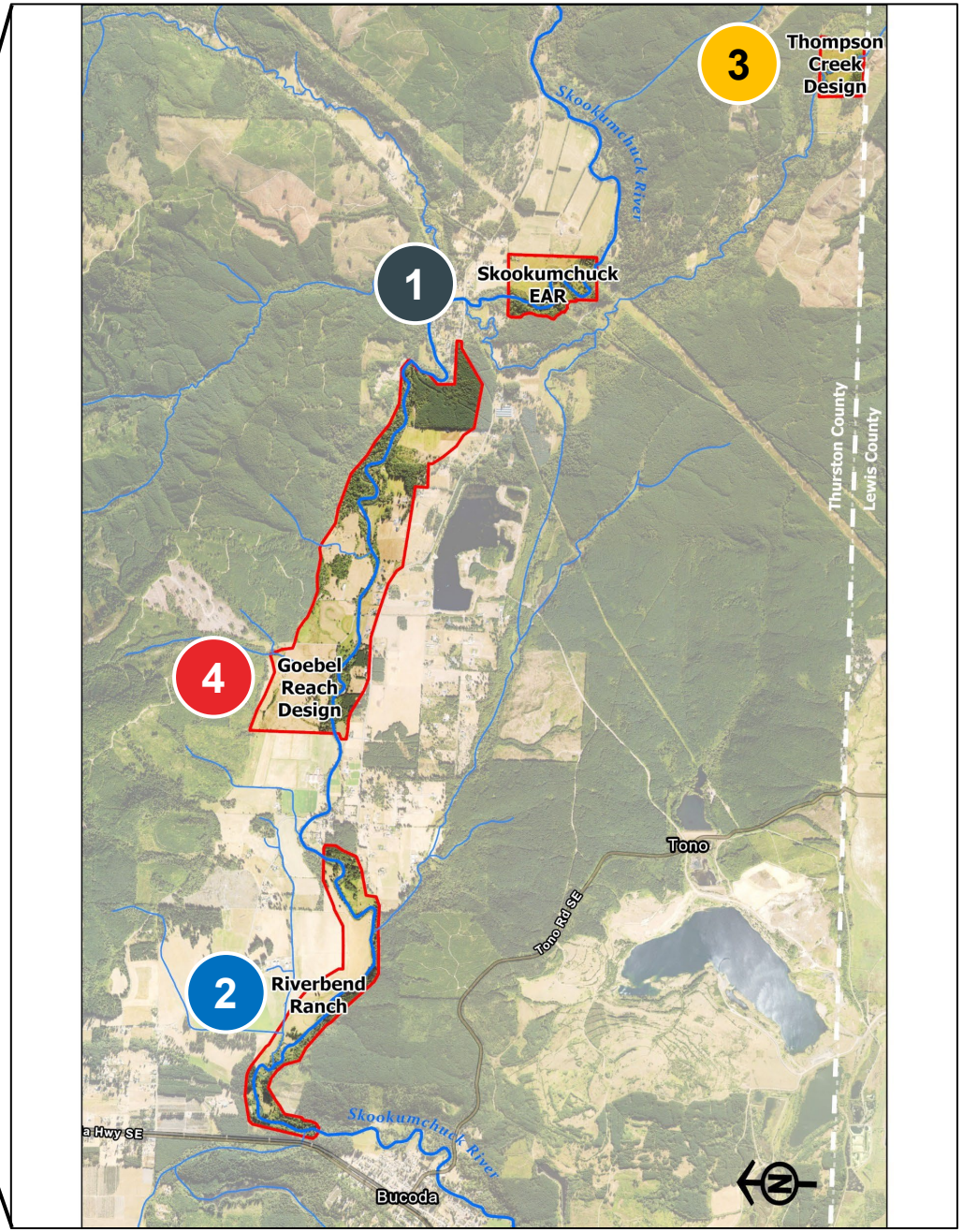
Thurston Conservation District

thurstoncd.com



Upper Basin Cluster





1 **Skookumchuck EAR**
Early Action Reach

2 **Riverbend Ranch**
Skookumchuck RM 11.5–14

3 **Thompson Creek**
Tributary · RM 3.5

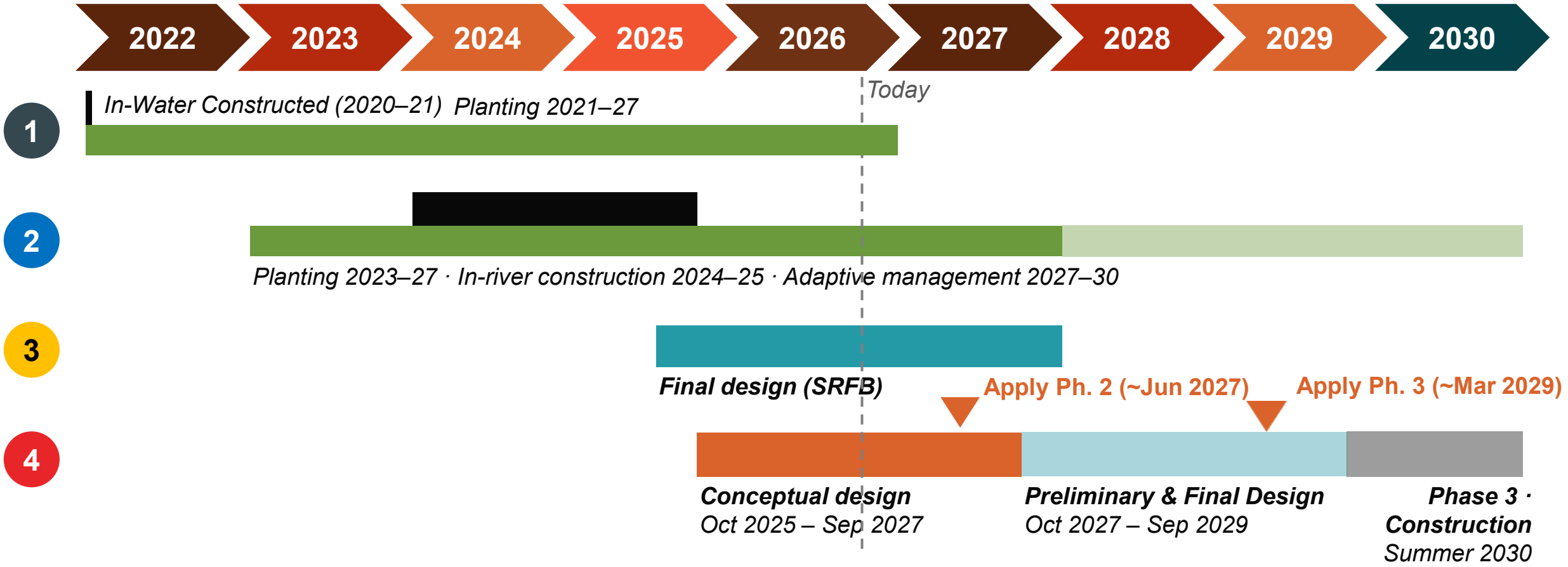
4 **Goebel Reach**
Skookumchuck RM 15–17

Office of Chehalis Basin

Project Name (Sponsor)	Status	Project Cost	River Miles & Acres
Skookumchuck EAR (TCD) 1	Constructed (2022–2023)	$2.5 million	1.1 miles 75 acres
Riverbend Ranch (TCD) 2	Construction (in-water complete)	$8.1 million	RM 11.5–14 2.5 miles · 112 acres
Thompson Creek RM 3.5 (TCD · SRFB funded) 3	Final design	$253,000	0.43 miles 11 acres
Goebel Reach – Skookumchuck RM 15–17 (TCD) 4	Landowner Outreach & Conceptual Design	$268,497 (ASRP)	RM 15–17 2 miles

	BDAs/ PALS	ELJs	Side Channel Creation	Planting/ Invasive control
Water Temp	3	1 2 4	1 2 3 4	1 2 3 4
Winter High Flow Refugia	3 4	1 2 4	1 2 3 4	1 2 3 4
Side Channel Habitat	3 4	1 2 4	1 2 3 4	1 2 3 4
Floodplain Connection	3	1 2 4	1 2 3 4	1 2 3 4
Habitat Diversity	3 4	1 2 4	1 2 3 4	1 2 3 4
Sediment Storage	3 4	1 2 4	1 2 3 4	1 2 3 4
Summer Low Flow	3	1 2 4		1 2 3 4
Total (Structures, Acres, etc)		2 56 ELJs 1 27 ELJs	2 3 high-flow ch. 1 1 high-flow ch.	2 112 ac planting 1 67 ac planting

PROJECT TIMELINE



Planning Design Construction Planting

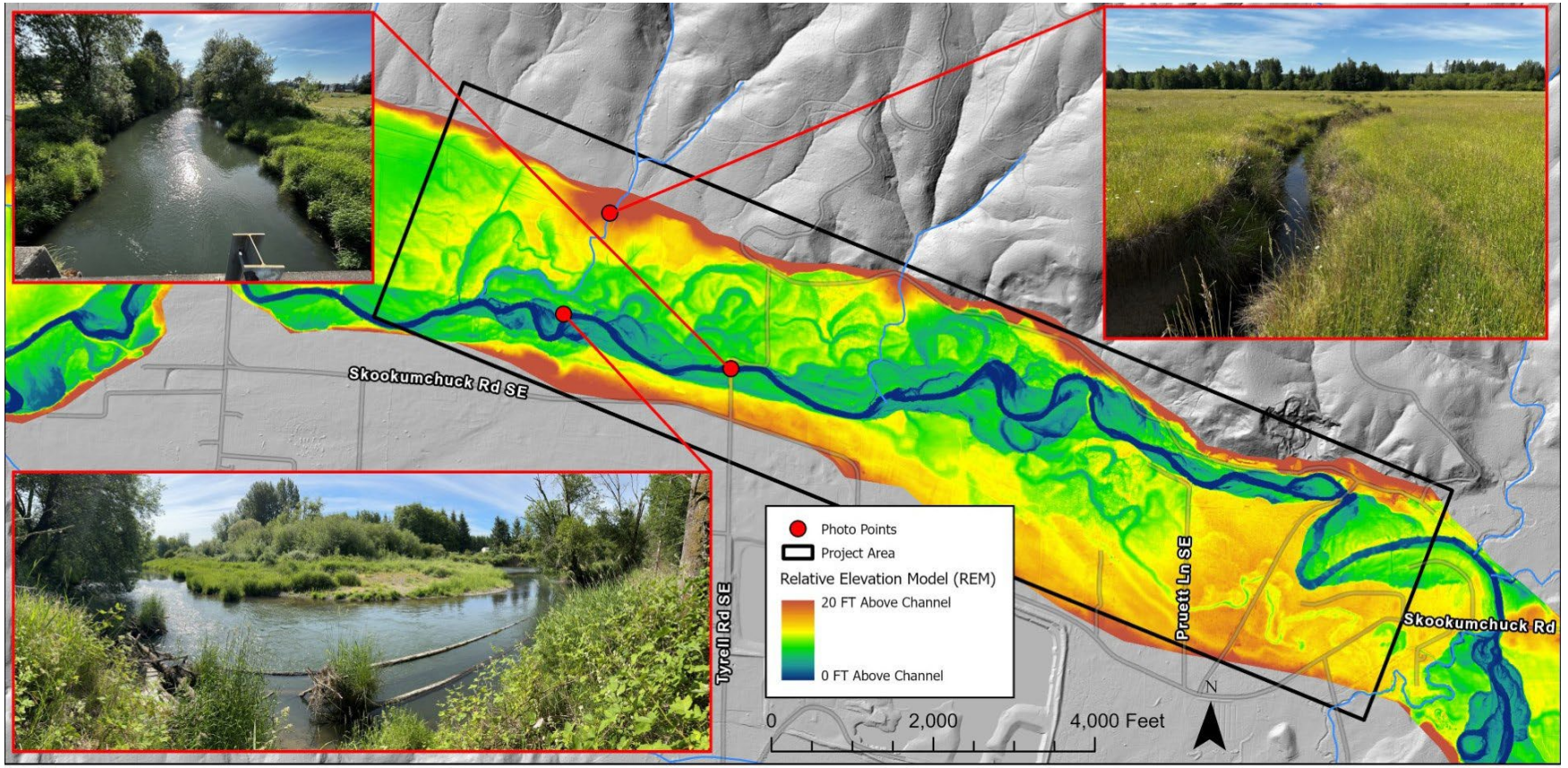
Office of Chehalis Basin

4

Goebel Reach

Skookumchuck RM 15–17

- Project initialization: Ecology ASRP grant (Oct 2025 – Sep 2027)
- Landowner engagement and conceptual design
- Anchor QEA
- Concepts for 3 willing landowners & their neighbors
- Next: Preliminary/Final Design 2027–29, Construction 2029-2030

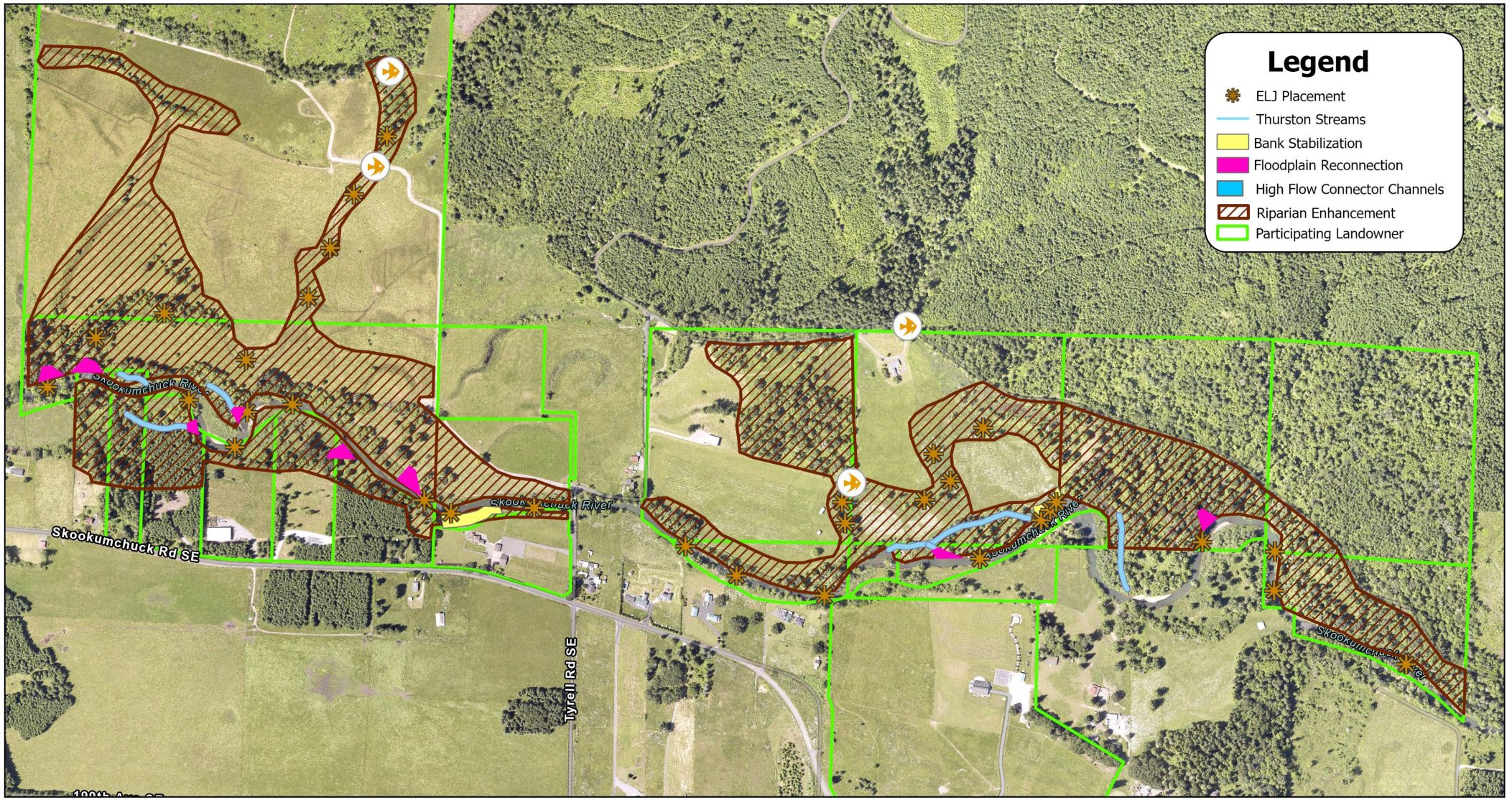






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4 Goebel Reach – Conceptual Restoration Actions



