

Coastal Steelhead 2023/24 Preseason Planning Update

WDFW Fish Committee

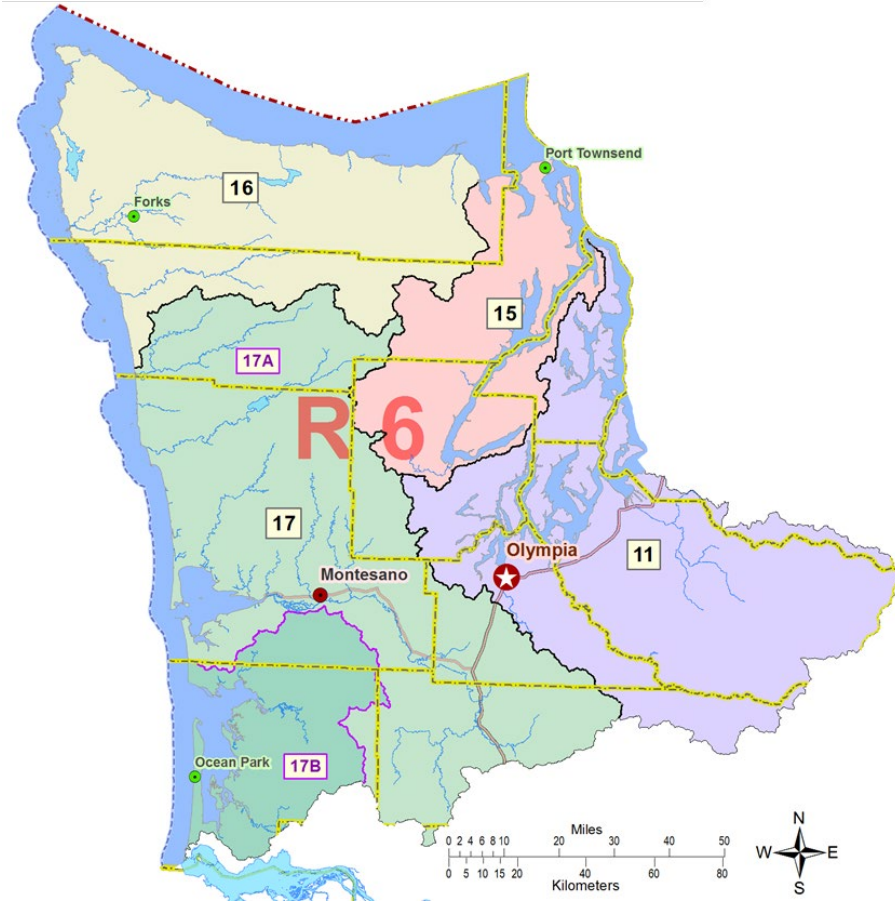
October 26, 2023

James Losee, Regional Program Manager



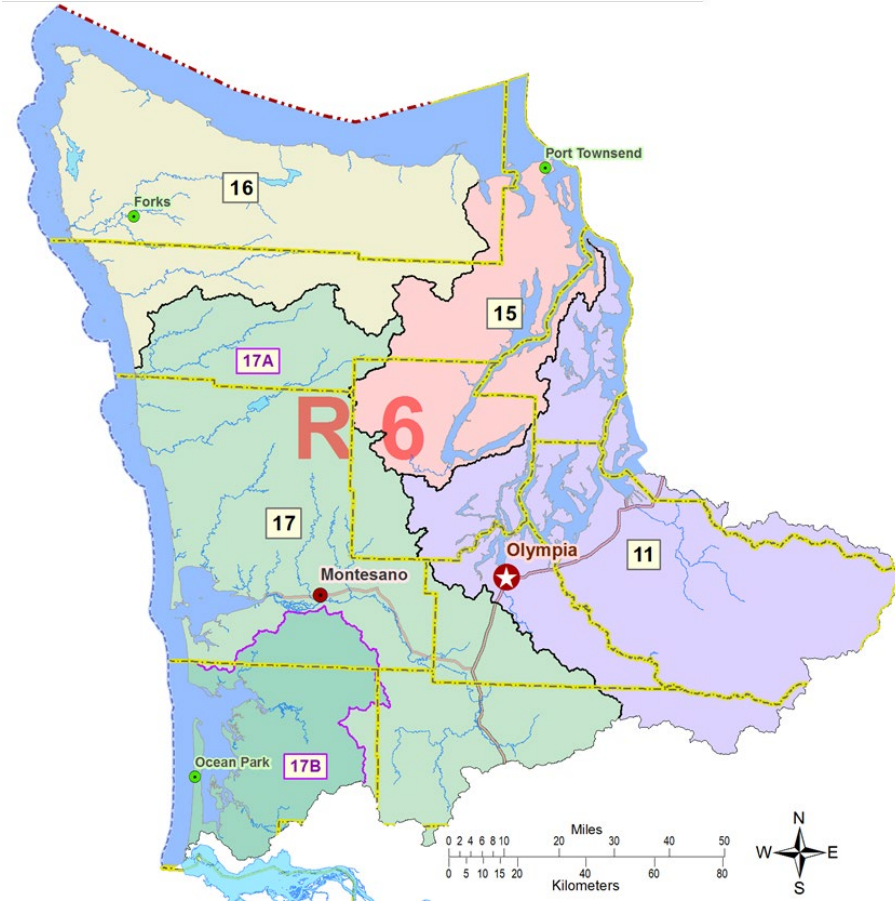
Agenda

- 2023 Review
- 2024 Forecasts
- Town Hall #1 Review

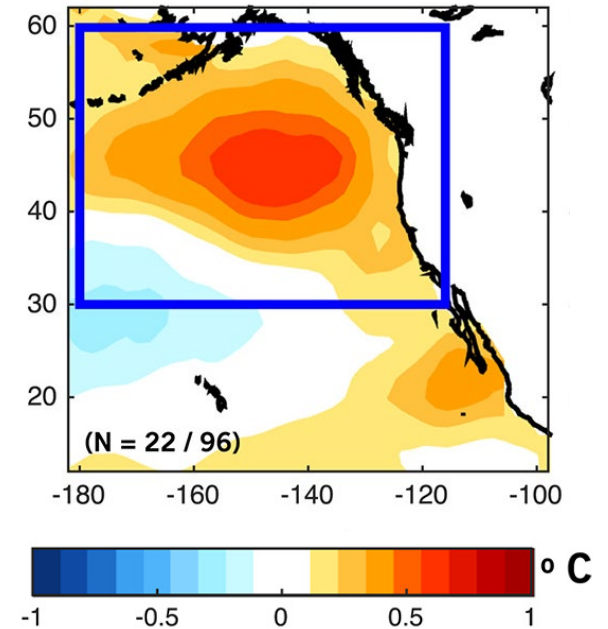
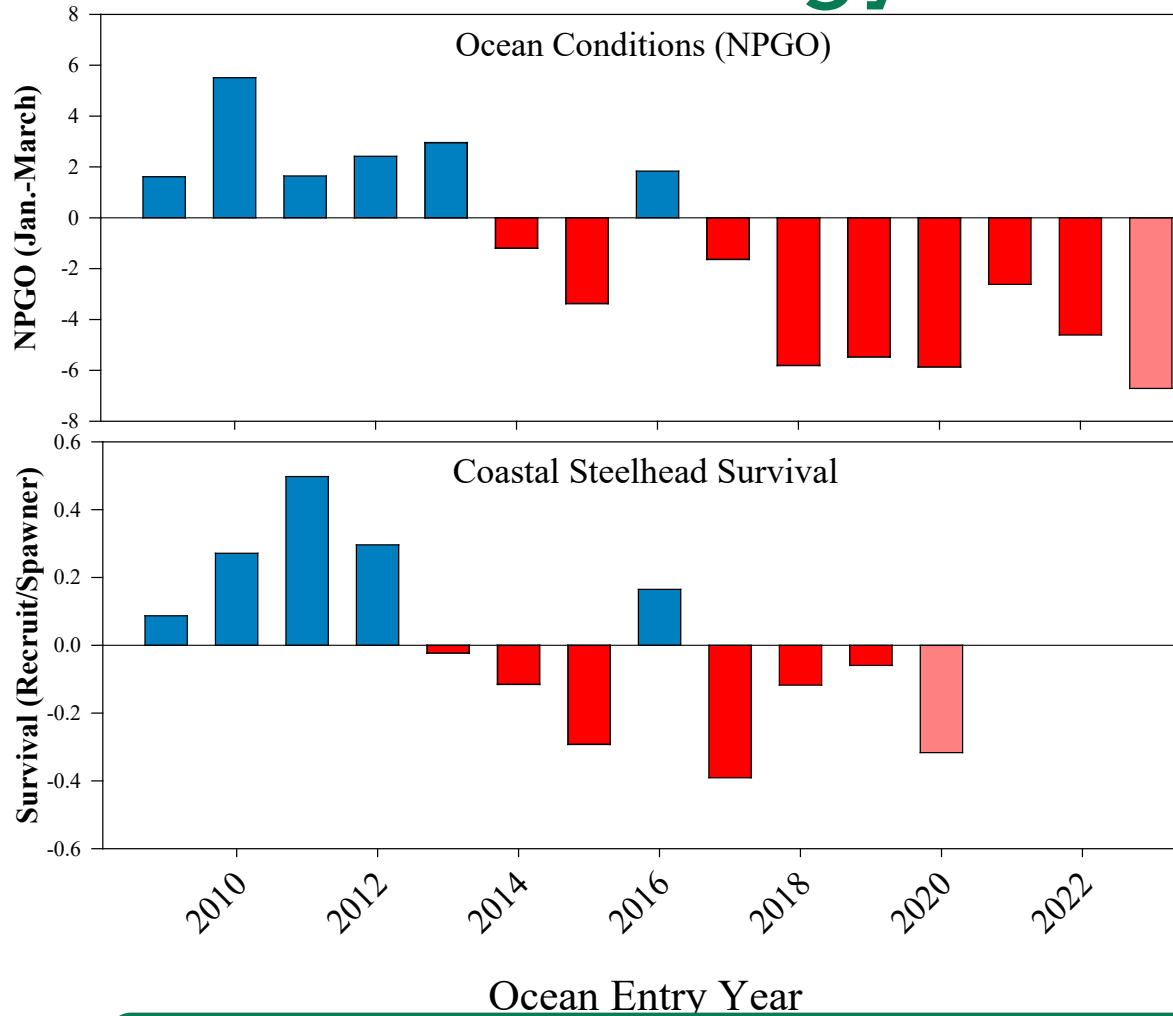


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Steelhead Biology-Ocean Conditions



Joh & Lorenzo 2017
Scheuerell et al. 2020



Steelhead survival is poor when ocean conditions are unfavorable (NPGO negative). Future returns are expected to follow extremely unfavorable conditions.



2023 Review-Environmental Conditions

Drought likely to develop in Washington after cool and dry spring

Union-Bulletin

Idaho Capital Sun 🌲

Washington declares drought emergency in 12 counties

Irrigators are facing water shortfalls, while officials worry about conditions for fish hatcheries and salmon migration within a number of Olympic Peninsula watersheds

1.5 million people asked to conserve water in Seattle because of statewide drought

Seattle Public Utilities is asking about 1.5 million customers in the Seattle area to use less water amid ongoing drought conditions



2022/23 Review : Preliminary Runsize

River/Area	Predicted Runsize	Actual Runsize
Willapa	3,535	4,936
Chehalis	7,114	6,249
Humptulips	1,222	1,290
Upper Quinault	2,376	1,182
Queets/Clearwater	3,958	4,176
Hoh	2,995	4,154
Quillayute	9,344	9,230



