



























Where We Work

Mid-Columbia
FISHERIES
ENHANCEMENT
GROUP

COOLING THE YAKIMA DELTA

Restoring Salmon + Improving Water Quality

Water is treated by the Yakima Island treatment facility before being released into the river.

Too Warm for Salmon + Steelhead!

The passage barrier at Knappton Island is a significant impediment to naturally protected fish and hinders the ability to restore salmon and steelhead in the Yakima Basin. The negatively effects hatchery production and fishing rights.





facebook.com/CTUR 1855 509.633.1111



Confederated Tribes of the
Umatilla Indian Reservation







4965 tags deployed

596 tags detected (12.0%)

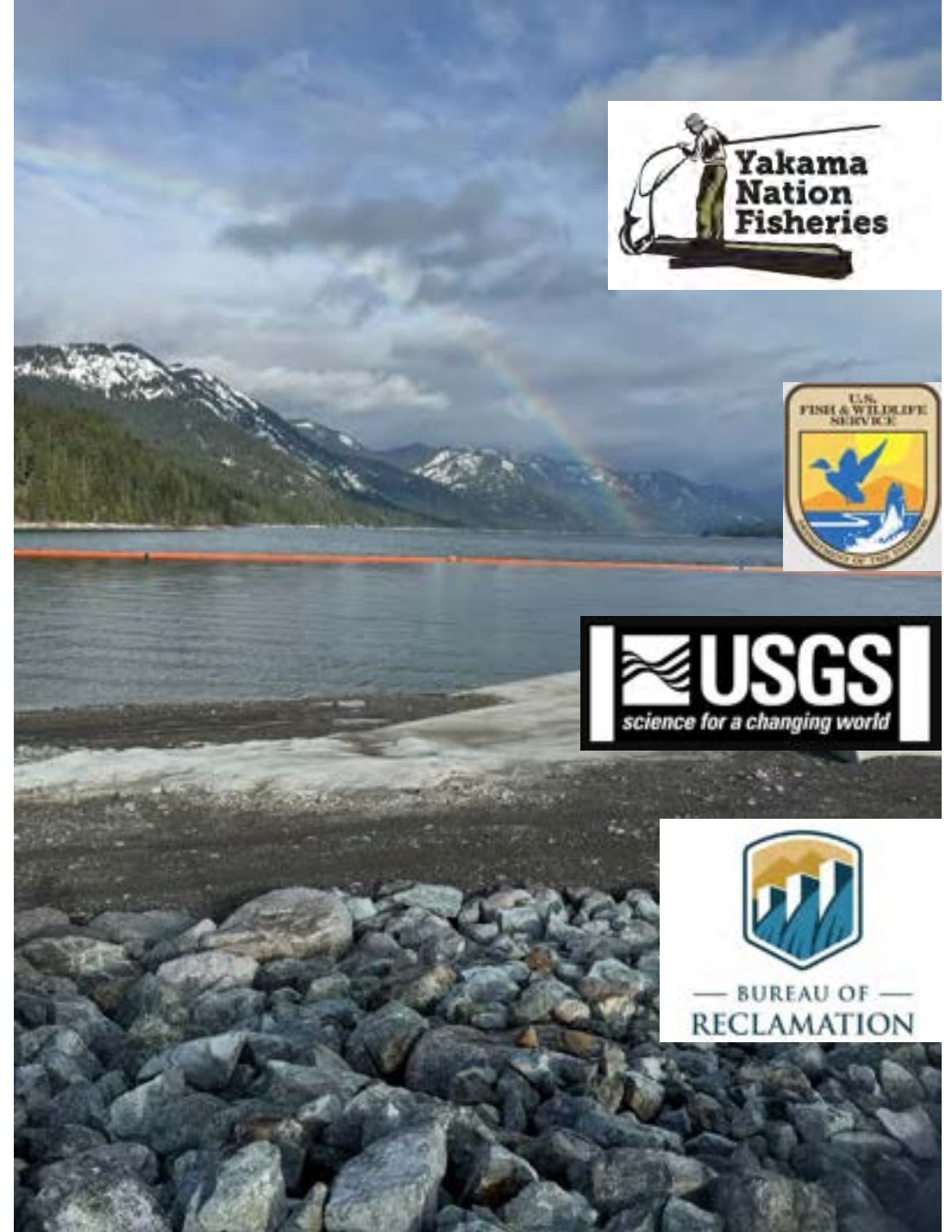
562 (94.3%) out of 596 detected on only a single array

Cle Elum	Roza Dam	Sunnyside	Prosser	McNary	John Day	Bonneville	Estuary	count
X		X						5
X			X					2
	X	X						15
	X		X					2
	X					X		1
		X	X					7
		X		X				3
X								26
	X							89
		X						346
			X					61
				X				7
				X				3
					X			20
						X		6



Helix and Roza Monitoring

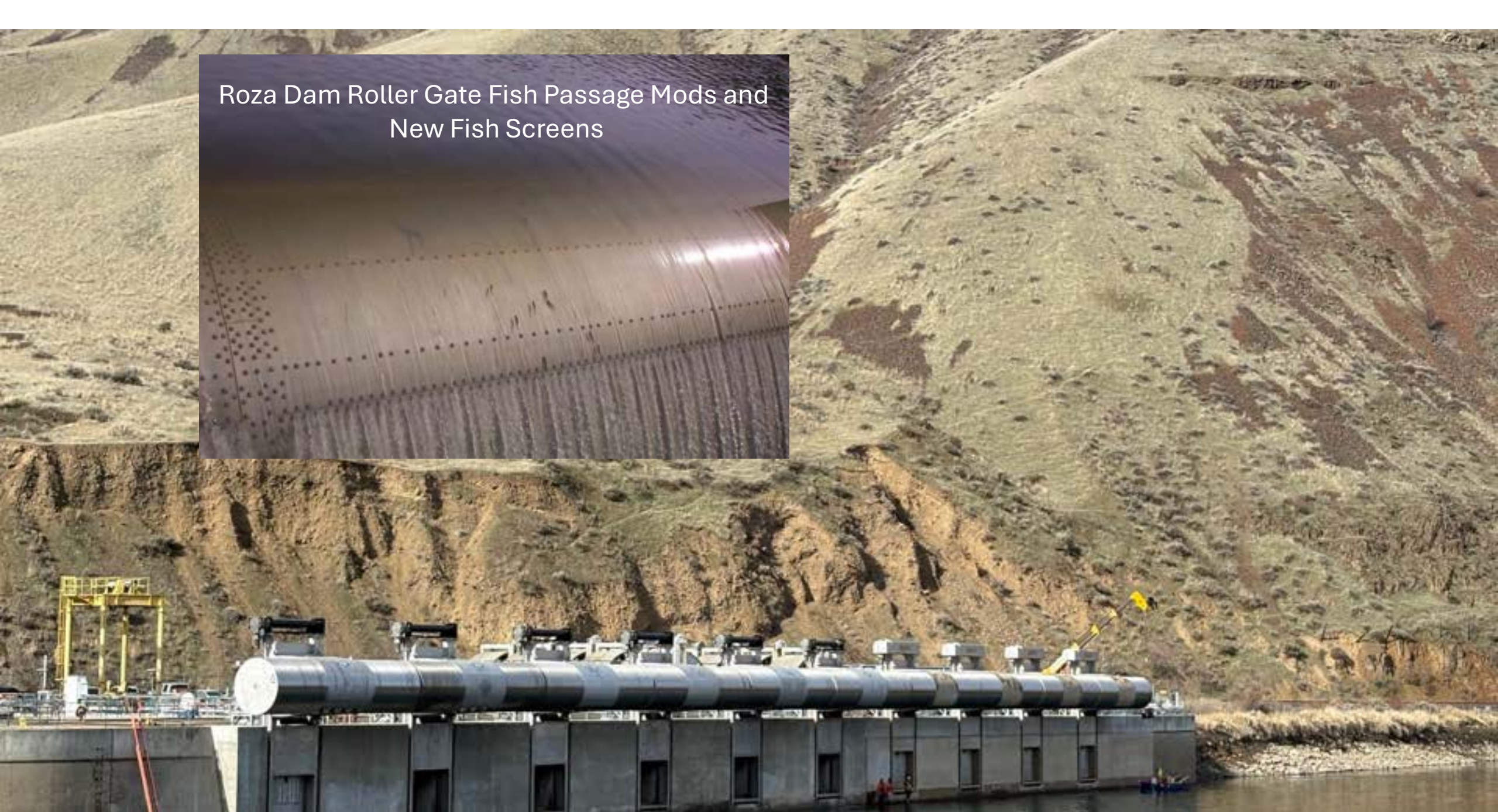
- BOR ESA and YRBWEP funding cooperative studies with YN, USGS, USFWS
- Goals: evaluate Cle Elum Juvenile Fish Passage Helix and Roza Dam modifications for fish survival and migration behavior
- JSATS acoustic telemetry tags are high efficiency for short term studies, use batteries so limited life
- Acoustic tagging some hatchery Chinook, Sockeye captured in lake
- Tagged fish released at Cle Elum or Roza Forebay and monitored during migration
- Testing Helix flow range 100-400 cfs and fish passage through dam outlet
- Need info for new facility SOP's, modifications



Species	Cle Elum forebay	Cle Elum tailrace	Roza forebay
Yearling Chinook	138	88	62
<u>Subyearling Chinook</u>	0	0	123
Sockeye	196	40	0

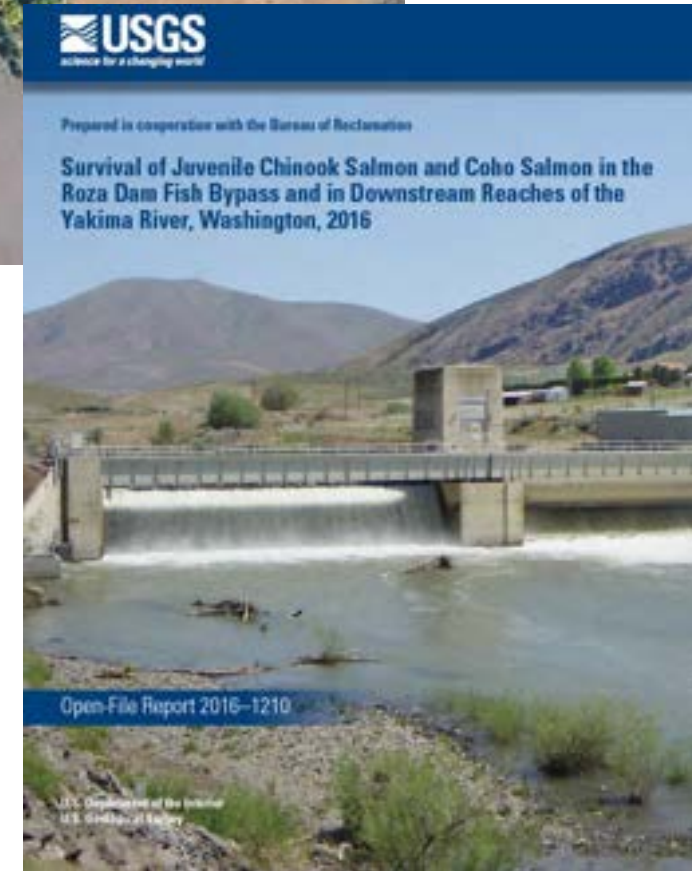


Roza Dam Roller Gate Fish Passage Mods and
New Fish Screens



2026 Initial Observations

- Intake Level 1 (full pool) operated March 23 –June 8
- Fish passing through Helix appear to have high survival
- Some fish exited reservoir through the dam outlet
- Some tagged fish have not exited
- So far no fish detected in Roza Canal
- Reassess Roza Dam survival studies 10 years later



Current and Future Flavors of Drought: Different Pathways to Low Snowpack

Karin Bumbaco
Washington State Climate Office (WASCO)
Climate Impacts Group
University of Washington

June 10, 2026



Source: <https://ecology.wa.gov/water-shorelines/water-supply/water-availability/statewide-conditions/drought-response>

Washington Flavors of Drought

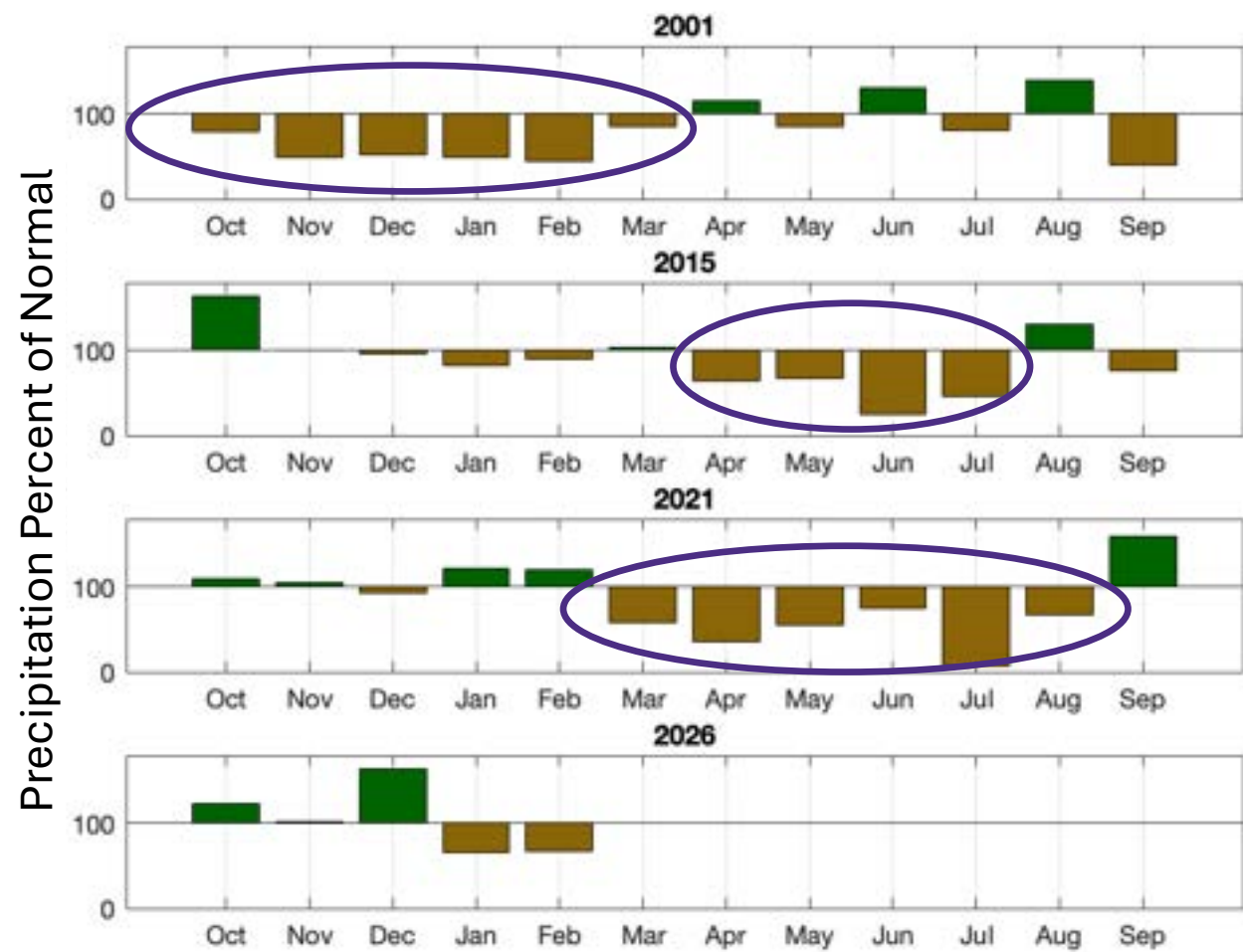
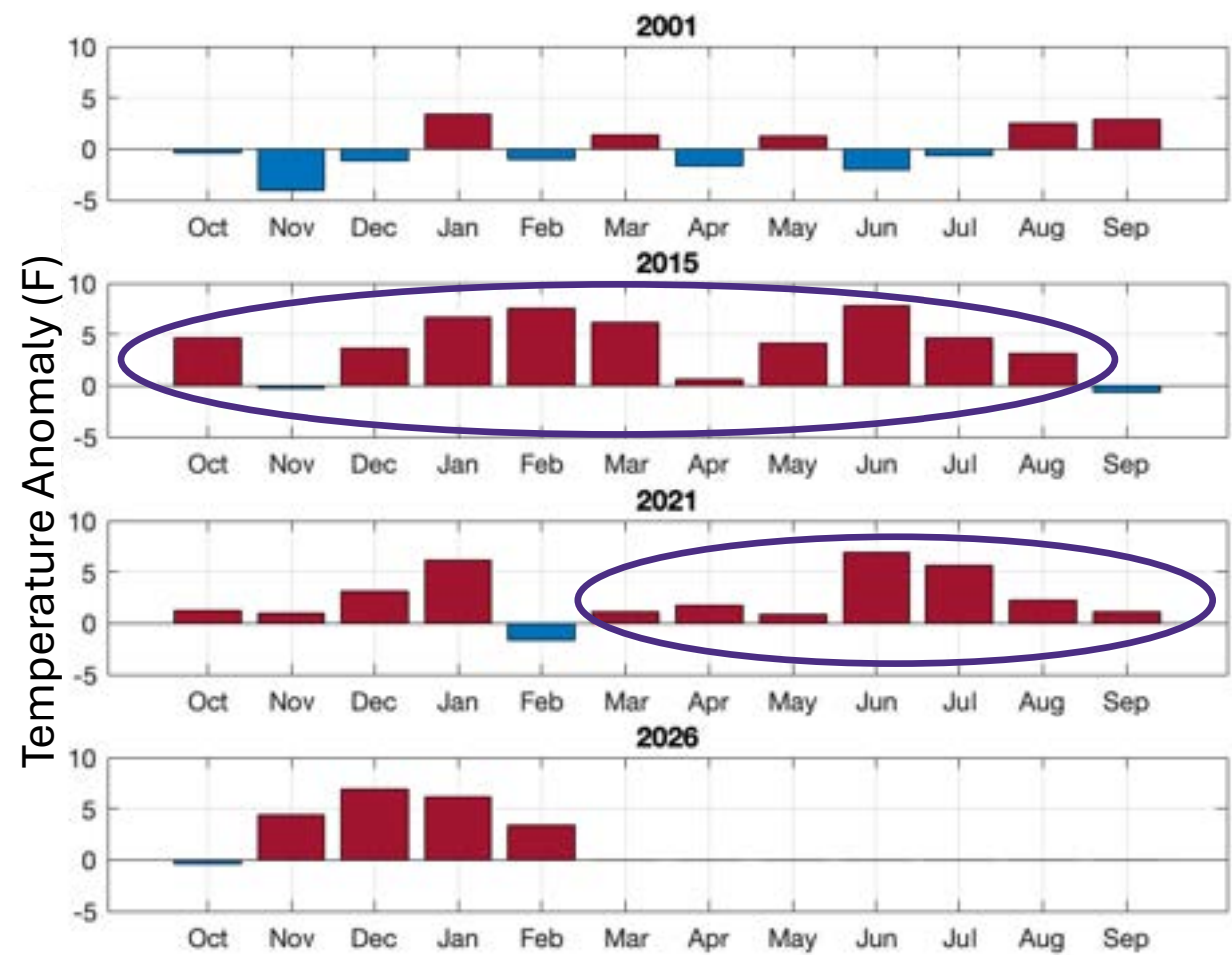
- Dry Winter (e.g., 1976-77, 2000-01) impacting snowpack
- Warm winter (e.g., 2004-05, 2014-15) impacting snowpack
- Dry spring (e.g., 2021) and summer (e.g., 2003)