Thurston Conservation District
www.thurstoncd.com

0 400 800 1,200 1,600 2,000 US Feet

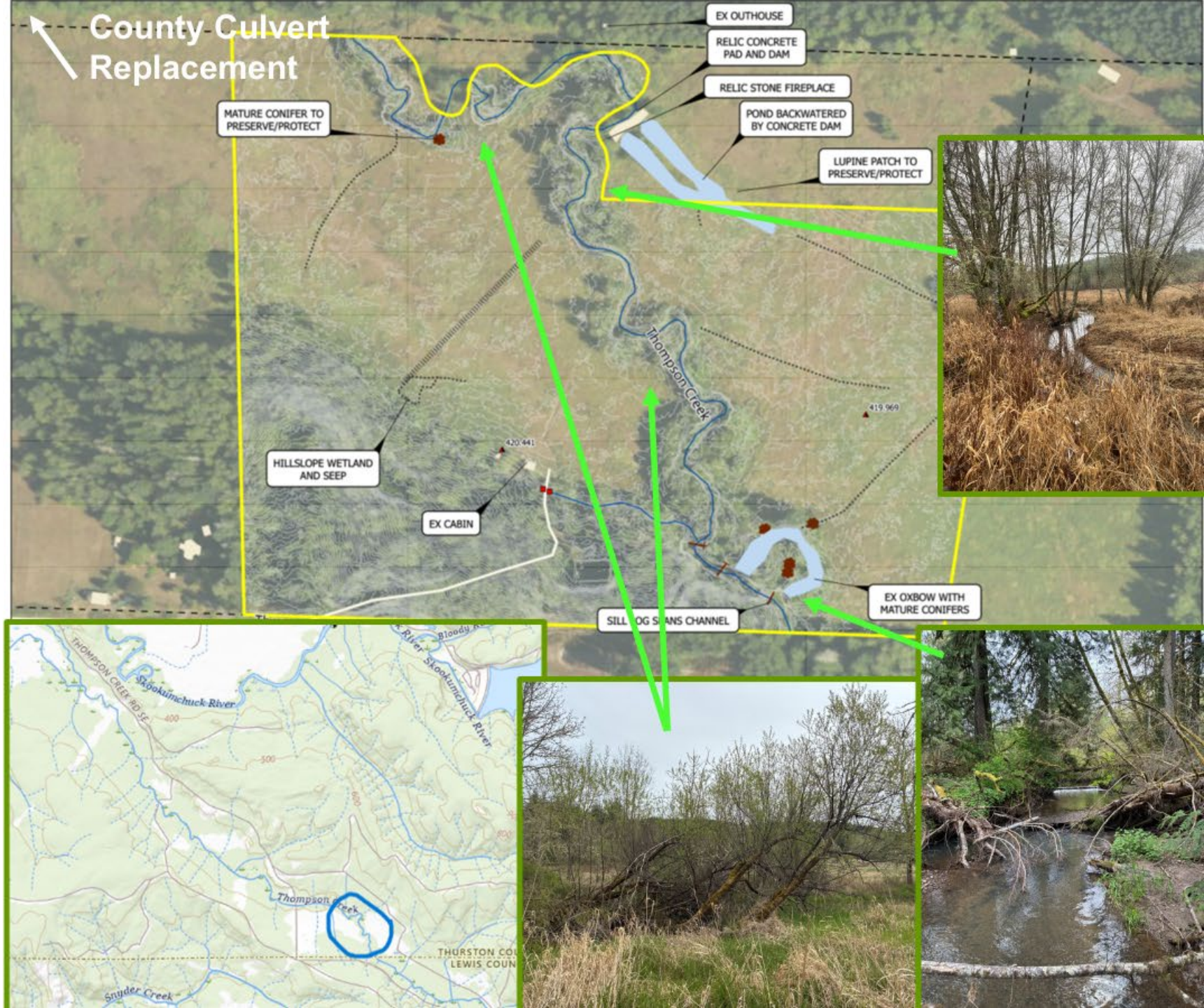
Map prepared by TCD on 10/7/2026
Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet

Thompson Creek

RM3.5 Final Design

- Project initialization: RCO SRFB grant (Sep 2025 – Sep 2027)
- Final Designs
  - Wolf Water Resources
- County culvert replaced 2025 opens up 10 miles of upstream habitat
- Next: Phase 2 Build 2028-30

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NEWAUKUM PROJECTS TROUT UNLIMITED

ALEX GUSTAFSON & ADAM HIGH

October 14, 2026

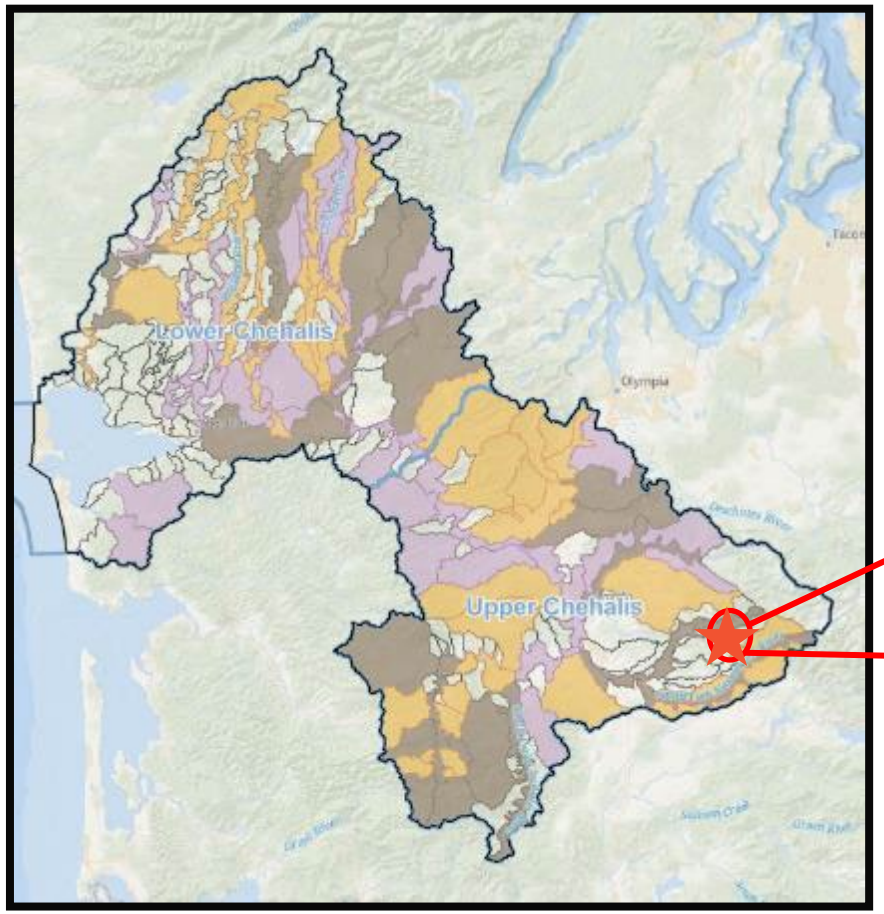
ASRP Progress & Planning Workshop

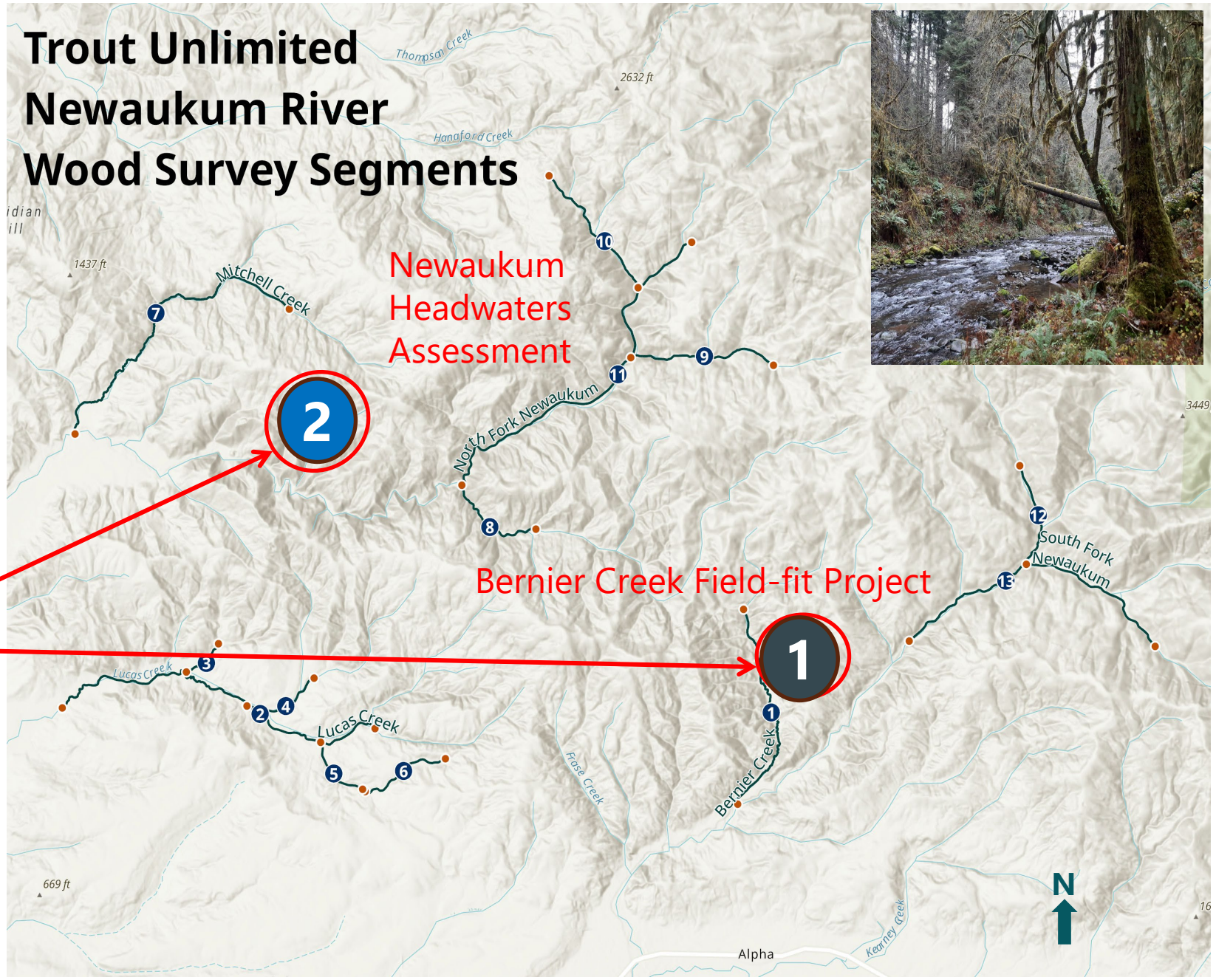
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TROUT UNLIMITED



Trout Unlimited
Newaukum River
Wood Survey Segments





Office of Chehalis Basin

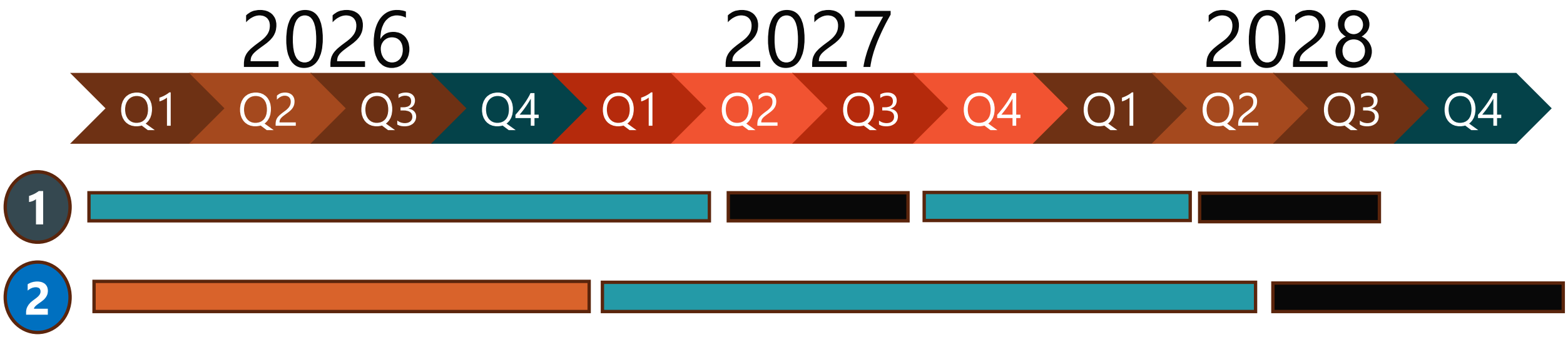
TROUT UNLIMITED

Project Name (Sponsor)	Status	Project Cost	River miles & Acres
Bernier Creek Field-fit (Trout Unlimited) 1	Design/Construction	SRFB $349,731 ASRP $200,778	0.5 Miles
Newaukum Headwaters Assessment (Trout Unlimited) 2	Design	SRFB $200,000 ASRP $124,800	22 Miles

TROUT UNLIMITED

	BDAs/ PALS	ELJs	Side Channel Creation
Water Temp			
Winter High Flow Refugia	1 2	2	2
Side Channel Habitat	1 2	2	2
Floodplain Connection	1 2	2	2
Habitat Diversity	1 2	2	2
Sediment Storage	1 2	2	
Summer Low Flow		2	
Total (Structures, Acres, etc)	1 52		2

PROJECT TIMELINE



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TROUT UNLIMITED

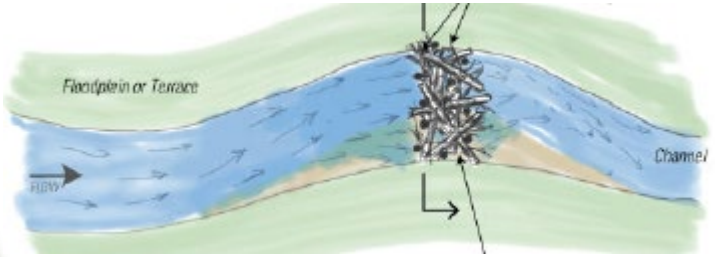
Planning Design Construction

Bernier Creek

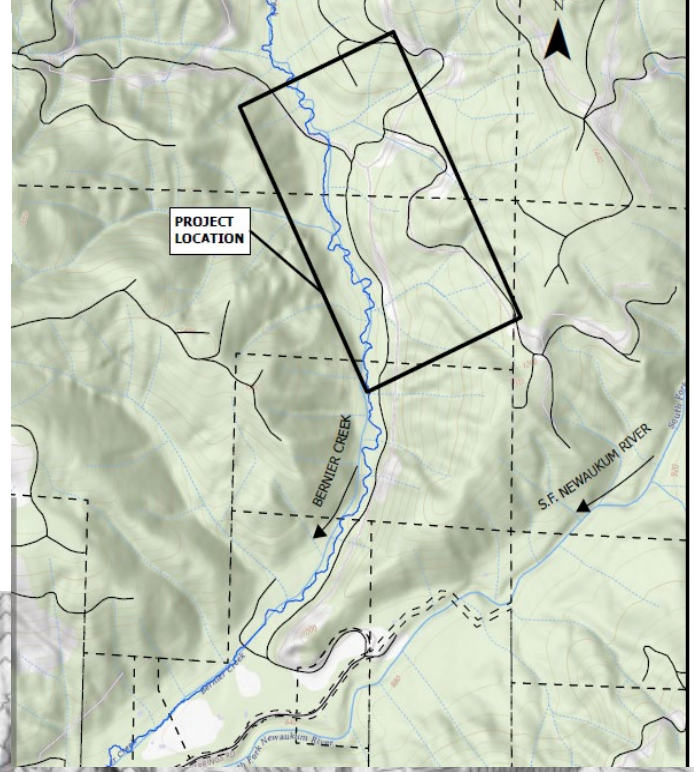
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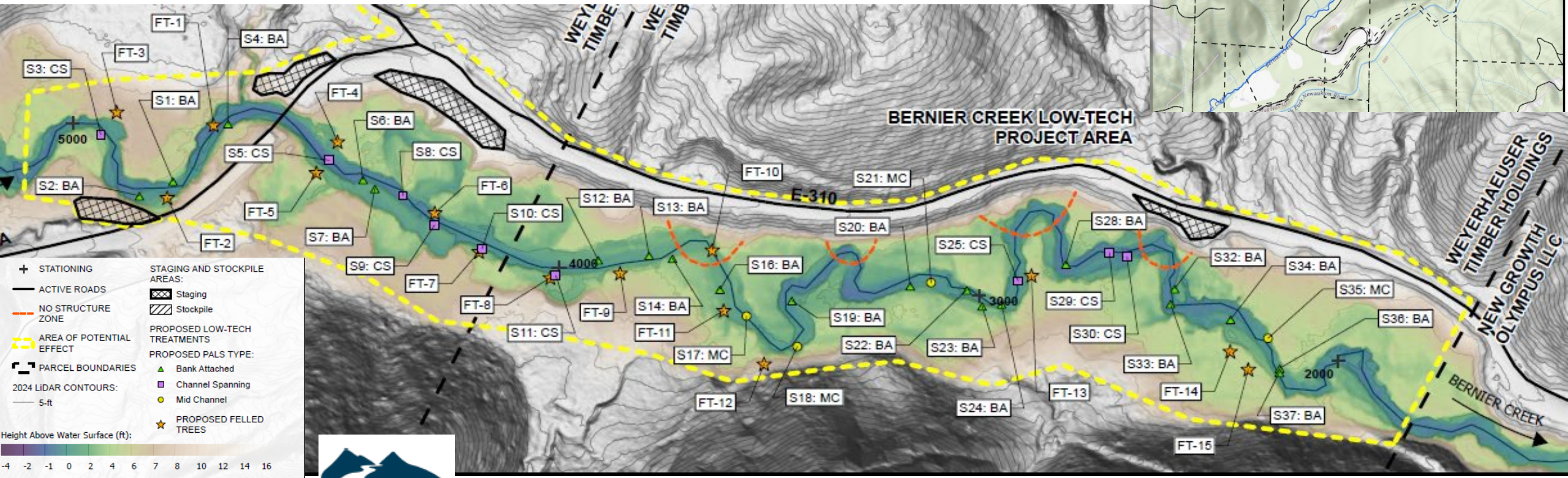
TROUT UNLIMITED











