

Partnering on Dungeness River Drought Response



Shawn Hines
Watershed Planner
Jamestown S'Klallam Tribe



Victoria

Strait of Juan de Fuca

Salish Sea

Port Angeles

Port Townsend

Sequim

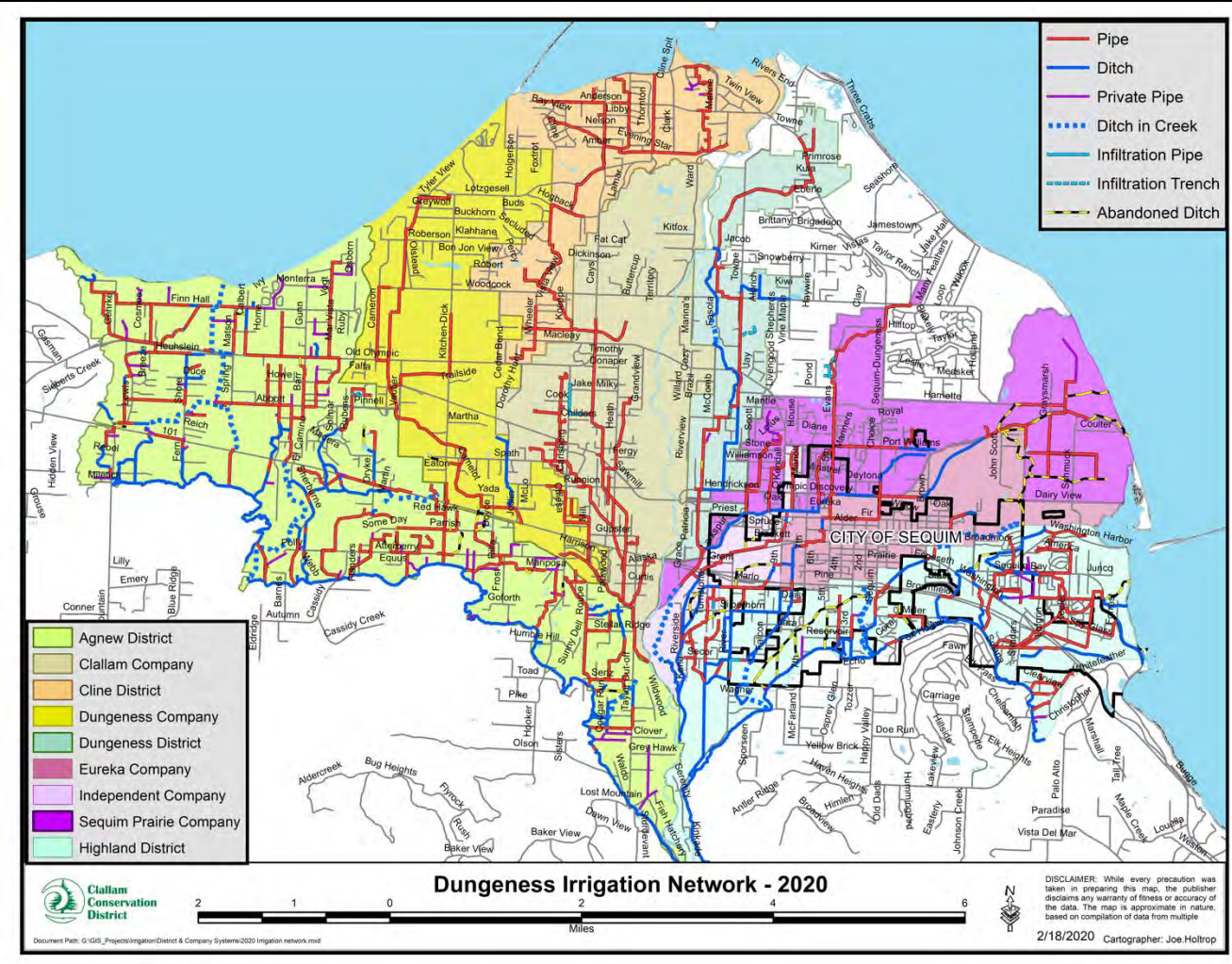