Golden delicious apples shriveled on the tree to prioritize water supply for higher value crops in 2015
(Kate Prengaman, Yakima Herald)

Historical Droughts

Temperature WA Statewide Precipitation



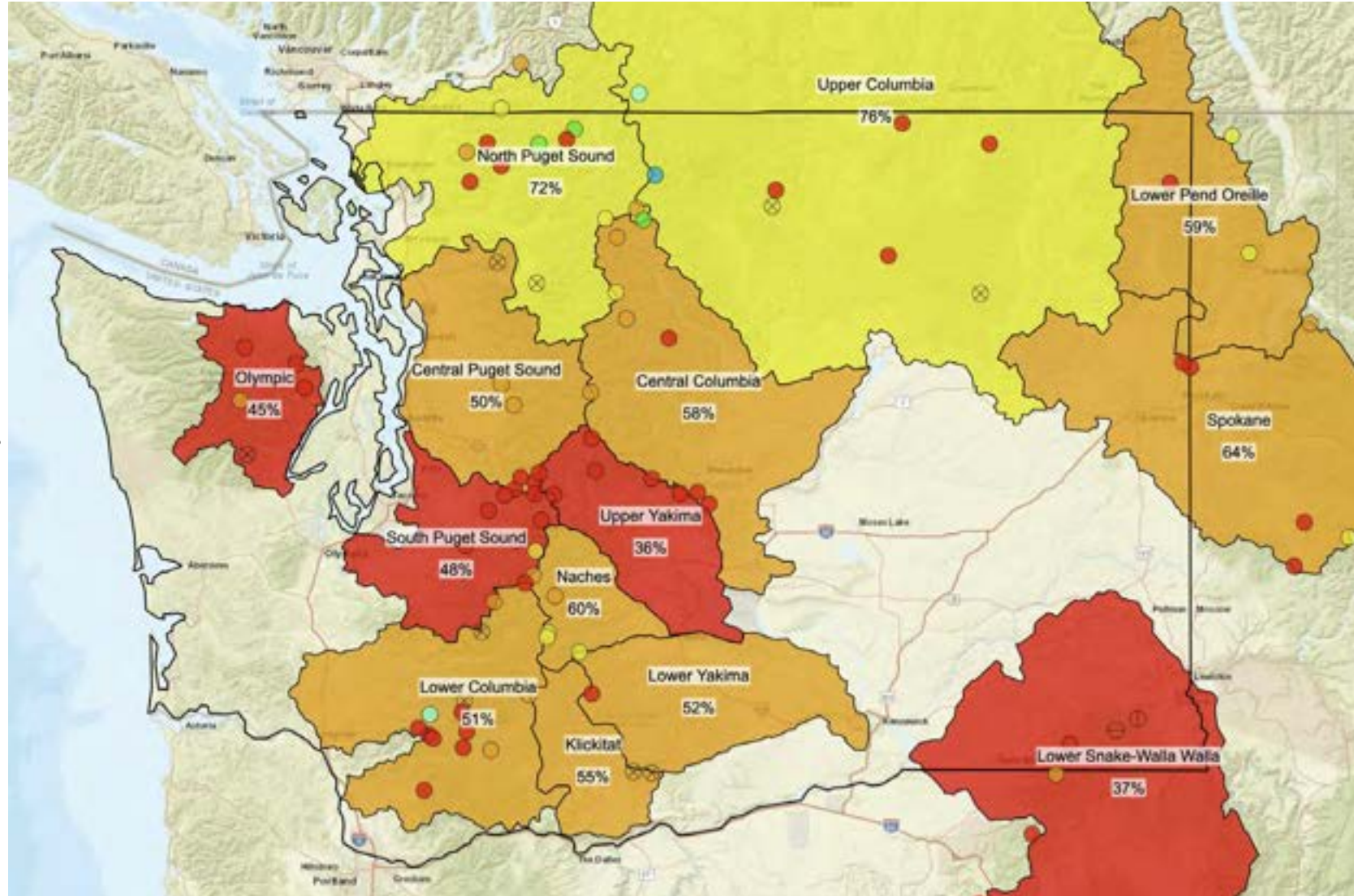
Anomalies compared to 1901-2000 mean

Winter 2025-26

Extremely Low Spring Snowpack



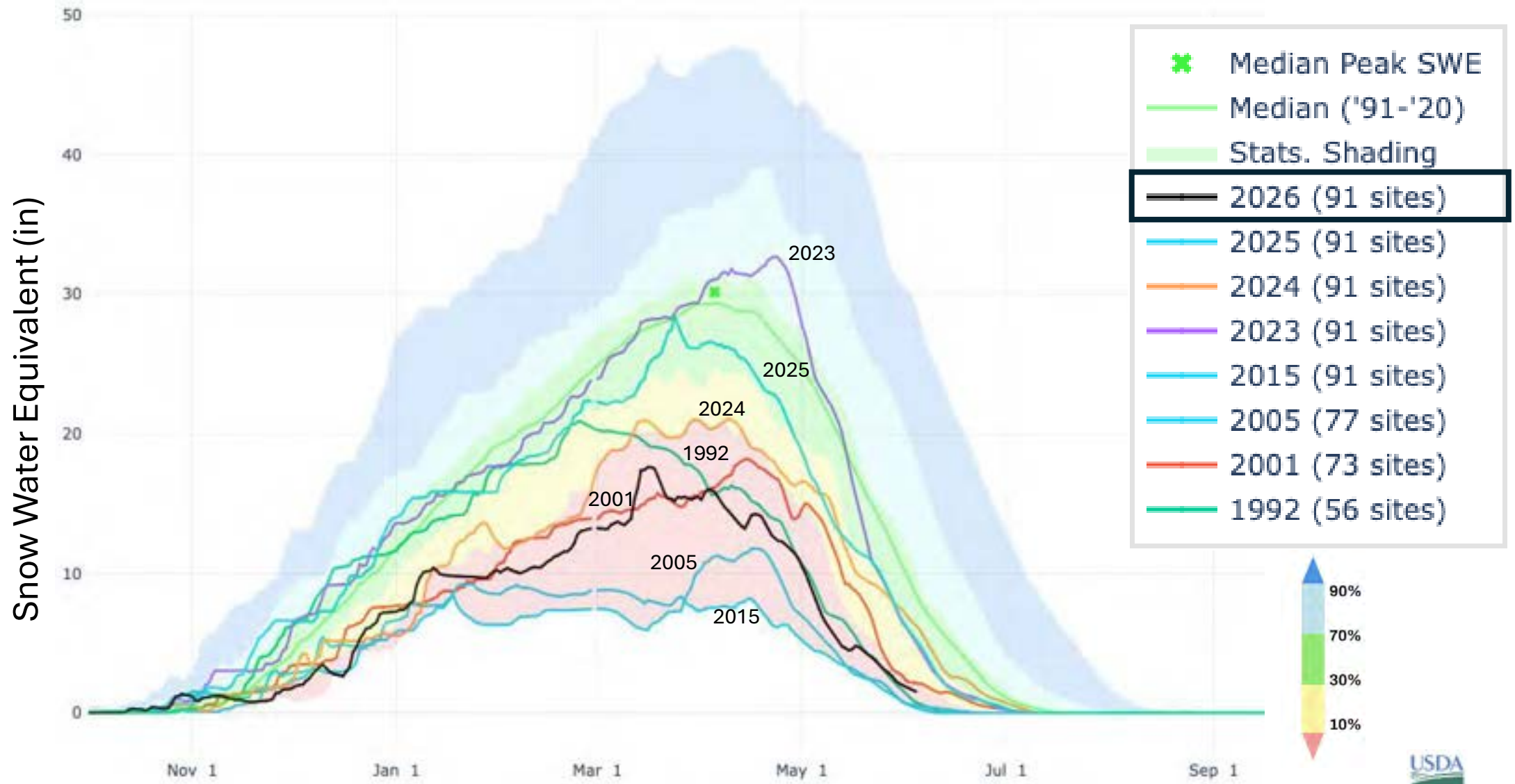
Basin Percent of Median: April 1, 2026 SWE



**2026
Statewide Snowpack:
52% of median**

Source: <https://nwcc-apps.sc.egov.usda.gov/imap/>

WA Average Snowpack lower than last 3 years



4th lowest snowpack currently: 7th percentile

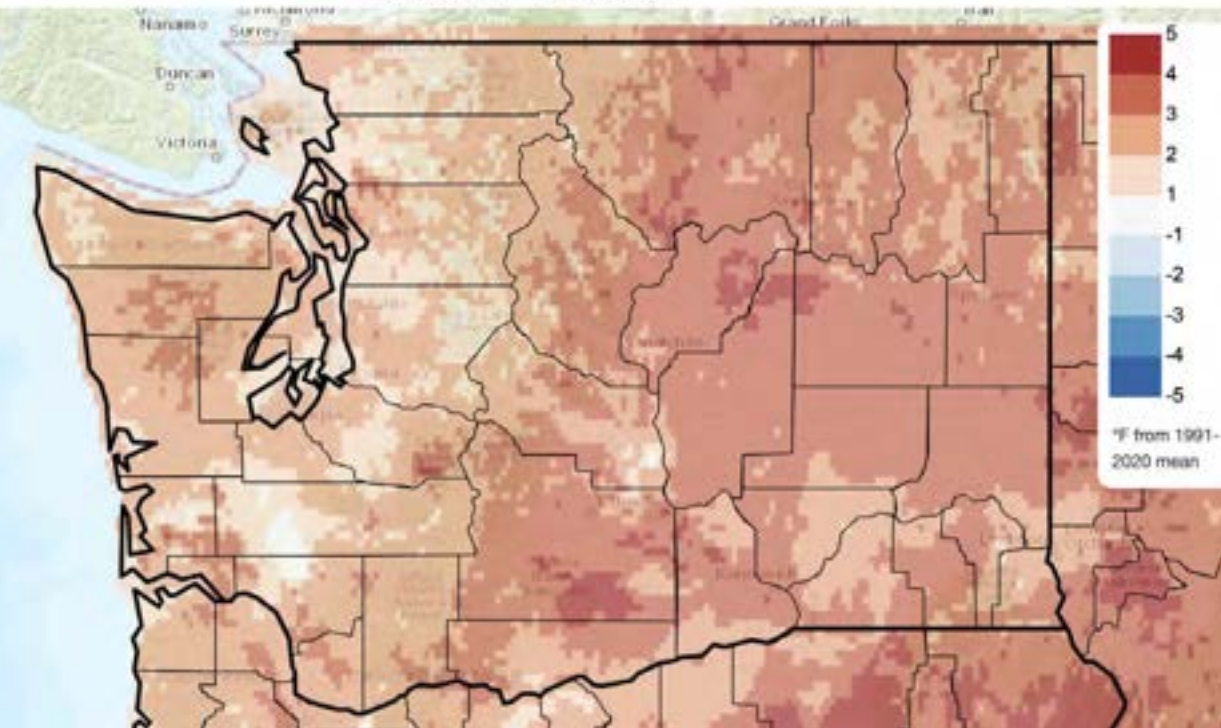
Source: [Link to Source for Snowpack levels](#)

Water Year 2026



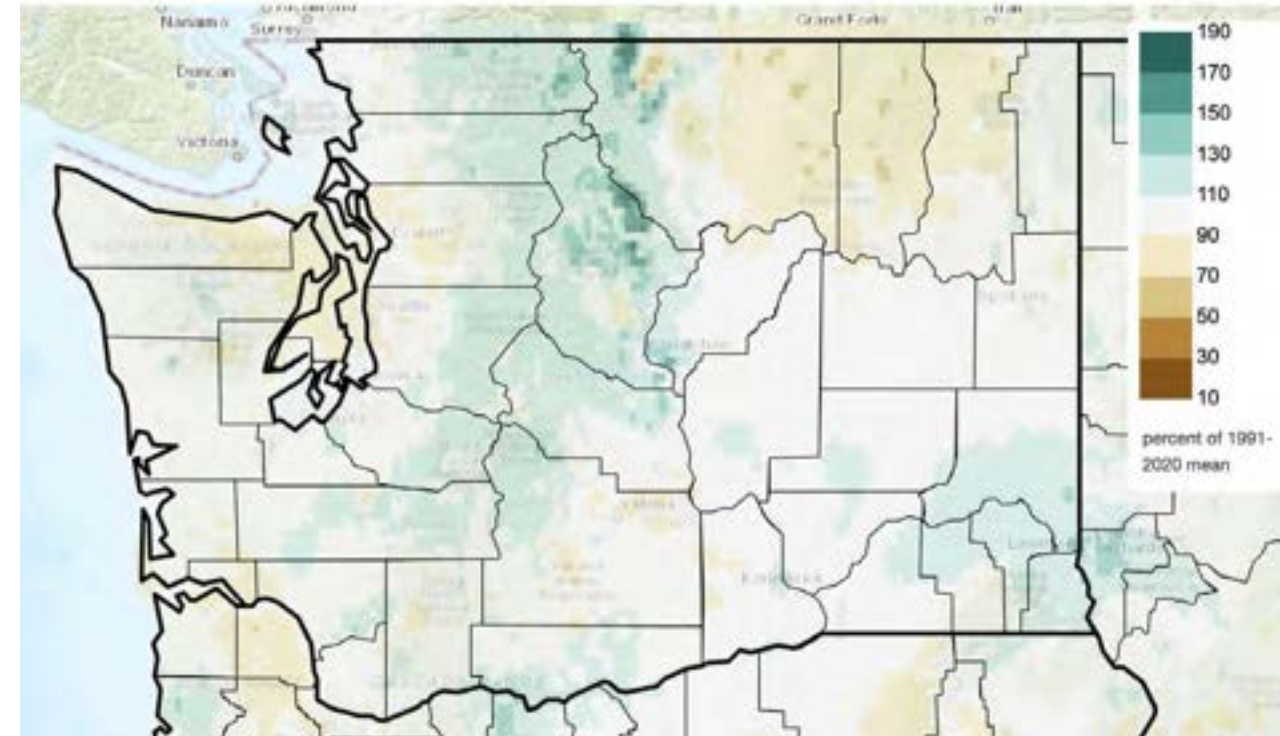
Temperature

Mean Daily Temperature Anomaly, Since Oct 1st
2025/10/01 - 2026/06/03



Precipitation

Total Precipitation Anomaly, Since Oct 1st
2025/10/01 - 2026/06/03



[Climate Toolbox](#)

- Averaged statewide, Oct-May tied 1992 as the 3rd warmest (+2.7°F)* on record
- Averaged statewide, Oct-May precipitation was near-normal (+1.12"; 103% of normal)*

*Records since 1895; Normal is 1991-2020

*Records since 1895; Normal is 1991-2020

What “flavor” of drought occurred this year?