2022/23 Review : Preliminary Runsize

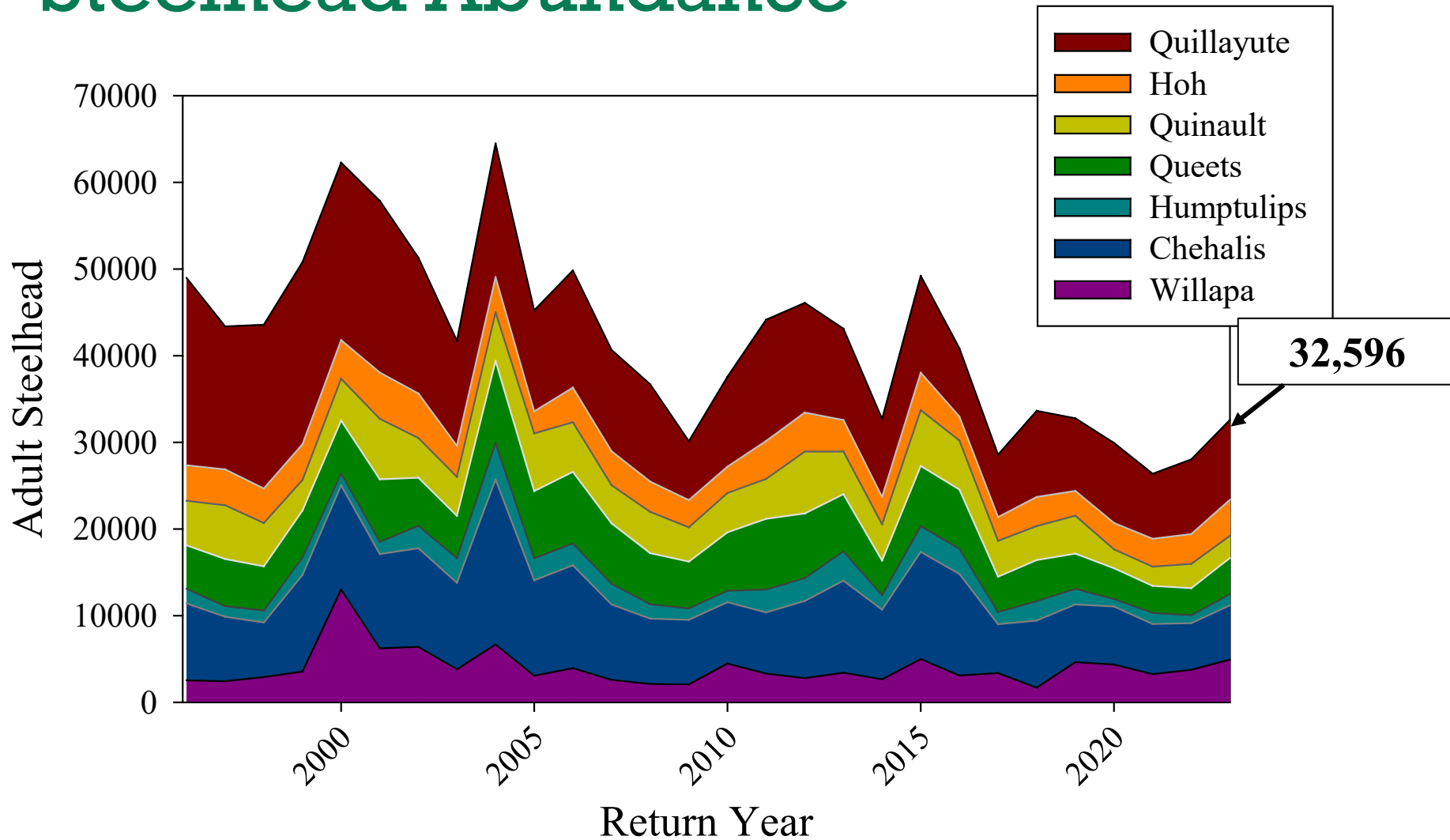
River/Area	Predicted Runsize	Actual Runsize	Escapement Goal	Actual Escapement
Willapa	3,535	4,936	4,206	4,546
Chehalis	7,114	6,249	8,600	6,238
Humtulsips	1,222	1,290	1,600	1,290
Upper Quinault	2,376	1,182	1,600	1,182
Queets/Clearwater	3,958	4,176	4,200	3,824
Hoh	2,995	4,154	2,400	3,672
Quillayute	9,344	9,230	5,900	8,513



Forecasted within 3% of actual runsize in 2022/23 and escapement goals met in 3 of 7 rivers. In Willapa Bay escapement goal was met for the second time in 20 years.



2022/23 Review: Wild Coastal Steelhead Abundance



2022/23 Review: Monitoring and Performance

- Preseason: Low forecasts in most rivers and conservative season regulations with bank fishing opportunity in Willapa and Hoh watersheds and boat fishing opportunity in the Quillayute watershed (Quillayute, Sol Duc, Calawah, and Bogachiel rivers).
- In-season: Sport and tribal catch suggested runsize similar to predictions.
- Post-season: Preliminary estimates of runsize and escapement suggest high forecast accuracy and some places where runsize exceeded preseason expectations.
- Surplus Hatchery Adult Steelhead: 1,237 planted in 7 coastal lakes.



2022/23 Review: Sport Monitoring

Comprehensive Creel conducted December 16th to March 31st in select watersheds.

- Willapa Bay
 - Willapa River: 291 interviews conducted, 5,663 total estimated angler hours and 283 wild steelhead caught. ~20% of run caught.
 - Naselle River: 203 interviews conducted, 6,204 estimates angler hours and 370 wild steelhead caught. ~21% of run caught.
- Hoh River
 - 666 interviews, 57,273 estimated angler hours, 3,575 wild steelhead caught. ~86% of run caught.
- Sol Duc River
 - 264 interviews, 28,329 estimated angler hours, 2,204 wild steelhead caught. ~55% of fish that entered the Sol Duc caught.
- Test Fishery Pilot project
 - 2 technicians for two months
 - 55 angler days fished 26 wild steelhead caught



2022/23 Review: Preliminary Tribal Catch

	Wild Projected	Wild Harvested
Willapa	0	0
Chehalis	0	0
Humptulips	0	0
Quinault	936	213
Queets	567	243
Hoh	297	124
Quillayute	1446	717



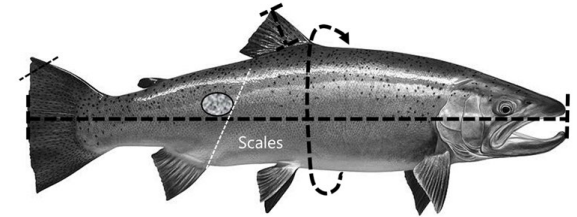
Tribal catch ~40% of what was projected preseason as a result of management actions and lower than expected effort.