Dungeness Watershed

Blyn

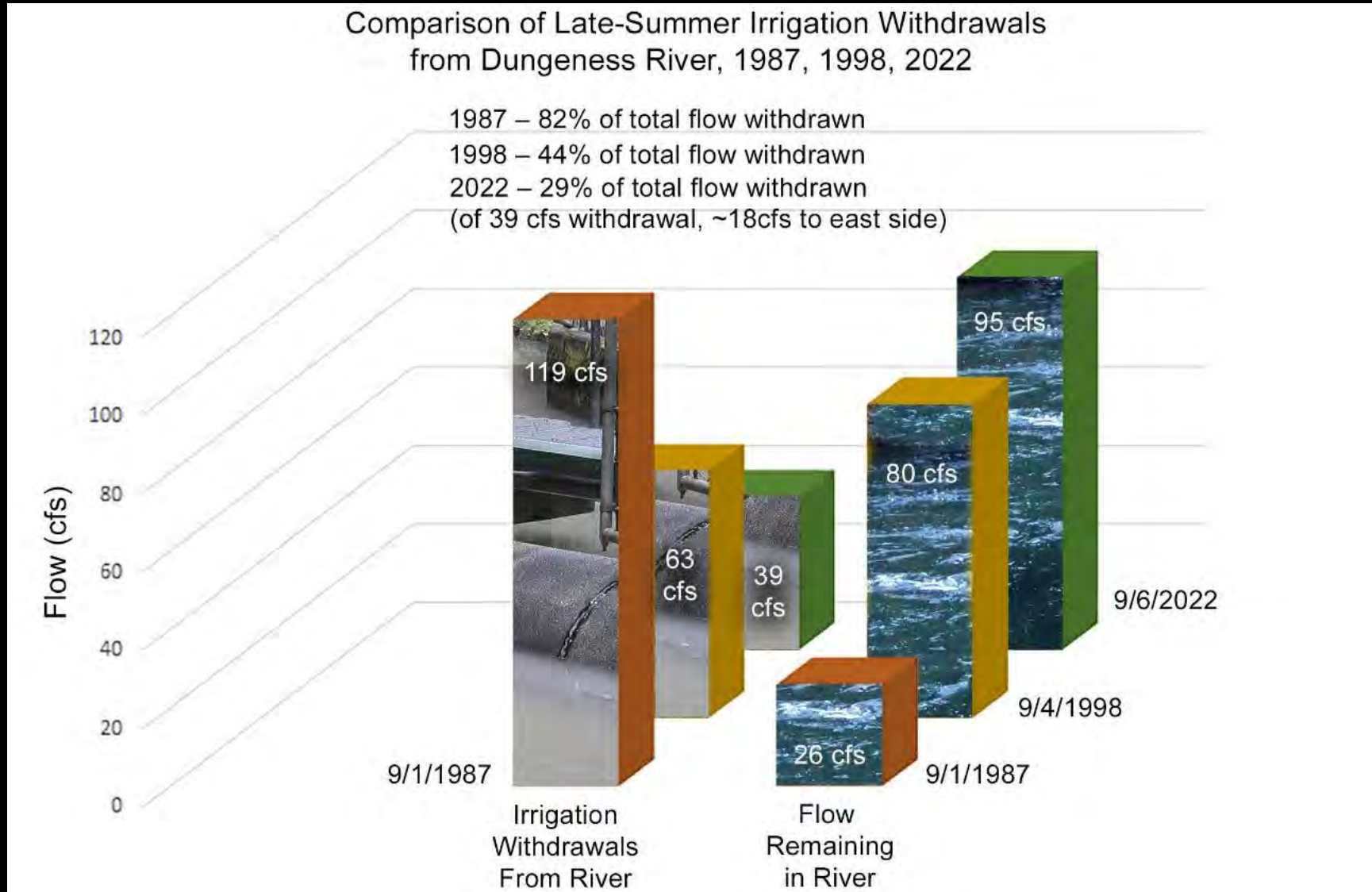
JST Tribal Campus

Hood Canal

Seattle



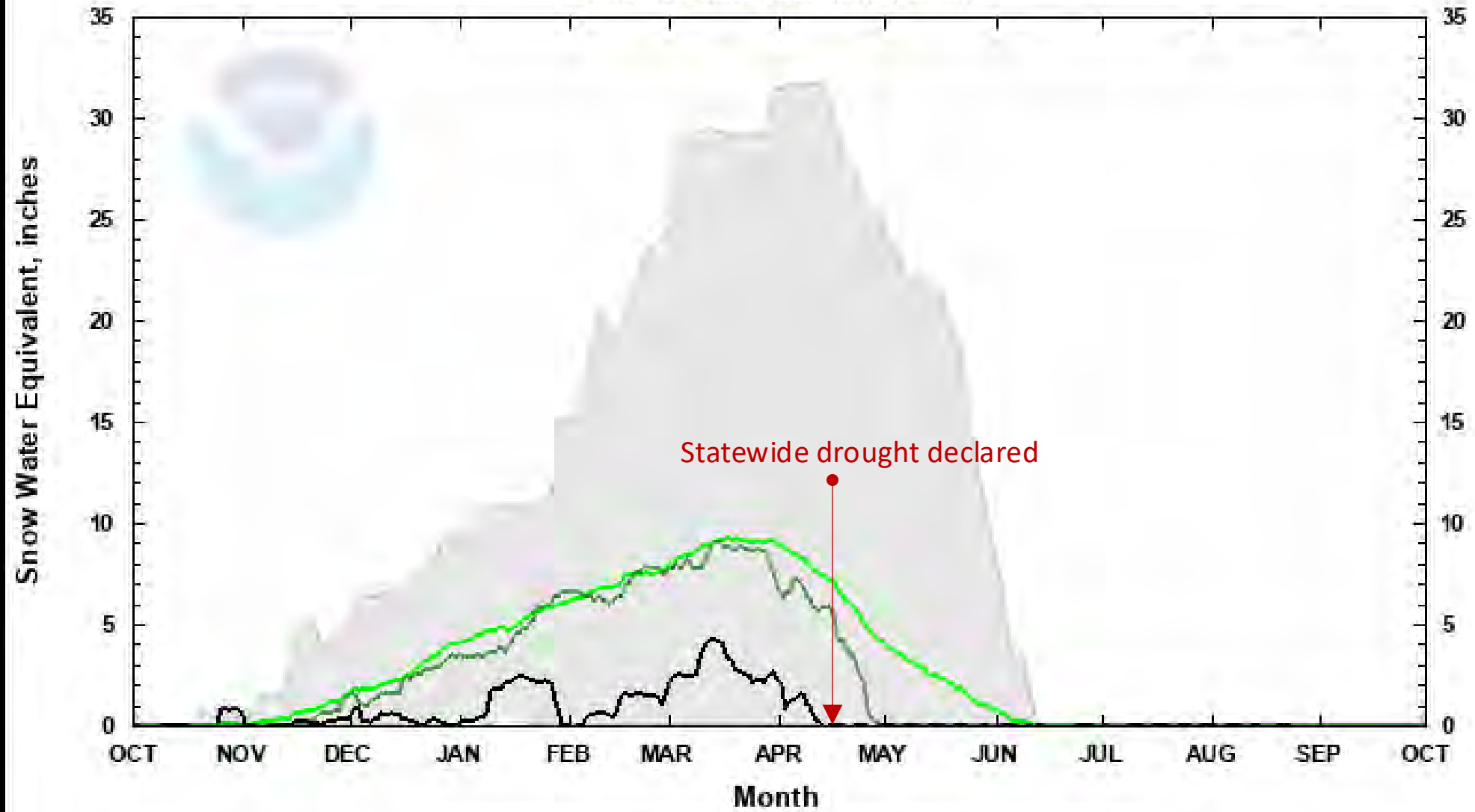
History of low flows, irrigation, partnerships



