

# ECOLOGY SOUTHWEST REGION UPDATE ON ACTIVITIES

**Mike Gallagher**  
**Southwest Region Section Manager**

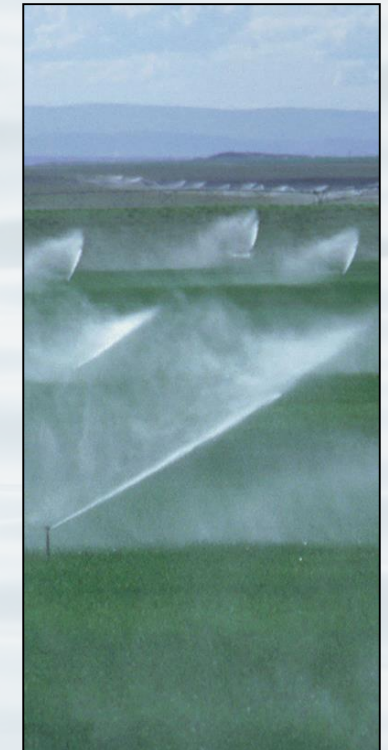
Water Resources Program  
Washington State Department of Ecology

*Thurston County Water Utility Purveyor Technical Committee Meeting –June 3, 2022*



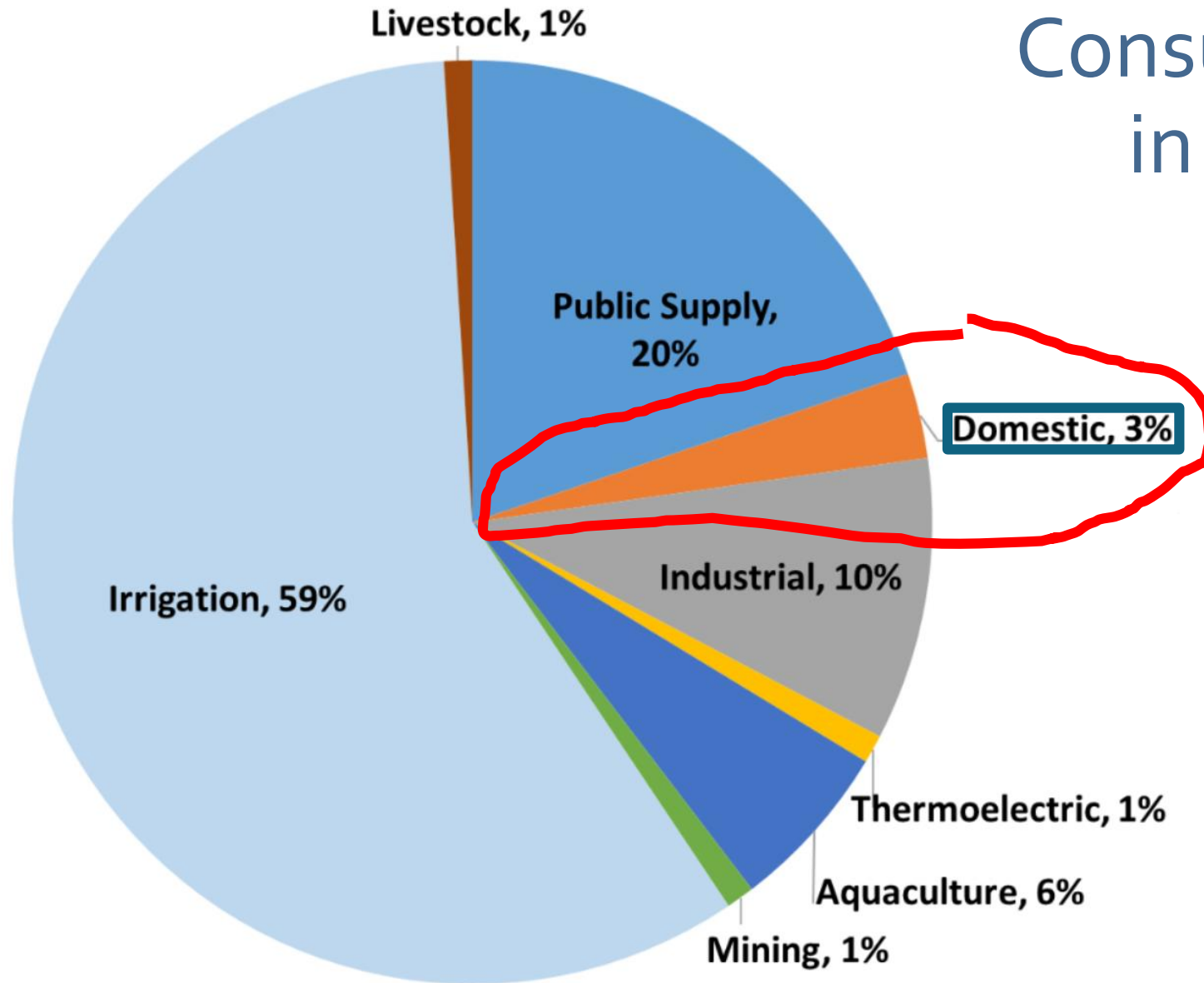
# Overview of Ecology Water Resources Since April 2022

- Summary of consumptive use from permit exempt wells in 15 different watersheds.
- Summer 2022 water supply projections.
- Curtailments in Chehalis (WRIA 22/23) Watershed again in 2022?
- Trans Alta water rights put in Trust and a water bank established for Chehalis River below confluence with Skookumchuck River (51 CFS for sale).
- Final Report of Examination issued for City of Yelm. Appeal Period ends June 8, 2022

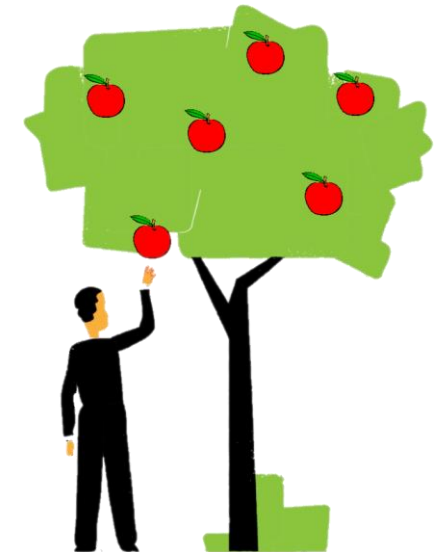




# Consumptive Water Use in Washington (2015)



- Permit-exempt domestic (private) wells account for ~ 3% of WA water use.
- Private well use is low hanging fruit



# **It all started in WRIA 11 (Nisqually) with early input from Thurston PUD on Nisqually Watershed Planning Unit!**

Recall that the Nisqually Watershed Plan Amendment was directed under the Streamflow Restoration Act (RCW 90.94) to be ADOPTED by February 1, 2019

This plan amendment was successful in achieving that goal.

One of the key outcomes of this plan was to determine the projected number of permit exempt wells in each watershed AND the amount of consumptive use from those wells that needs to be offset by streamflow improvement projects (funded by Ecology Grant \$\$ and other fund sources).