2022/23 Review: Productivity, Distribution & Diversity

SSMP on Distribution and Diversity:

“Modify the timing of fisheries, gear types, or fishery characteristics to enhance diversity and spatial structure consistent with watershed goals”

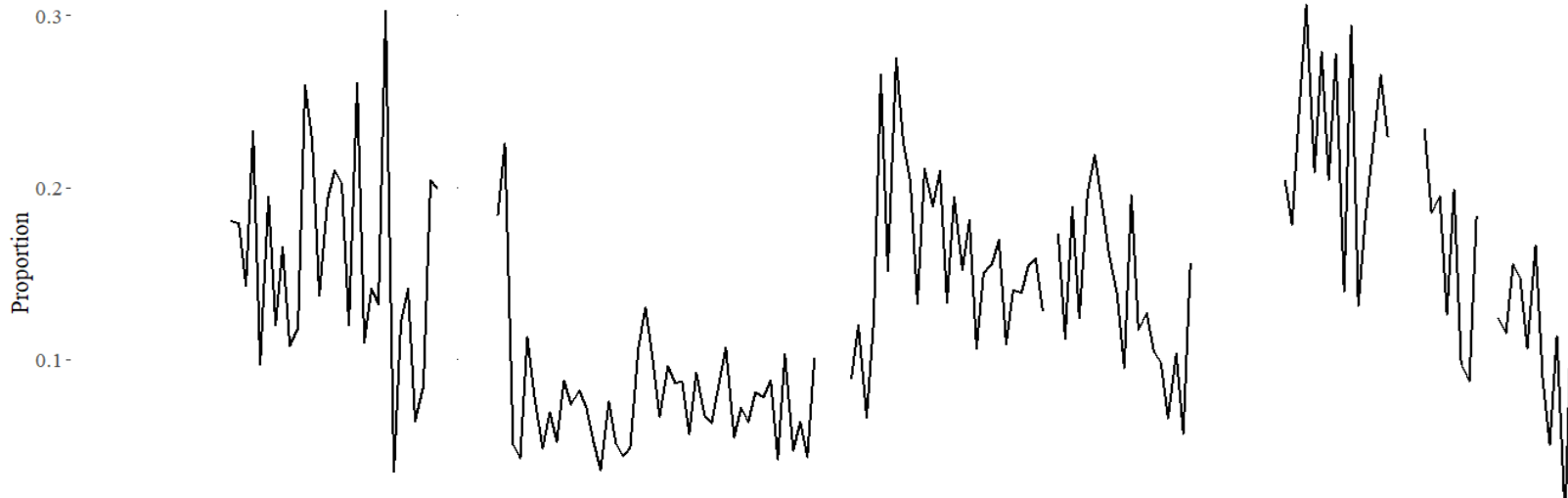


2.Hoh

1.Quillayute

3.Queets