Snow Water Equivalent

DUNGENESS SNOTEL

Water Year 2024 - Elevation 4100 feet



□ POR Range — 30Yr Avg — 30Yr Med — SWE Obs

Partnering on Dungeness River Drought Response - Summary

1. Collaborated on strategies and funding
2. Tracked low flows and ID'd fish passage barriers
3. Assisted fish passage near barrier riffles
4. Implemented two flow restoration programs
5. Acoustically tracked Chinook movements during drought response
6. Drought outreach/education



Rock dams installed in
barrier riffle reach of
Dungeness River

2024 Fish Passage Near Barrier Riffles

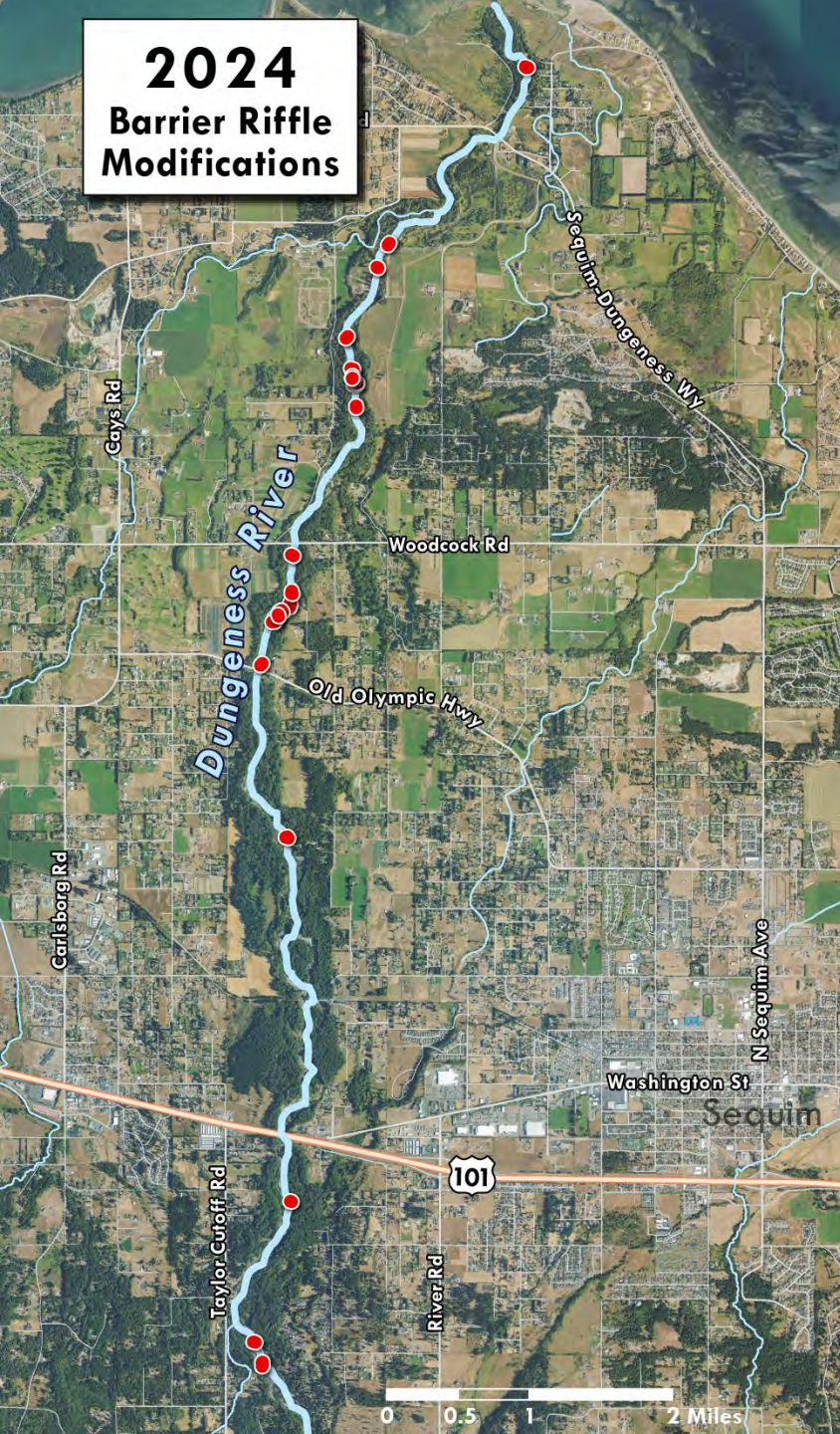
- Installed aqua-dams and constructed rock dams to direct fish passage
- JST worked with WCC crew provided by Ecology
- Permitting by WDFW