**Washington State Department of Ecology Water Resources Program**  
**Technical Review of**  
**Nisqually Watershed Response to the 2018 Streamflow Restoration Act (RCW 90.94)**  
**Addendum to the Nisqually Watershed Management Plan**  
**January 22, 2019 - Draft**

Name of WRIA 11 Calculation Method	WRIA-Wide Potential Impact (cfs)
Legal Limit	7.598
Ecology Guidance Method	1.03
Thurston PUD Data Source "Plan A and B"	0.439

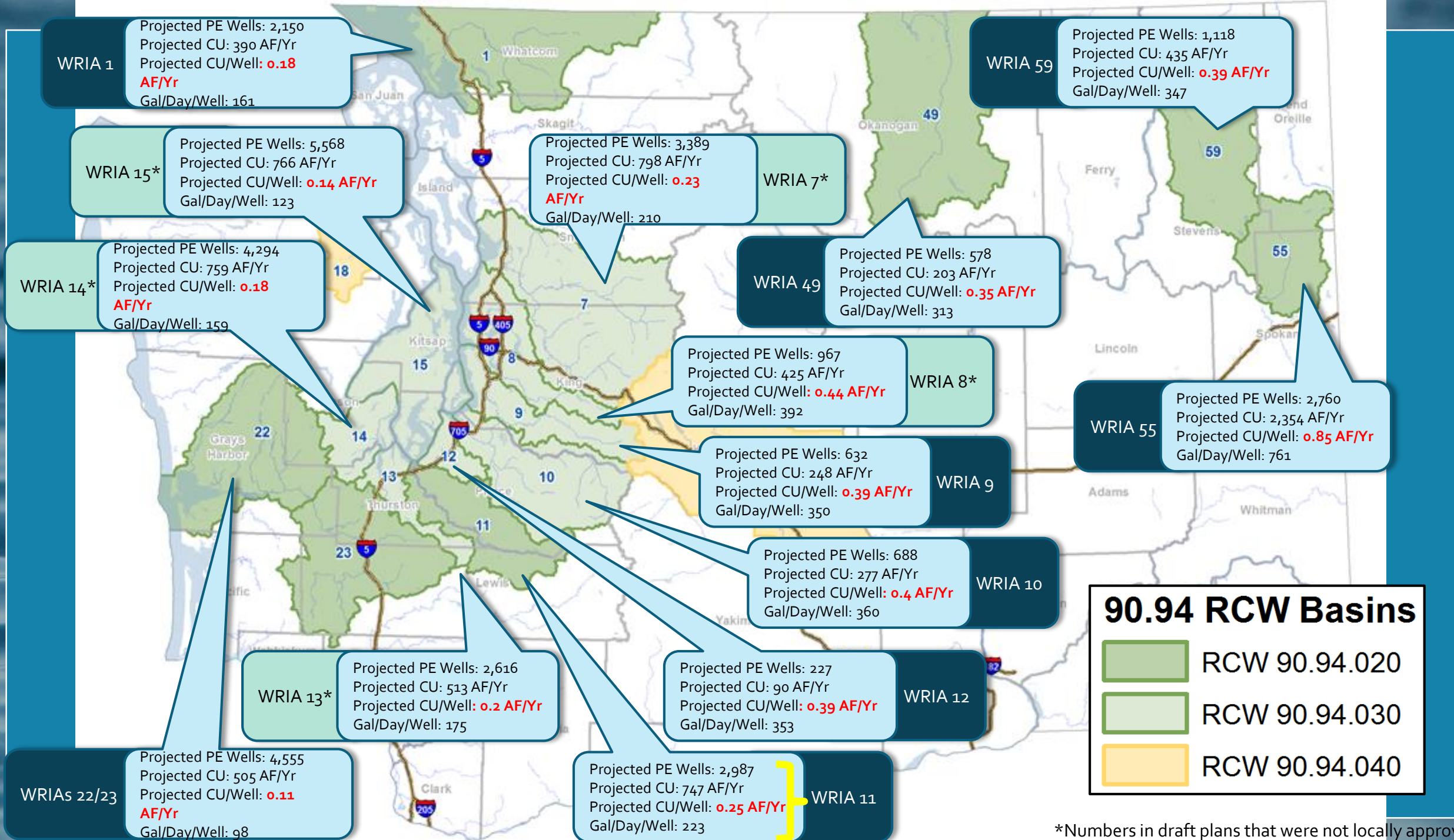
Table 3-15: Total Projected New Domestic Permit-Exempt Connections by Aggregated Sub-basin, WRIA 11 (2018-2040)

Sub-basin	UGA Connections	Rural Connections	Total Connections
McAllister	39	116	155
Thompson/Yelm	1,036	526	1,562
Lackamas/Toboton/Powell	-	430	430
Lower Nisqually		2	2
Mashel River		20	20
Prairie Tributaries		596	596
Ohop Creek		27	27
Upper Nisqually (Lewis, Pierce, Thurston)		195	195
Total	1,075	1,912	2,987

Table 3-19: Projected Actual Annual Average Consumptive Use of Domestic Permit-Exempt Wells, Nisqually Watershed, WRIA 11 (2018-2040) – Ecology Guidance Method

Sub-Basin	Total PE Connections	Annual Consumptive Use (AFY)	Cubic Feet/Second (CFS)	CFS per connection	AFY per connection
McAllister	155	39	0.054		
Thompson/Yelm	1,562	390	0.539		
Lackamas/Toboton/Powell	430	107	0.148		
Lower Nisqually River	2	0	0.001		
Mashel River	20	5	0.007		
Prairie Tributaries	596	149	0.206		
Ohop Creek	27	7	0.009		
Upper Nisqually (all counties)	195	49	0.067		
Total	2,987	747	1.032	0.000345	0.25





\*Numbers in draft plans that were not locally approved.



## Curtailment Notices issued in the Upper and Lower Chehalis Watersheds - past 7 years: 2015 – 2021 2022????

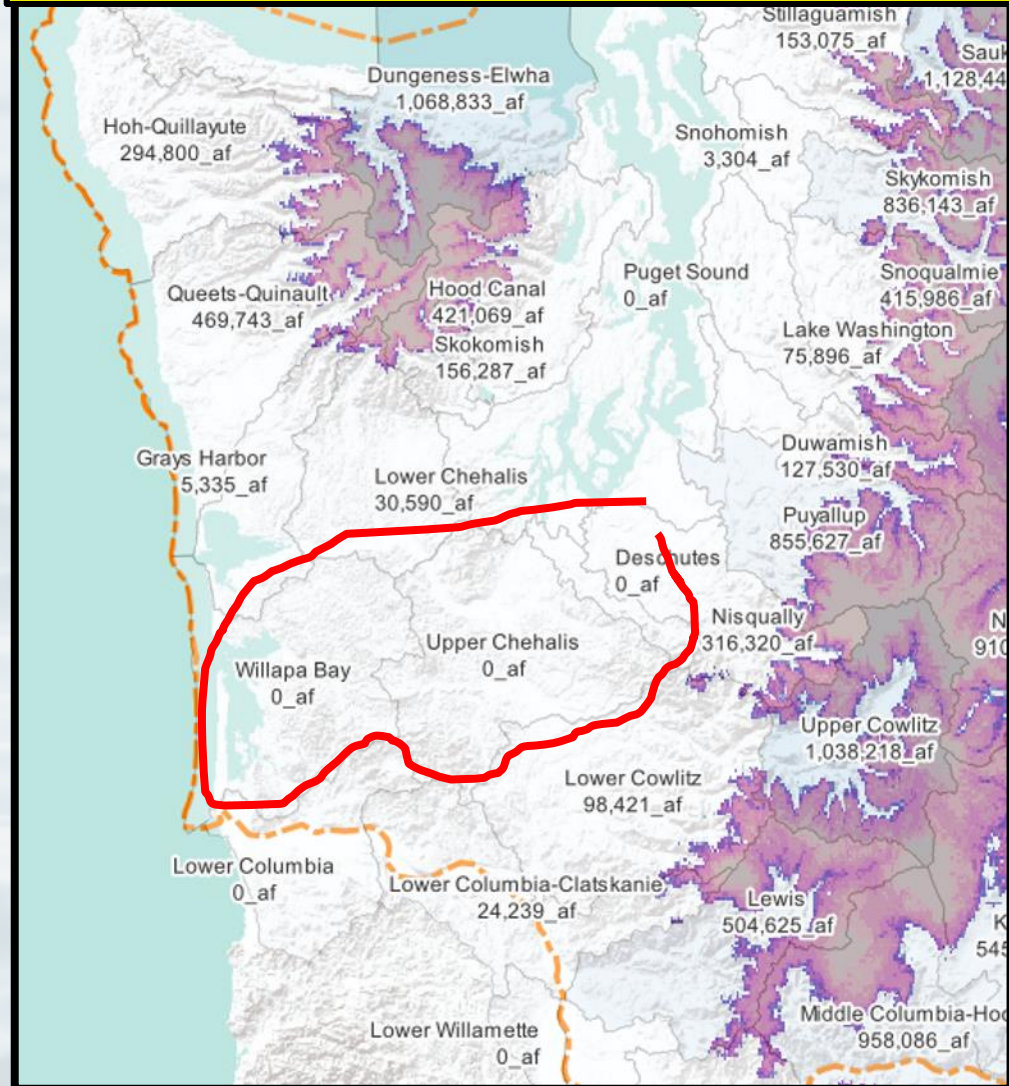
- 93 Junior\* water right holders with surface water diversion for Irrigations purposes only
- Also, curtailment notices sent to 4 water ski lake facilities
- Does not affect diversions for domestic use or for stockwater use