inter·fluve

Newaukum Headwaters Assessment

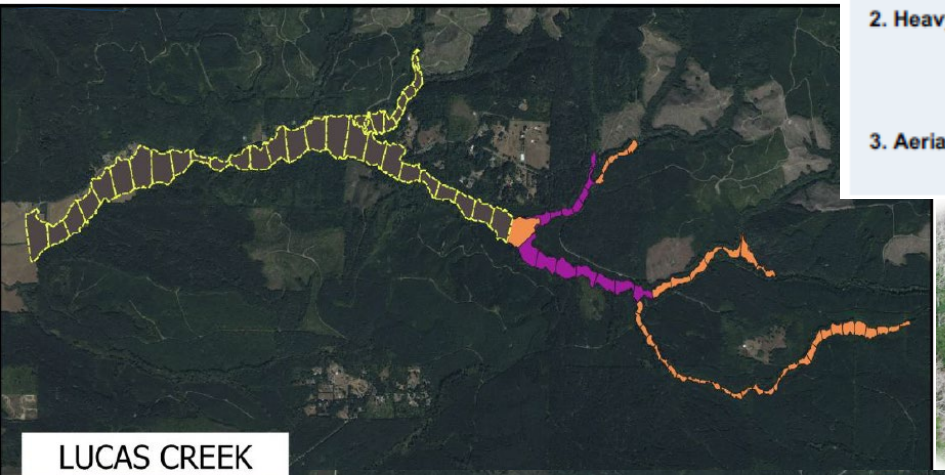
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TROUT UNLIMITED

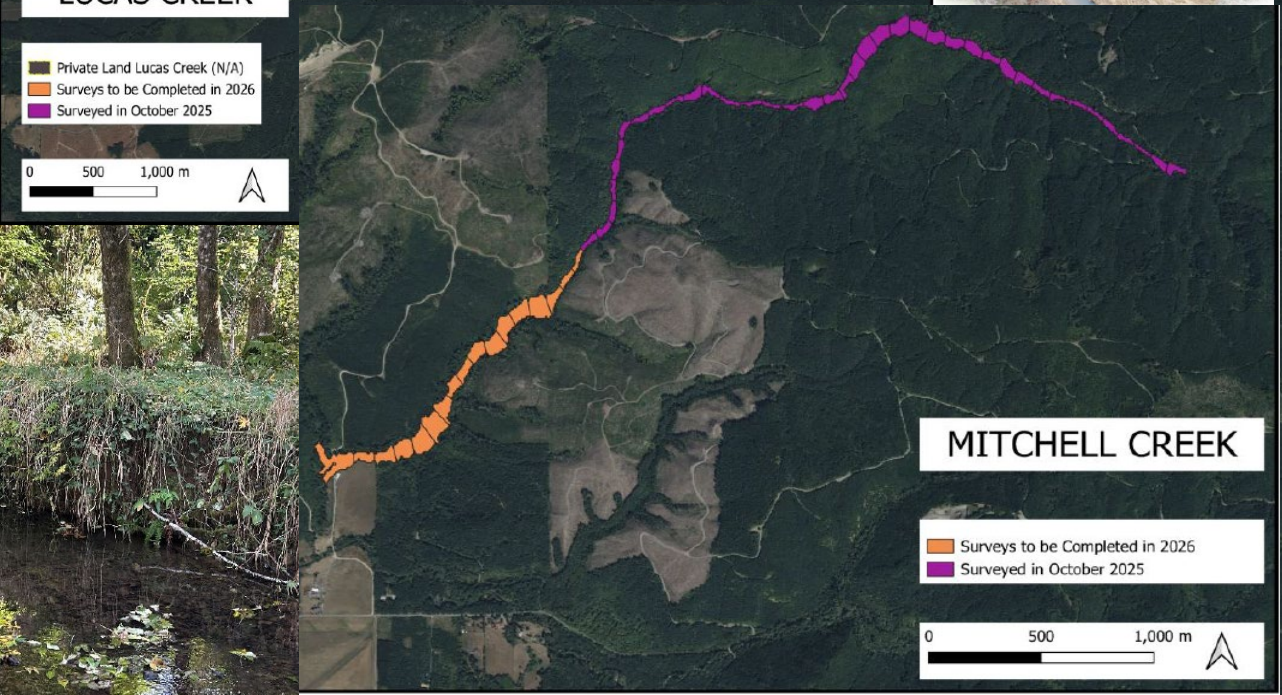
LUCAS CREEK SURVEYED AREAS

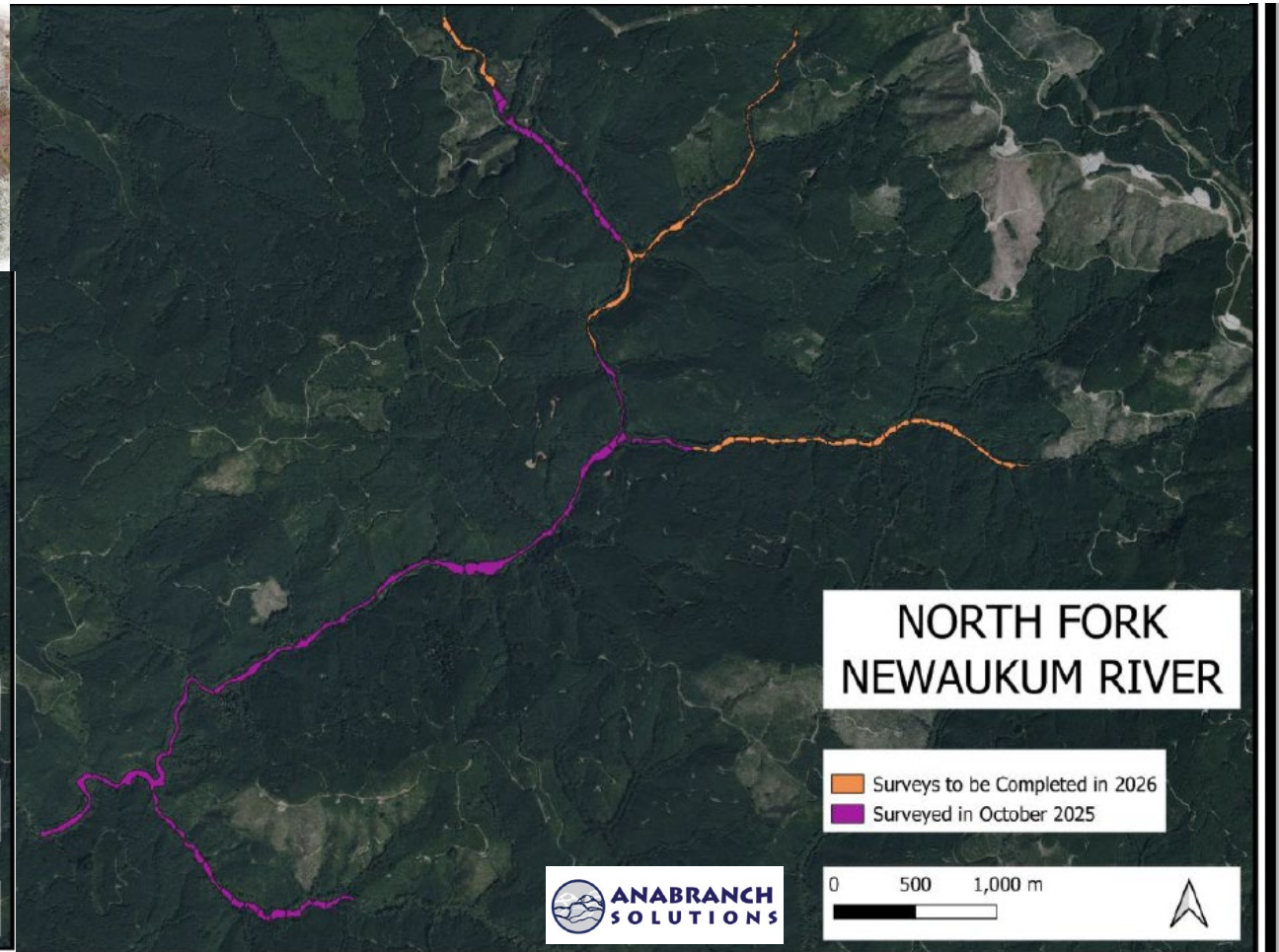
Wood Addition Process-Based Restoration Continuum

Class	Typical treatment forms	Typical material	Typical Equipment	Footprint, advantages, typical costs
1. Light Low-Tech	BDAs, PALS, seeding/racking, loose wood	Brush, slash, small-to-moderate logs, locally sourced posts	1-2 person carry-able equipment; hand tools; hydraulic / thermal post pounder, bucking chainsaws	Light footprint; scalable application with entry level experience staff; low-cost
2. Heavy Low-Tech	Direct-felled wood, tipped trees/rootwad recruitment, rigged key pieces woven into floodplain trees	Key Pieces, large logs, full trees with rootwads	Felling Chainsaws, Griphoists, capstan winches, advanced rigging; occasional road-restricted mechanical assist (tractors, excavators)	Light to medium footprint; able to move the largest wood pieces with entry level experience staff with skilled oversight; low-medium cost
3. Aerial Wood Additions	Dispersed loading, key-piece placement, large jam assembly,, floodplain/side-channel loading	Key Pieces, large logs, full trees with rootwads	Helicopter or logging skyline/cable yarding system	Light to no footprint; able to create the wood jams in most terrain types; highly skilled operators needed at high costs









LESSONS LEARNED/ REMAINING QUESTIONS

- Weyerhaeuser is a willing and supportive partner, but be prepared for lengthy review and approval timelines
- Juvenile use and distribution is a data gap
- Will beavers recolonize new areas?