2024 Fish Passage Near Barrier Riffles



**2024
Barrier Riffle
Modifications**

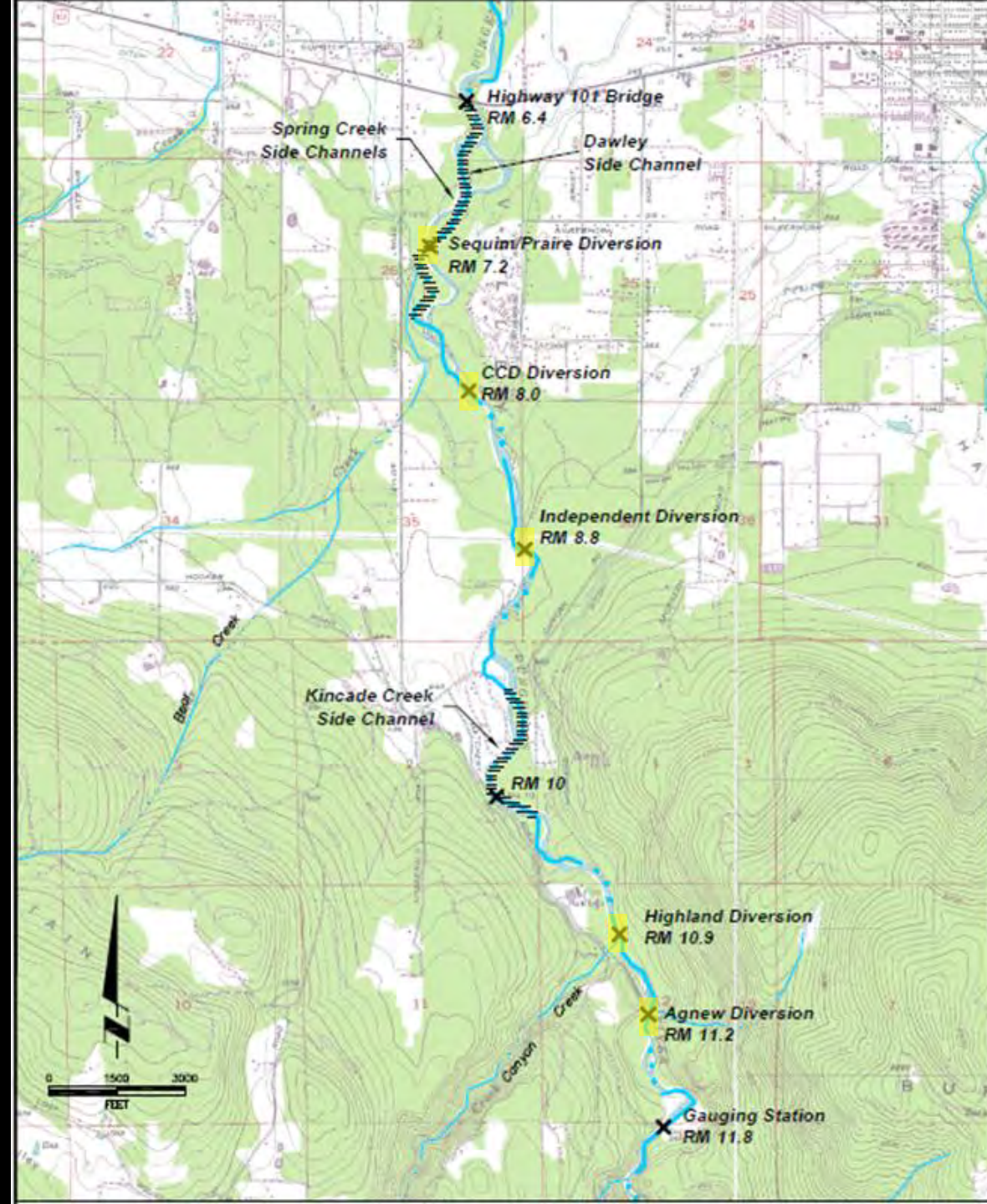


2024 Fish Passage Near Barrier Riffles



2024 Flow Restoration

- 5 diversions on River shared by 7 irrigation companies/districts
→→→
- Late season diversions occur during dryest time of year and when ESA-listed salmon are spawning
- Two programs:
 - 1) Dry year leasing
 - 2) Pulse flow leasing