\* Junior means the water right is younger than the 1976 Chehalis Instream flow regulation (WAC 173-522)

Ecology WRP Drought Coordinator Jeff Marti suggesting that:

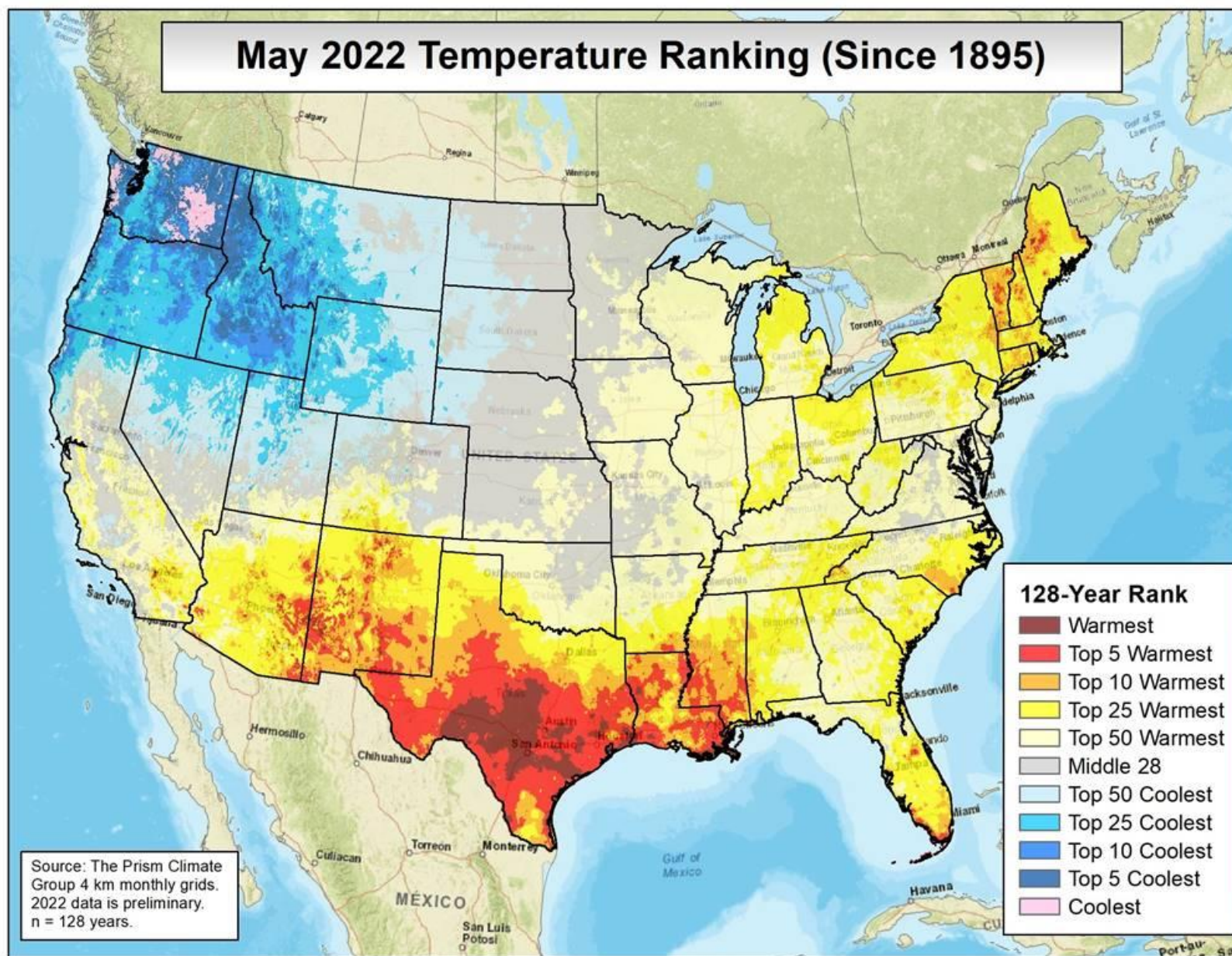
*"it looks like the state SWE peaked on March 22<sup>nd</sup> and we're now racking up consecutive days of SWE losses. Our spring melt is now underway."*