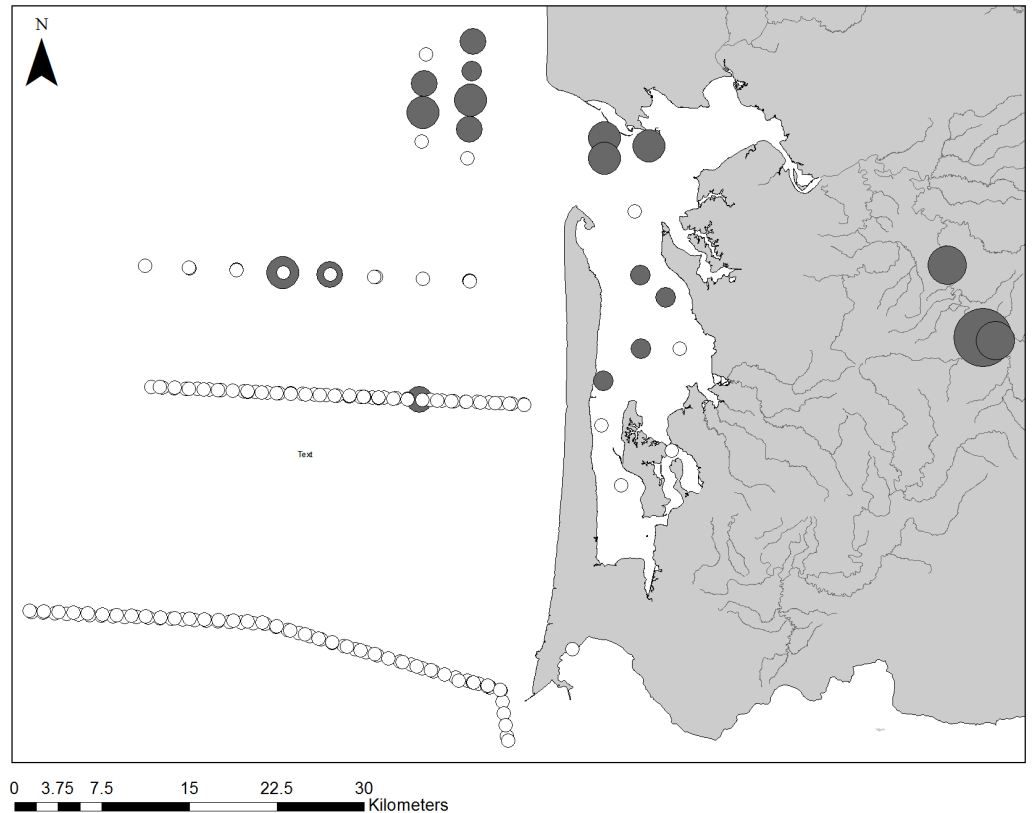
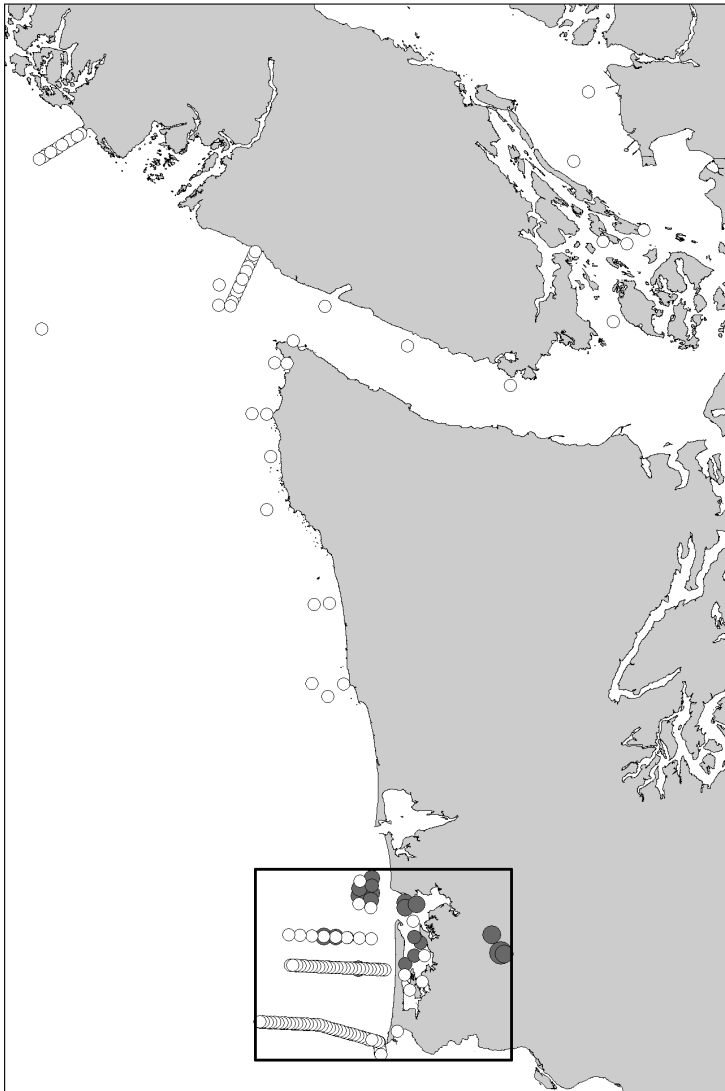
4.Chehalis



Declining and highly variable rates of repeat spawners.

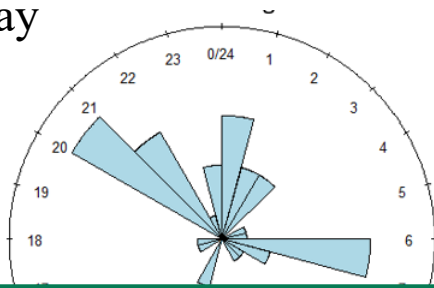



Coastal Steelhead Kelt Movements

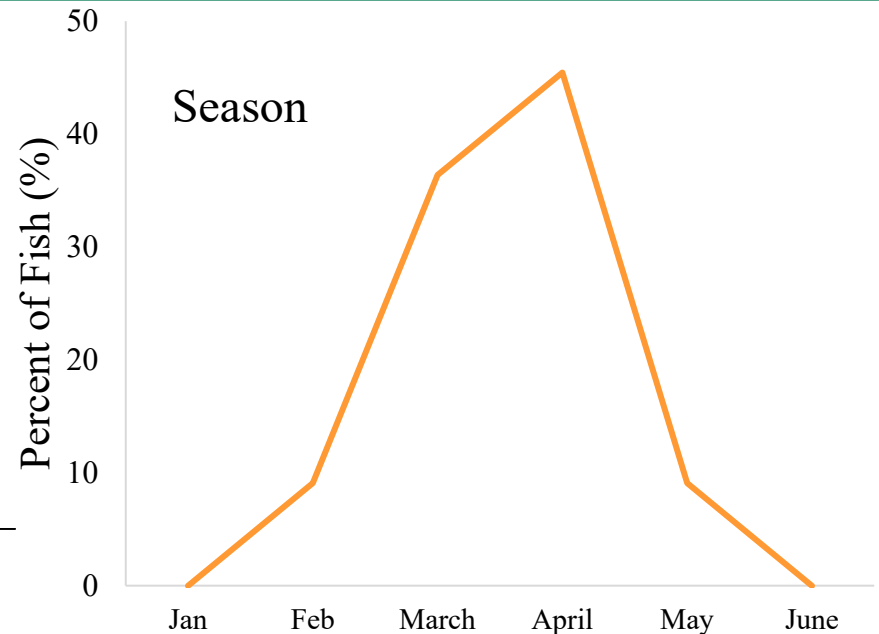
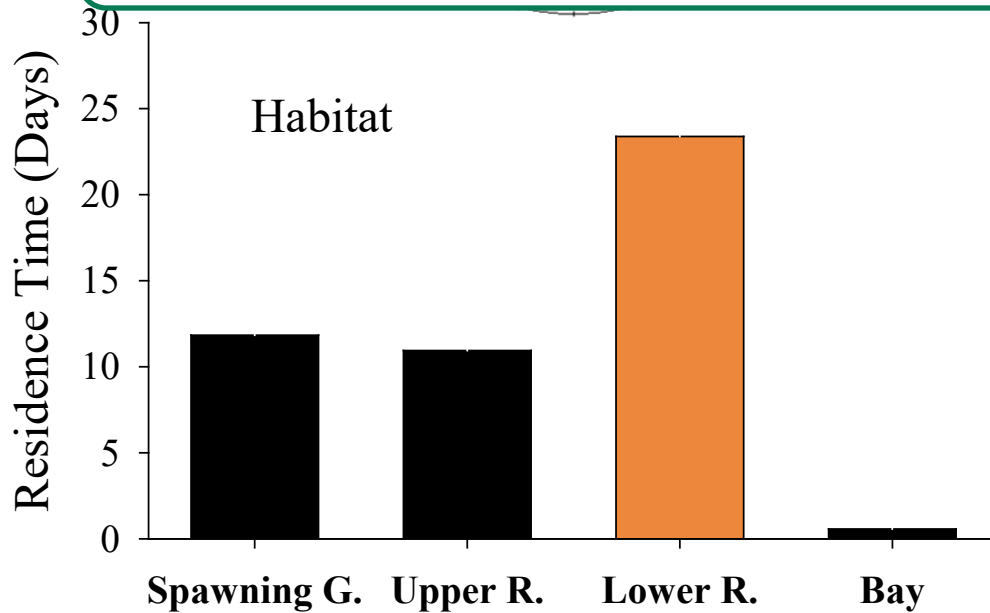