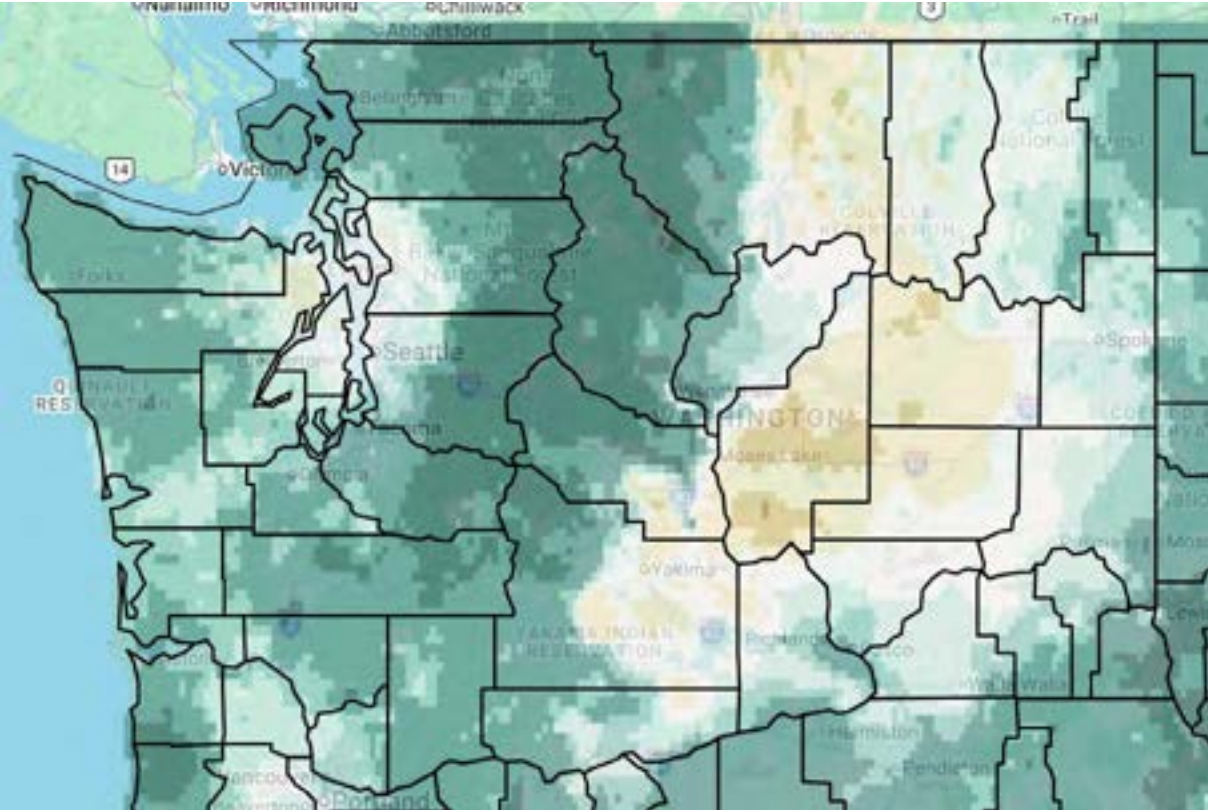
- 1) Dry winter → low snowpack
- 2) Warm winter → low snowpack
- 3) Dry spring/summer



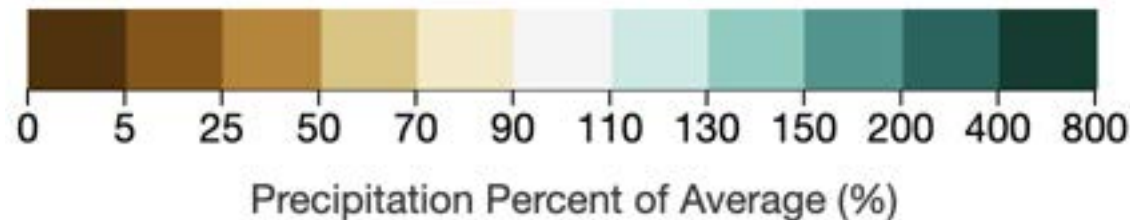
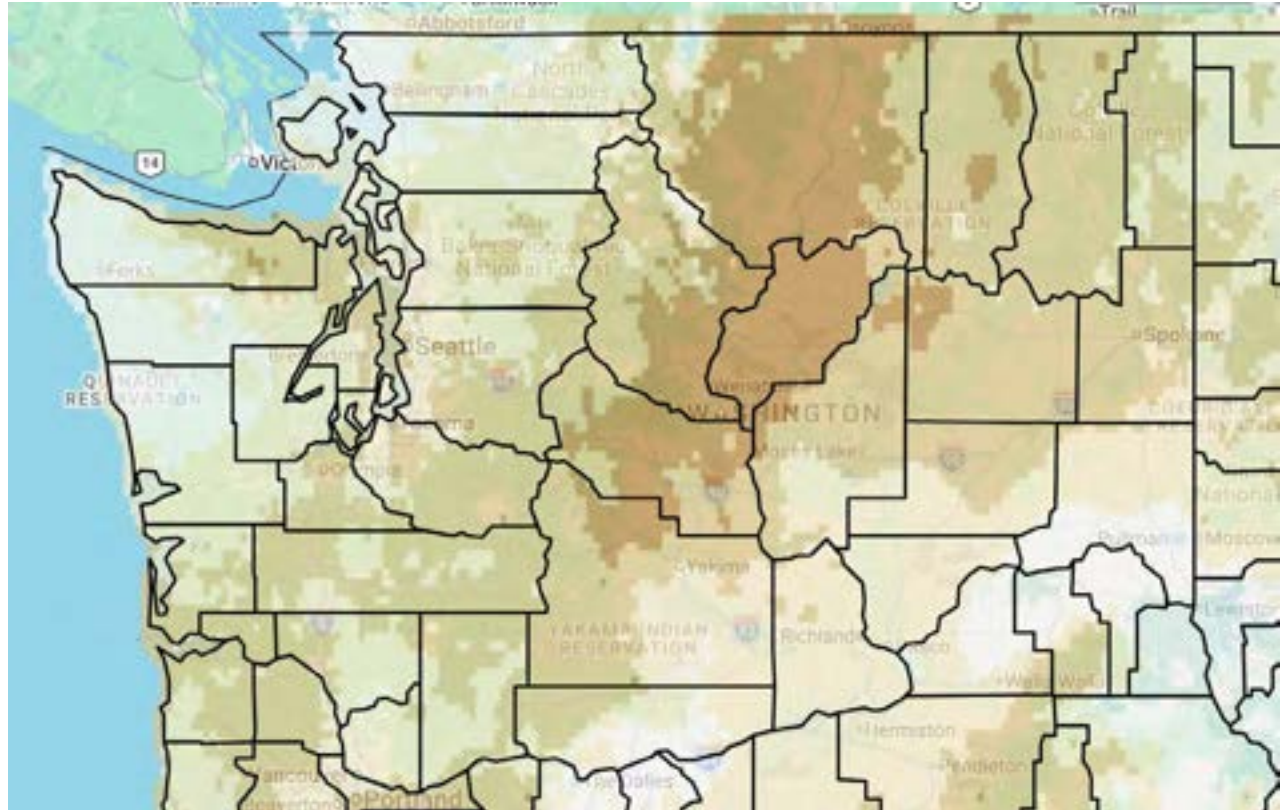
Stevens Pass December 10, 2025. Photo: Stevens Pass

Wetter conditions shifted to drier conditions

December 2025 Precipitation



January 1-March 8, 2026 Precipitation



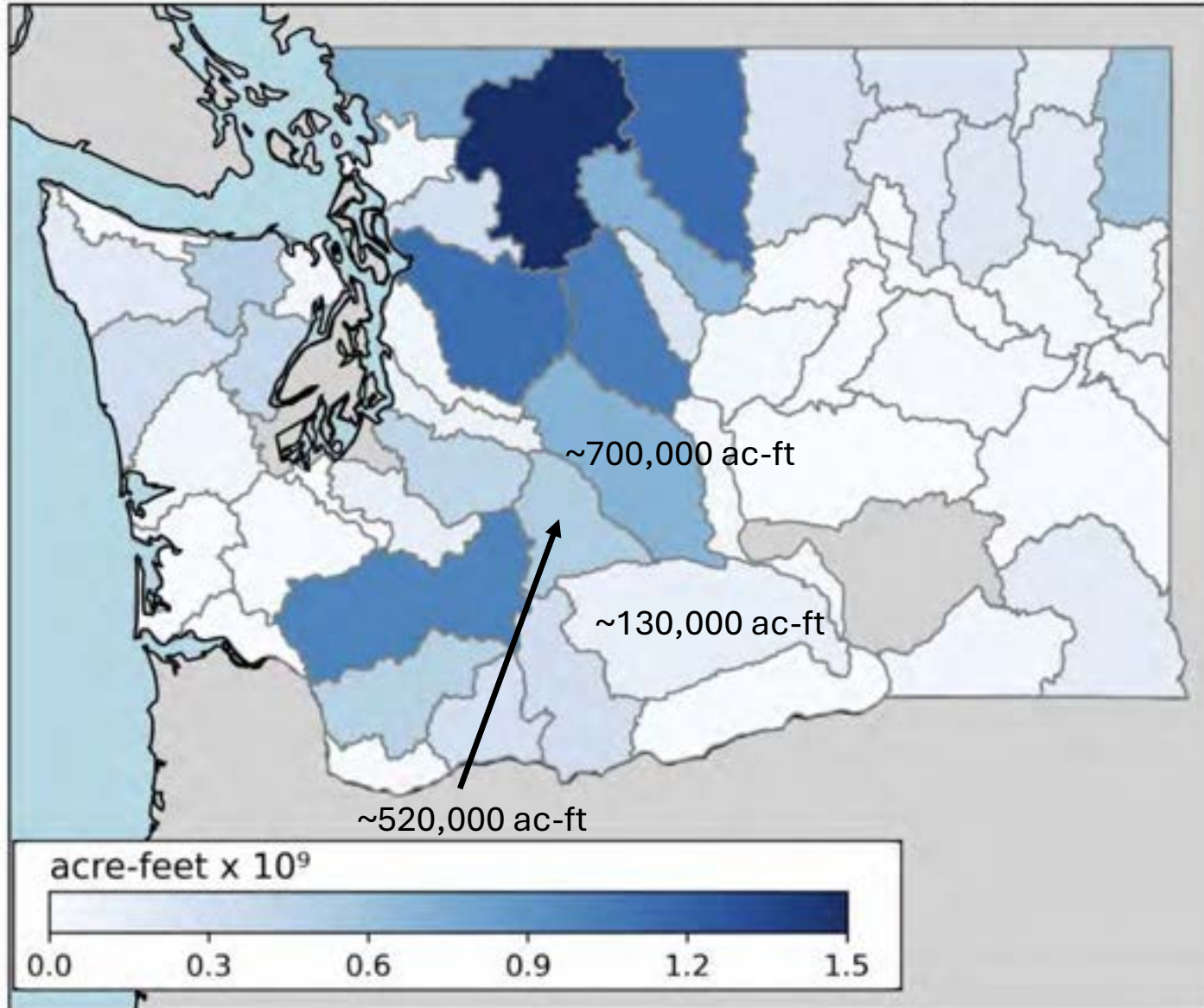
Yakima Reservoirs have above normal storage

Water Year Graph



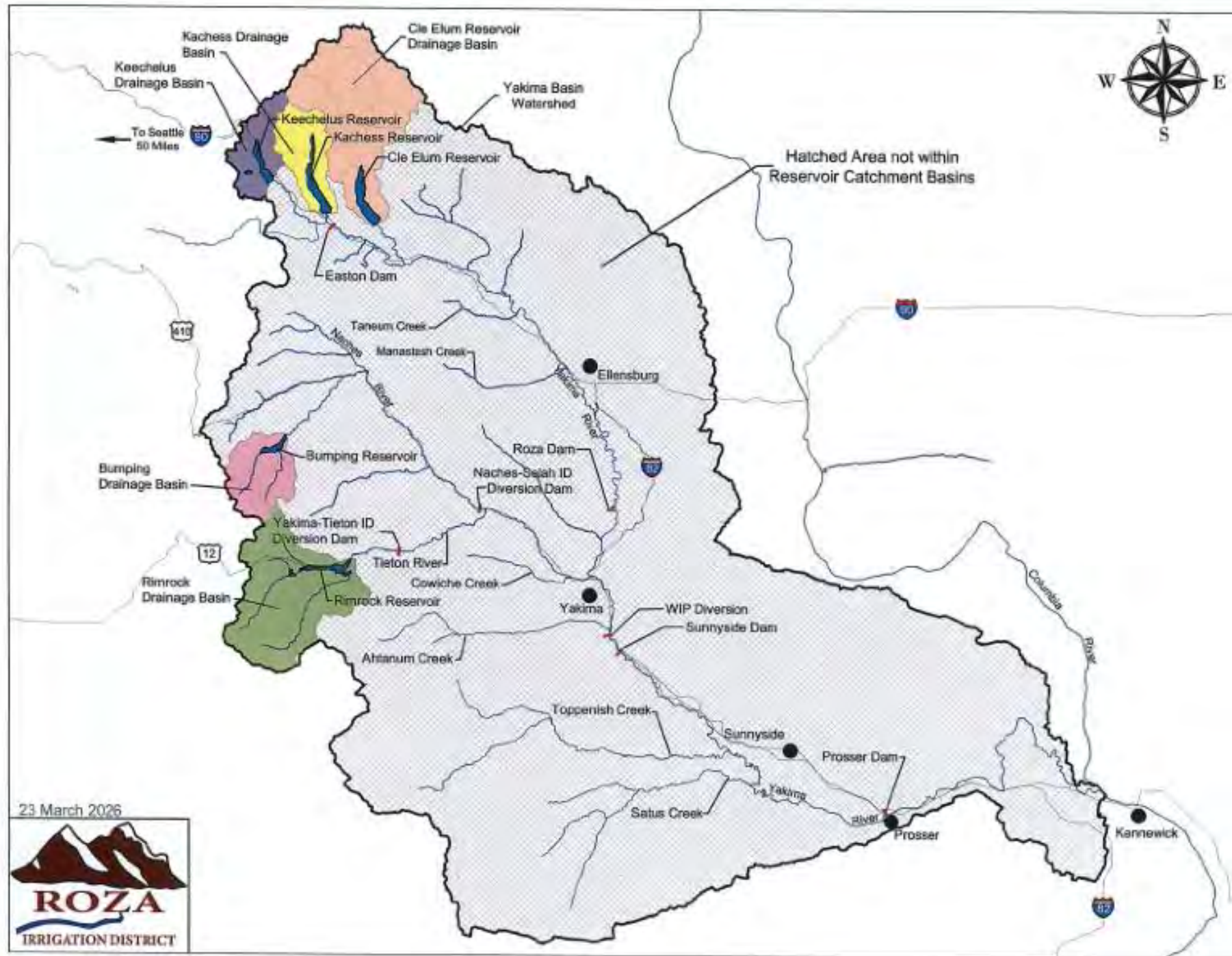
USBR Water Supply Forecast: Proratable water users to receive 52% of their May-September water allotments