2024 Flow Restoration – Dry Year Leasing

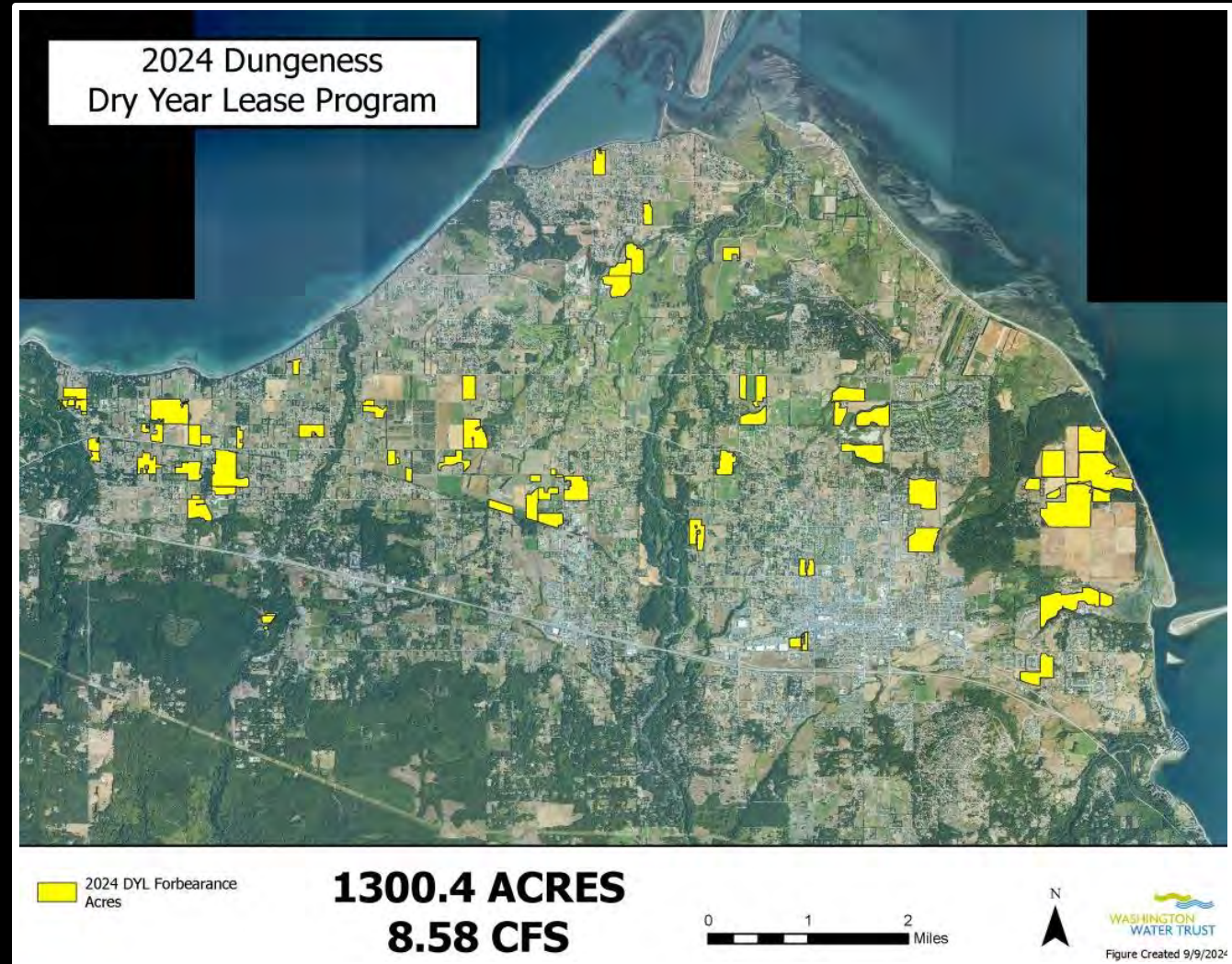
- Voluntary program that pays farmers not to divert from river
- Primary lease period:
Aug 1 – Sep 1
- Conditional lease period:
Sep 2 – Sep 15



Photo Credit: WWT

2024 Flow Restoration – Dry Year Leasing

- 15 forbearance agreements (and 1 source-switch to GW)
- 1,300.4 acres, ~9 cfs
- Program managed by WWT, with funding from Ecology and private donors



2024 Flow Restoration – Pulse Flow Leasing

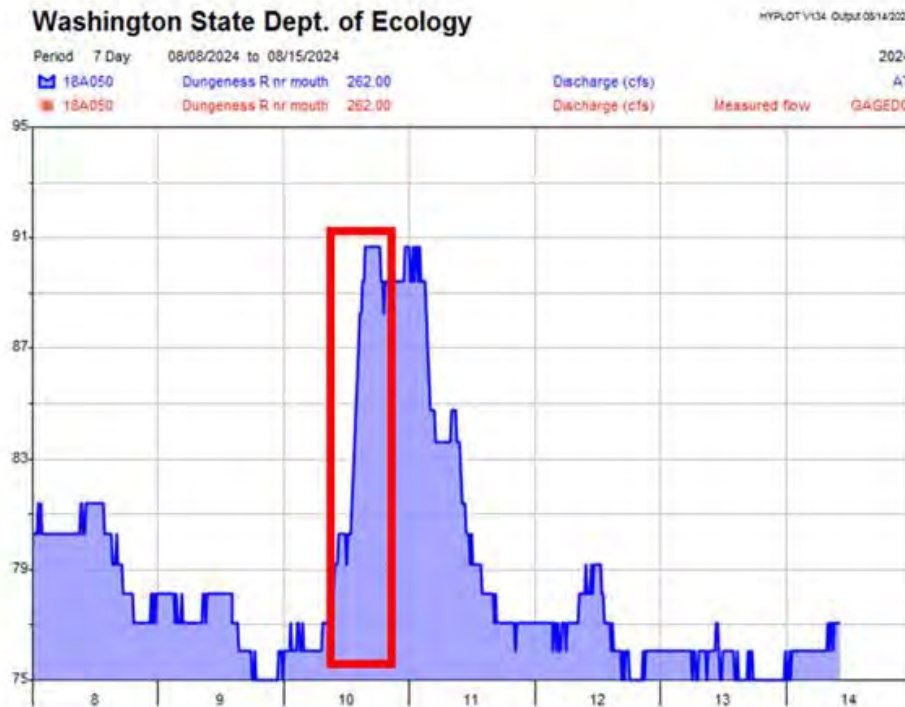
- Coordinated, voluntary program
- 4 pulse flow events
- 13-hr curtailment period
- Weekly strategy meetings
- Managed by WWT, with funding from Ecology and private donors