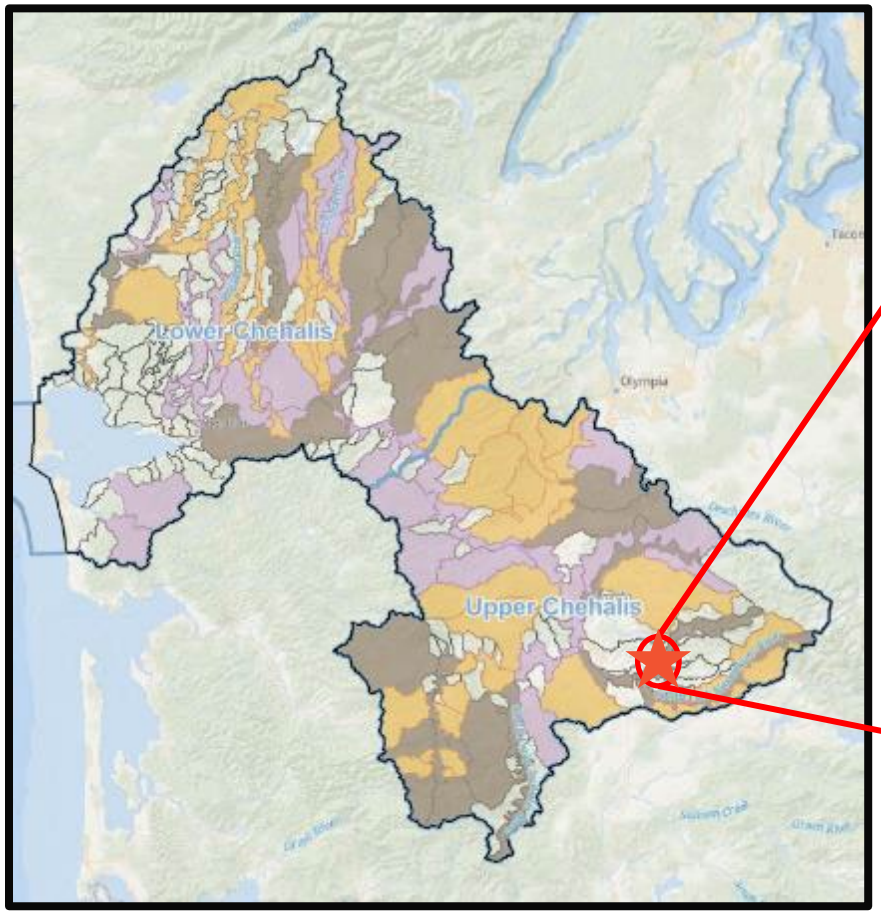
MS NEWAUKUM & SF NEWAUKUM

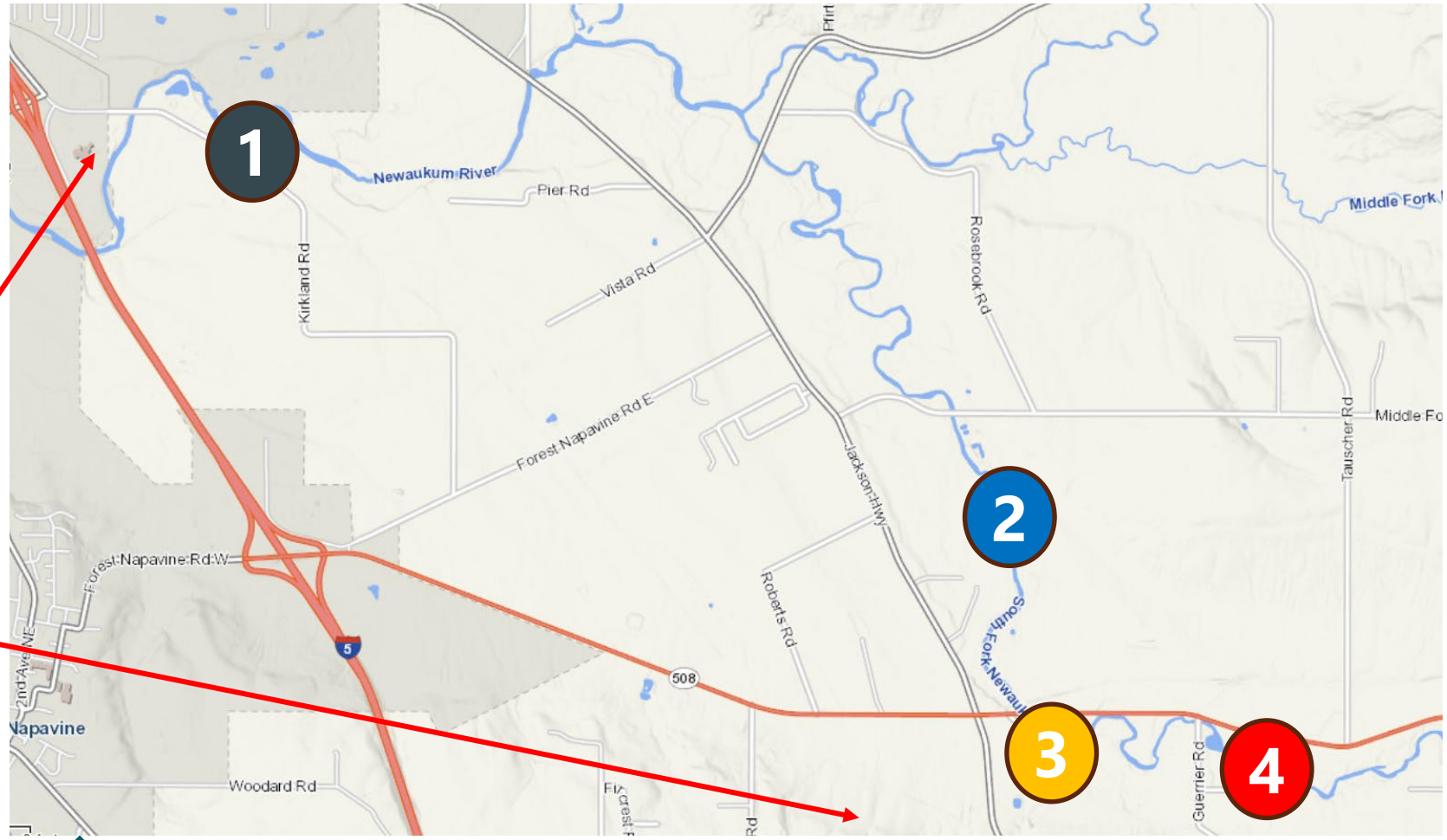
NIKKI ATKINS

October 14, 2026

ASRP Progress & Planning Workshop

Office of Chehalis Basin



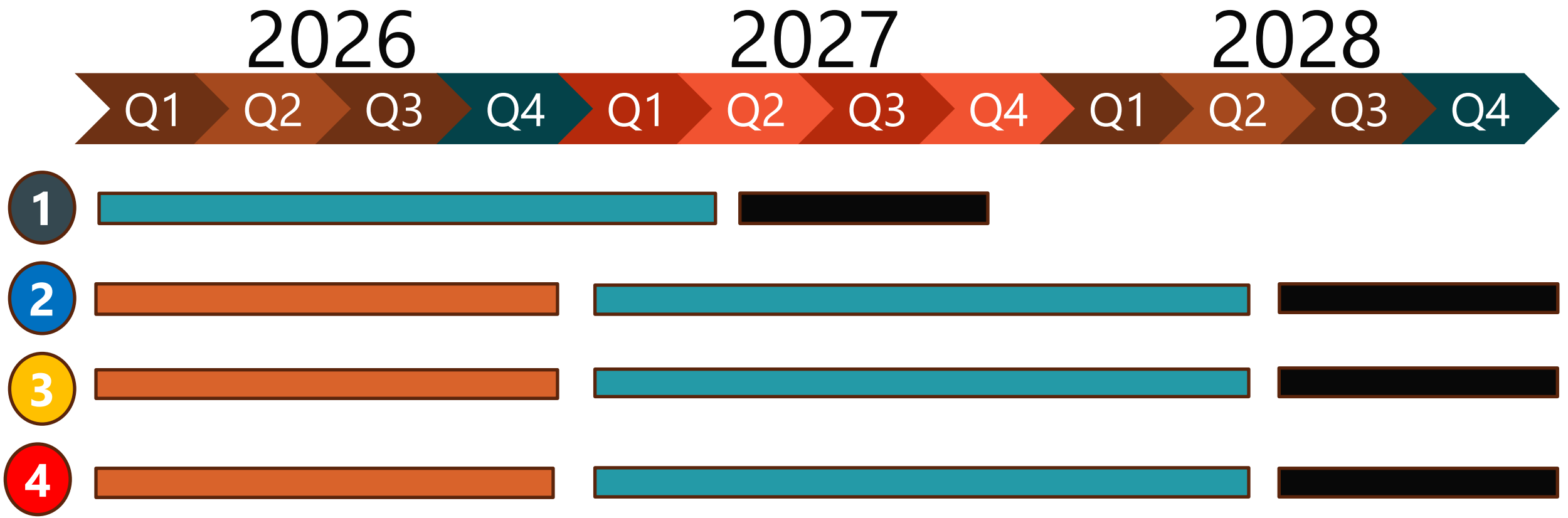


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Project Name (Sponsor)	Status	Project Cost	River miles & Acres
MS Newuakum RM 7-9 (Lewis CD) 1	Pre-Construct	~$ 3 mil	0.8 Miles 3.5 Acres
SF Newaukum RM 12.5-13 (Lewis CD) 2	Design	~$ 300K	0.3 Miles 3 Acres
SF Newaukum RM 13.5-14 (Lewis CD) 3	Design	~$ 300K	.02 Miles 1.5 Acres
SF Newaukum RM 14.5 (Lewis CD) 4	Design	~$ 300K	0.3 Miles 2.0 Acres

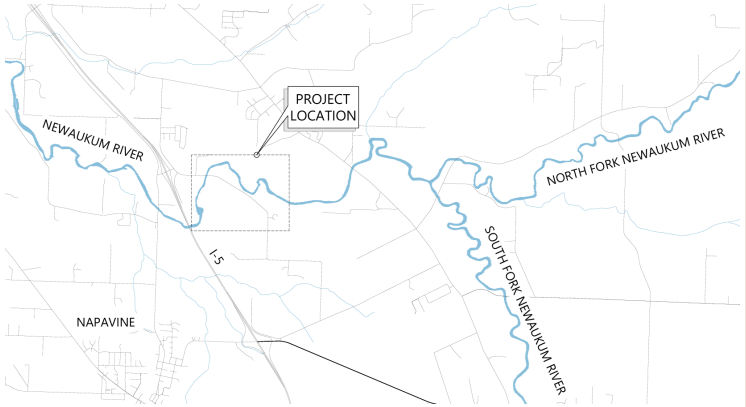
	Bank Structure	ELJs	Side Channel Creation	Planting/ Invasive control
Water Temp	1 3 4	1 2 3 4	1 2 3 4	1 2 3 4
Winter High Flow Refugia			1 2 3 4	
Side Channel Habitat			1 2 3 4	
Floodplain Connection			1 2 3 4	
Habitat Diversity	1 3 4	1 2 3 4		1 2 3 4
Sediment Storage				1 2 3 4
Summer Low Flow				1 2 3 4
Total (Structures, Acres, etc)	1 1,200 ft 3 120 ft 4 450 ft	1 5 ELJ's 2 2 ELJ's 3 1 ELJ's 4 10 ELJ's	1 950 ft 2 700 ft 3 400 ft 4 1,000 ft	1 3.5 Acres 2 3.0 Acres 3 1.5 Acres 4 2.0 Acres