## Estimated snow storage by HUC8 watershed as of March 28, 2022.



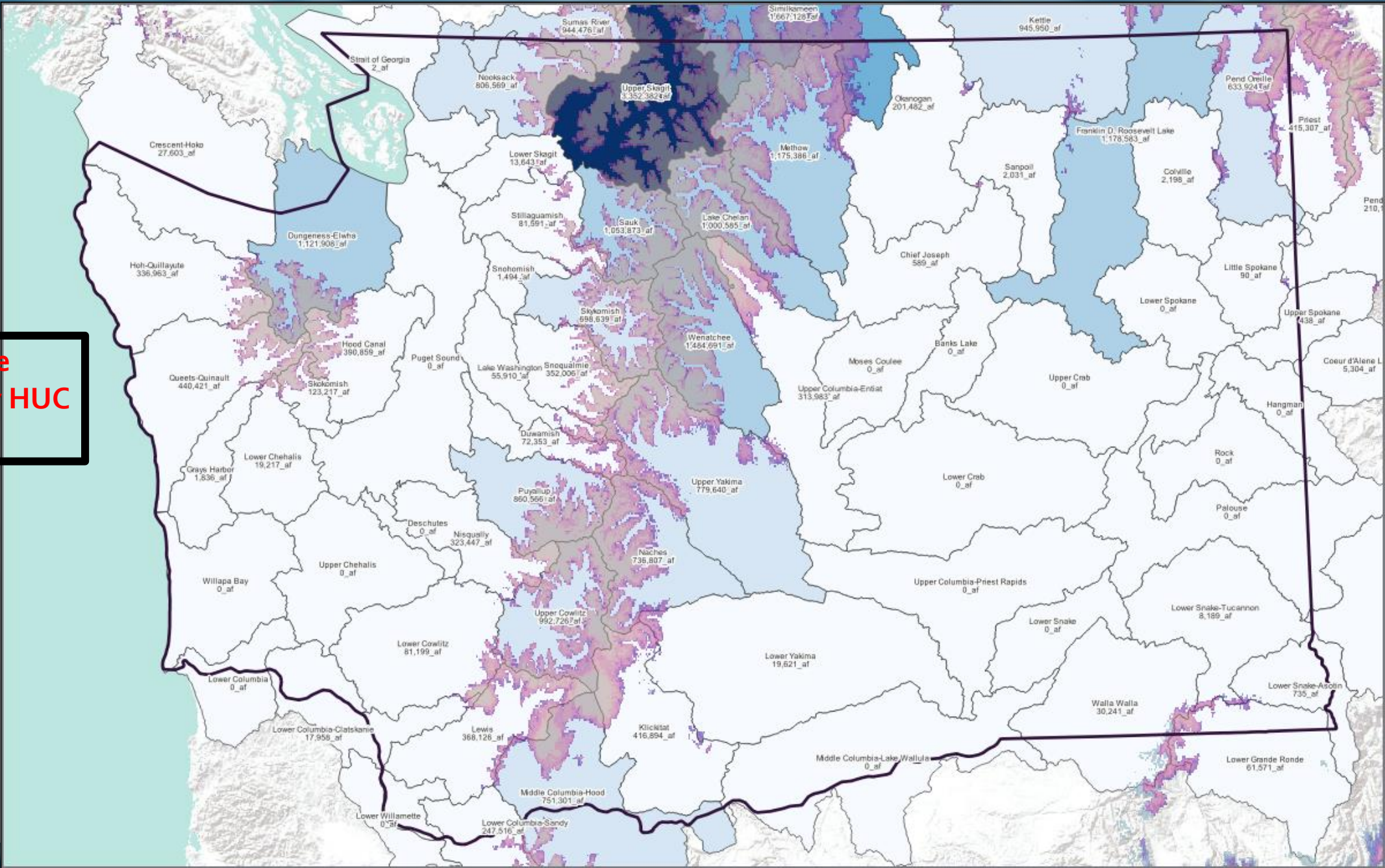


## May 2022 Temperature Ranking (Since 1895)



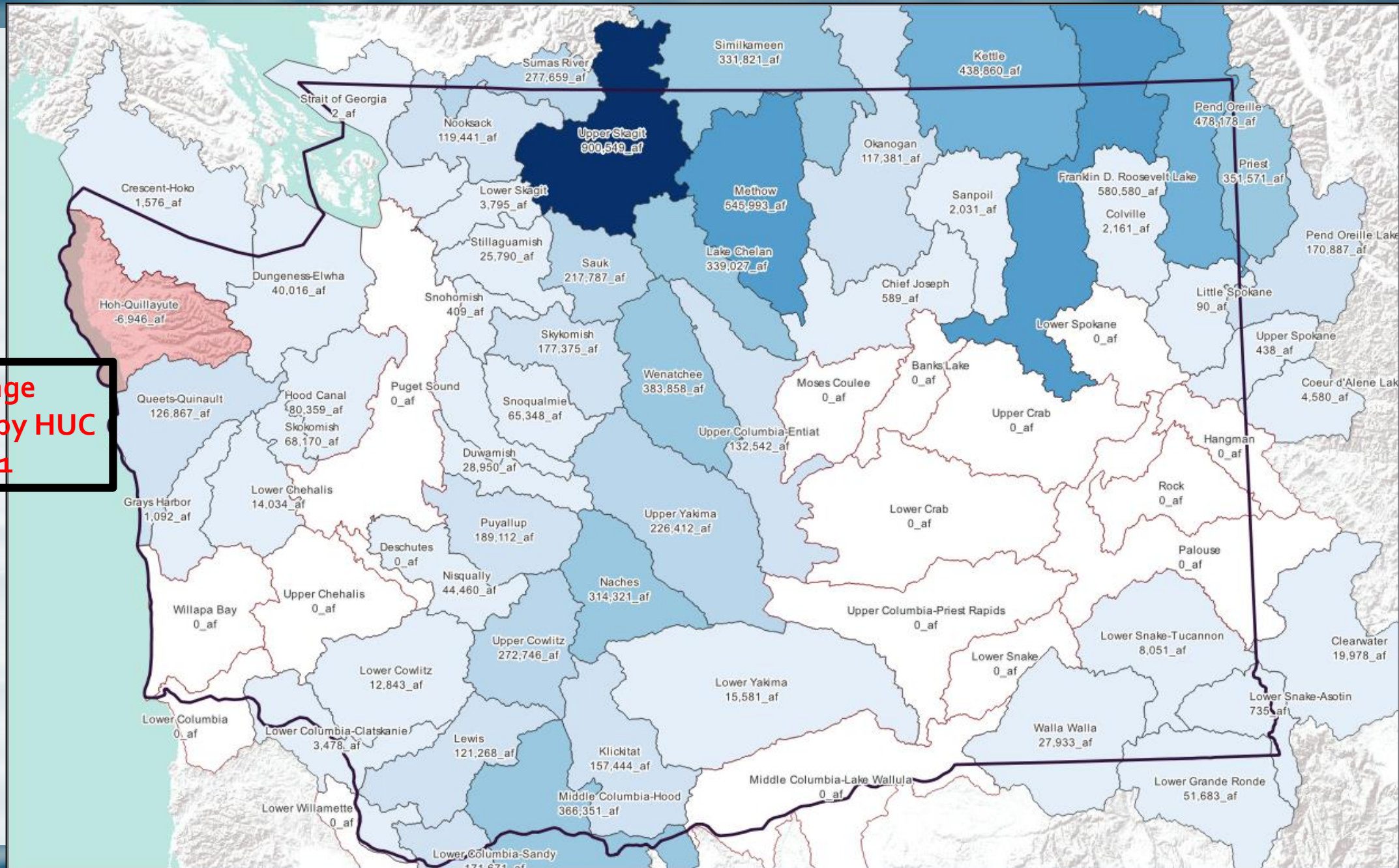


<p><b>Snow storage (acre feet) by HUC May 31 2022</b></p>	
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**Snow storage  
(acre feet) by HUC  
May 31 2021**

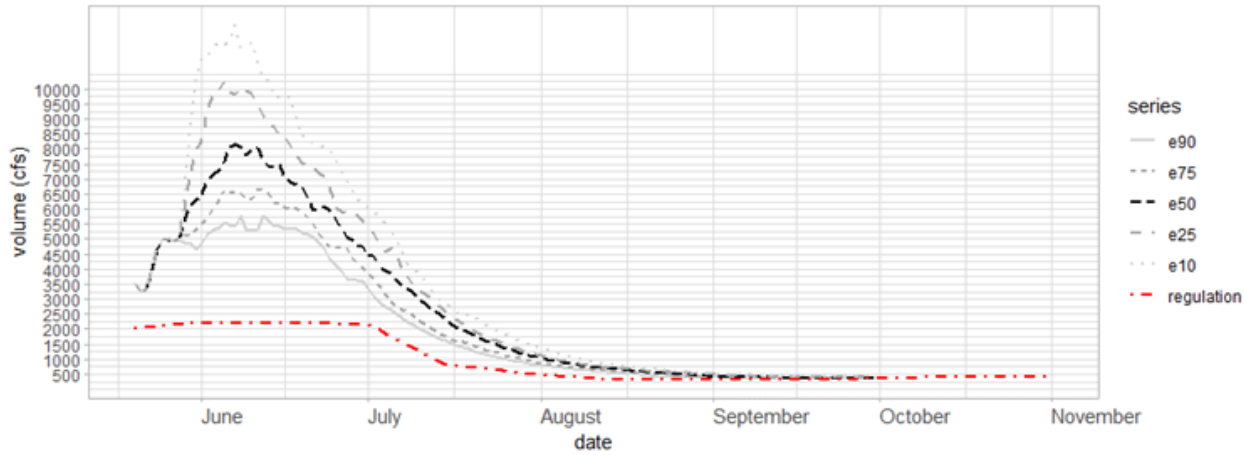




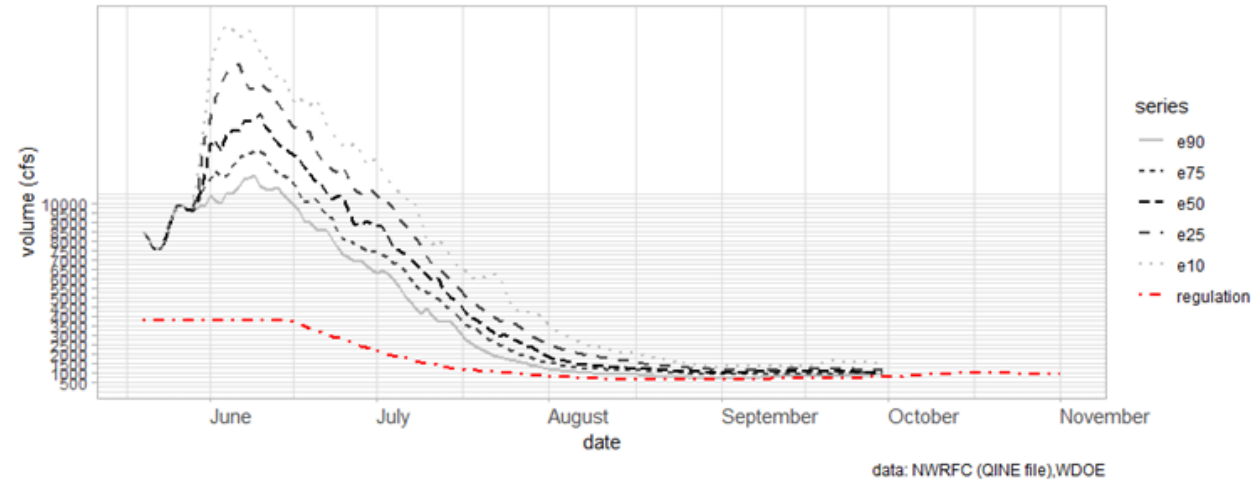
# Current Flow Projections as of May 18, 2022