Highland Irrigation District's Diversion
Photo Credit: WWT



2024 Flow Restoration – Pulse Flow Leasing


First Event: August 10, 2024



Company/ District	8/10/24	8/17/24	8/24/24	8/31/24
#1	0	0	9.2	7.1
#2	8.3	6.2	7.1	4.3
#3	4.8	2.6	4.0	1.6
#4	4.0	3.1	2.4	3.8
#5	3.7	2.7	0.5	3.0
#6	1.5	0	2.0	2.2
*Totals	22.3 cfs	14.6 cfs	25.2 cfs	22.0 cfs

**All data provisional*

Total flow not diverted: ~84 cfs

 Pulse Flow Event



John Gorman
NATURE PHOTOGRAPHER

2024 Chinook Tracking Pilot Project



*Tagging fish for tracking during
drought response.*

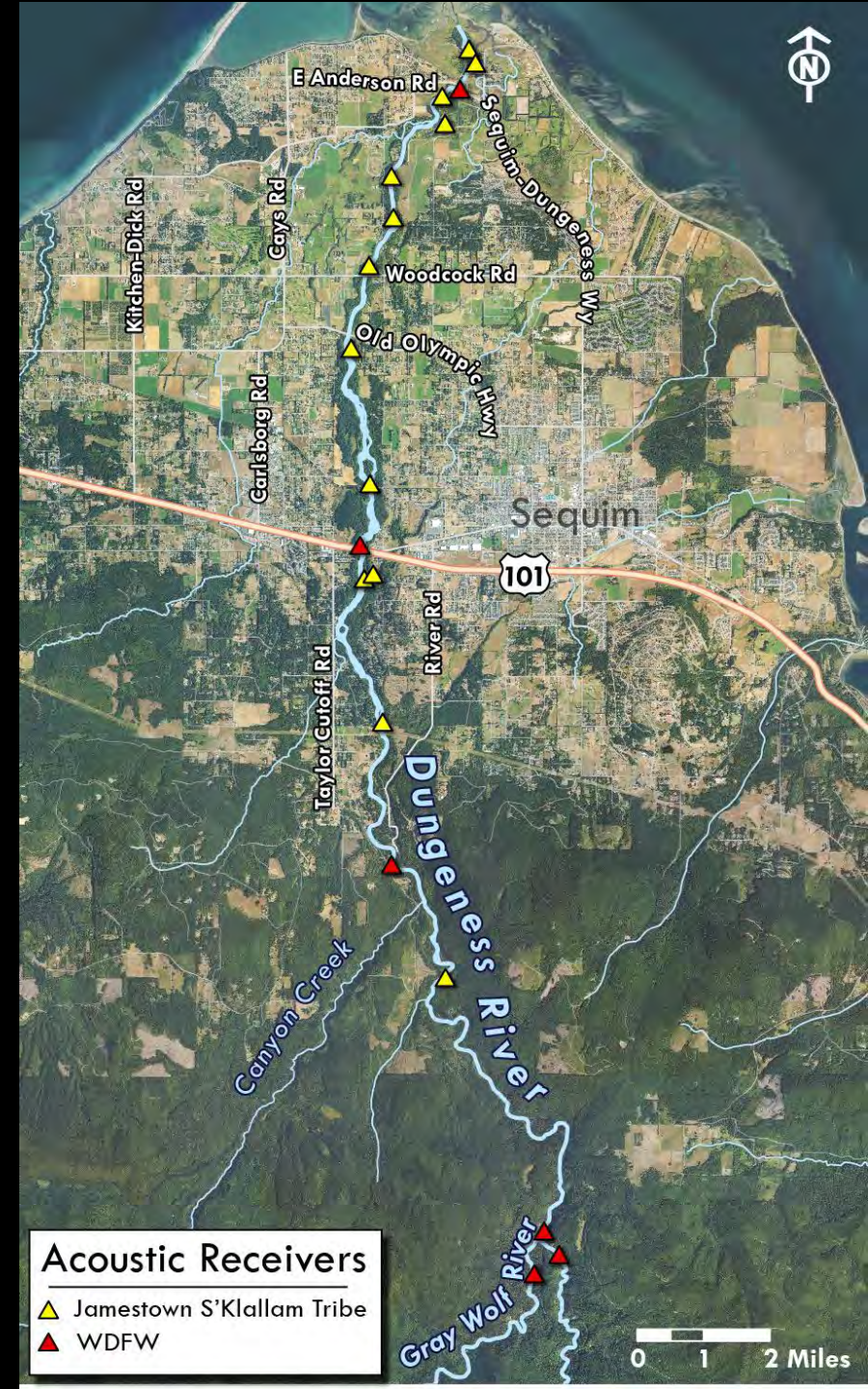


2024 Chinook Tracking Pilot Project

- Purchased acoustic receivers (adding to WDFW's)
- Installed receivers throughout river
- Purchased 25 acoustic tags for Chinook