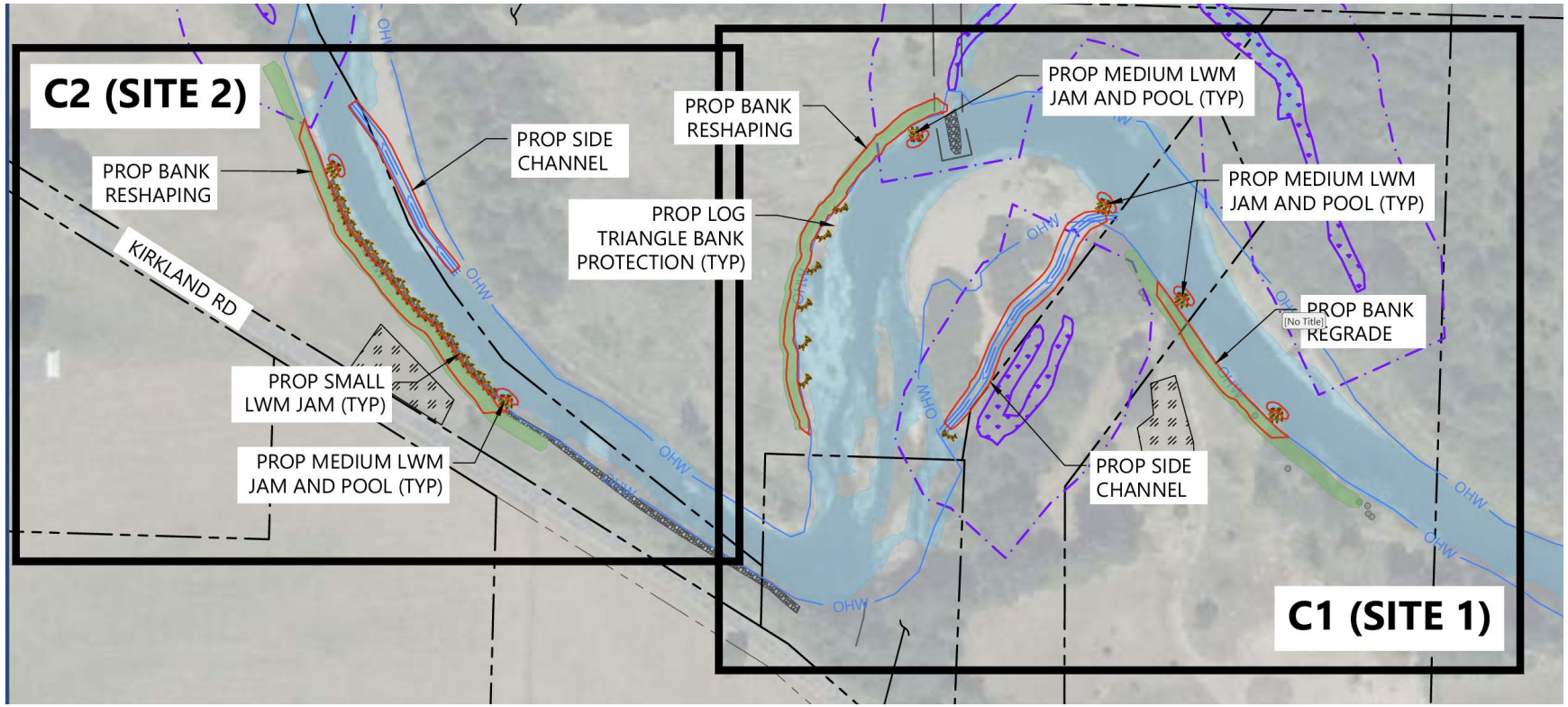
PROJECT TIMELINE

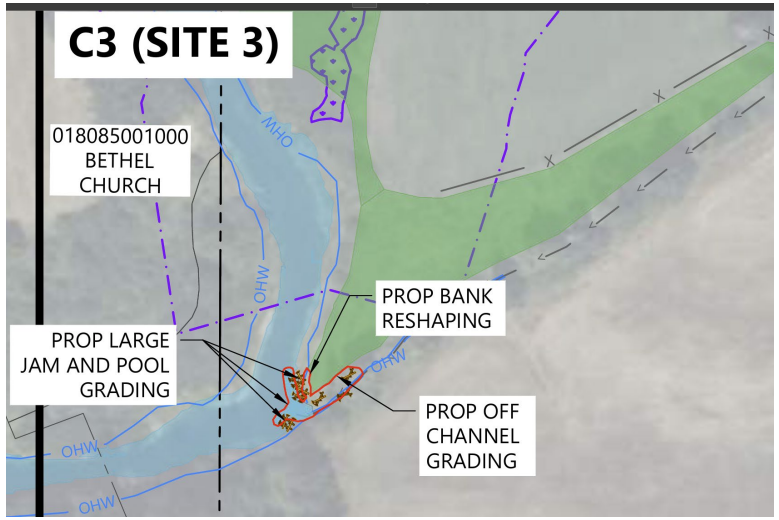


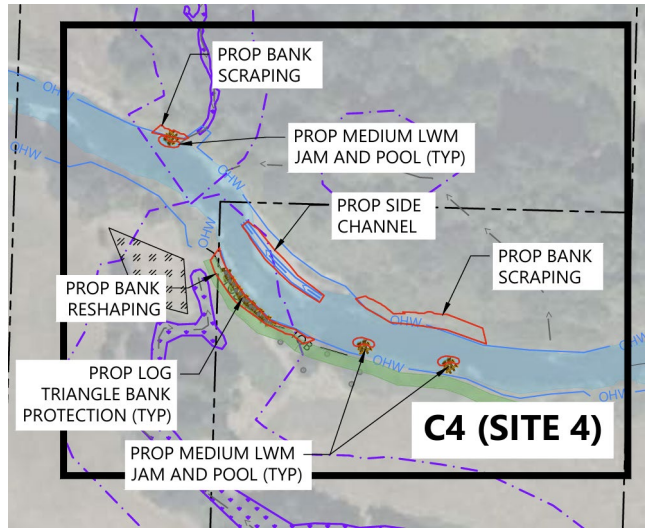
Office of Chehalis Basin

Site 1 1



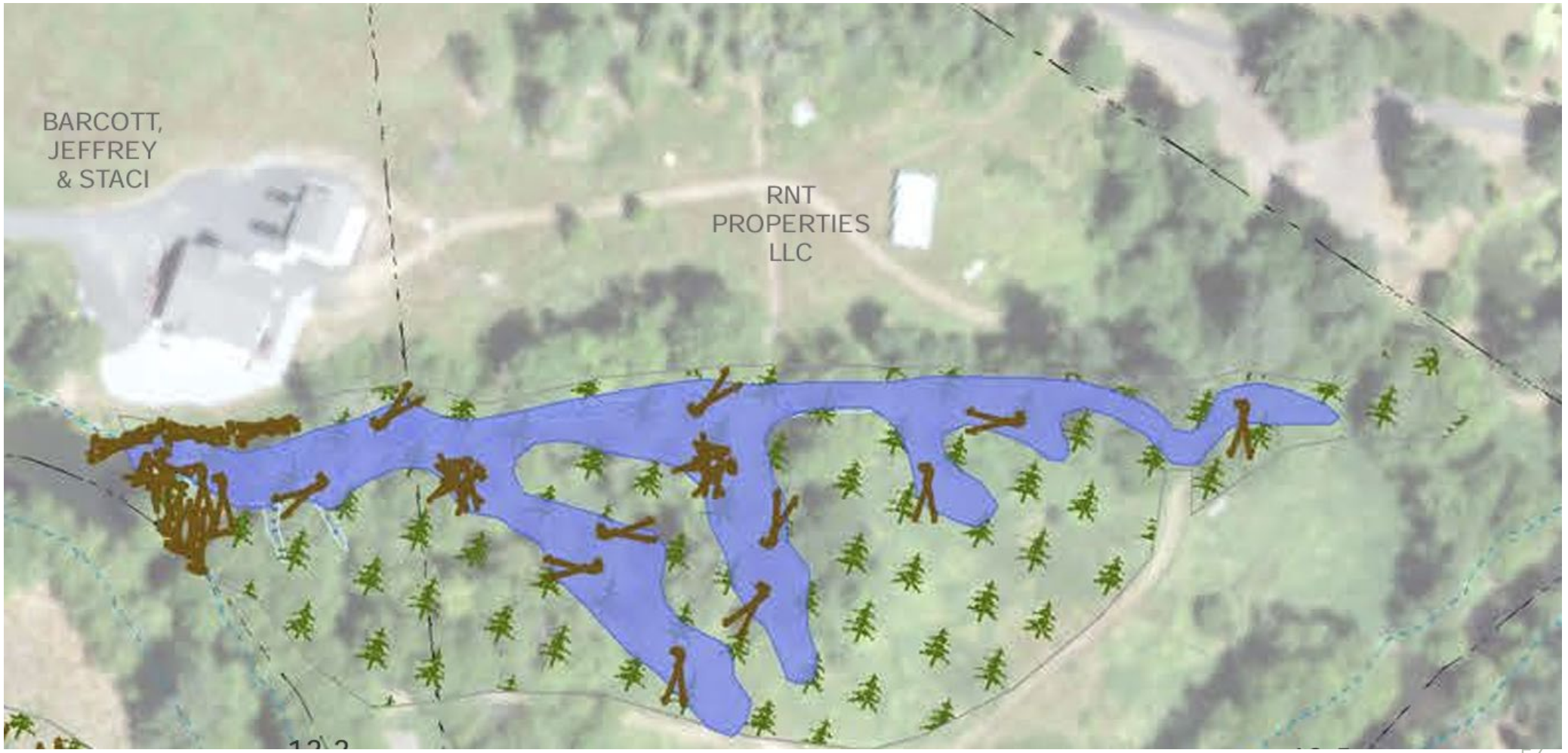






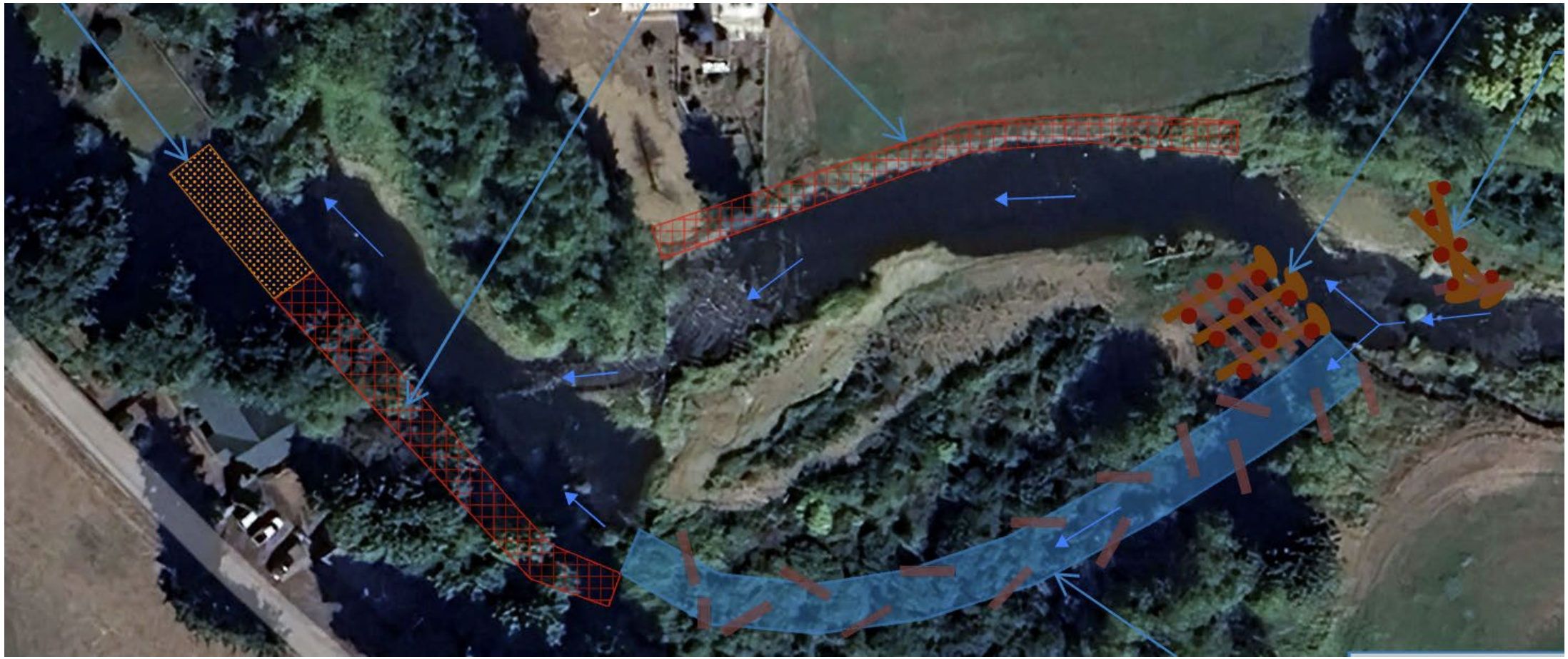
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Site 2 2



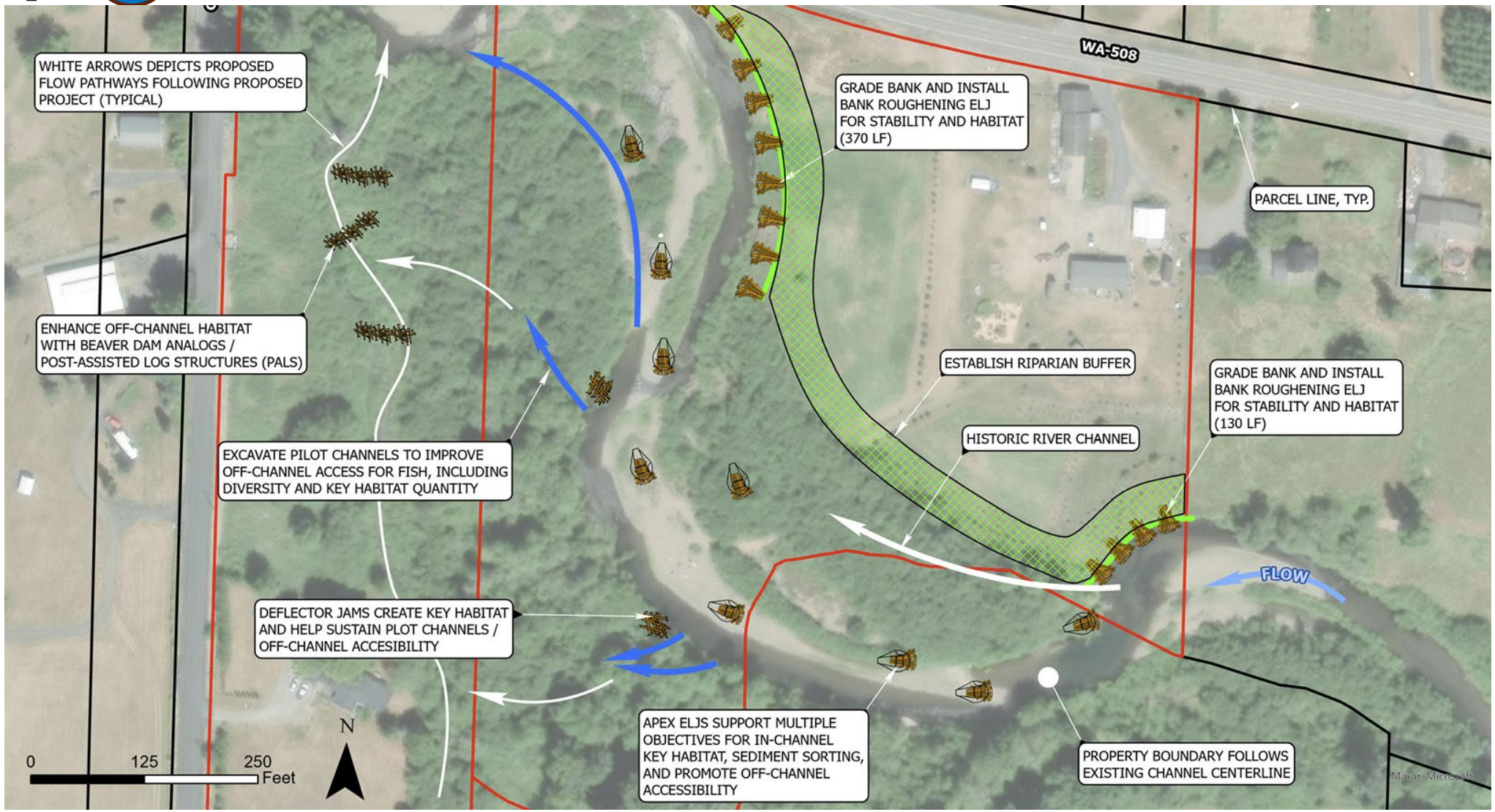
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Site 3 3



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Site 4 4



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QUESTIONS?



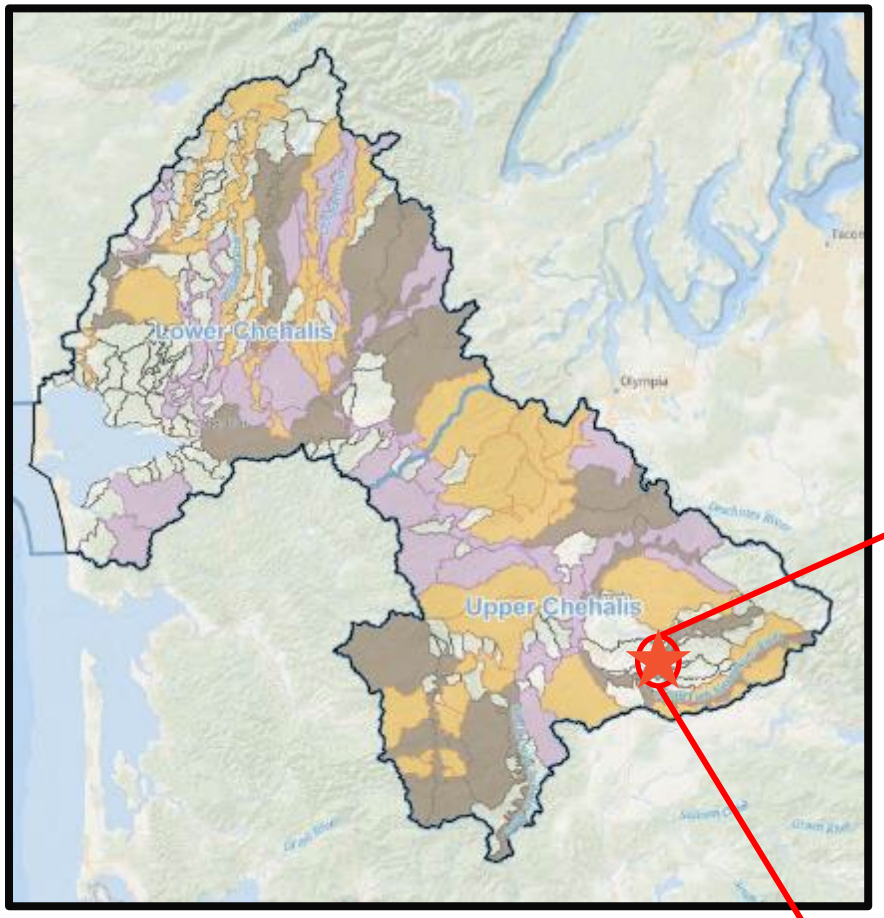
NORTH FORK NEWAUKUM

NIKKI ATKINS & MARISSA BRIGGS

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Site 4 4

N Fork Rd

Site 3 3

Lucas Crk

Centralia Alpha RD

N Fork Newaukum

N Fork Rd

2

Site 2

1

Site 1

Tauscher RD

WASHINGTON

-122.828, 46.609

M Fork Newaukum

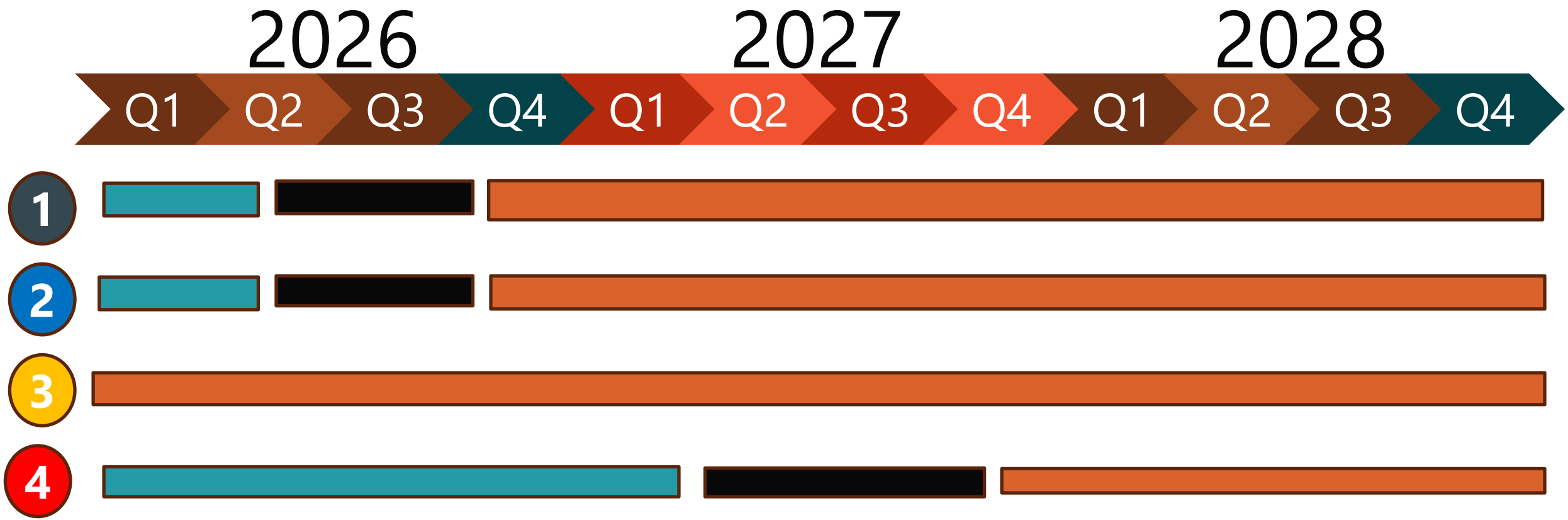
N

1 mile

Project Name (Sponsor)	Status	Cost – Construction	River miles & Acres
NF Newaukum site 1 (Lewis CD) 1	Constructed /Planting	$ 776,310	0.46 Miles 5.26 Acres
NF Newaukum site 2 (Lewis CD) 2	Constructed /Planting	$1,643,151	0.75 Miles 12 Acres
NF Newaukum site 3 (Lewis CD) 3	Complete	$ 271,318	0.062 Miles 0.28 Acres
NF Newaukum site 4 (Lewis CD) 4	Design	$~300,000	0.06 Miles 0.30 Acres

	Flood Swale	Bank Structures	ELJs	Side Channel Creation	Planting / Invasive
Water Temp		1 2 3 4	1 2	1 2 3	1 2 3 4
Winter High Flow Refugia	2	1 2 3 4	1 2	1 2 3	
Side Channel Habitat			1 2	1 2 3	
Floodplain Connection	2		1 2	1 2 3	
Habitat Diversity	2	1 2 3 4	1 2	1 2 3	1 2 3 4
Sediment Storage					1 2 3 4
Summer Low Flow					1 2 3 4
Total (Structures, Acres, etc)	2 1910’	1 1 2 3 3 1 4 1	1 5 2 14	1 1100 ft 2 1065 ft 3 250 ft	1 5.2 Acres 2 12 Acres 3 0.3 Acres 4 0.3 Acres