## of the Methow, Okanogan, Wenatchee and **Chehalis Rivers**

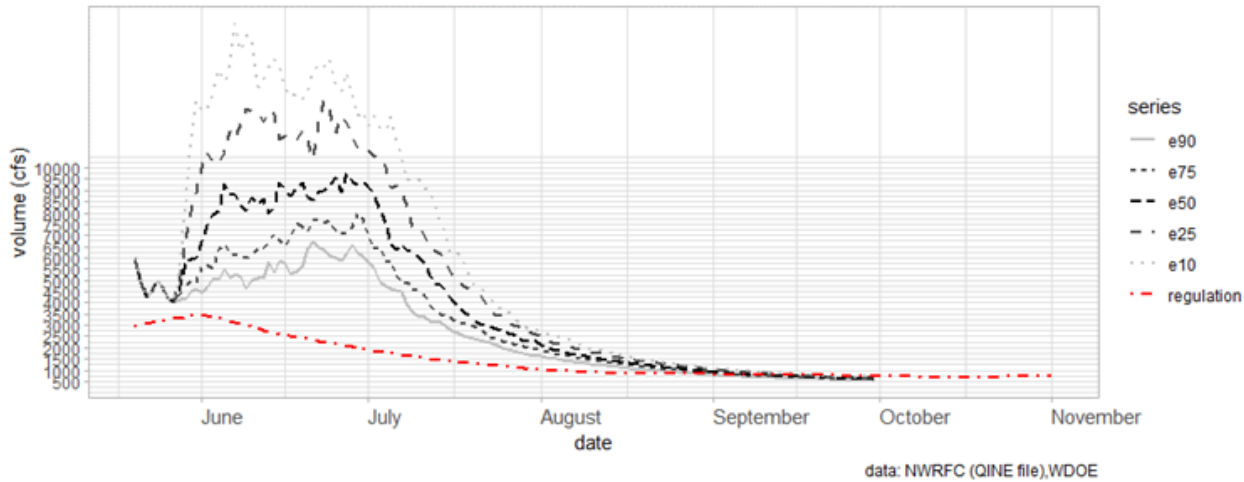
2022-05-18 | ensemble forecast vs Methow River nr Pateros regulation flows



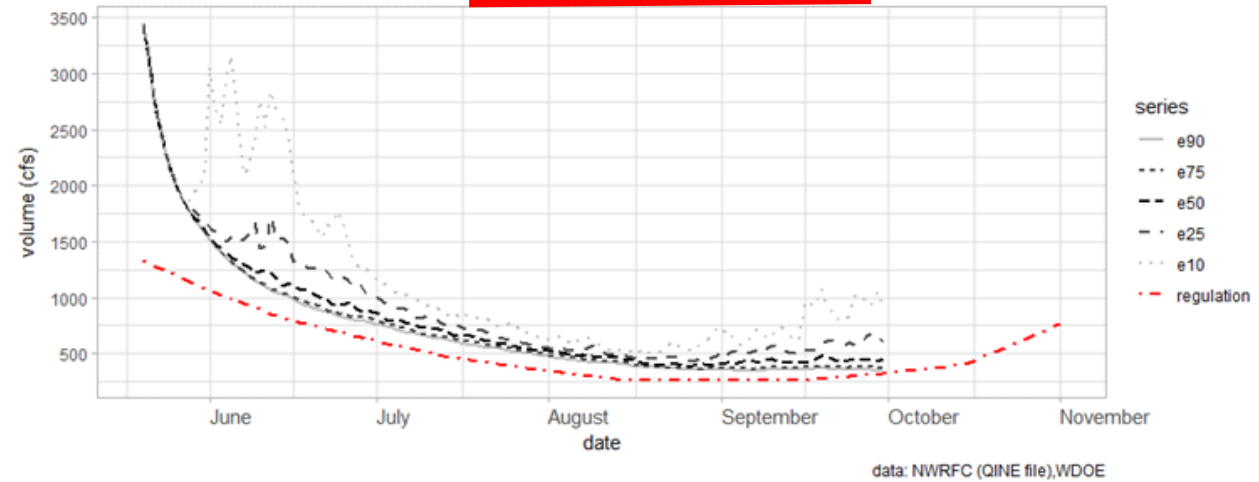
2022-05-18 | ensemble forecast vs Okanogan at Malott regulation flows