Receiver mounted on wheel



Acoustic Receivers

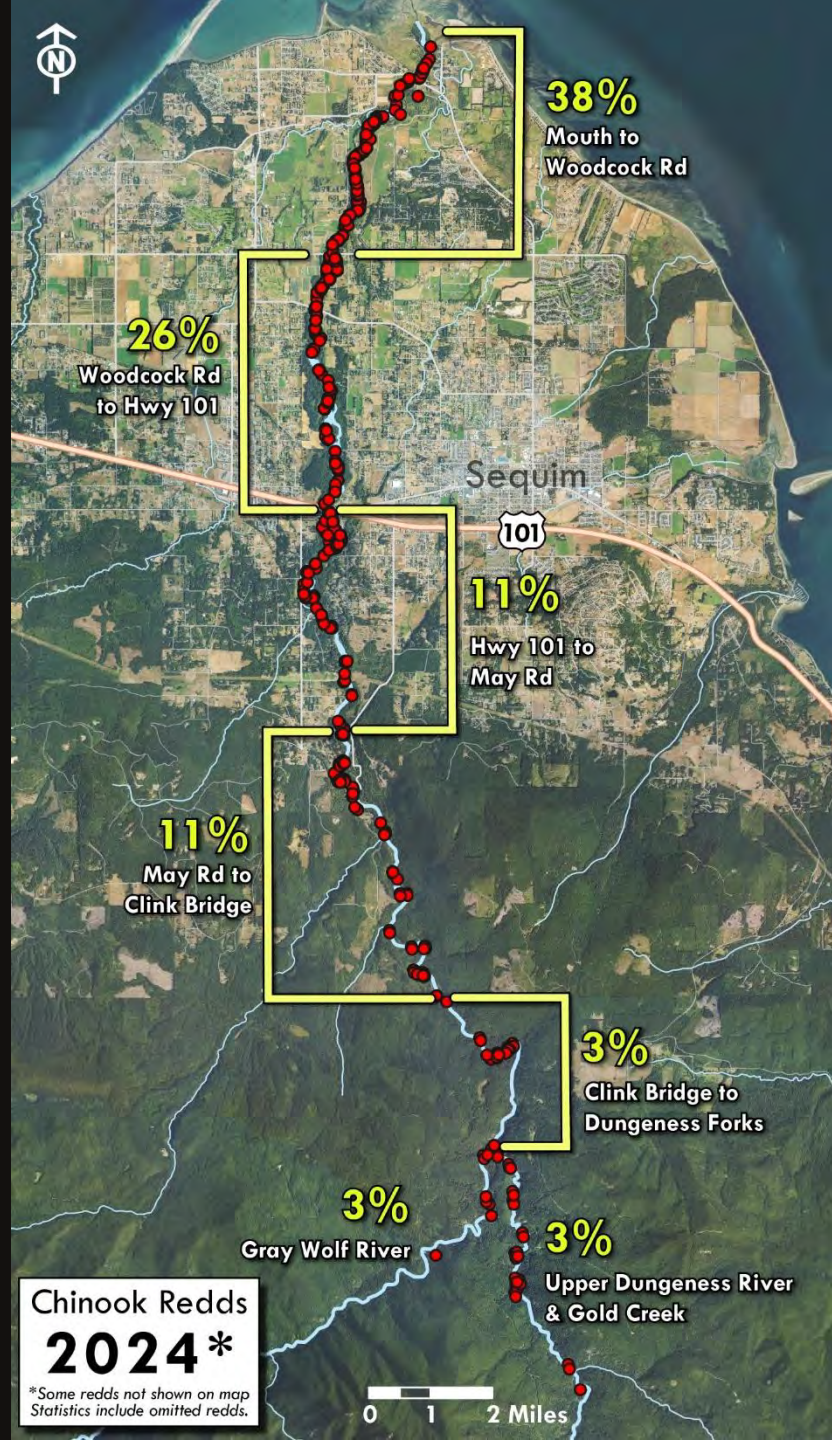
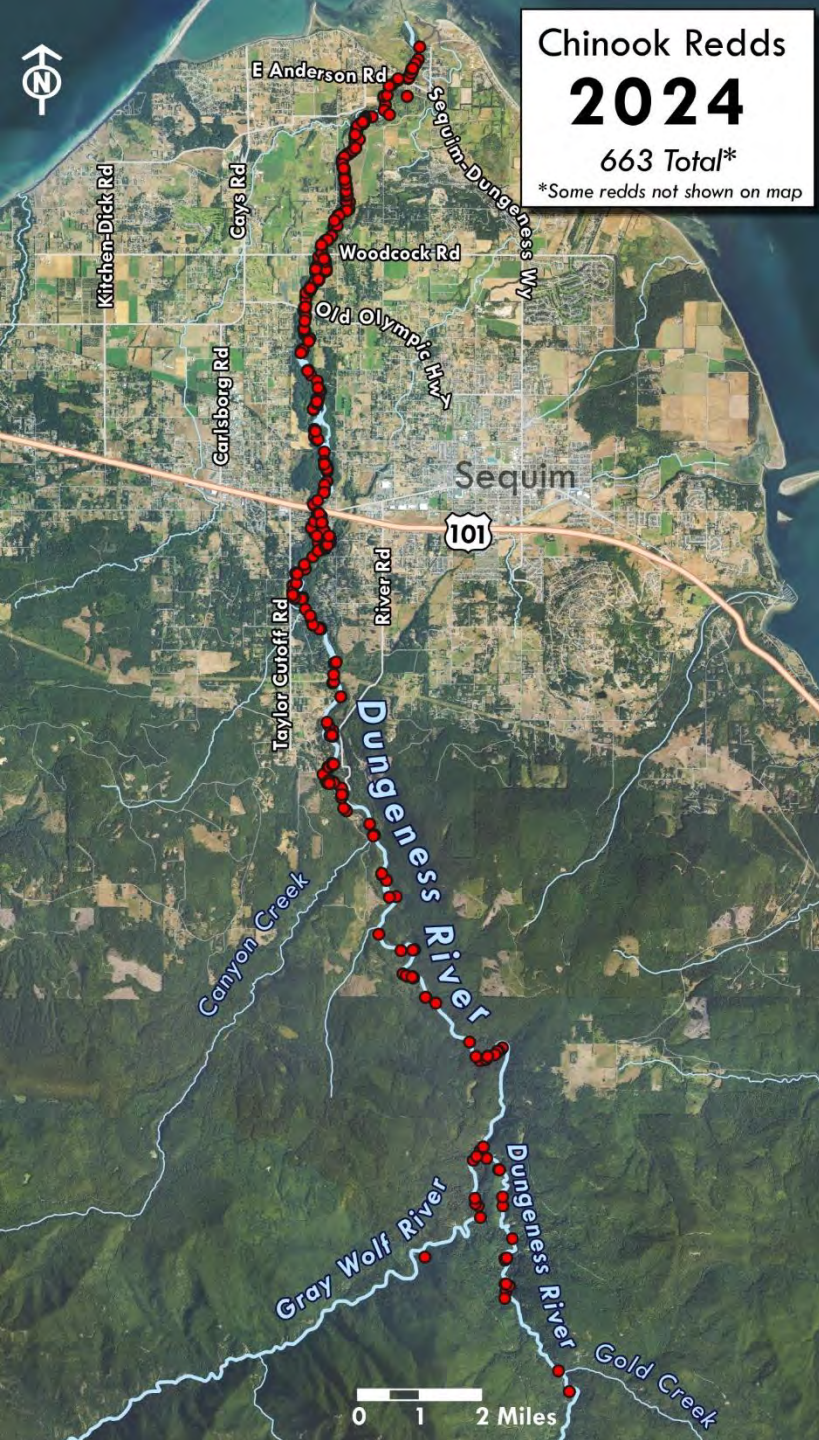
- ▲ Jamestown S'Klallam Tribe
- ▲ WDFW