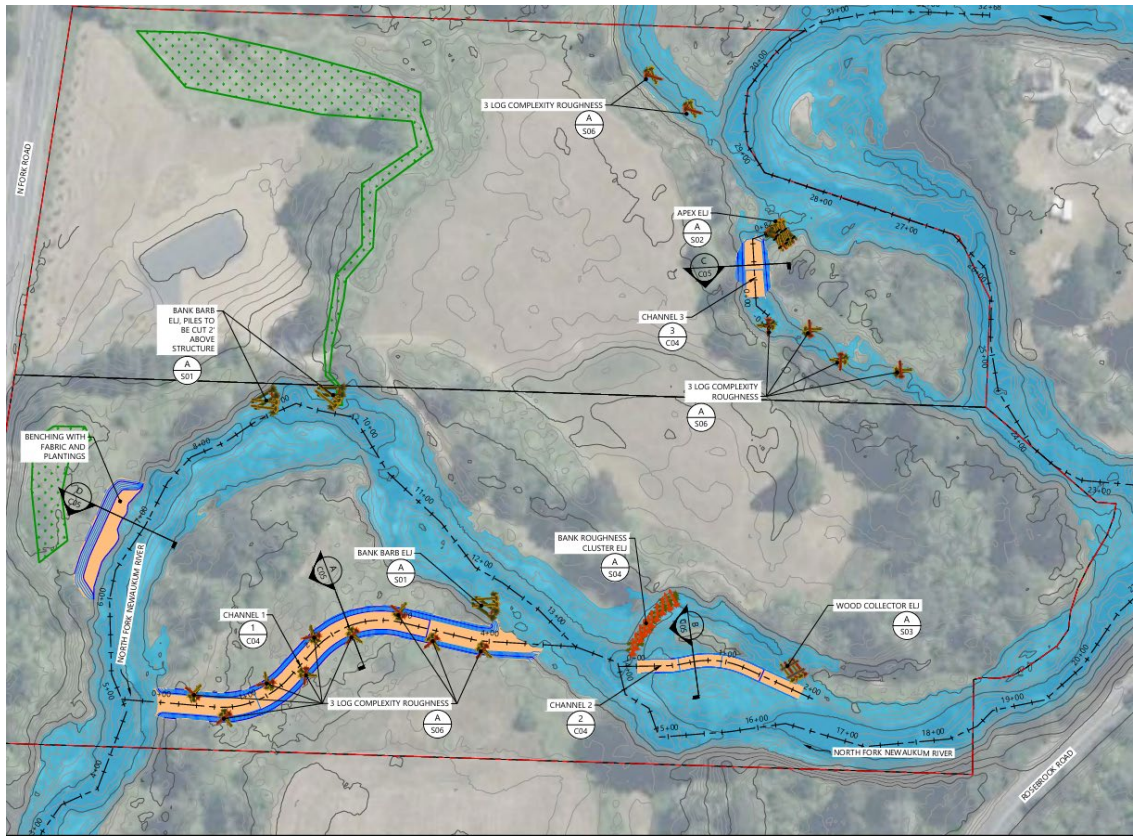
PROJECT TIMELINE



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Site 1 1







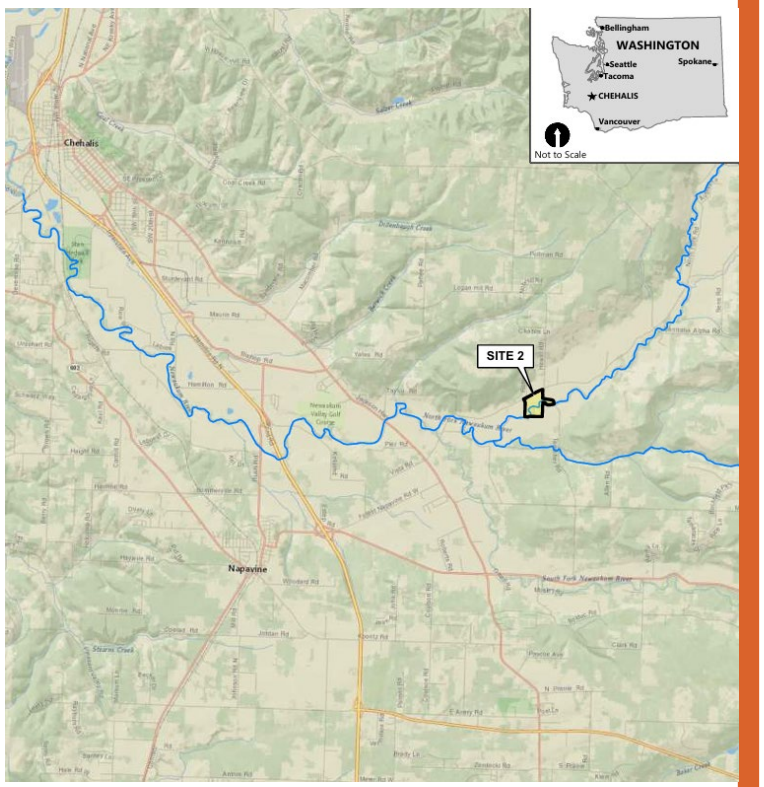




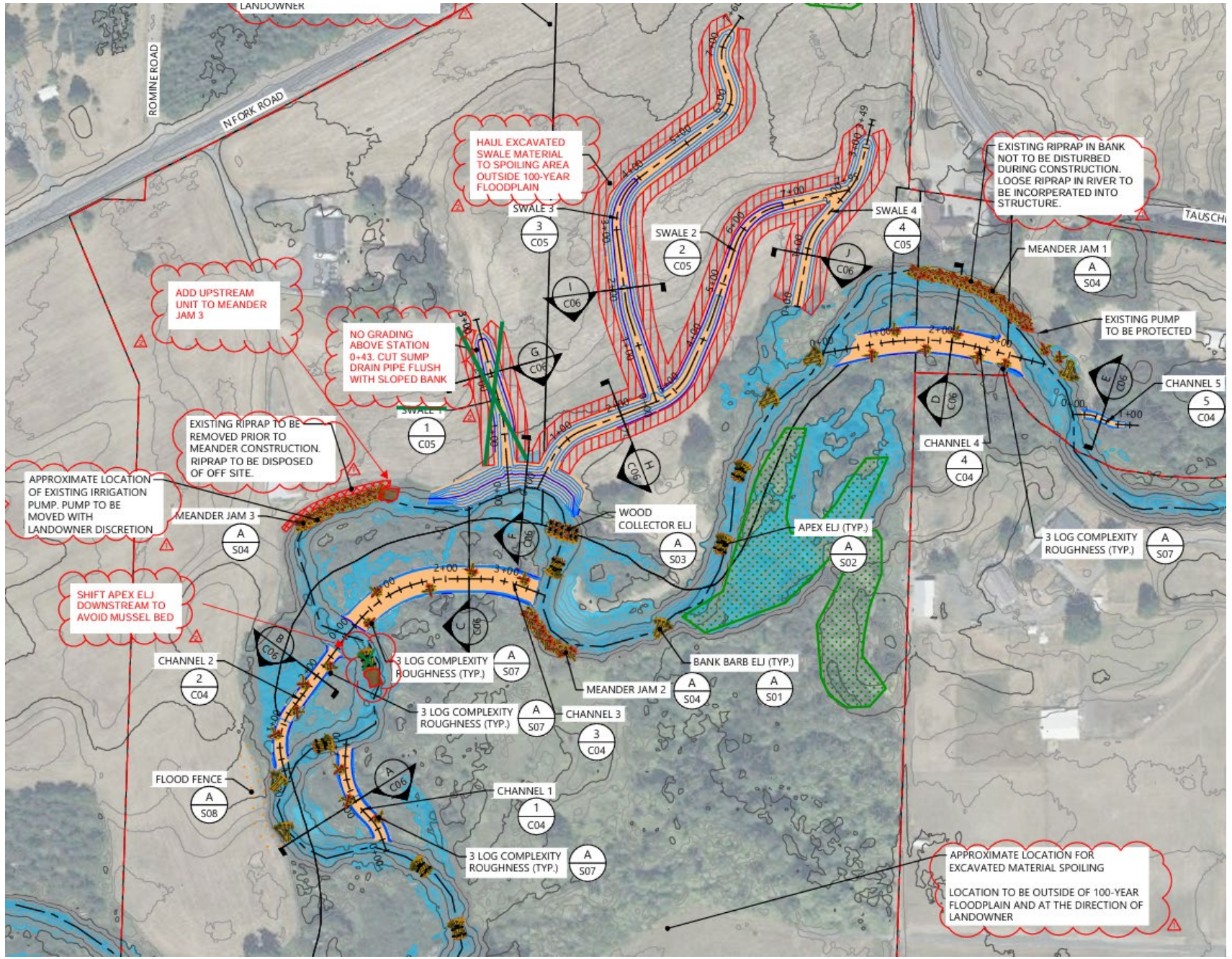


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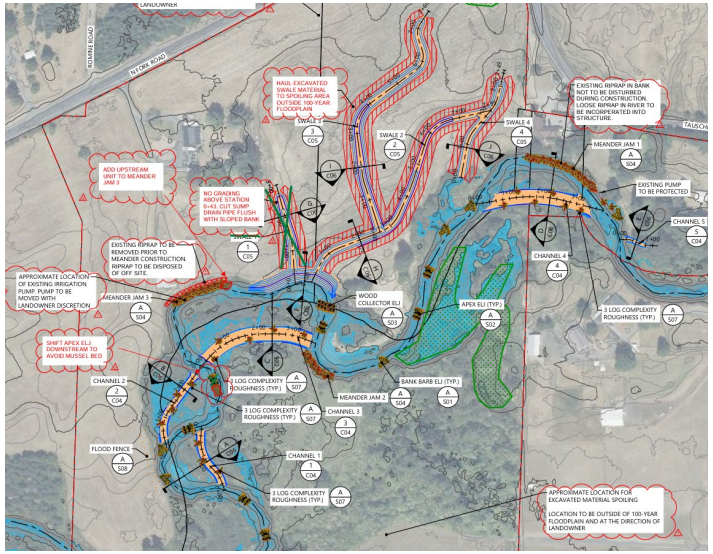
Site 2 2



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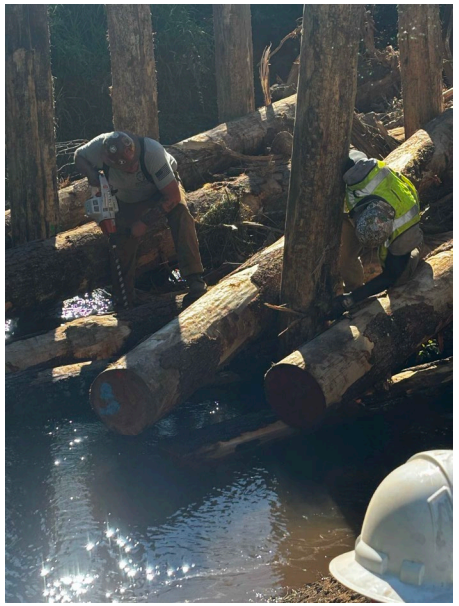


Site 2







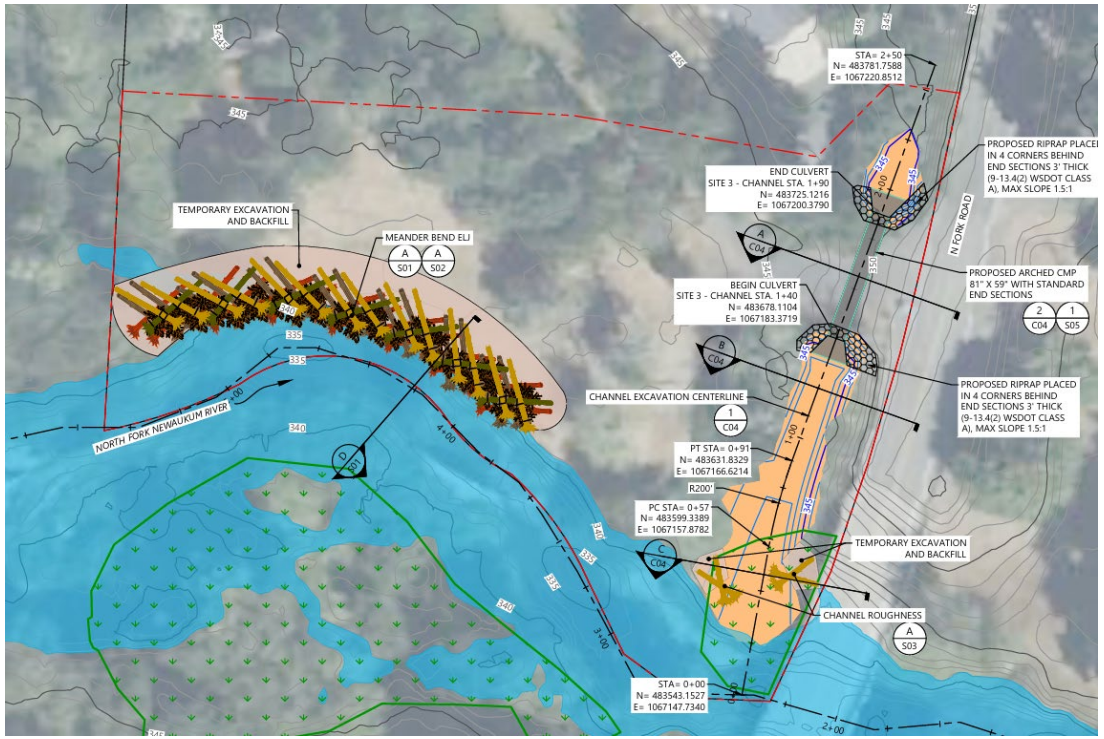




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Site 3 3





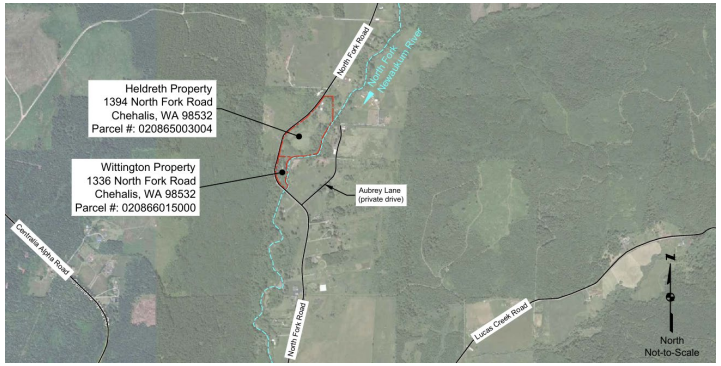


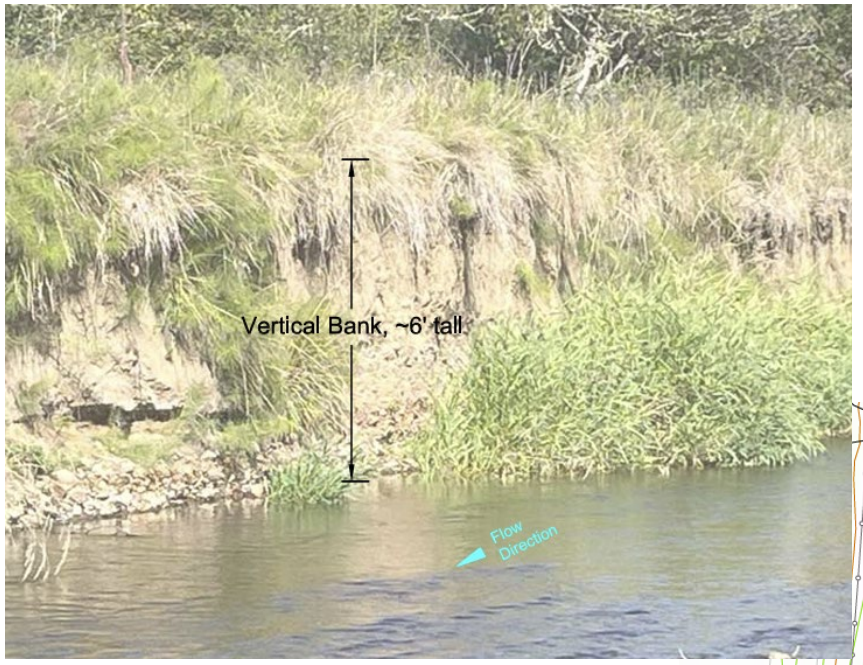


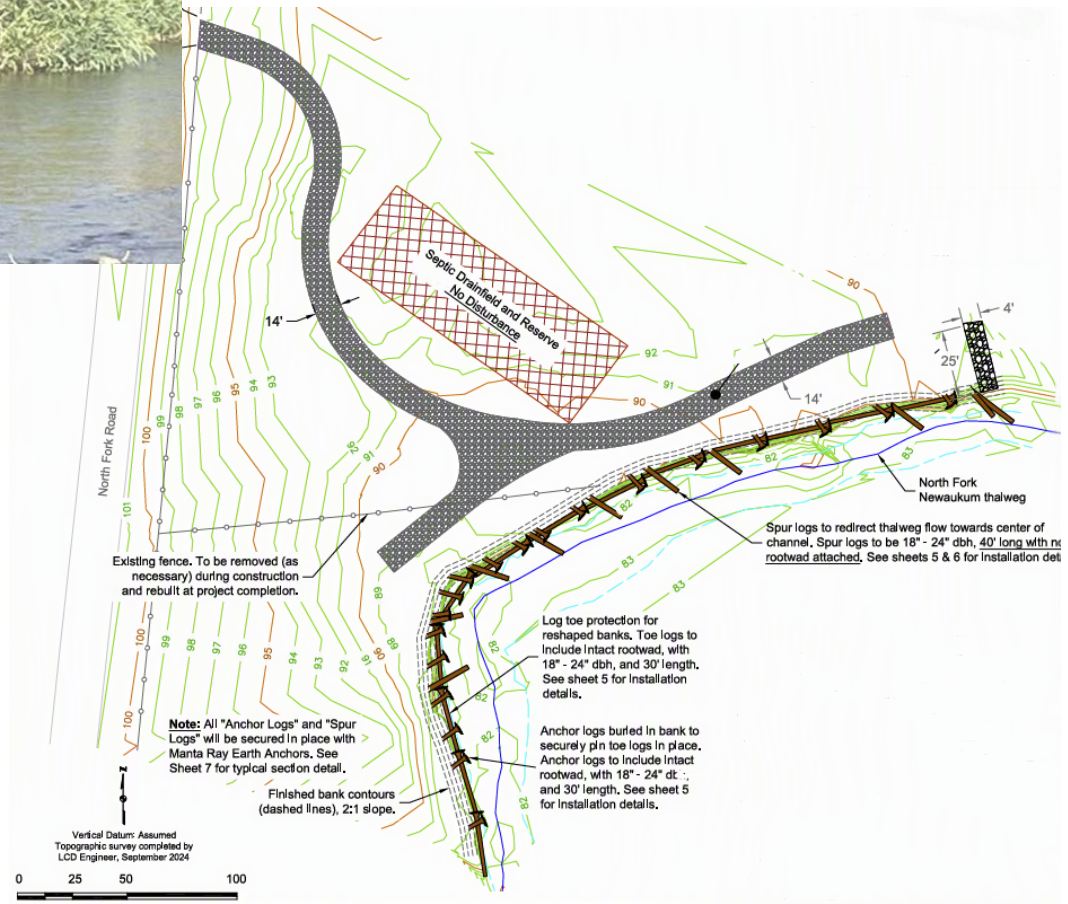


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Site 4 4







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LESSONS LEARNED/ REMAINING QUESTIONS

- Difficult to estimate future construction pricing, but if you wait to request funds it can push a project out a year.
- Complete mussel surveys early, preferably the year before the scheduled construction so if plans need modified there is plenty of time to do so.
- Ownership dynamics can change quickly changing project goals and expectations.