2022-05-18 | ensemble forecast vs Wenatchee at Peshastin regulation flows

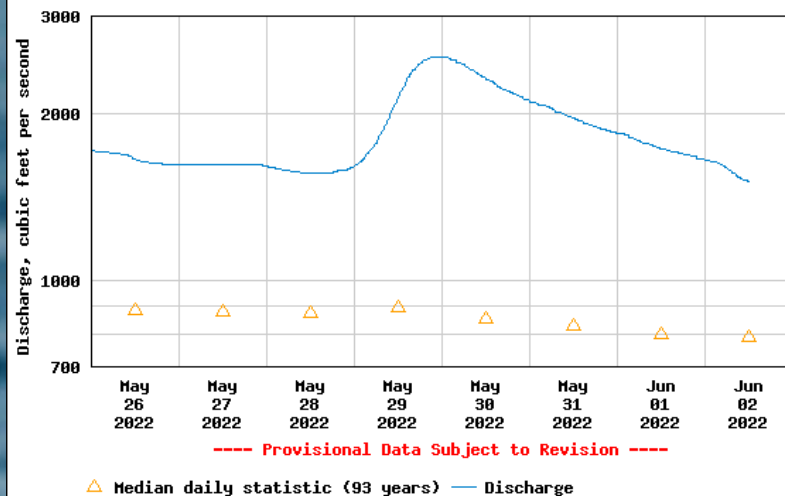


2022-05-18 | ensemble forecast vs **Chehalis at Porter regulation flows**

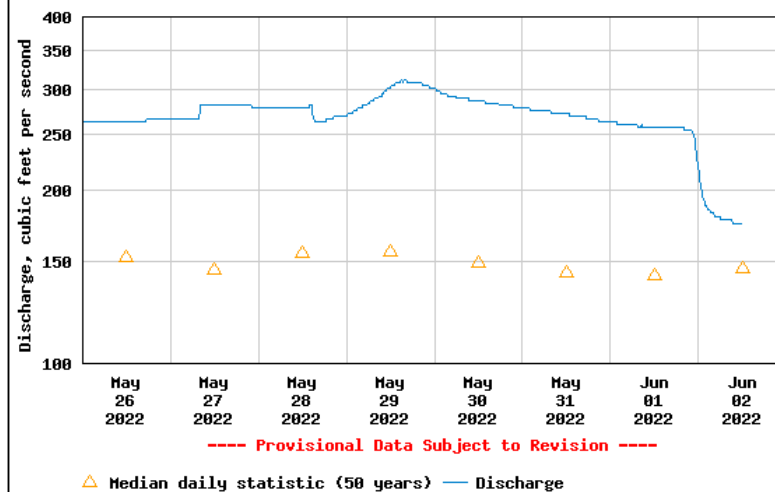




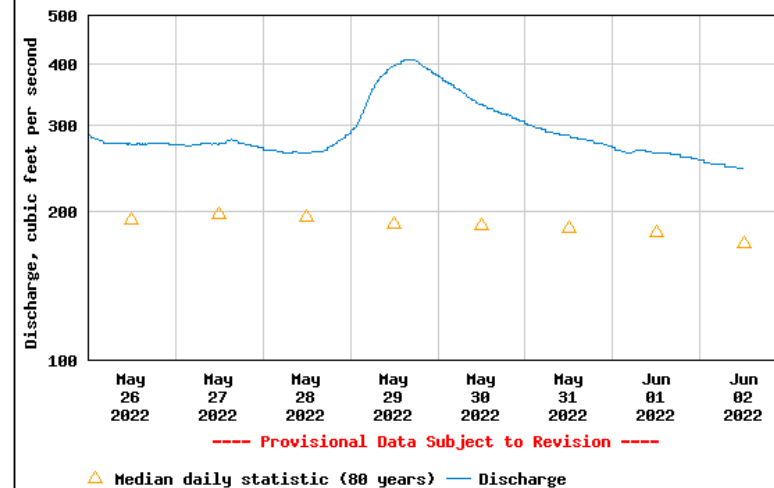
USGS 12027500 CHEHALIS RIVER NEAR GRAND MOUND, WA



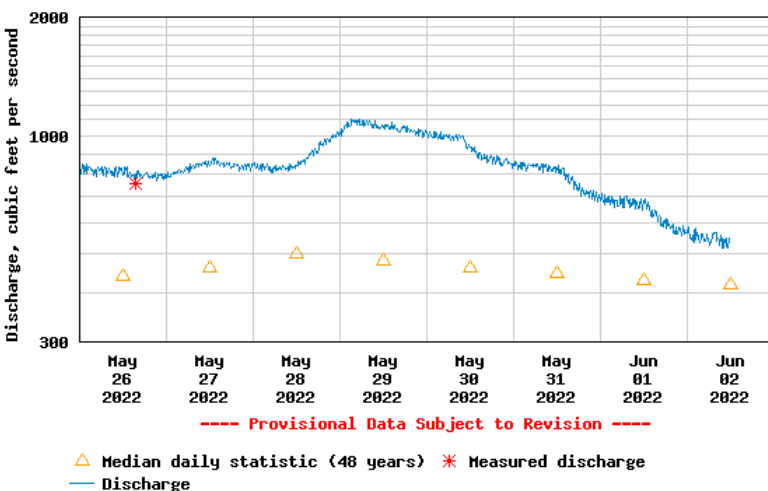
USGS 12026400 SKOOKUMCHUCK RIVER NEAR BUCODA, WA



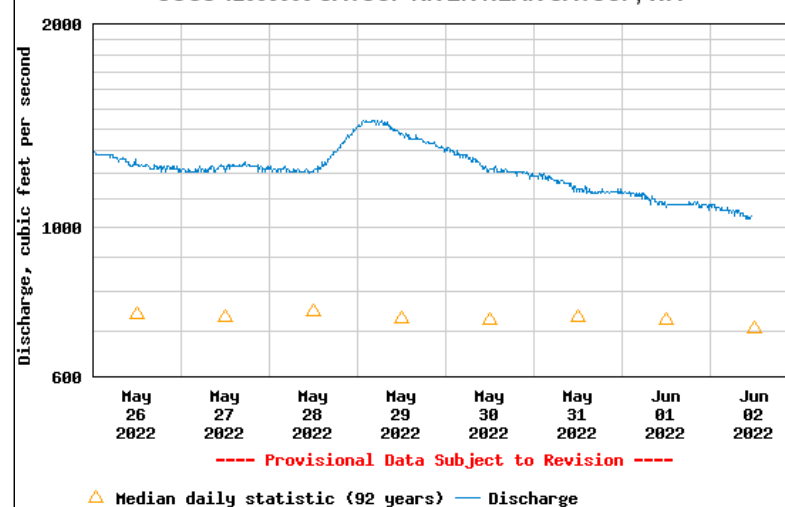
USGS 12025000 NEWAUKUM RIVER NEAR CHEHALIS, WA



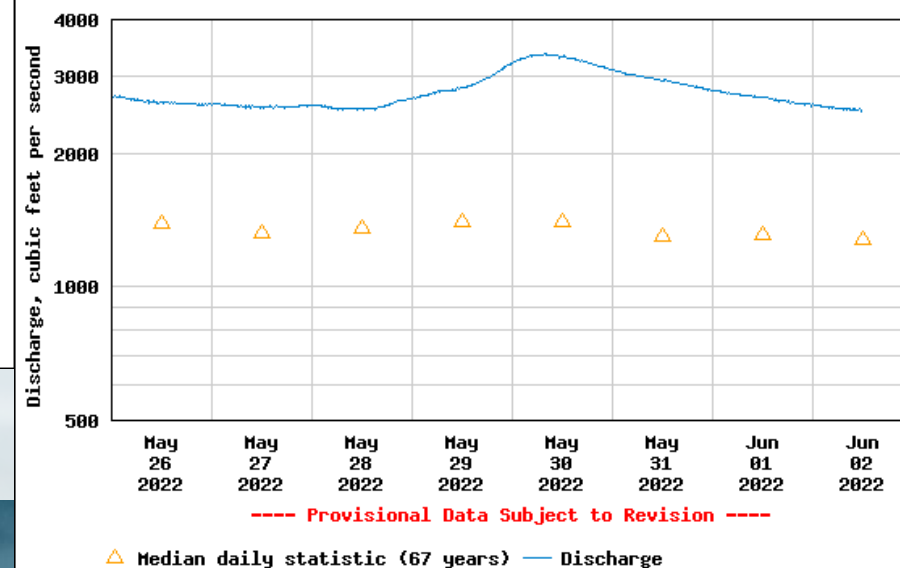
USGS 12037400 WYNOOCHEE RIVER ABOVE BLACK CREEK NR MONTESANO, WA



USGS 12035000 SATSOP RIVER NEAR SATSOP, WA



USGS 12031000 CHEHALIS RIVER AT PORTER, WA





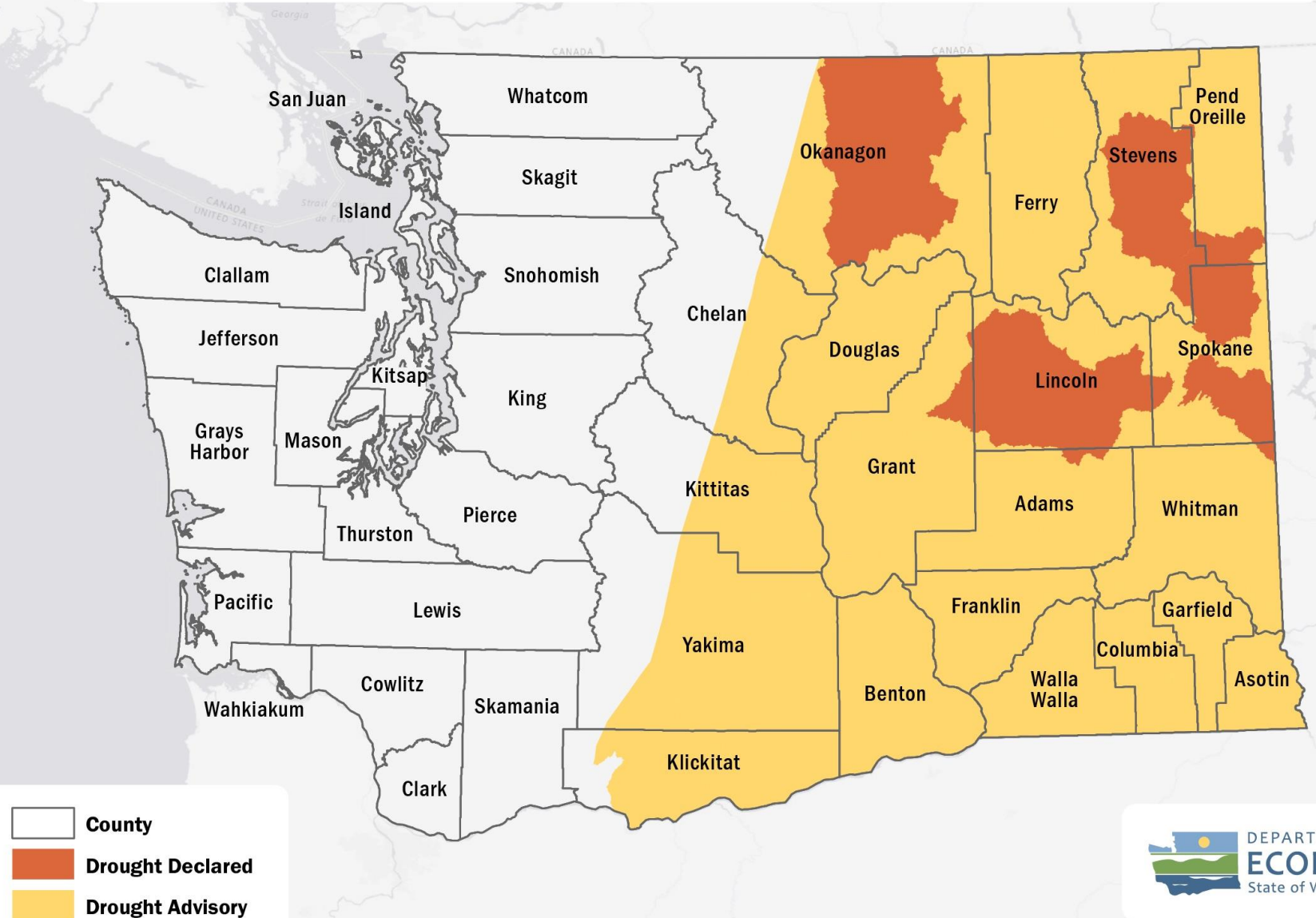
# 2022 Drought Declaration/Advisory Areas