April 1st Snow Water Volume (1986-2011)



Total Average April 1 SWE: ~1,350,000 ac-ft

Maximum Reservoir Storage: ~1,070,000 ac-ft



Future Drought

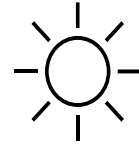
Statewide Average Temperature Trends (1895-2025)

- All seasons have warmed
- Winter and summer trends are the strongest
- Spring trends are the weakest

Annual Trend: +2.2 °F



Winter: ↑ 2.9°F



Summer: ↑ 2.7°F

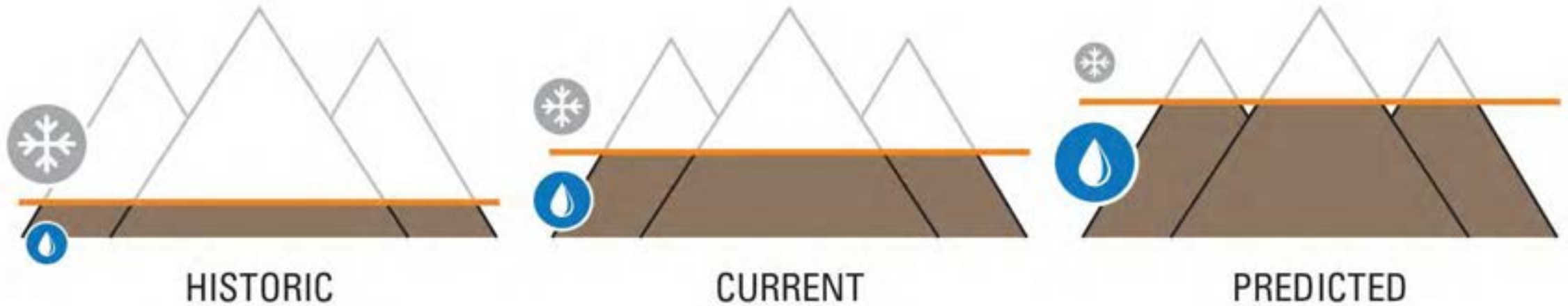


Fall: ↑ 1.8°F



Spring: ↑ 1.3°F

Our primary mechanism for storing water – snow – is sensitive to warming



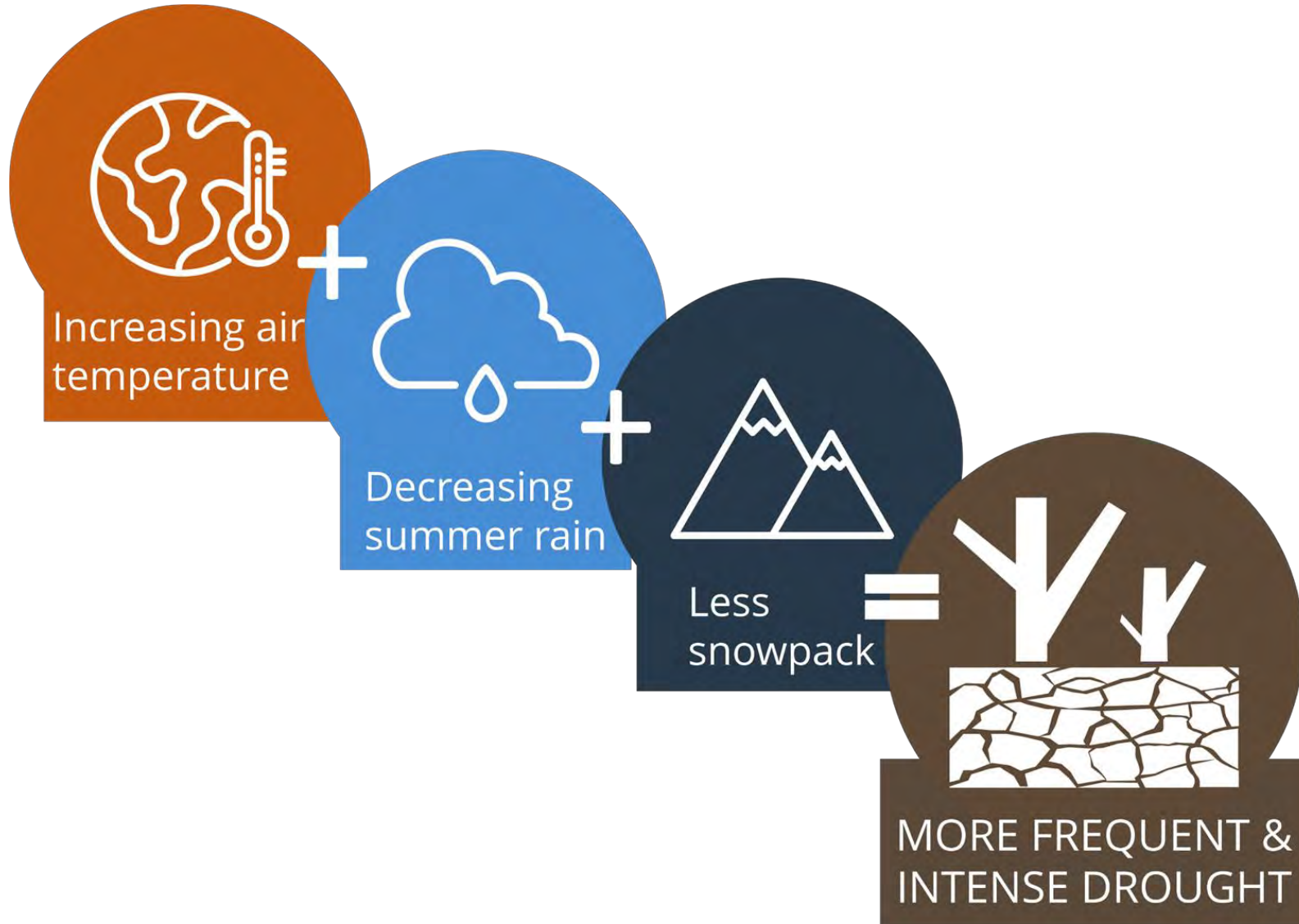
When precipitation falls as snow, it is stored as ice and snow that slowly melts, providing water to the Skagit River throughout the year, including late summer and drought periods.

FREEZING LEVEL

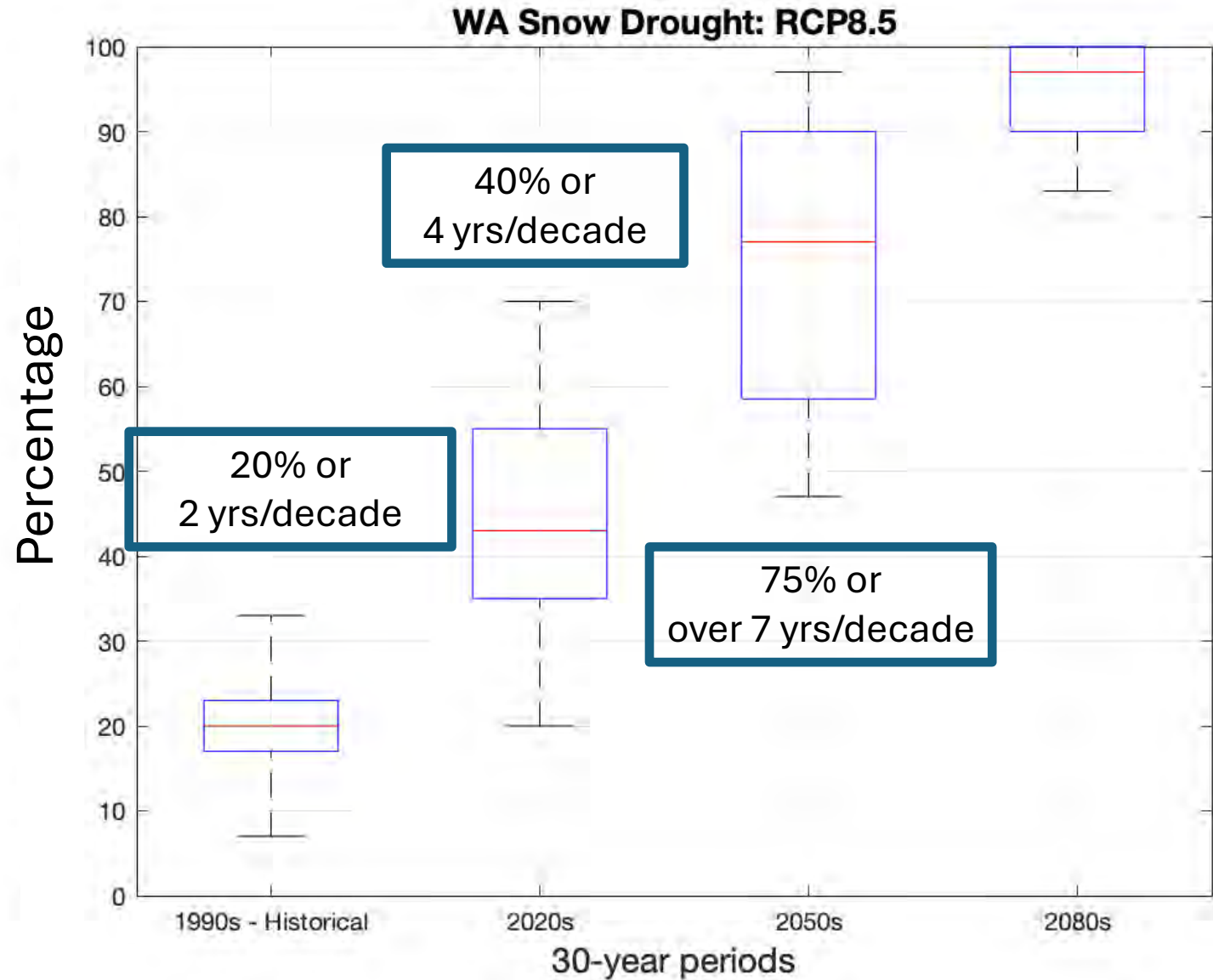


When precipitation falls as rain, water quickly enters the Skagit River during fall and winter, often contributing to flood risk. As freezing levels rise, the area potentially susceptible to flooding increases.

Combining Forces: Climate Drivers of Drought



Increased Likelihood of “Snow Drought”



2015: A preview of the future



Warmest year on record for WA
~4°F warmer than the 20th century average



6th driest April to September in WA



Lowest snowpack on record for WA
30% of normal (1970-1999 average)