Coastal Steelhead Kelt Movements

Time of Day



 Surviving kelts moved slowly in lower river in March and April, “holding” during the day, then migrated rapidly offshore.



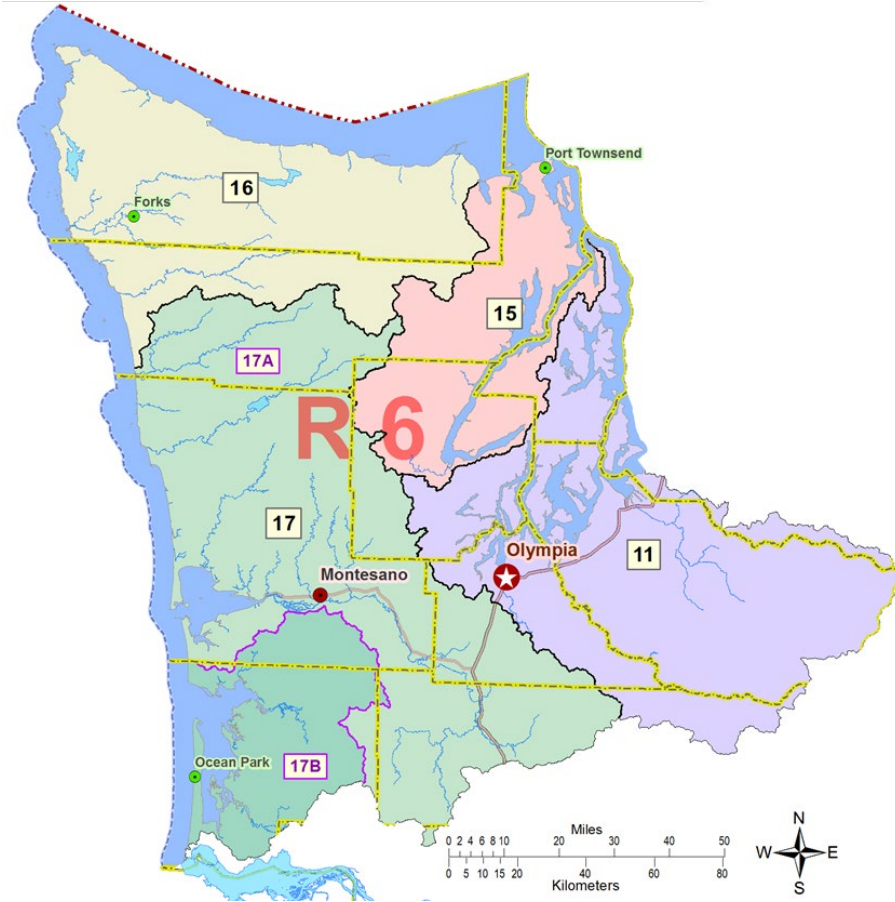
2022/23 Review: Summary

- 🐟 Forecasted wild abundance in 2022/23 within 3% of actual runsize.
- 🐟 Escapement goals met in 3 of 7 watersheds.
- 🐟 Future returns are expected to follow extremely unfavorable environmental conditions.
- 🐟 Long term decline of steelhead abundance in all coastal systems.
- 🐟 2022/23 Fishery regulations supported diverse spawning distributions and run timing.
- 🐟 Tribal catch ~ 40% of pre-season plans as a result of management actions and lower than expected effort
- 🐟 Kelt movement in freshwater is focused around lower rivers in March and April. Marine movements characterized by rapid offshore migration.



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2023-24: Preliminary Forecasts

System	Run-to-River Forecast	Escapement Goal
Willapa	4,085	4,206
Chehalis	7,148	8,600
Humptulips	1,343	1,600
Upper Quinault	1,870	1,600
Queets/Clearwater	4,150	4,200
Hoh	3,389	2,400
Quillayute	9,096	5,900



2023-24: Preliminary Forecasts

System	Run-to-River Forecast	Escapement Goal	Wild Steelhead Relative to Goal	Sport Impact Limit
Willapa	4,085	4,206	-121	409
Chehalis	7,148	8,600	-1,452	214
Humptulips	1,343	1,600	-257	67
Upper Quinault	1,870	1,600	270	135
Queets/Clearwater	4,150	4,200	-50	208
Hoh	3,389	2,400	989	495
Quillayute	9,096	5,900	3,196	1,598