*Parts of Washington east of the Cascade Mountains will remain under an emergency drought declaration this summer.*

*The five watersheds in parts of North Central and Eastern Washington include parts of Spokane, Lincoln, Grant, Adams, Whitman, Stevens, Okanogan, and Pend Oreille counties.*

*These drought stricken areas could continue to see*

- low soil moisture,*
- dried out ponds, and*
- earlier irrigation curtailments for people on*
  - the Colville River near Kettle Falls, and*
  - the Little Spokane River and*
  - Hangman Creek near Spokane.*



# Trans Alta Water Bank in WRIA 22/23

## Chehalis Watershed

Lewis, Grays Harbor & Mason Counties

- 51.6 CFS and 28,033 acre-feet per year
- Year-round
- Consumptive
- Not Interruptible
- Storage regulated
- Meets WDFW objectives

### Water Budget Assumptions

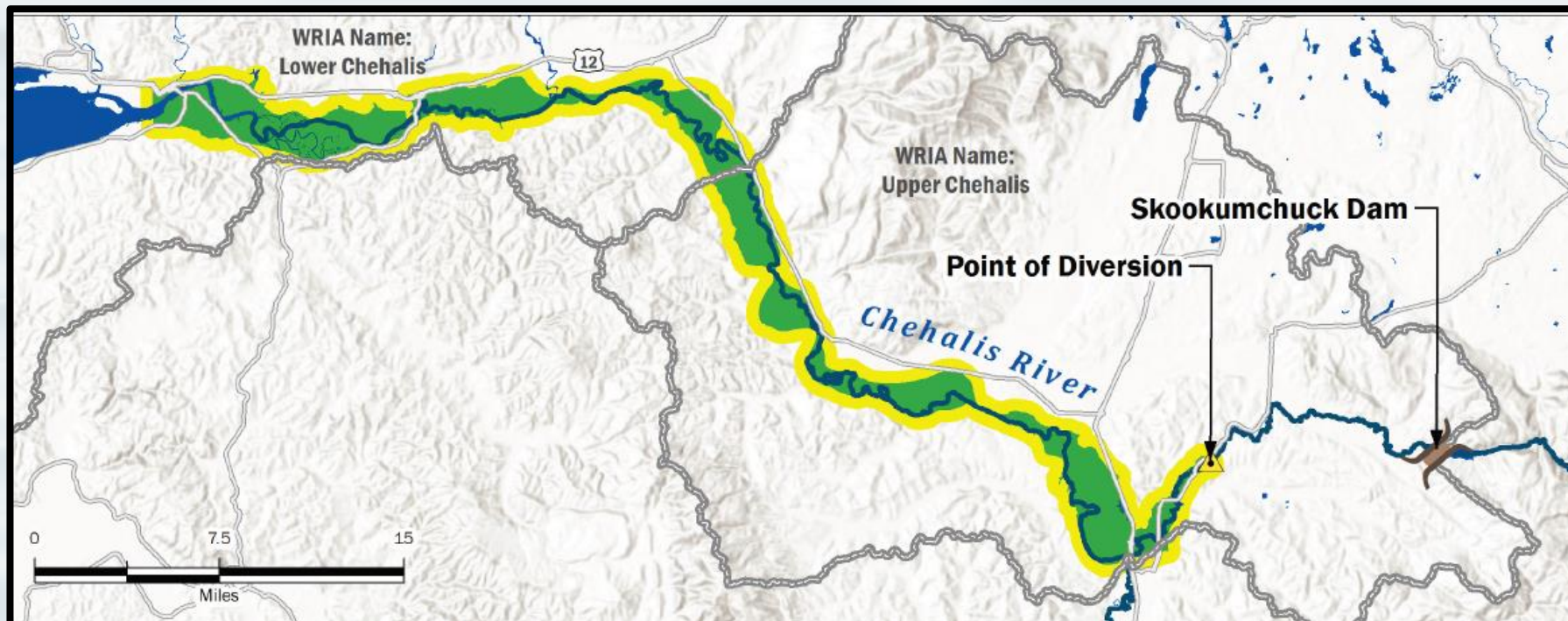
- 28,033 acre-feet per year to trust under TWA
- New mitigated permit will authorize 12,000 ac-ft with development schedule
- Balance of 16,033 ac-ft for immediate marketing
- Additional water likely available after 2025
- Additional supply for exempt well mitigation (Chehalis Basin Partnership/QIN), irrigation, other uses
- Determined future development for local municipal use by City of Centralia



## Where in the Chehalis Watershed can this water be best used?

Water can be used in the Chehalis Watershed from the point of diversion on the Skookumchuck River, all the way downstream on the Chehalis River to Grays Harbor.

Water can be diverted directly from the river or be withdrawn from wells that are located near the river.



City of Yelm  
FINAL Report  
of  
Examination –  
posted for 30  
day appeal  
period (to  
June 8, 2022)

First of 5  
Foster Pilots in  
RCW 90.94 to  
reach this  
point...



STATE OF WASHINGTON  
**FINAL**  
REPORT OF EXAMINATION  
FOR WATER RIGHT APPLICATION

WR Doc ID 2222192

PRIORITY DATE	WATER RIGHT APPLICATION NUMBER
January 10, 1994	G2-29086

NAME AND MAILING ADDRESS	SITE ADDRESS
CITY OF YELM 105 YELM AVENUE WEST YELM, WA 98597	10099 JENSEN DRIVE YELM, WA 98597

Total Rate and Quantity Authorized for Withdrawal	
WITHDRAWAL RATE (gpm)	ANNUAL QUANTITY (ac-ft/yr)
2,100	942

gpm = Gallons per Minute; ac-ft/yr = Acre-feet per Year

Purpose			
PURPOSE	WITHDRAWAL RATE (gpm)	ANNUAL QUANTITY (ac-ft/yr)	PERIOD OF USE
Municipal	2,100	942	Year-Round

IRRIGATED ACRES	PUBLIC WATER SYSTEM INFORMATION	
N/A	WATER SYSTEM NAME AND ID	CONNECTIONS
	99350	4,241 Approved 2019

**SPECIAL REMARKS:**

The use of water under this permit is subject to the fulfillment of the City of Yelm Pilot Project Mitigation Plan (January 2022) ("Mitigation Plan"), existing interlocal agreements, and continued government to government collaboration with the Nisqually Tribe, Squaxin Tribe, and the cities of Lacey, Olympia, Tacoma, and Yelm.

Should any of the City's mitigation actions cease, the City will provide immediate notice to Ecology and generate a proposal for a replacement mitigation action.

Source Location			
COUNTY	WATERBODY	TRIBUTARY TO	WATER RESOURCE INVENTORY AREA
Thurston	Groundwater, TQu aquifer	N/A	11 – Nisqually

SOURCE NAME	PARCEL	WELL TAG	TOWNSHIP	RANGE	SECTION	QQ Q	LATITUDE	LONGITUDE
Well SW1	78640000024	ALM113	17N	01E	23	SE-SE	46.94525 N	-122.64347 E

QQ Q = Quarter-Quarter

Datum: NAD83/WGS84

Place of Use
DESCRIBED IN MOST RECENT WATER SYSTEM PLAN UPDATE DATED:
April 14, 2015

LEGAL DESCRIPTION OF THE AUTHORIZED PLACE OF USE
The place of use of this water right is the service area described in the most recent Water System Plan approved by the Washington State Department of Health, so long as the water system is, and remains, in compliance with the criteria in RCW 90.03.386(2). Under RCW 90.03.386, future changes to the POU for this water right may occur.

Proposed Works
Well SW1 was completed to a depth of 633 feet below ground surface (bgs) with a 12-inch diameter casing and seal from +2 to 367.5 feet bgs and an 8-inch diameter casing and screen assembly from 349 to 633 feet bgs. Well SW1 will be connected to the City's municipal water system and become the main source well for the system.