Seasonal Outlooks

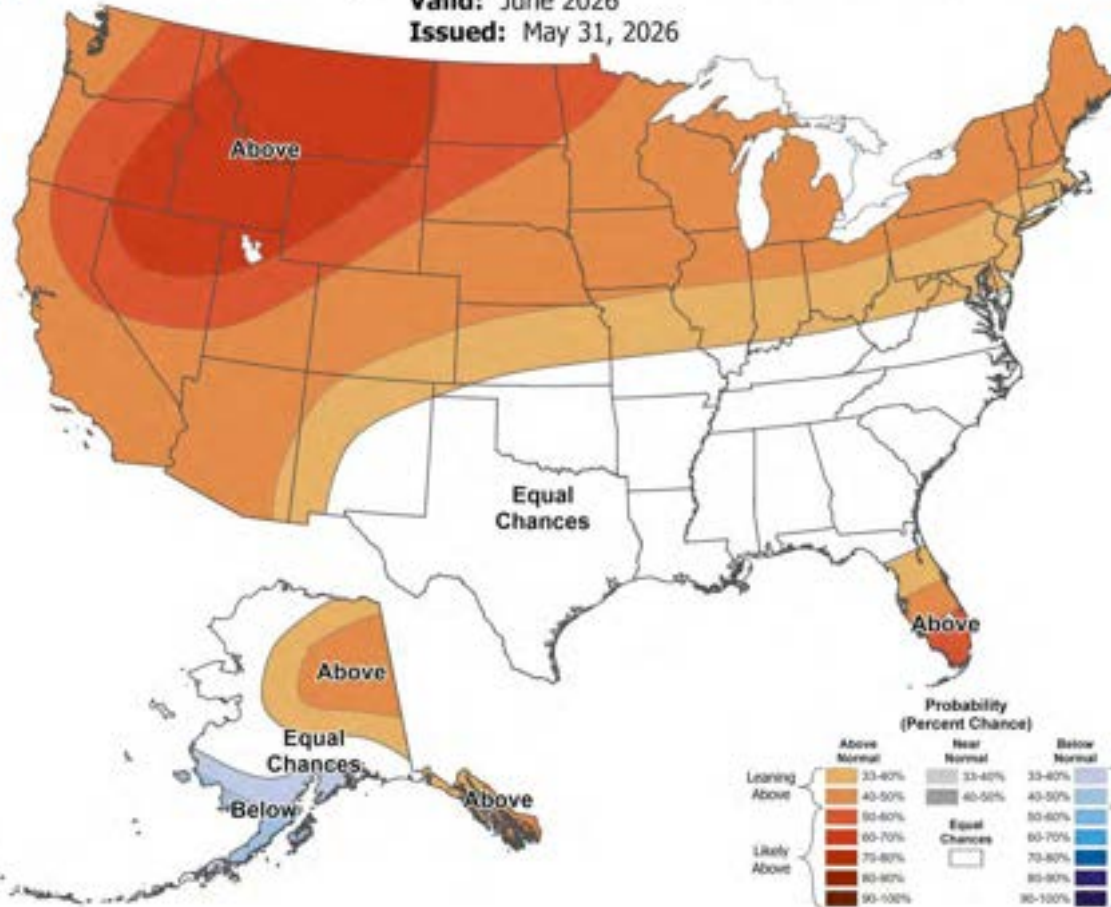
Climate Prediction Center: June Outlook



Monthly Temperature Outlook

Valid: June 2026

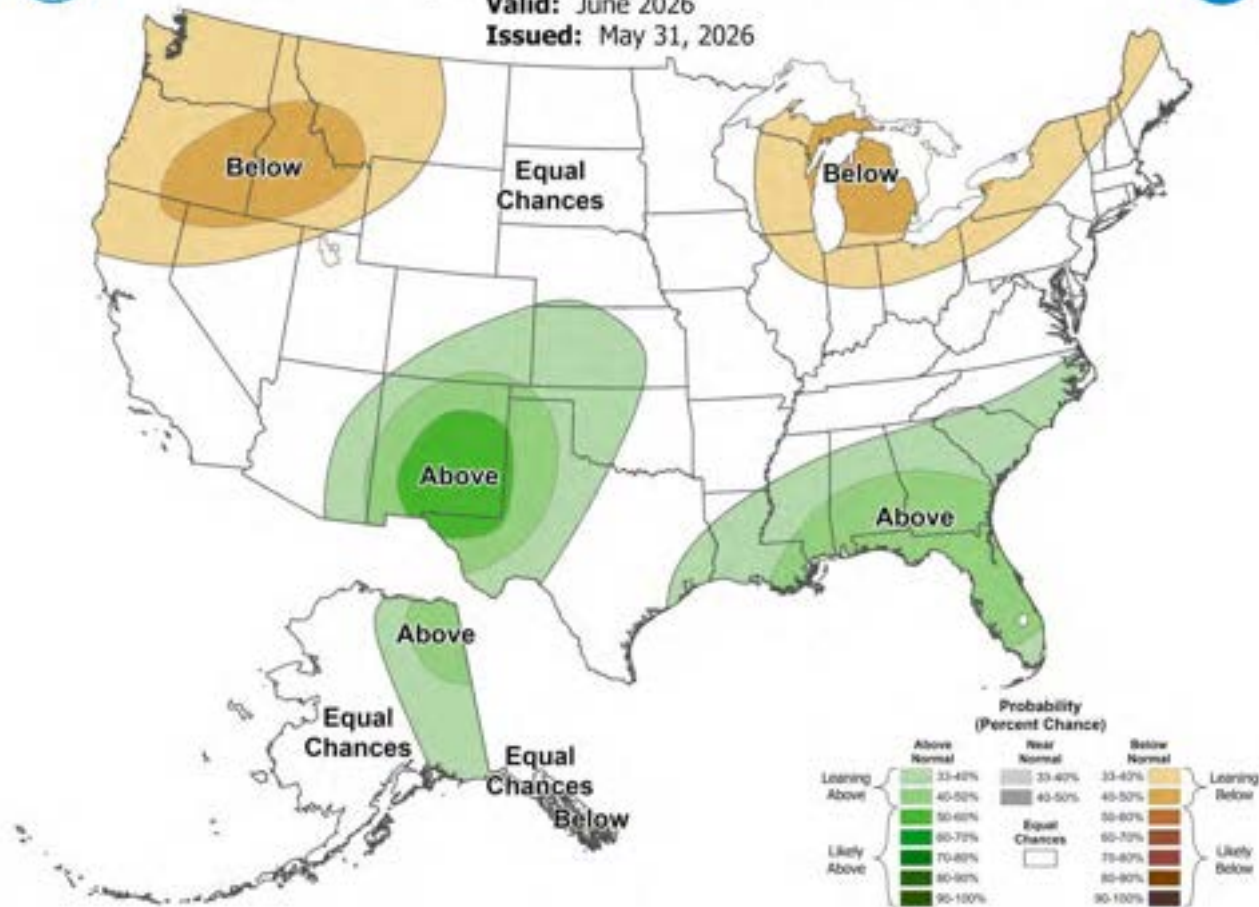
Issued: May 31, 2026



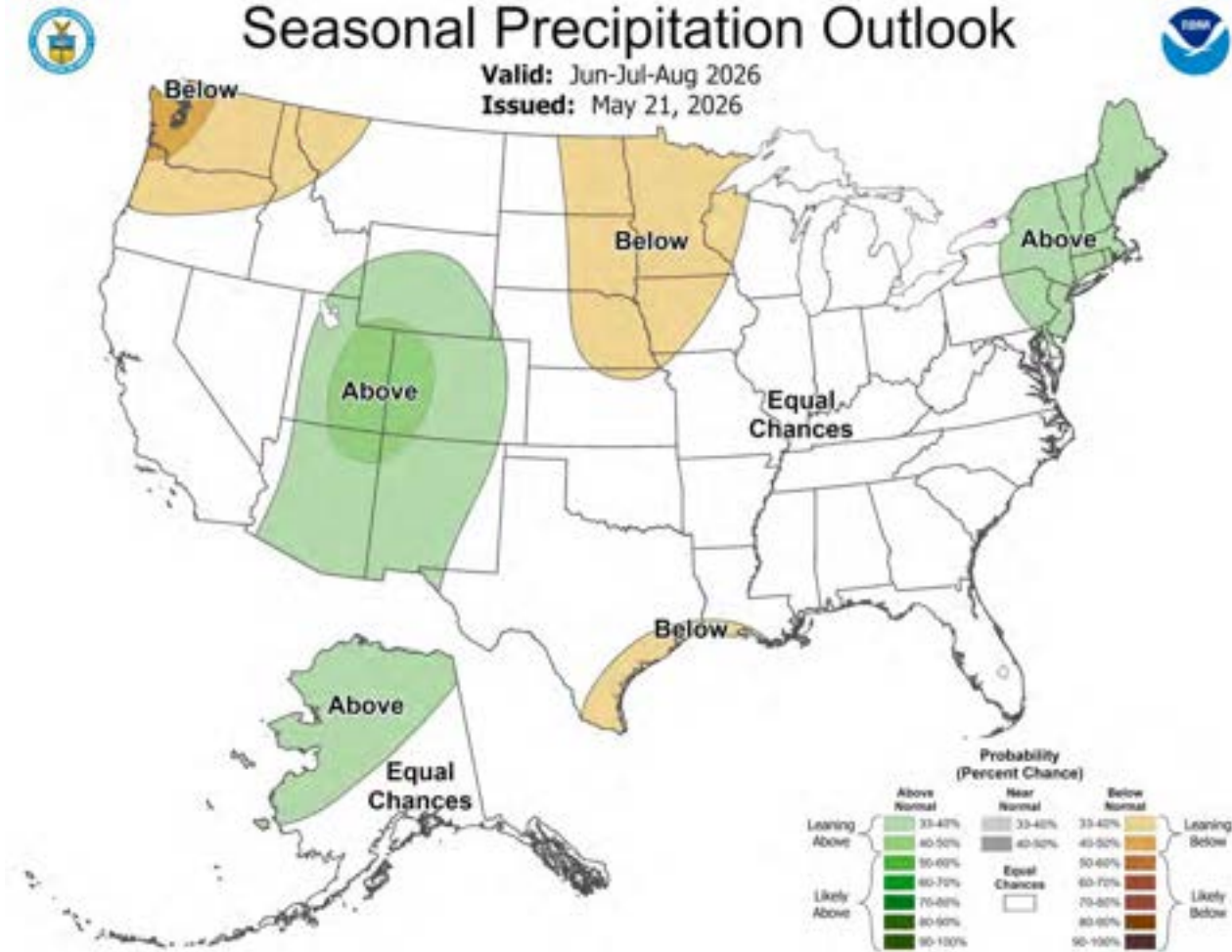
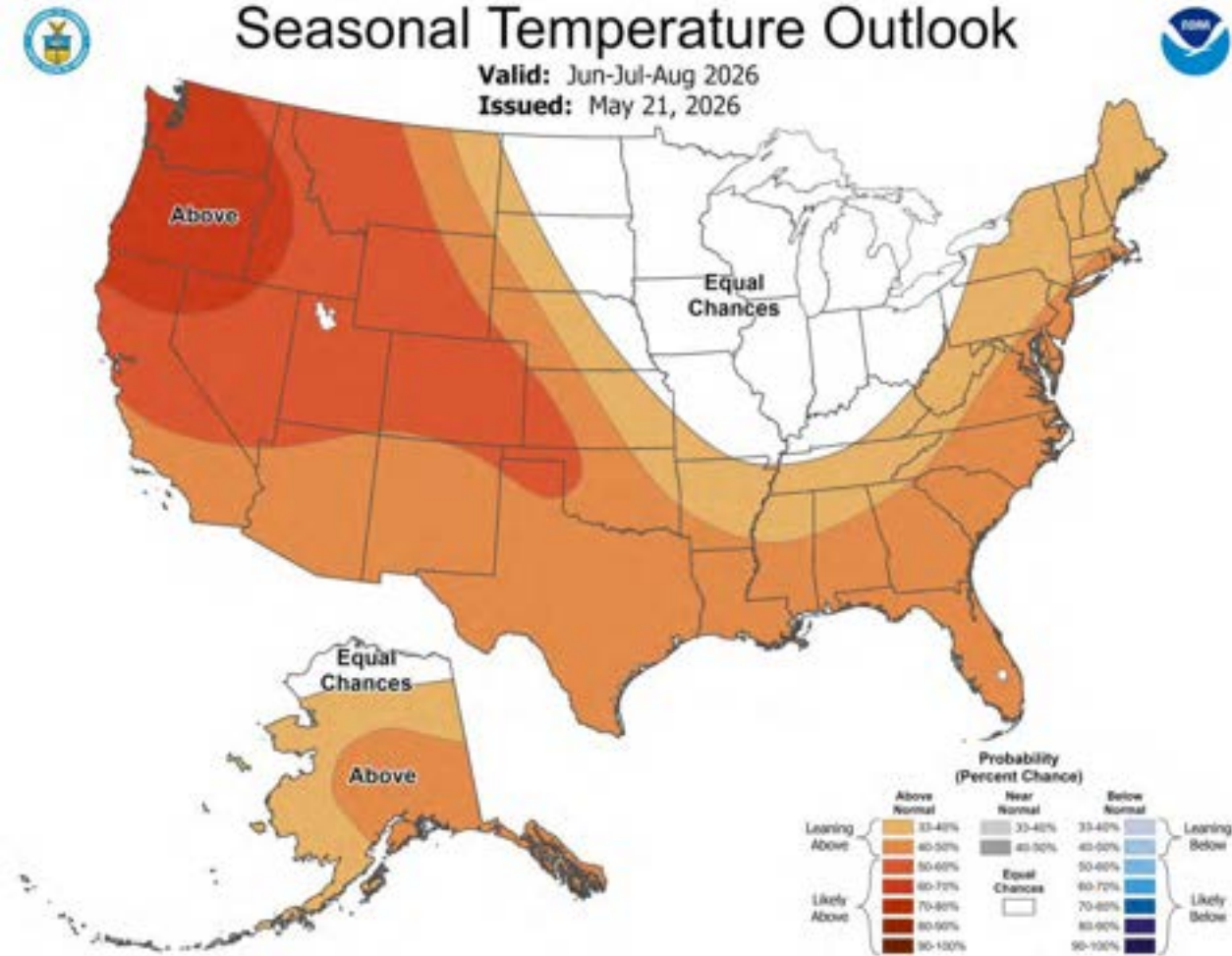
Monthly Precipitation Outlook

Valid: June 2026

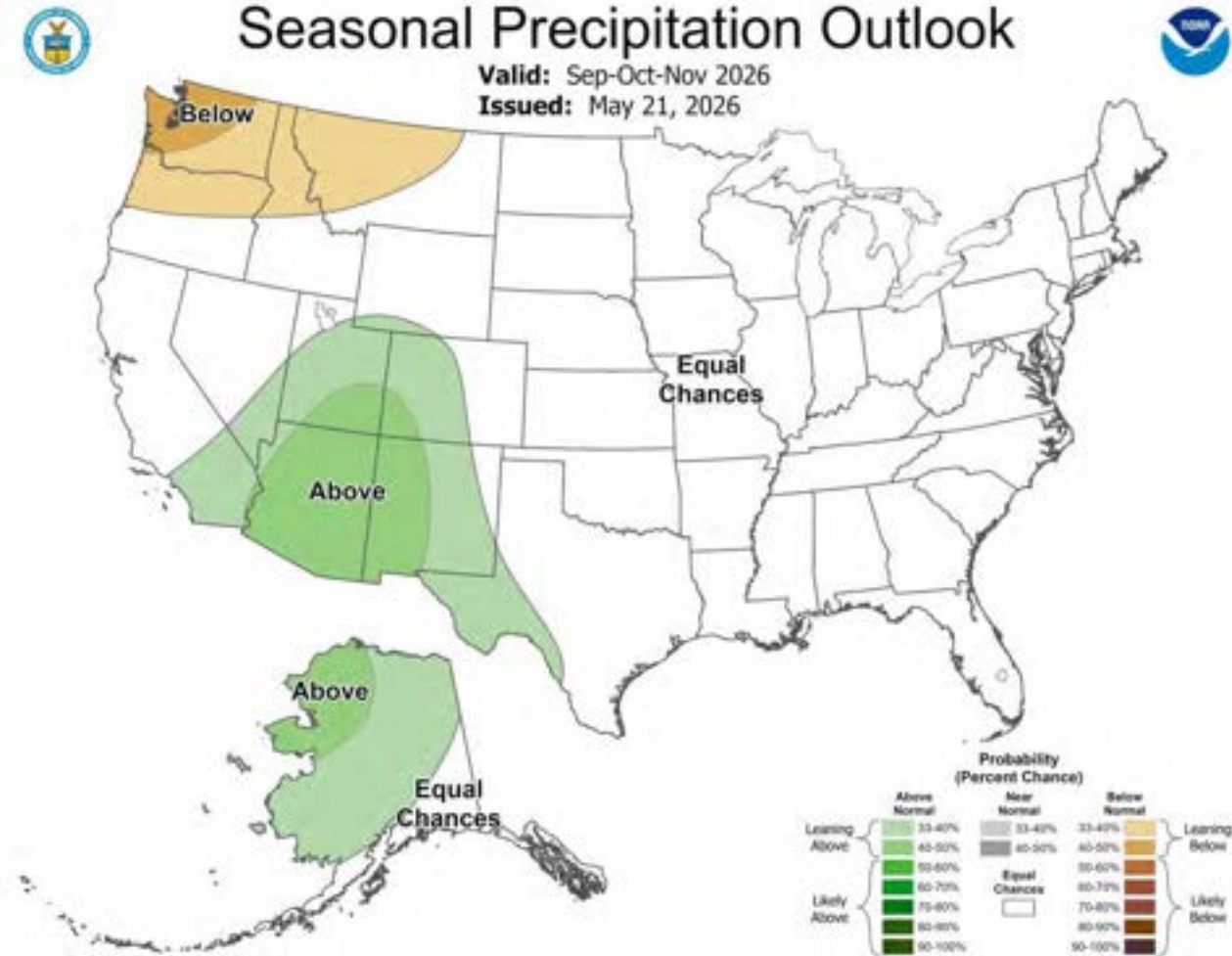
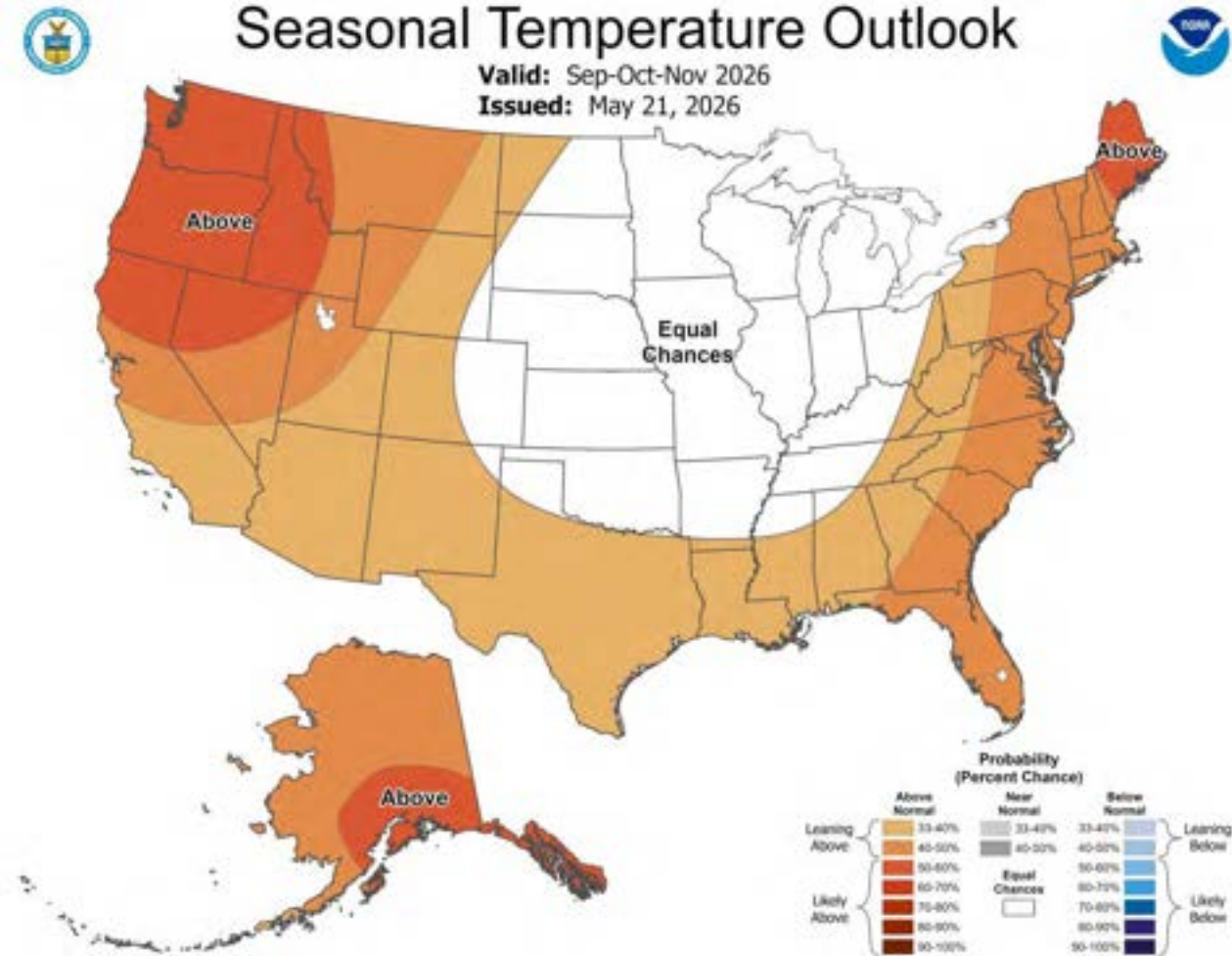
Issued: May 31, 2026