MILL CREEK PLANTING

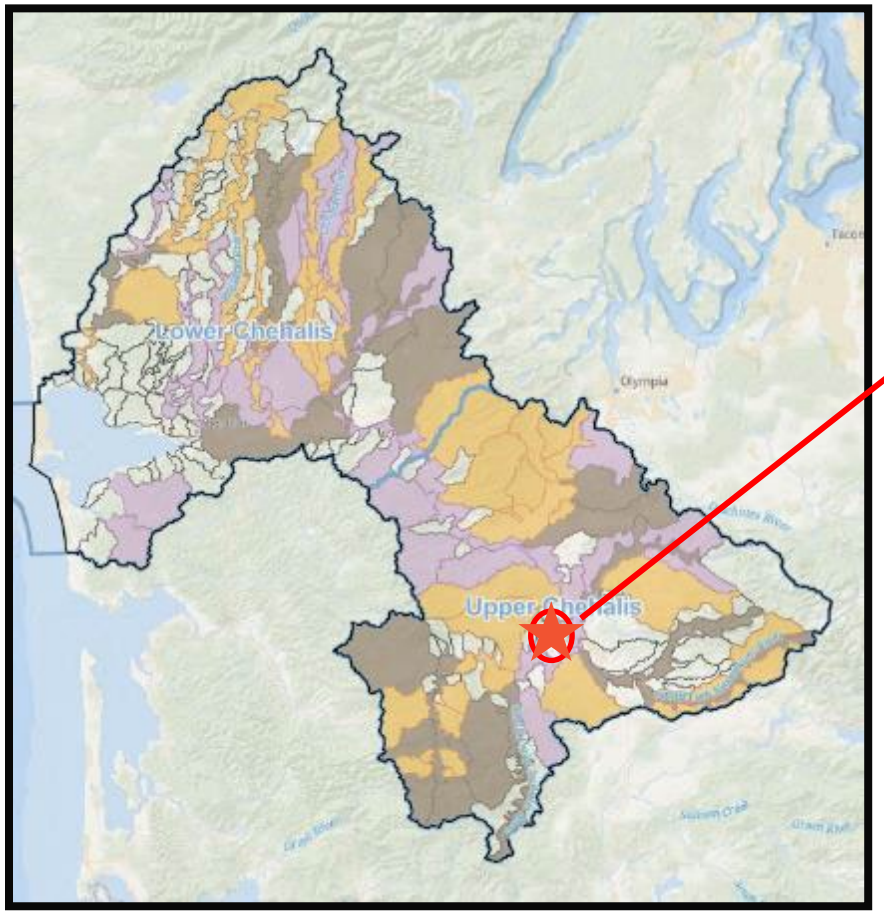
KELLY VERD

October 14, 2026

ASRP Progress & Planning Workshop

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Site

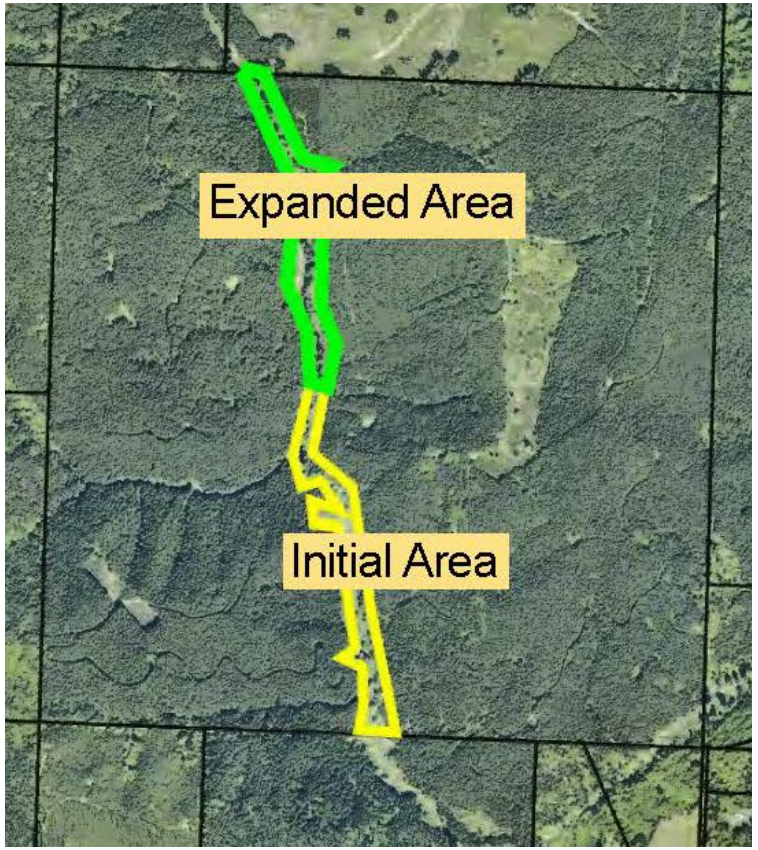
Mill Creek
Coal Creek
Van Ornum Creek
Jefferies Rd
Wisner Creek Rd
McAuley Dr
Chilvers Rd
Kray Rd
McLaughlin Rd
Dieckman Rd
Stearns Rd
Bunker Creek Rd
Clinton Rd
Fay Rd
Goff Rd
Curtis Hill Rd
Penning Rd
Budgett Ln
Claquato
Littell
Adna
810 ft
787 ft
599 ft
617 ft
455 ft
492 ft
415 ft
6

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, CNES/Airbus DS, InterMap, NASA/METI, NASA/NGS and the GIS User Community

Project Name (Sponsor)	Status	Project Cost	River miles & Acres
Mill Creek Planting RM 4.5 (Lewis CD)	Ongoing	$117,300 (SRFB)	2.04 Miles 21 Acres
Mill Creek Planting RM 4.5 (Lewis CD)	Ongoing (But ASRP Portion has been spent)	$40,000 (ASRP)	

	BDAs/ PALS	ELJs	Side Channel Creation	Planting/ Invasive control
Water Temp				1
Winter High Flow Refugia				1
Side Channel Habitat				
Floodplain Connection				1
Habitat Diversity				1
Sediment Storage				1
Summer Low Flow				1
Total (Structures, Acres, etc)				1 21 Acres 23,000 willows/trees/ shrubs planted

Site 1 1









Office of Chehalis Basin

LESSONS LEARNED/ REMAINING QUESTIONS

- Caged tree survival has been excellent
- Over planting helps to deal with browse
- Control of canary grass has led to natural recruitment
- Low tech restoration can be valuable
- Concurrent study on dragonfly larva and heavy metals being conducted by Oregon State University



NEWAUKUM RIVER_RM6.7-7.1_LANDACQUISITION_PHASE1B

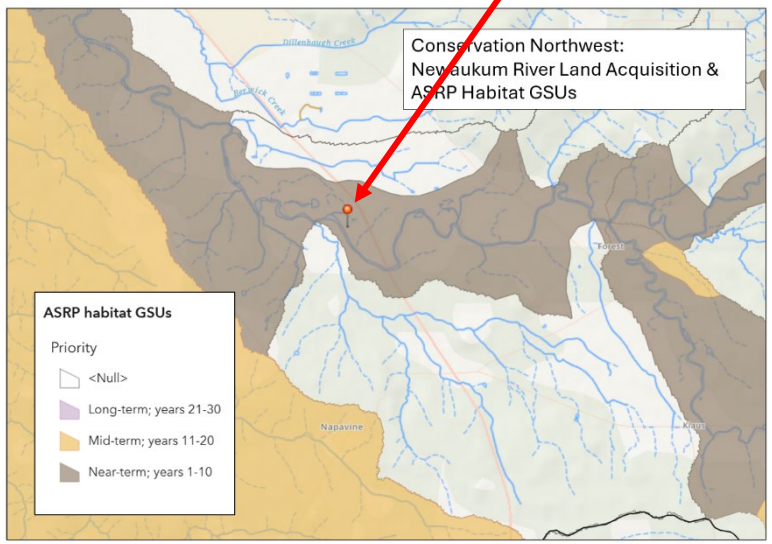
CHEHALIS BASIN STRATEGY

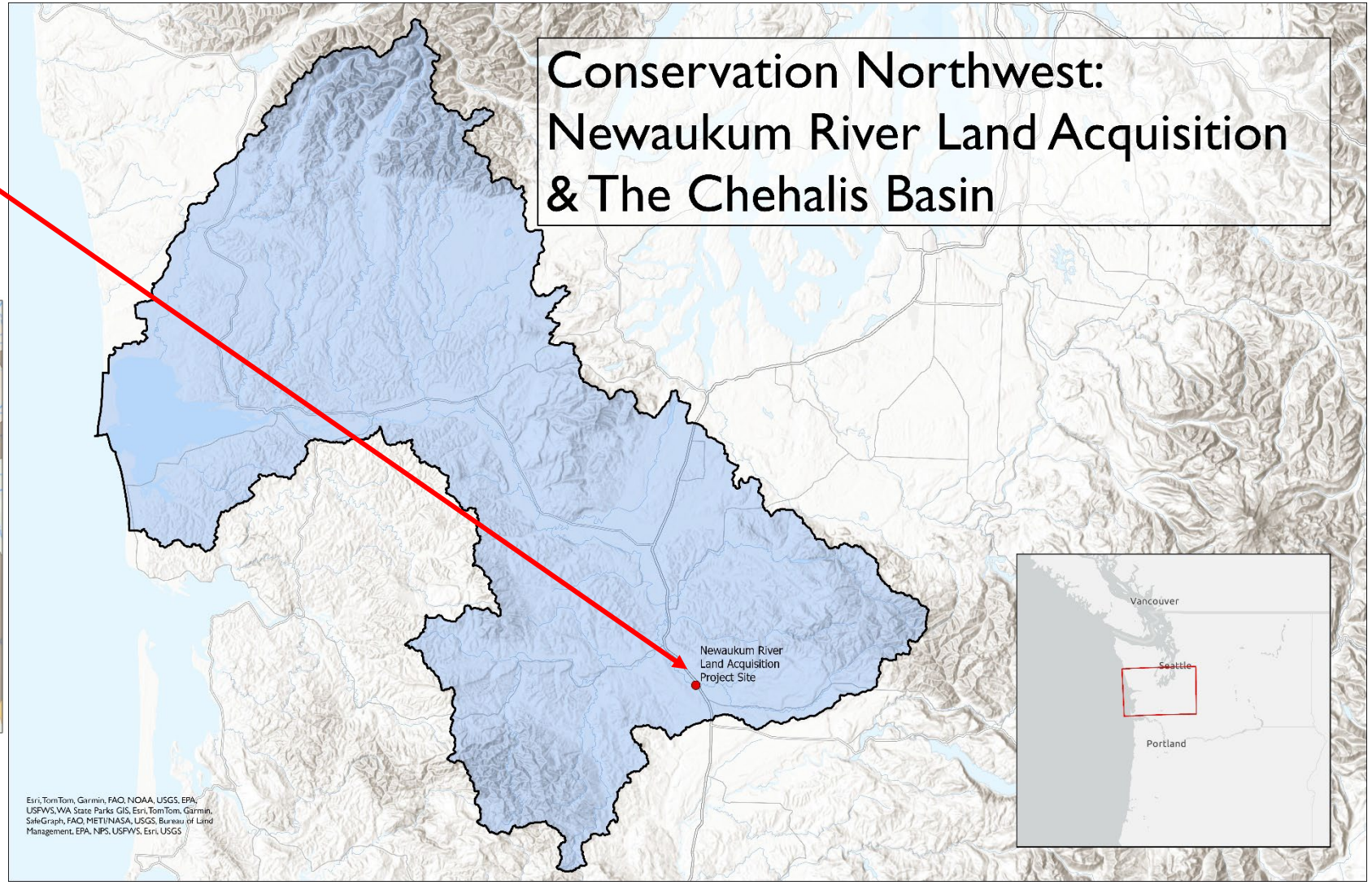
CONTACT: VANESSA LAVALLE, CONSERVATION NORTHWEST

NEWAUKUM RIVER_RM6.7-7.1_LANDACQUISITION_PHASE1B

: BASIN LOCATION

122.9109544° W, 46.6037636° N





CHEHALIS BASIN STRATEGY

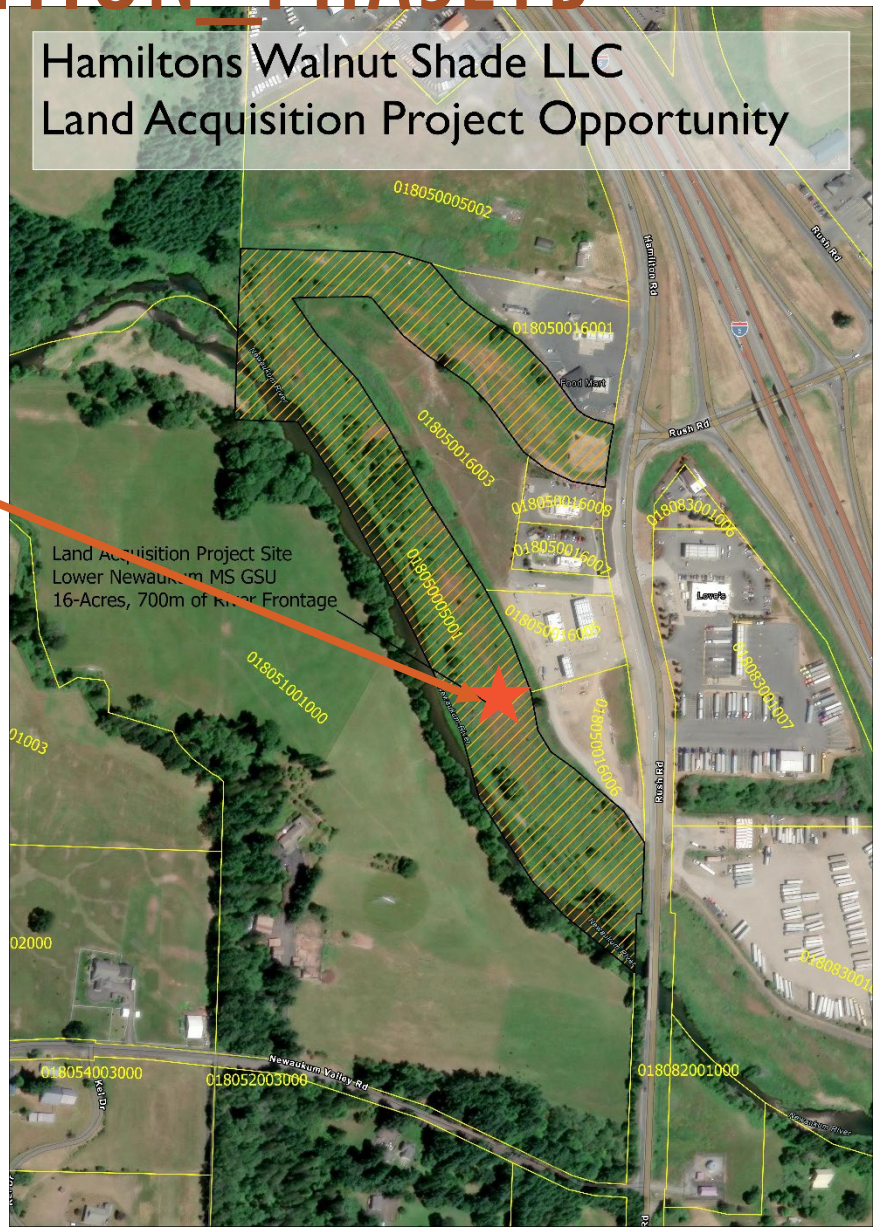
NEWAUKUM RIVER_RM6.7-7.1_LANDACQUISITION_PHASE1B

: CONTEXT AND DEVELOPMENT

This opportunity proposal has been made possible by a ASRP project development grant “Satsop and Newaukum Riparian Connectivity Strategy” beginning in March 2024 involving landowner outreach and stakeholder coordination to scope out riparian conservation and restoration opportunities.