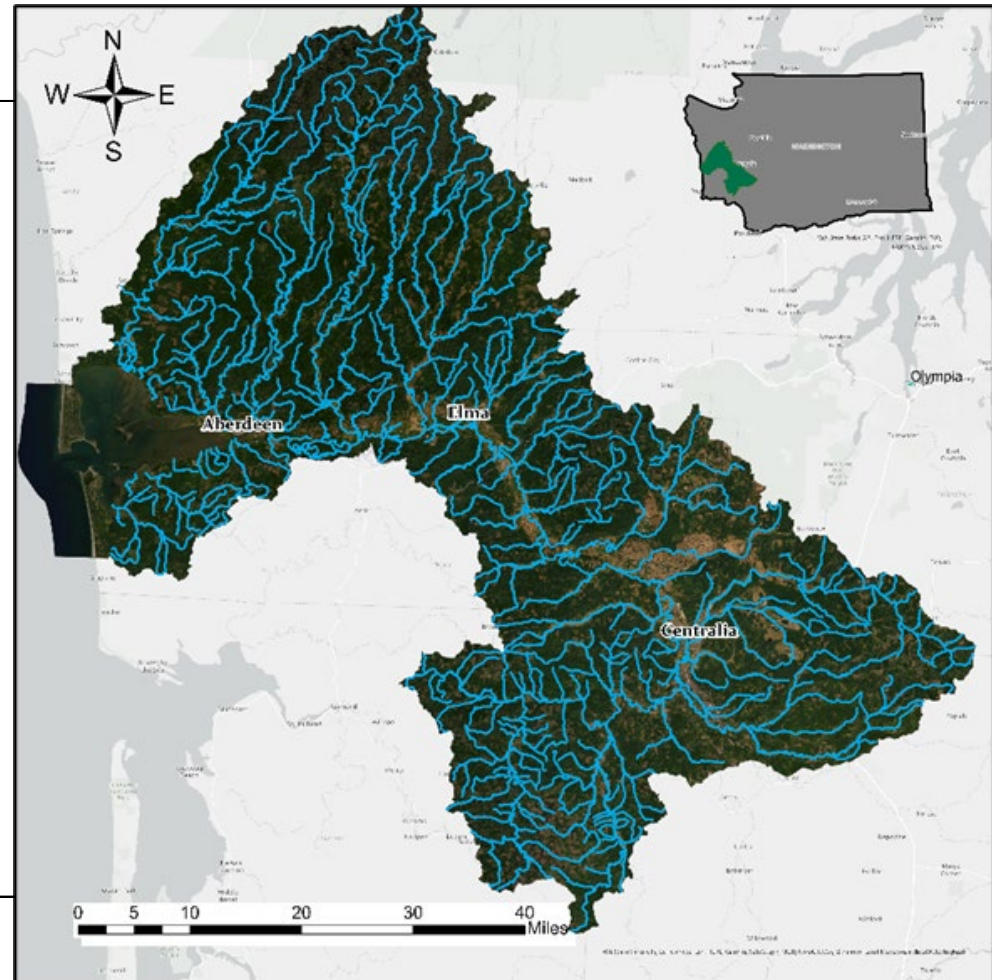


Analysis of Options: Hatchery Directed Fisheries

Chehalis Watershed

Tributary	Forecasted Sport Impact Limit
Hoquiam	10
Wishkah	12
Wynoochee	41
Satsop	62
Cloquallum	12
Black	1
Lower Chehalis Tribs.	6
Upper Chehalis Mainstem	11
Skookumchuck	9
Newaukum	23
Upper Chehalis Tribs.	7
EF Chehalis	8
SF Chehalis	8
WF Chehalis	4

*Does not account for mixed “stock” encounters



Analysis of Options: Hatchery Directed Fisheries

Tributary	Forecasted Sport					
	Impact Limit	December	January	February	March	April
Hoquiam	10	0.6	1.6	2.1	2.9	2.9
Wishkah	12	0.7	1.8	2.5	3.4	3.4
Wynoochee	41	2.4	6.3	8.7	11.8	11.8
Satsop	62	3.6	9.6	13.3	18.0	17.9
Cloquallum	12	0.7	1.8	2.5	3.3	3.3
Black	1	0.1	0.2	0.2	0.3	0.3
Lower Chehalis Tribs.	6	0.4	0.9	1.3	1.8	1.8
Upper Chehalis Mainstem	11	0.6	1.7	2.3	3.1	3.1
Skookumchuck	9	0.5	1.4	2.0	2.7	2.7
Newaukum	23	1.3	3.6	5.0	6.7	6.7
Upper Chehalis Tribs.	7	0.4	1.1	1.5	2.0	2.0
EF Chehalis	8	0.4	1.2	1.7	2.2	2.2
SF Chehalis	8	0.4	1.2	1.7	2.2	2.2
WF Chehalis	4	0.2	0.6	0.8	1.1	1.1