Climate Prediction Center Outlook: Jun-Aug



Climate Prediction Center Outlook: Sep-Nov



Elevated wildfire potential June-September



Significant Wildland Fire Potential Outlook

Jun



Jul



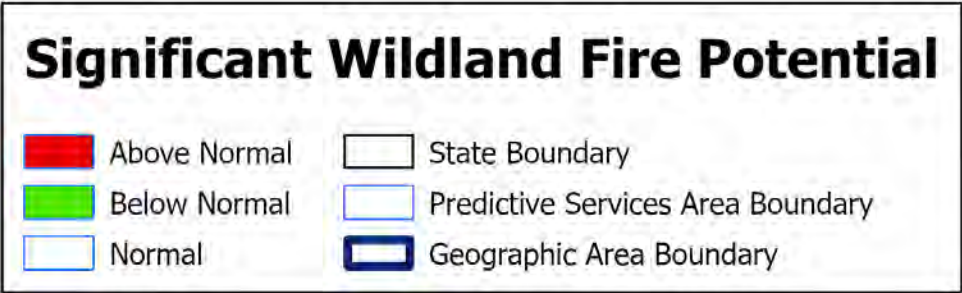
Aug



Sep



Map produced by
Predictive Services,
National Interagency Fire Center
Boise, Idaho
Issued: June 1, 2026
Next Issue: July 1, 2026



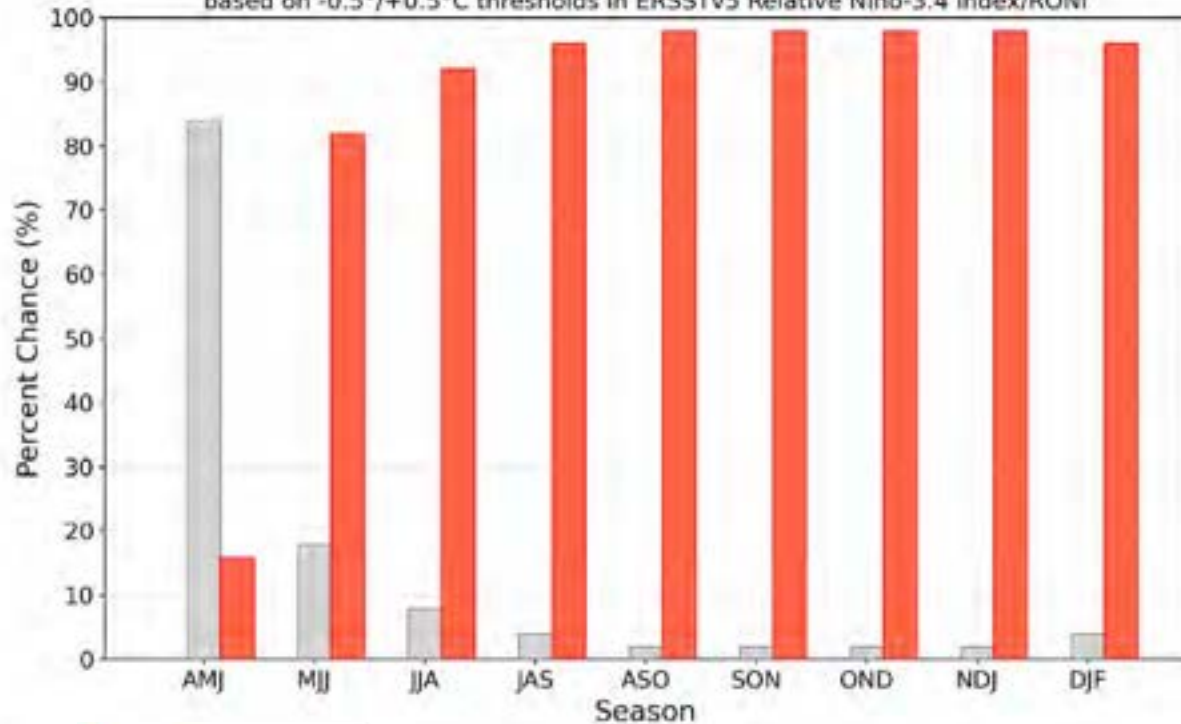
Source: https://www.nifc.gov/nicc-files/predictive/outlooks/monthly_seasonal_outlook.pdf

Current Status: Neutral

El Niño Watch

Official NOAA CPC ENSO Probabilities (issued May 2026)

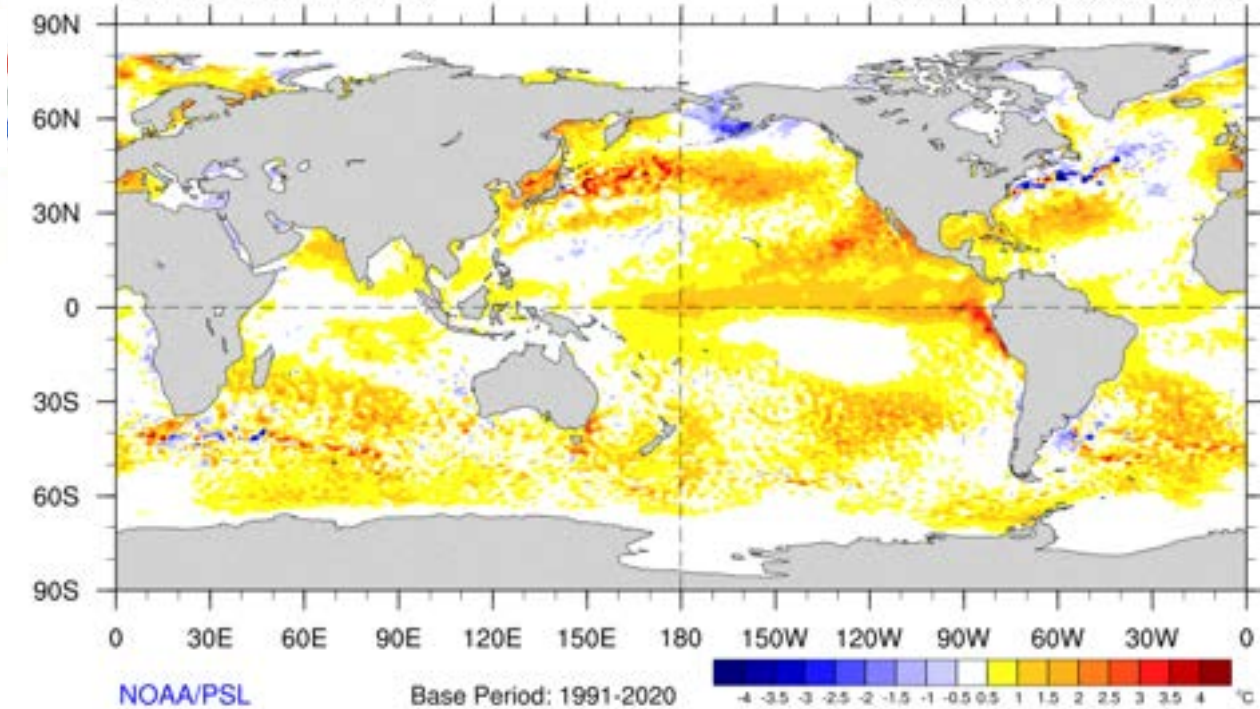
based on $-0.5^{\circ}/+0.5^{\circ}\text{C}$ thresholds in ERSSTv5 Relative Niño-3.4 Index/RONI



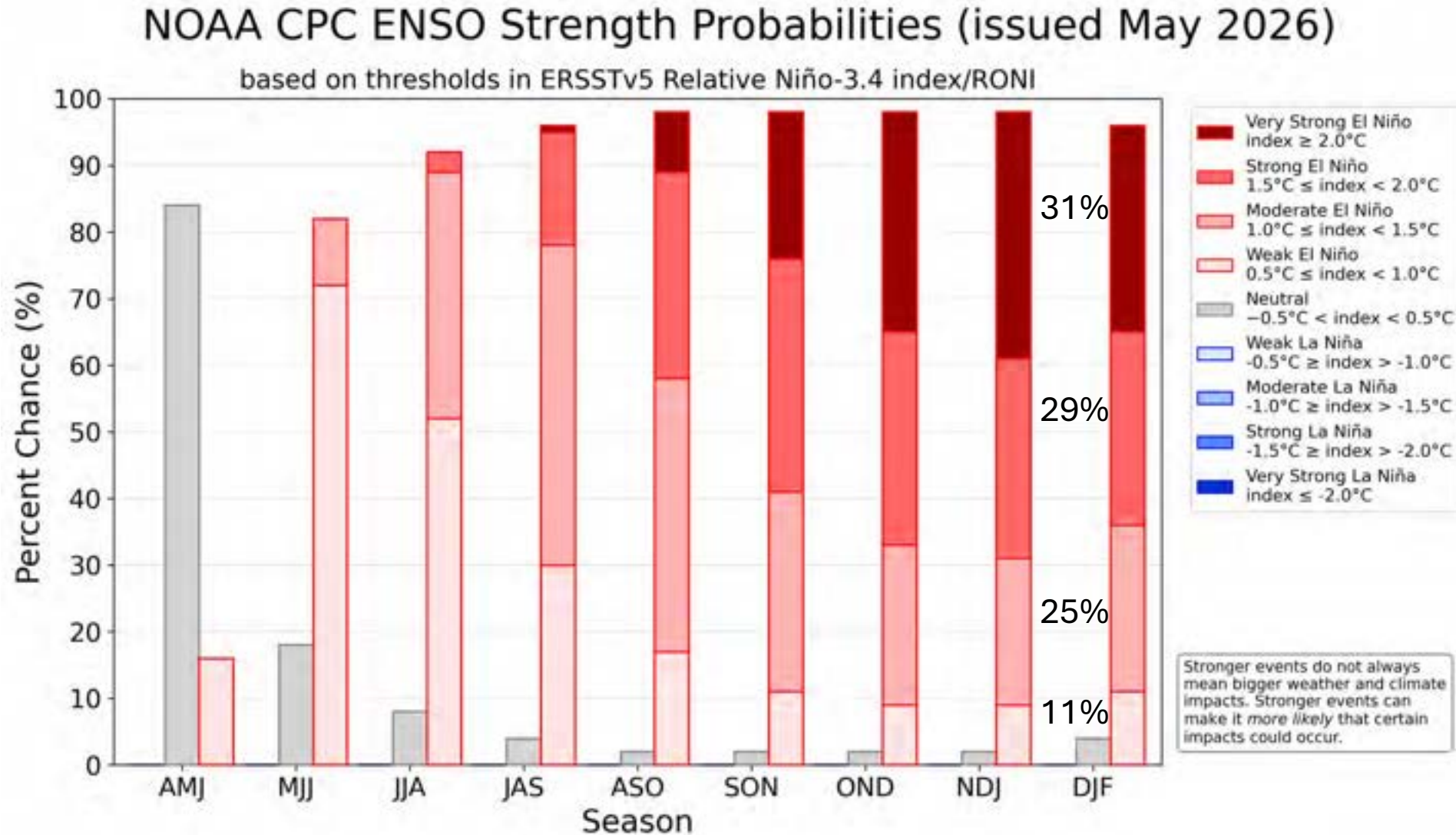
“El Niño is likely to emerge soon (82% chance in May-July 2026) and continue through Northern Hemisphere winter 2026-27 (96% chance in December 2026-February 2027).”

Monthly SST Anomaly

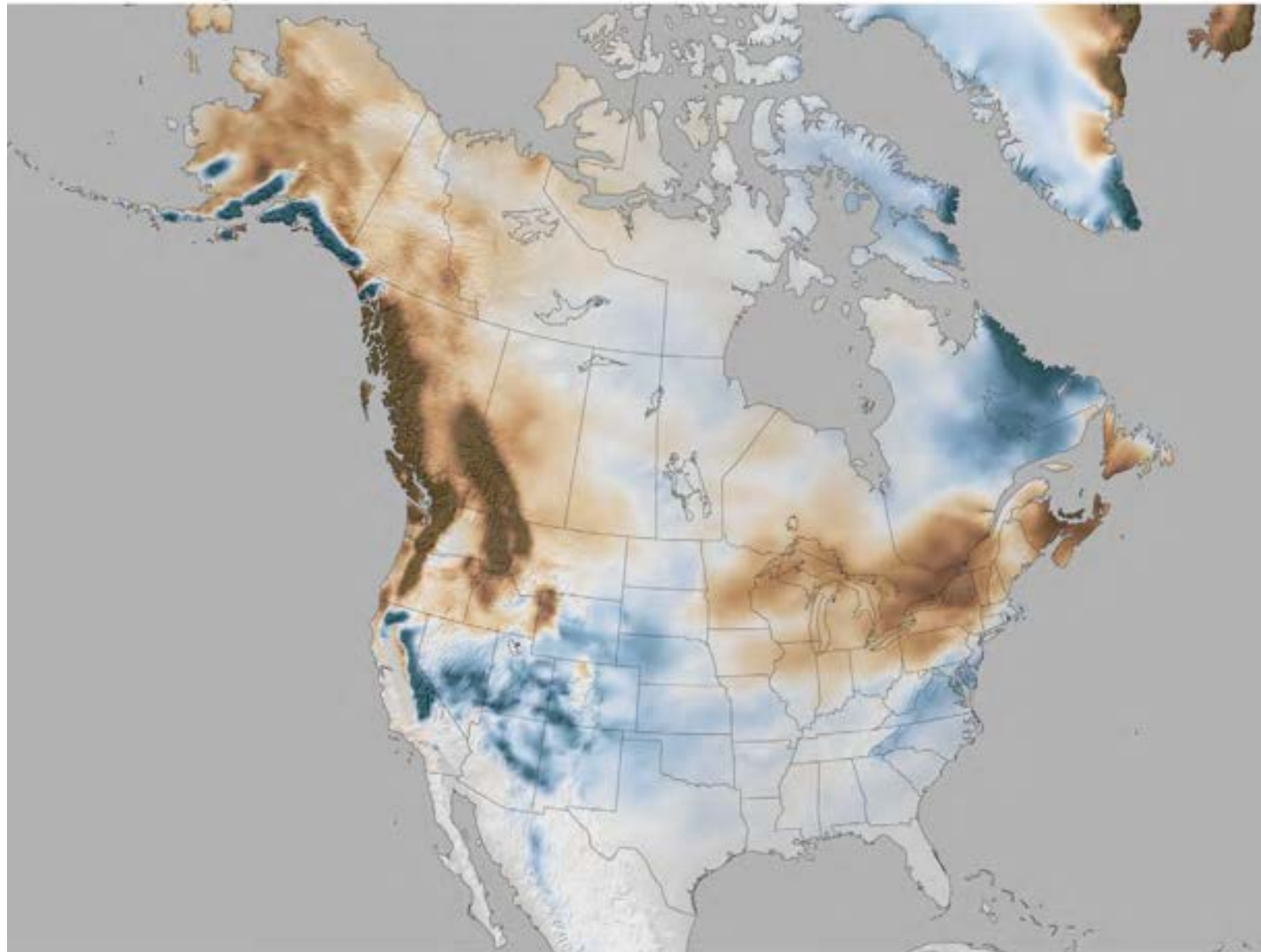
2026/05/03 - 2026/05/30



Slightly higher chance of strong to very strong El Niño next winter



Snowfall during all El Niño winters (Jan-Mar)