Conserve 19 acres of land with 700 meters (.43 miles) of riverfront on N side of the Newaukum River, NW of the Rush Road bridge in Napavine. This parcel is critical for several reasons:

- Rapid development is occurring around the property, and the landowner has indicated that the land has the potential to be developed for residential housing. Owner is not interested in an environmental easement and is advertising the parcel to be sold.



CHEHALIS BASIN STRATEGY

NEWAUKUM RIVER_RM6.7-7.1_LANDACQUISITION_PHASE1B : SITE PHOTOS





CHEHALIS BASIN STRATEGY

NEWAUKUM RIVER_RM6.7-7.1_LANDACQUISITION_PHASE1B :

SITE PHOTOS





CHEHALIS BASIN STRATEGY



CHEHALIS WATER LEASE IMPLEMENTATION

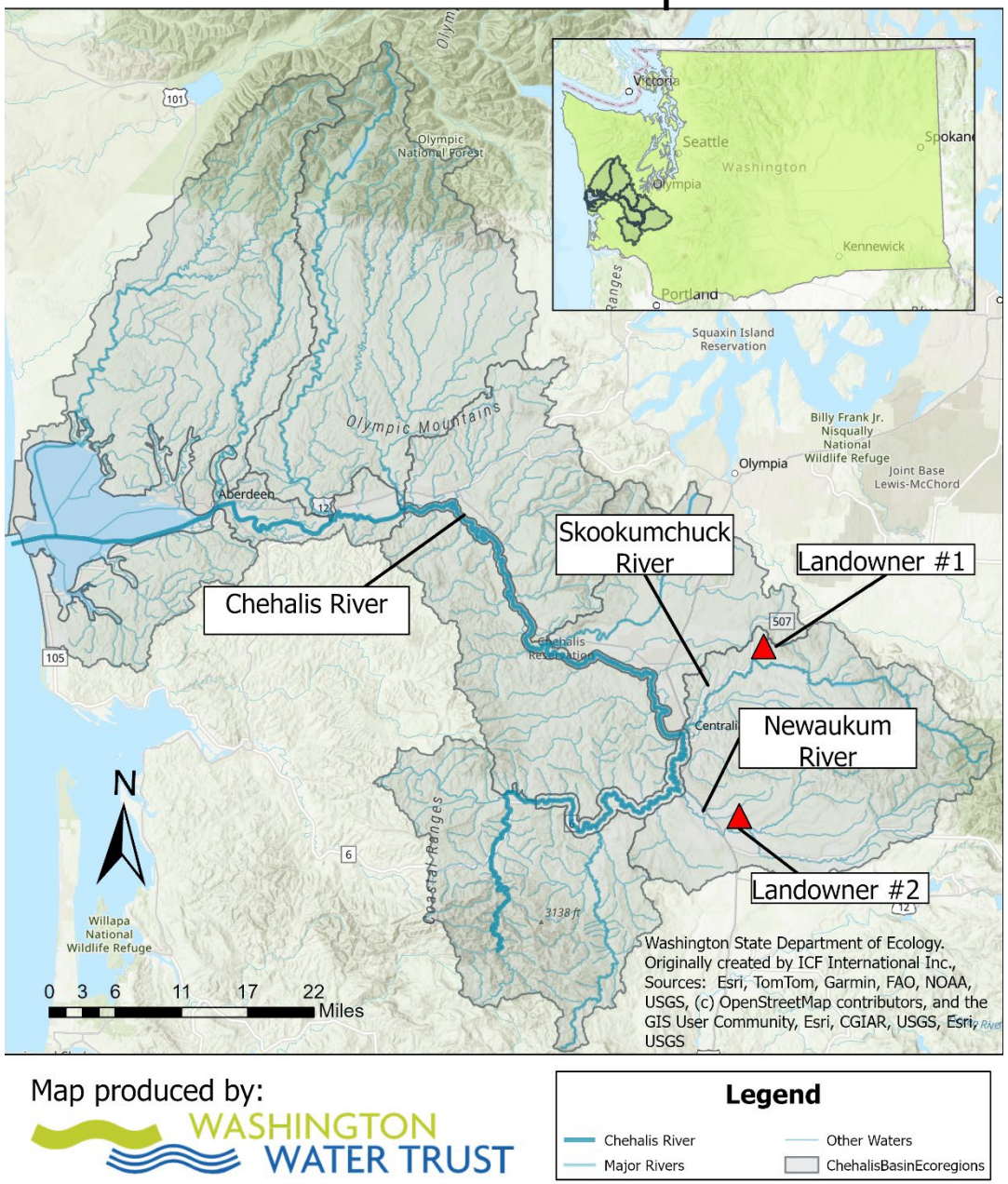
SKOOKUMCHUCK RIVER_RM13 AND NEWAUKUM RIVER_ RM8

CONTACT: MAX TRUJILLO, WASHINGTON WATER TRUST

WATER LEASE IMPLEMENTATION: OVERVIEW

- **Sponsor/Budget**: Washinton Water Trust/$62,507 Budget
- **Landowner type:** Agricultural
- **EcoRegion and** GSU**:** Cascade Mountains/Lower Skookumchuck MS & Lower Newaukum MS
- **ASRP Grant Category:** Priority Project
- **ASRP Project Scope:** Acquisition and Protection Priority
- **ASRP Project Tasks:** Implementation
- **Short Description**: WWT intends to initiate termed water lease agreements with local water users
- **ASRP Priority Actions for this location:**
  - Lower Skookumchuck MS and Lower Newaukum MS: Place large wood (High), Reconnect/restore floodplain (High), Riparian restoration (High)
- **Limiting Factors this project addresses:** Temperature and low-flows
- **ASRP Species: Spring-run Chinook**; *Coho, Fall-run Chinook*

WATER LEASE IMPLEMENTATION: BASIN LOCATION



About the projects:

- Agricultural water leases
  - Lower Skookumchuck
  - Lower Newaukum
- Short-term (growing season)
- Acreage
  - Two projects spanning 151 acres
- Senior water rights users
  - Water rights with Irrigation as purpose of Use
- Groundwater and surface water sources

WATER LEASE IMPLEMENTATION : OUTCOMES

- Project Goals
  - Improve surface water/groundwater conditions
    - Instream flow benefit
    - Groundwater preservation
  - Successful implementation of pilot lease project in basin
  - Landowner relationship building

- ASRP Priorities
  - Low-flow conditions
  - Water quality

- Target Metrics:

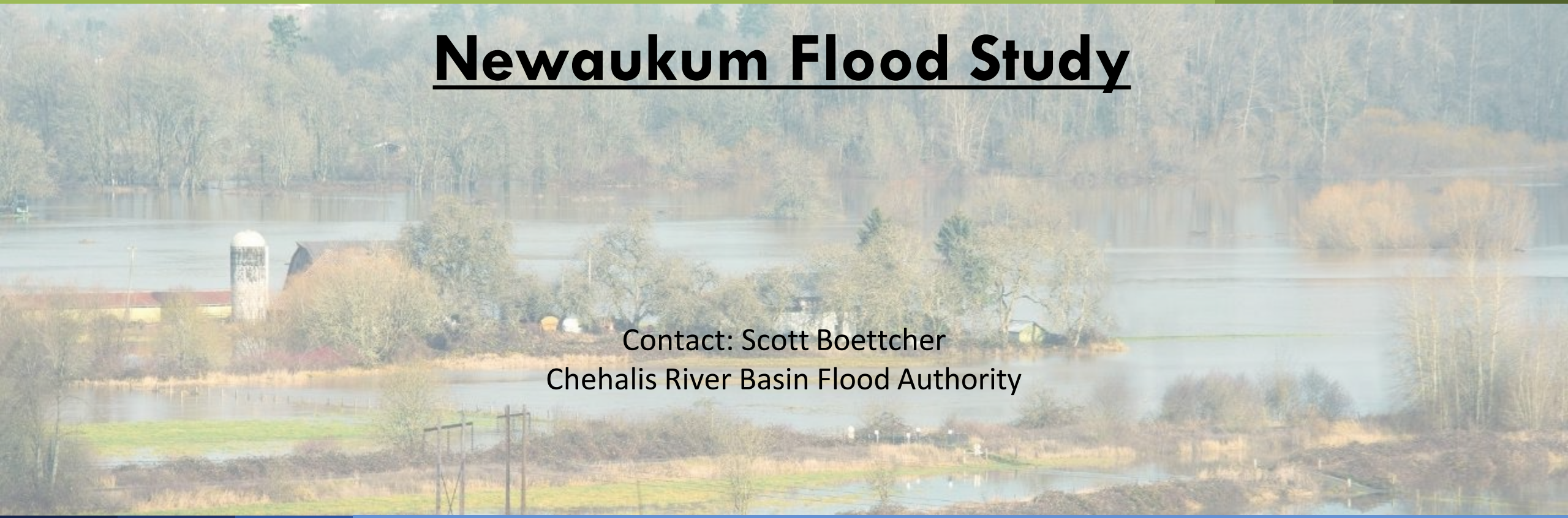
Project Metric	Value
Skookumchuck River Seasonal Groundwater Withdrawal Reduction/Groundwater Preservation (acre-feet)	200
Newaukum River Seasonal instream flow (cfs)	0.33
Newaukum River miles of instream flow benefit	8
Chehalis River miles of instream flow benefit	75
Fallowed Acreage	151



WATER LEASE IMPLEMENTATION : TIMELINE

Milestone	Date
Site Project Acreage/Area Confirmation	06/15/2026
Term Lease Agreement Signed	07/15/2026
Compliance Monitoring/Site Visits	06/2026 – 10/2026
Recorded Acq Documents	8/31/2026
Payment Delivery	11/30/2026
Compliance Monitoring Summary	11/30/2026
Project End Date	1/31/2027

Newaukum Flood Study



Contact: Scott Boettcher
Chehalis River Basin Flood Authority

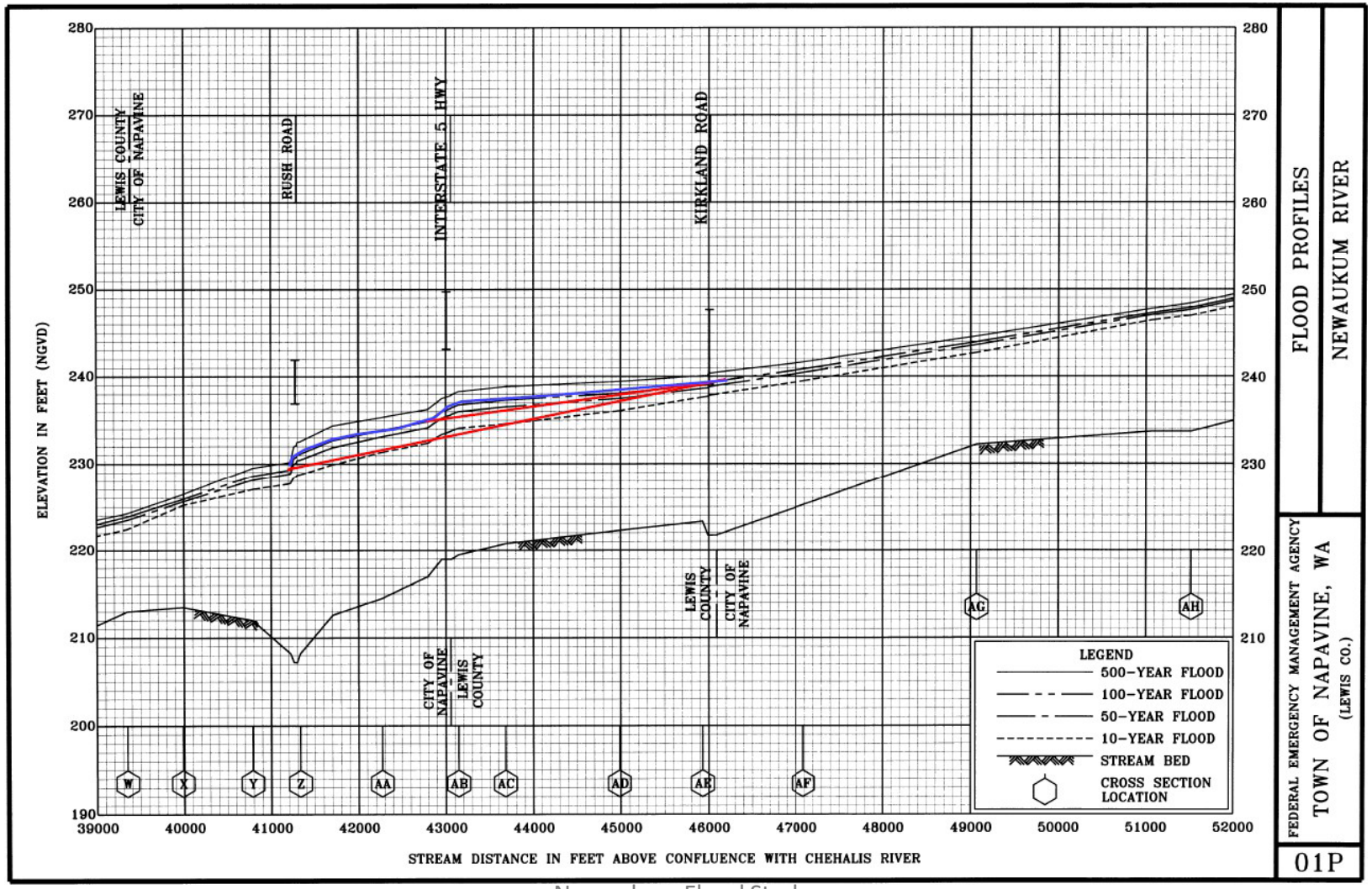
CHEHALIS RIVER BASIN FLOOD AUTHORITY

2026 -- USACE Newaukum Flood Study



1. Understand current flood risk.
2. **<u>Explore/evaluate strategies to reduce flood risk</u>**.
3. Use results to:
   - jump start future initiatives in the Newaukum River basin to reduce flooding for businesses, farms, and infrastructure near I5 river crossing
   - evaluate other flood risk reduction projects elsewhere in the watershed, which will benefit residents, other businesses and infrastructure.

Explore Strategies For Reducing Flood Risk



Long-term

Status

Completed -- Model has been developed.

Upcoming – Field work to validate model.

- Mainstem = Oct 27.
- North Fork = Oct 28.
- South Fork = Oct 29.

  - Need access points (parks, boat launches, bridges, etc.).
  - Need strong cell signal.
  - Looking for high water marks on buildings or other vertical surfaces or debris lines.
  - **Looking for first-hand observations, pictures, video, contacts**.
  - Let Scott know if you want to participate!

Thank You

Scott Boettcher
Staff, Chehalis River Basin Flood Authority
scottb@sbgh-partners.com
360-480-6600