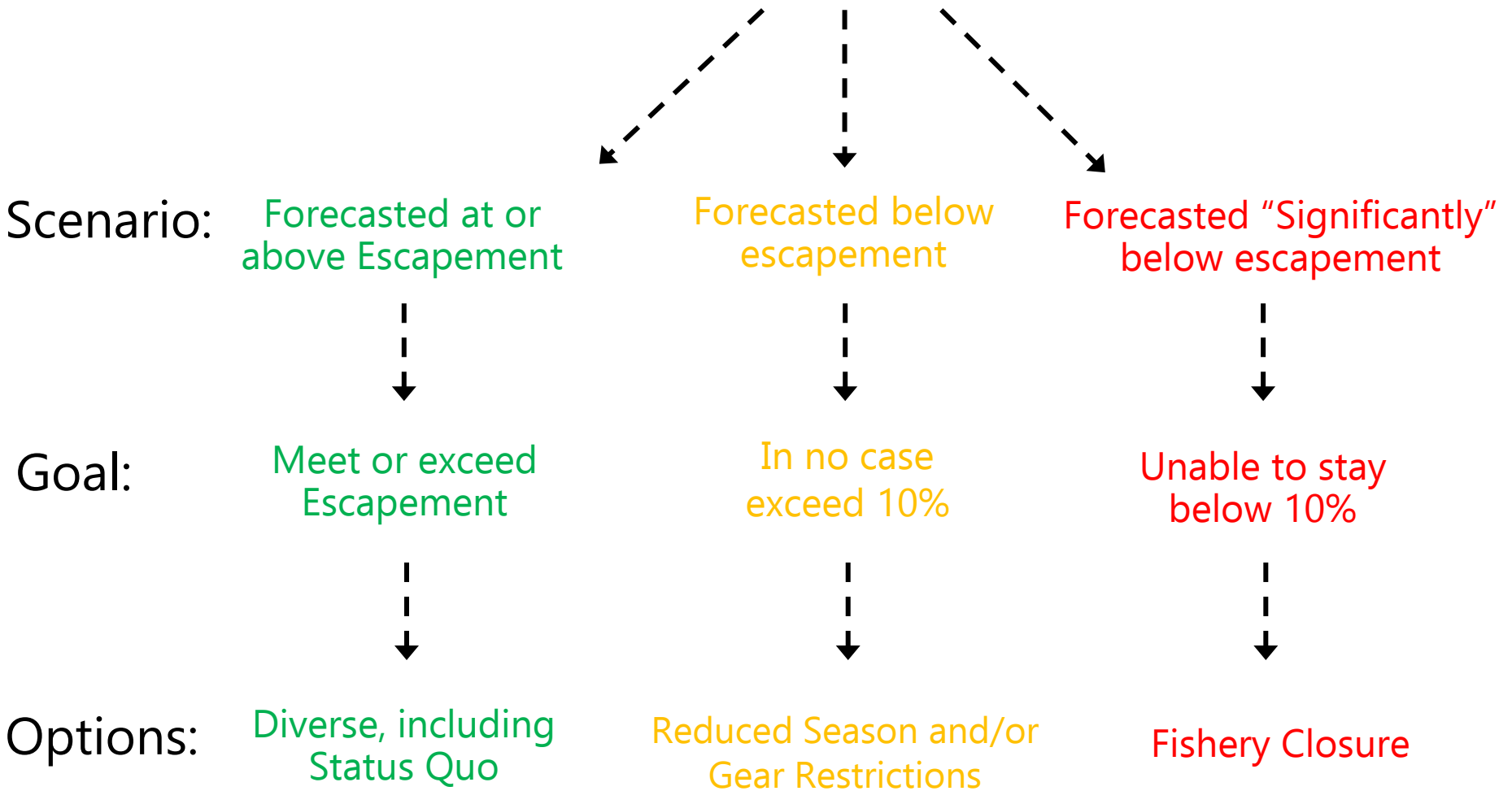


Hatchery Steelhead Preliminary Forecasts

Run Type	Facility	2023/24 Forecast
Early Winter	Naselle	1,369
	Humptulips/Wishkah	1,132
	Fork Creek/Willapa R.	833
	Hoh River	641
	Bogachiel	3,497
Late Winter	Bingham/Satsop	508
	Skookumchuck	1,585
	Eight Creek & Carlisle Lake	981
	Lk. Aberdeen/Wynoochee R.	1,336
	Quinault R. (Quinault Tribe)	4,718
	Salmon R./Queets R.	1,789

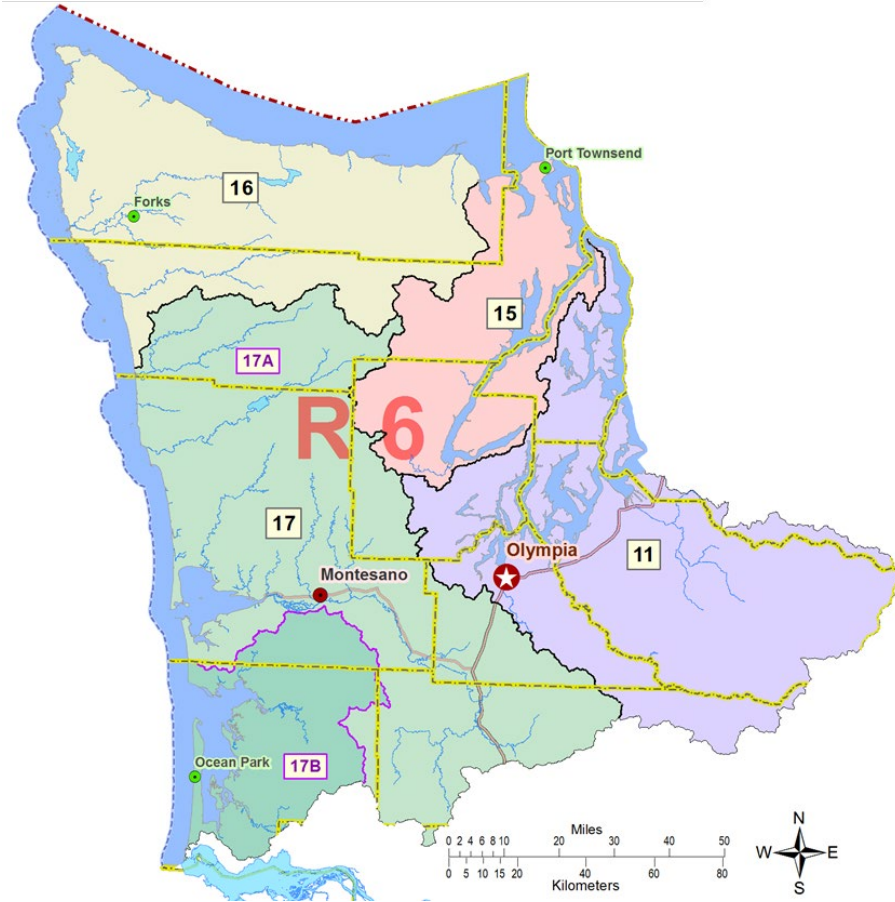


River Specific Regulation Options



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Town Hall #1 Review

- ~150 people in attendance.
- Appreciation for communication strategies (e.g. Town Halls, in-season tools and comment portal).
- Strong support for continued conservation efforts given low runsize.
- Diverse proposals received for future fisheries.
- Desire for increased opportunity on hatchery steelhead in specific systems.
- Discussion surrounding the lack of resources for monitoring.



Questions