El Niño winters (1959-2023)
vs. 1991-2020 average
(detrended)

difference from average snowfall (inches)



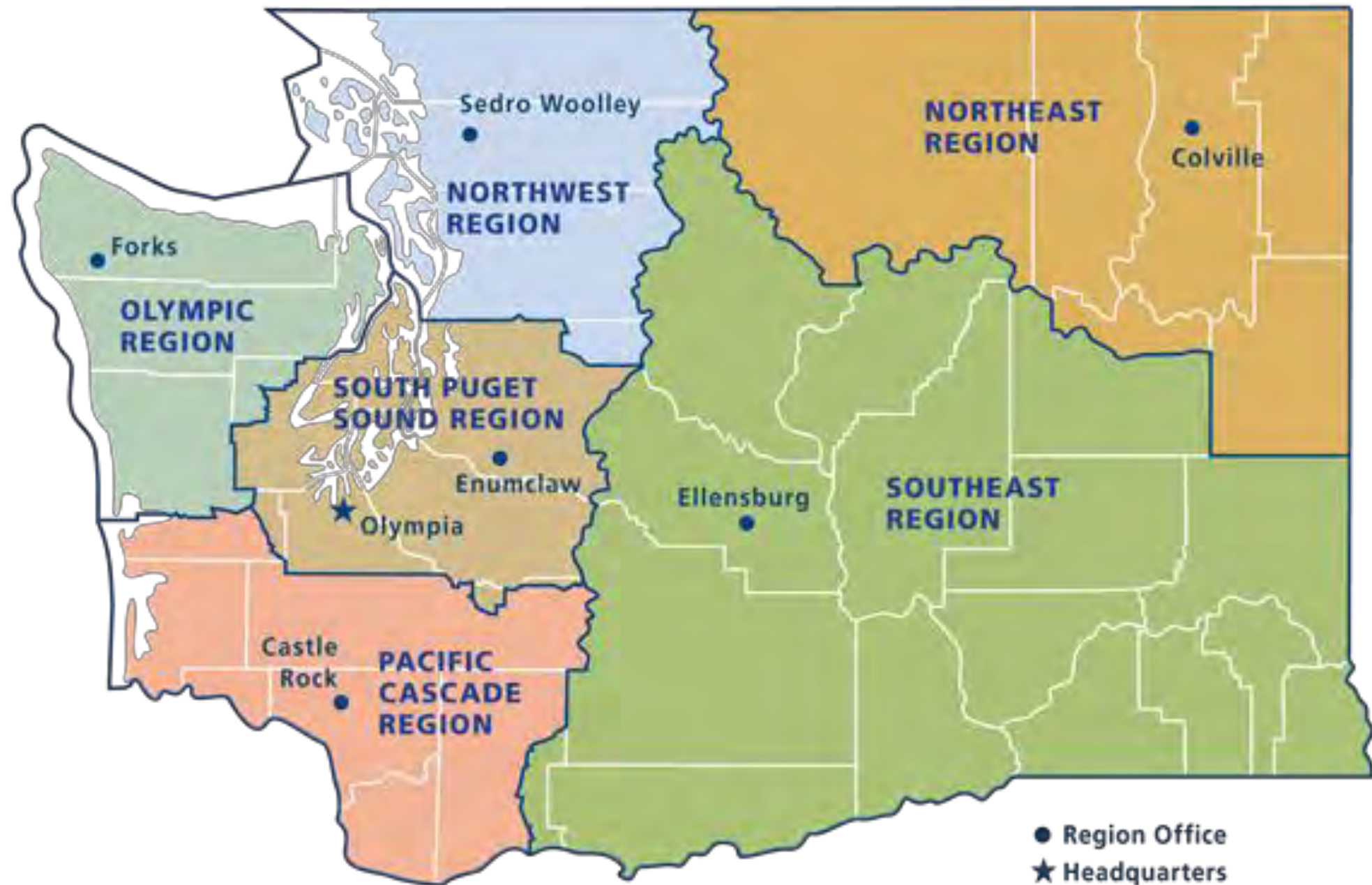
NOAA Climate.gov
Data: ERA5

Key Take-Aways

- Drought is better defined as “insufficient water to meet needs” rather than just a lack of precipitation
 - There are several ways to make drought: dry winter, warm winter, dry/warm spring and summer
 - There is not **one** drought metric
 - Snowpack is critical, storing more water volume in WA than reservoirs
- Warmer than normal temperatures resulting in lack of snow (with near-normal precipitation!) occurred in 2026, 2015, and 2005
- We are expecting to see this type of snow drought more in the future
- Warmer and drier than normal summer and fall expected with elevated wildfire risk

South east Region







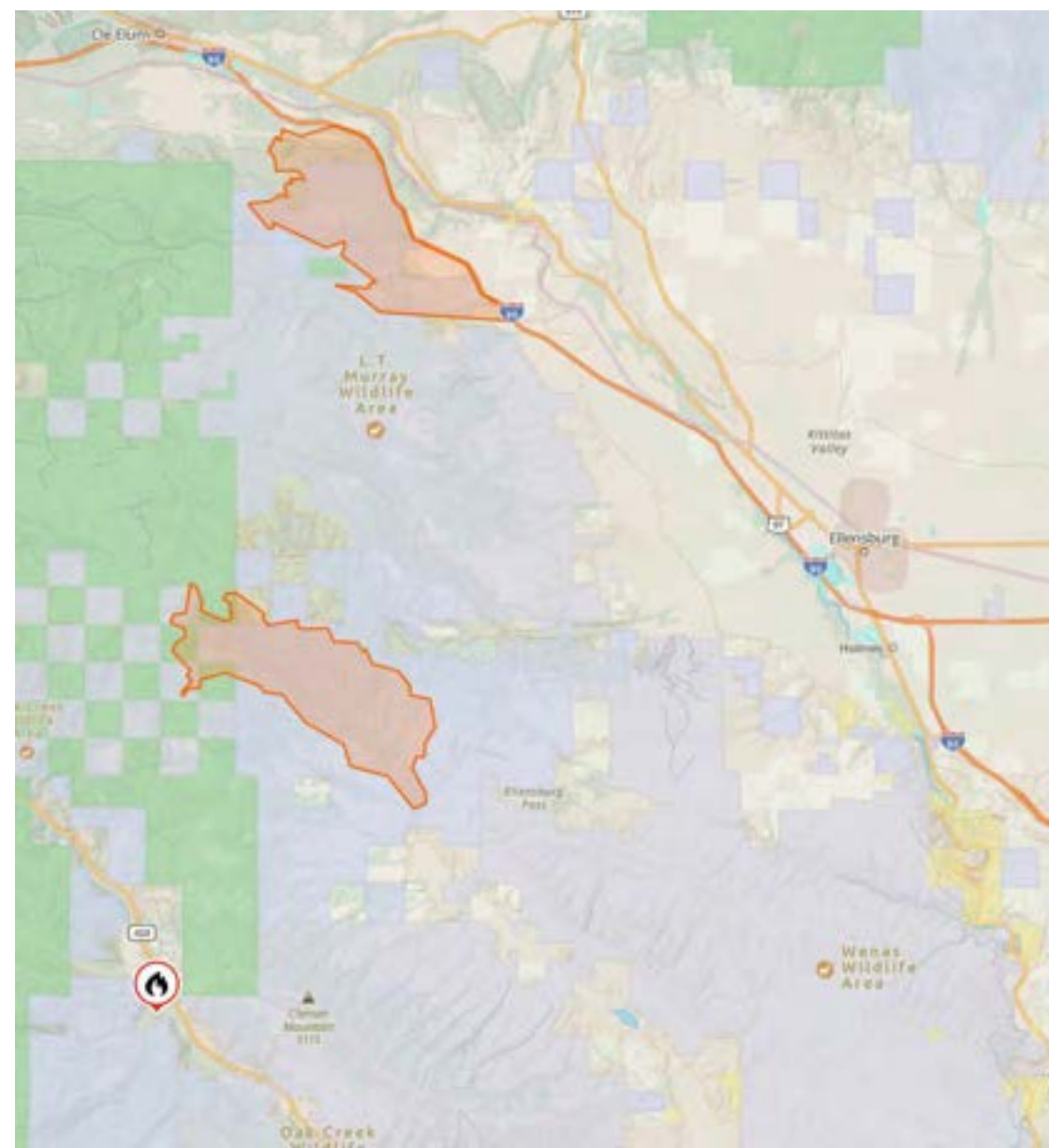
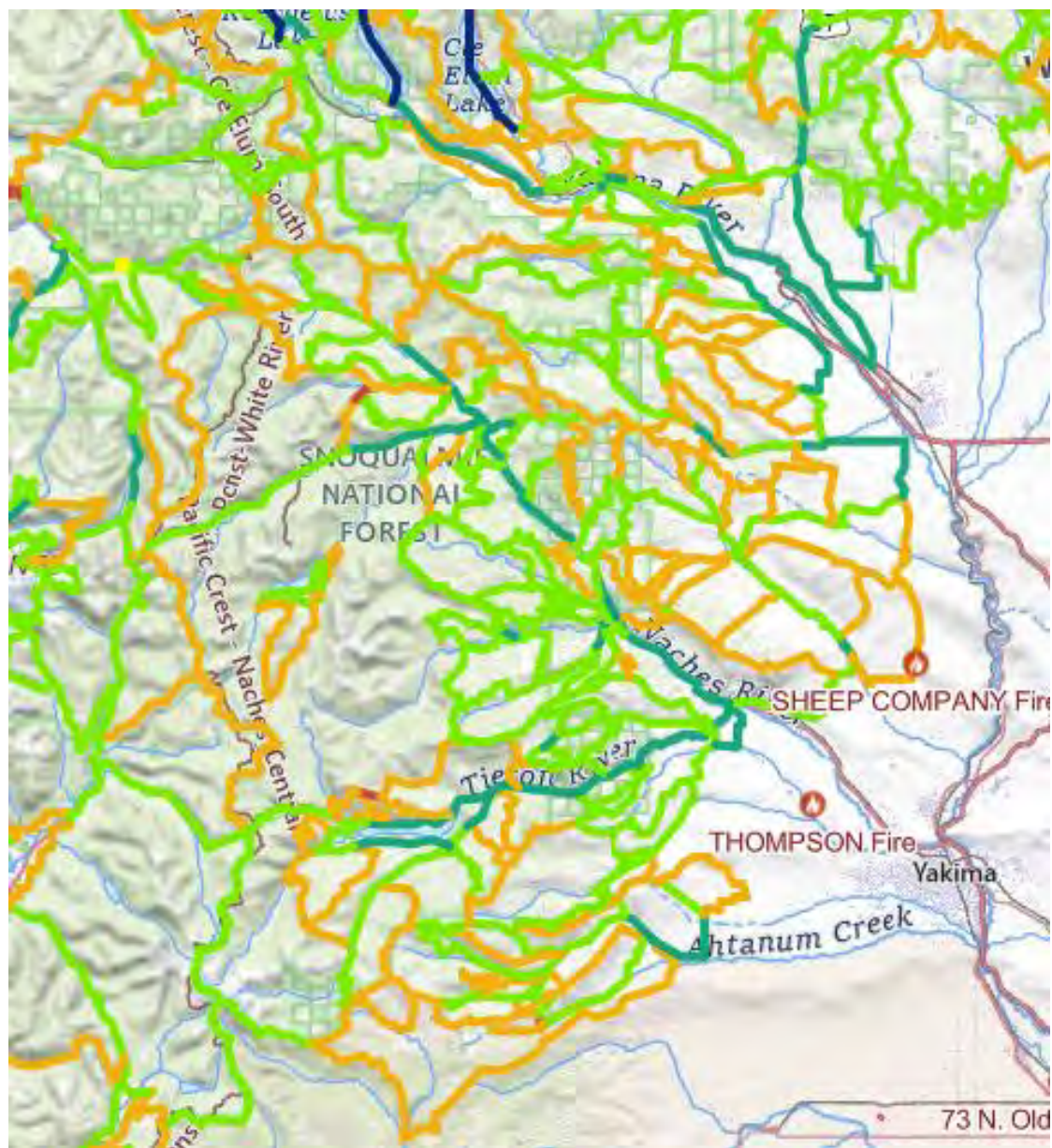
20-YEAR FOREST HEALTH STRATEGIC PLAN

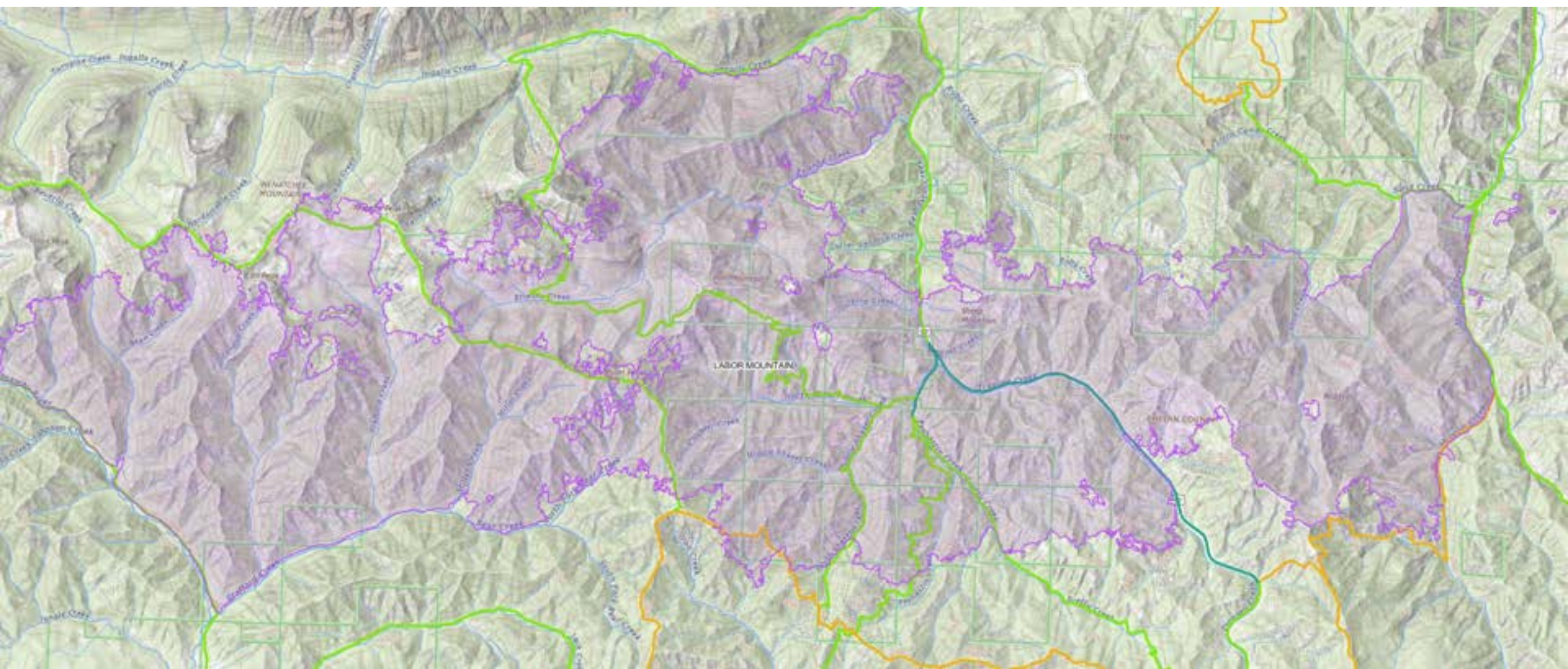
EASTERN WASHINGTON



WASHINGTON STATE DEPT OF
**NATURAL
RESOURCES**
MILAN S. FRANZ
COMMISSIONER OF PUBLIC LANDS







Scott McFarland
SE Region Manager
scott.mcfarland@dnr.wa.gov



June 2026 Yakima River Basin Water Enhancement Project Workgroup

Post-Fire Recovery Program



PURPOSE

Severe wildfires leave behind unstable, hazardous conditions that can trigger cascading impacts—severe flooding, debris flows, landslides, degraded air and water quality, and heightened risk from future fires.