Development Schedule		
BEGIN PROJECT BY THIS DATE	COMPLETE PROJECT BY THIS DATE	PUT WATER TO FULL USE BY THIS DATE
Begun	December 31, 2024	December 31, 2039

**Attention:** These dates represent deadlines that must be met or risk cancellation of this authorization. Submittal of formal documentation for each stage is required. Extensions may be requested.

Measurement of Water Use	
HOW OFTEN MUST WATER USE BE MEASURED AND RECORDED?	Weekly
HOW OFTEN MUST WATER USE DATA BE REPORTED TO ECOLOGY?	Annually by Jan 31 <sup>st</sup>
WHAT QUANTITY SHOULD BE REPORTED?	Total annual quantity in acre-feet
WHAT RATE SHOULD BE REPORTED?	Annual peak rate of withdrawal in gpm

**Provisions**

**Mitigation Progress Reports**

A joint Mitigation Summary Report must be prepared by the City of Yelm (City) and submitted to Ecology annually. At a minimum, the report shall include:

- Development and performance of the previous year's basin-specific mitigation actions. This data will be gathered from monitoring reports agreed to by the cities in existing interlocal agreements. The report's section on the Deschutes River and Woodland Creek shall be jointly developed with the cities of Lacey and Olympia consistent with interlocal agreements between the cities;
- Development and performance of the previous year's basin-specific in-kind mitigation actions. The summary of performance shall be supported by available data;
- Completed city-specific mitigation actions by basin;
- Comparison between permit development and corresponding completed mitigation actions, and;



- Identification of mitigation actions not completed, if any, including a revised schedule and proposed limitations on permit development until completed.

For brevity, the summary report may include appendices of construction and monitoring reports. The annual Mitigation Summary Report for the previous year is due to Ecology on March 1. The first summary report is due on March 1, 2023.

#### Measurements, Monitoring, Metering, and Reporting

An approved measuring device must be installed and maintained for each of the sources identified by this water right in accordance with the rule "Requirements for Measuring and Reporting Water Use", chapter 173-173 WAC, which describes the requirements for data accuracy, device installation and operation, and information reporting. It also allows a water user to petition the Department of Ecology (Ecology) for modifications to some of the requirements.

Recorded water use data shall be submitted electronically by January 31<sup>st</sup> each year. To set up an Internet reporting account, contact the Southwest Regional Office. If you do not have Internet access, you can still submit hard copies by contacting the Regional Office for forms to submit your water use data.

#### Conservation

The water right holder is required to maintain efficient water delivery systems and use of up-to-date water conservation practices consistent with RCW 90.03.005.

#### Proof of Appropriation

Consistent with the development schedule given in this report (unless extended by Ecology), the water right holder must file a Notice of Proof of Appropriation (PA) of Water with Ecology. The PA documents the project is complete and all the water needed has been put to full beneficial use (perfected). To verify the extent of water use under this permit, an inspection of water use is typically required, known as a "proof exam". After filing the PA, the water right holder's next step is to hire a Certified Water Rights Examiner (CWRE) to conduct this proof exam. A list of CWREs is provided to the water right holder upon filing the PA with Ecology. The final water right document, a water right certificate, then may issue based upon the findings of the CWRE. Statutory county and state filing fees may apply prior to certificate issuance.

#### Schedule and Inspections

Department of Ecology personnel, upon presentation of proper credentials, shall have access at reasonable times, to the project location, and to inspect at reasonable times, records of water use, wells, diversions, measuring devices and associated distribution systems for compliance with water law.

#### Findings of Fact and Order

Upon reviewing the investigator's report, I find all facts, relevant and material to the subject application, have been thoroughly investigated.

Therefore, I **ORDER APPROVAL** of Application No. G2-29086, subject to existing rights and the provisions specified above.

#### Your Right To Appeal

You have a right to appeal this Order to the Pollution Control Hearings Board (PCHB) within 30 days of the date of receipt of this Order. The appeal process is governed by chapter 43.21B RCW and chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal, you must do the following within 30 days of the date of receipt of the Order:

- File your appeal and a copy of this Order with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.
- Serve a copy of your appeal and this Order to Ecology in paper form - by mail or in person (see addresses below). E-mail is not accepted.

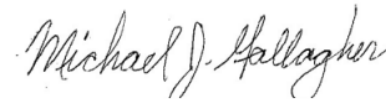
You must also comply with other applicable requirements in chapter 43.21B RCW and chapter 371-08 WAC.

Street Addresses	Mailing Addresses
<b>Department of Ecology</b> Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey, WA98503	<b>Department of Ecology</b> Attn: Appeals Processing Desk PO Box 47608 Olympia, WA98504-7608
<b>Pollution Control Hearings Board</b> 1111 Israel RD SW, Ste 301 Tumwater, WA98501	<b>Pollution Control Hearings Board</b> PO Box 40903 Olympia, WA98504-0903

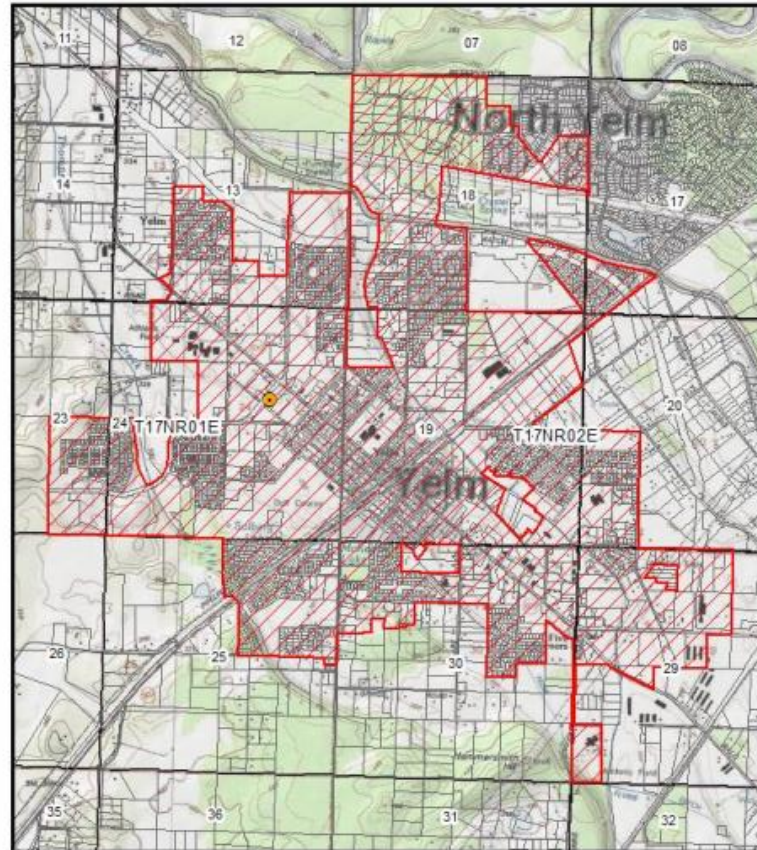
For additional information, visit the Environmental Hearings Office Website: <http://www.eho.wa.gov>. To find laws and agency rules, visit the Washington State Legislature Website: <http://www1.leg.wa.gov/CodeReviser>.

#### Authorizing Signature

Signed at Lacey, Washington, this 9th day of May, 2022.



Michael J. Gallagher, Section Manager  
 Water Resources Program/Southwest Regional Office  
 Department of Ecology



Basemap - E SRI US Topographic Map



0 1,550 3,100 6,200 Feet



Water Right Application  
G2-29086,  
T. 17N.R. 01E W.M., T. 17N.R. 02E W.M.  
WRIA 11 - Thurston County



Basemap - E SRI Terrain

#### Legend

- POINT OF WITHDRAWAL (POW)
- PLACE OF USE (POU)
- THURSTON CO. PARCEL
- SECTION LINE

#### Comments:

The Washington State Department of Ecology does not warrant, guarantee, or make any representations regarding the use of, or results from the use of the data in terms of correctness, accuracy, reliability, or otherwise.

Map Created 1/7/2022



Questions?

Thank you

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Water Resources Program

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[Mike.Gallagher@ecy.wa.gov](mailto:Mike.Gallagher@ecy.wa.gov)