Chinook Tracking Pilot Project

- Captured Chinook and fitted tags
- Receivers in river tracked fish movement







Preliminary 2024 Redd Distribution

} 20% in upper watershed

Drought Outreach

- News and radio spots
- Webpage
- Event booths
- Water conservation, promoting gold (vs green) lawns in summer, and education to farmers/gardeners

The Drought Dispatch: The importance of conserving water...

By Sammi Grieger For the Sequim Gazette • October 9, 2024 1:30 am

Oak leaves are falling, and chilly have arrived: a seasonal sign that autumn is...

Posted in [Opinion](#)

The Drought Dispatch: The legacy of lawns and...

By Sammi Grieger For the Sequim Gazette • August 28, 2024 1:30 am

Keeping our lawns green and gardens lush is the main source for outdoor water use in the summertime. In dry...

Posted in [Daily Update Newsletter](#), [Opinion](#), [Weekender Newsletter](#)

The Drought Dispatch: Small farms in dry...

By Sammi Grieger For the Sequim Gazette • August 14, 2024 1:30 am

Fall may be in the air, but the drought is still much here. On Sept. 9, the City of Sequim...

Posted in [Daily Update Newsletter](#), [Weekender Newsletter](#)

The Drought Dispatch: Collaboration and conservation during dry...

By Sammi Grieger For the Sequim Gazette • August 14, 2024 1:30 am

Understanding the 2024 drought:

Posted in [Daily Update Newsletter](#), [Opinion](#), [Weekender Newsletter](#)

The Drought Dispatch: Small farms in dry... a sunny...

By Sammi Grieger For the Sequim Gazette • August 14, 2024 1:30 am

Outdoor watering is the largest use of water in the summertime for residents. And as drought conditions become more frequent,...

Posted in [Opinion](#)

Drought Outreach

NEWS

League installs drought warning sign for residents

By Michael Dashiell • August 28, 2024 1:30 am



Thank you to our 2024 drought response partners!