PURPOSE

Post-fire realities demand coordinated post-fire mobilization across jurisdictions and diverse expertise to stabilize landscapes, restore critical systems, and maintain recovery progress over time.

While wildfire response and management is supported by well-defined roles, processes, and coordination structures across jurisdictions, a comparable system for post-fire recovery on non-federal lands is largely absent.

YAKIMA-TIETON CANAL

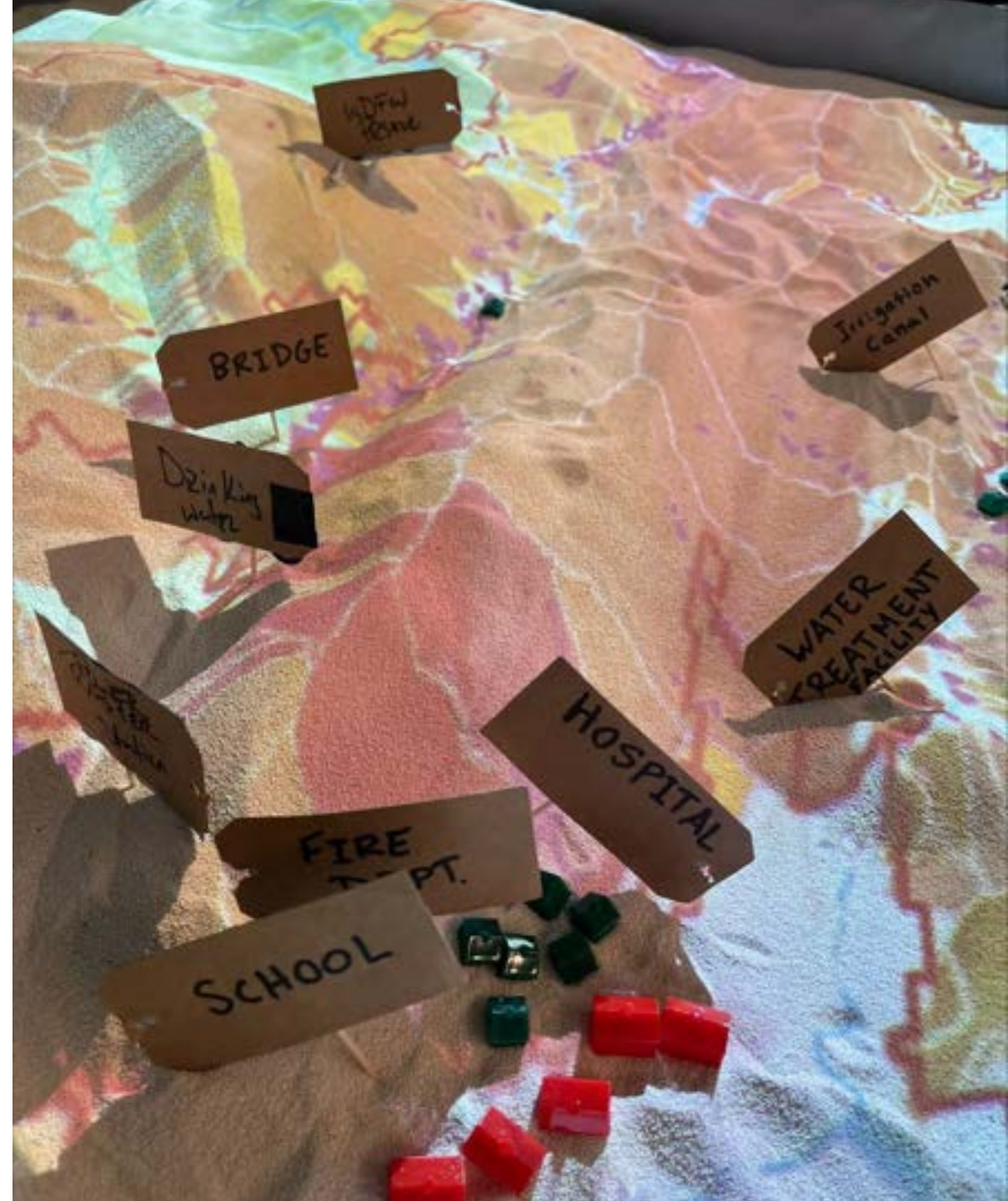
POST-WILDFIRE DEBRIS FLOW HAZARD MAP





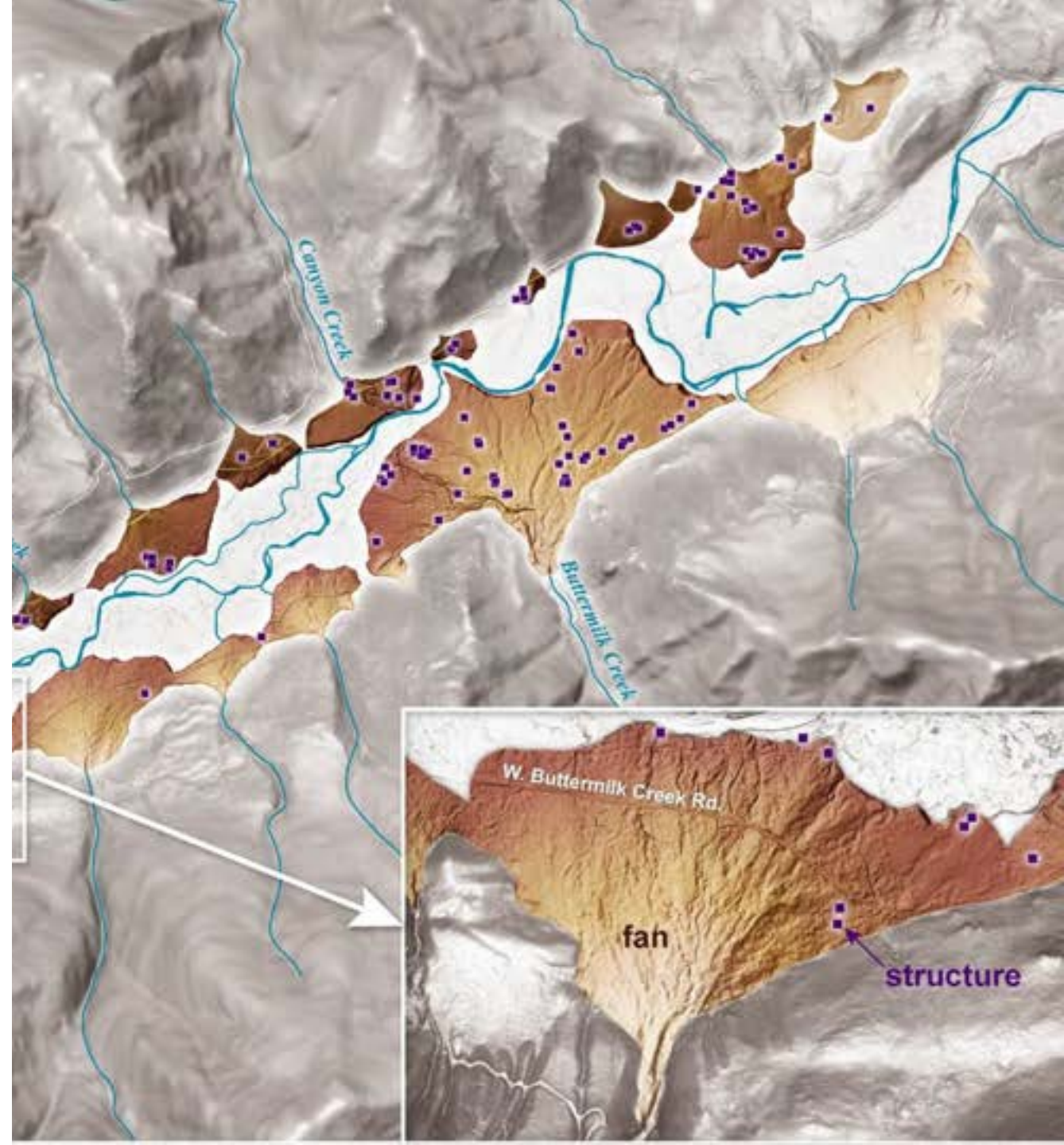
OUTCOMES

1. Local governments stressed the need for coordination and points of contact.
2. Reinforced that recovery requires sustained interagency coordination.



FAN PLAN 2026 - 2027

National Landslide Protection Act
funding alluvial fan mapping

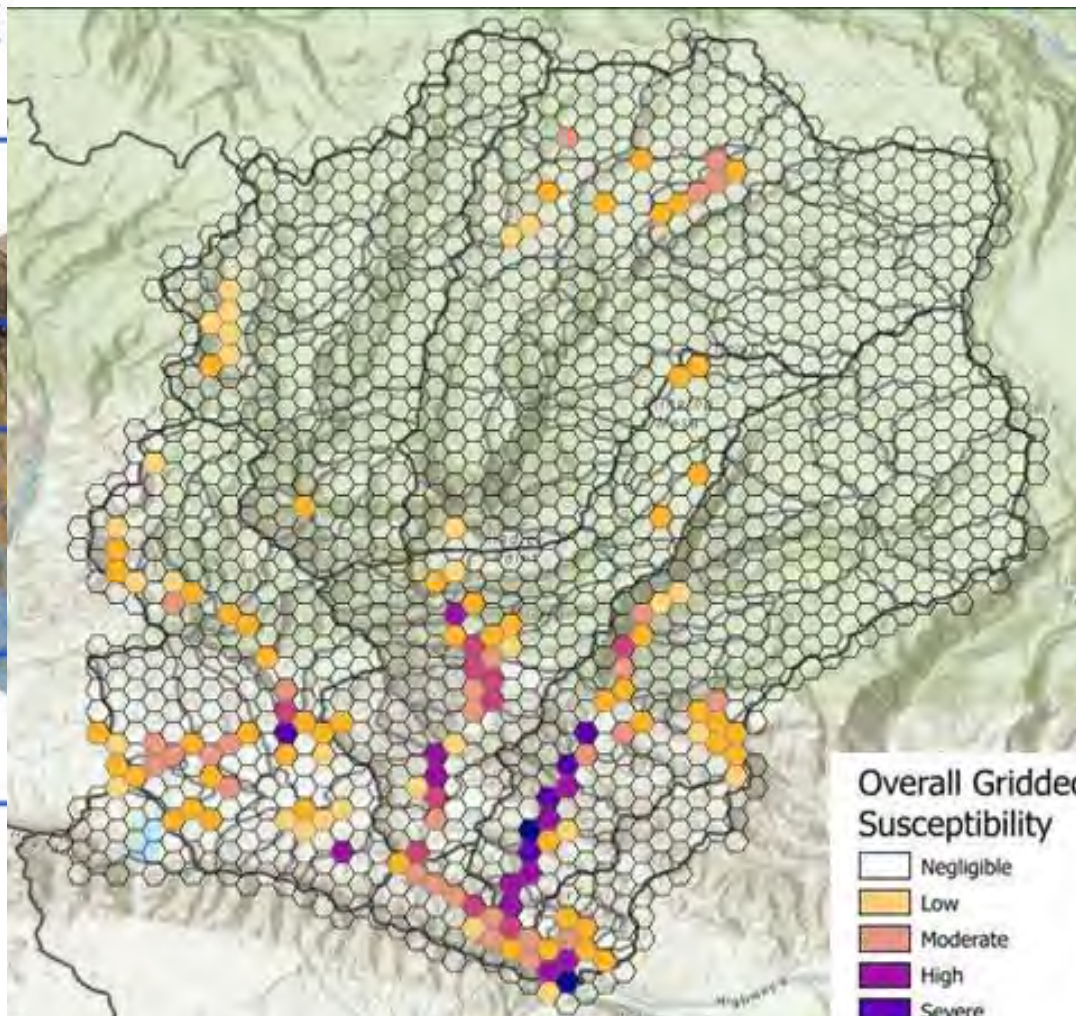




Credit: Mid-Columbia Fisheries Enhancement Group

VALUES AT RISK

- Reservoirs and Dams
- Municipal Water Intakes
- Ag Water Infrastructure
- Transportation Network
- Life and Property



HAZARDS

- Hillslope Erosion
- Debris and Mud Flows
- Water Quality Degradation
- Riverine Erosion & Sedimentation
- Flooding



COLORADO
Wildfire Ready
Watersheds
Colorado Water Conservation Board

2026-27 NETWORKING

Coordination and knowledge exchange
connecting with existing fish and fire focused
communities of practice, building relationships,
documenting forums to connect fire and fish
interests.



AfterTheFireWA.org



Explore Our Resource Hub

Welcome to the resource library, designed to provide you with essential information and accessible materials that can help you throughout the recovery process. Here, you'll find user-friendly resources on financial and technical assistance, post-fire recovery practices, and more.



SPONSORED BY:



Recovery@AfterTheFireWA.org

Washington Resource
Conservation & Development Council

109 SOUTH 3RD ST. YAKIMA, WA, 98901

**Washington DNR
Post-Fire Recovery Program
Manager:**

Collin Haffey
collin.haffey@dnr.wa.gov



Relationship Between Yakama Nation Wildfire Preparedness & YRBWEP

YAKAMA NATION FIRE MANAGEMENT AND FUELS MANAGEMENT



Overview



Yakama Nation Wildfire Preparedness



Focuses on forest health, fire mitigation, and protection of tribal lands.



Yakima River Basin Water Enhancement Project (YRBWEP)



Improves water reliability, fish habitat, and climate resilience across the basin.

Connection: Both support long-term ecological and cultural resource protection.

Yakama Nation Wildfire Preparedness

Reduces wildfire risk through:

- Forest thinning
- Fuel reduction
- Emergency response planning
- Protection of culturally significant areas

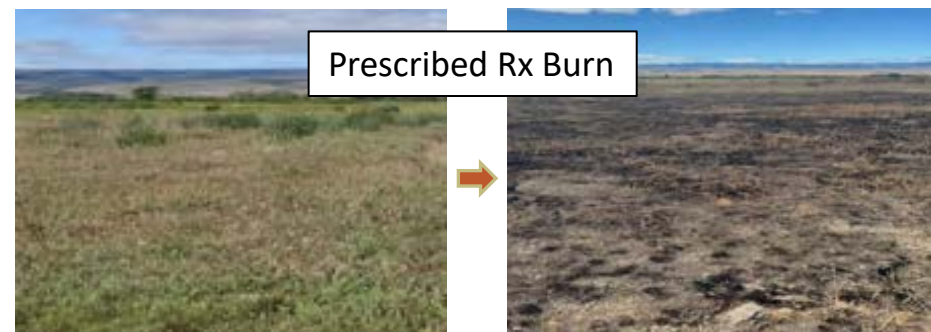


Strengthens watershed stability and post-fire recovery.



Wildland Urban Interface (WUI)

- Reduce wildfire risk around Tribal homes, communities, and critical infrastructure
- Create defensible space and safer conditions to suppress wildfire





WUI Rx burn.

Hazardous Fuels Reduction (HFR)

- Create defensible space by lowering surface and ladder fuels, making wildfires less intense and easier to manage



Mechanical Thinning

Crews remove excess small diameter trees and brush to reduce fuel density.



Scattering

The thinned material is scattered to allow it to dry properly.



Hand Piling

Once dry, the scattered material is gathered into manageable piles.



Pile Rx Burning

These piles are burned during safe conditions in the fall to reduce surface fuel loads.



Broadcast Rx Burns

Surface fuels are burned during safe conditions in the fall to further reduce surface fuel loads.



Maintenance Rx Burns

Treated areas are revisited and Rx burned for maintenance.



HFR roadside thinning treatment at Fuels project site.



Fall Rx pile burns at an HFR project site.

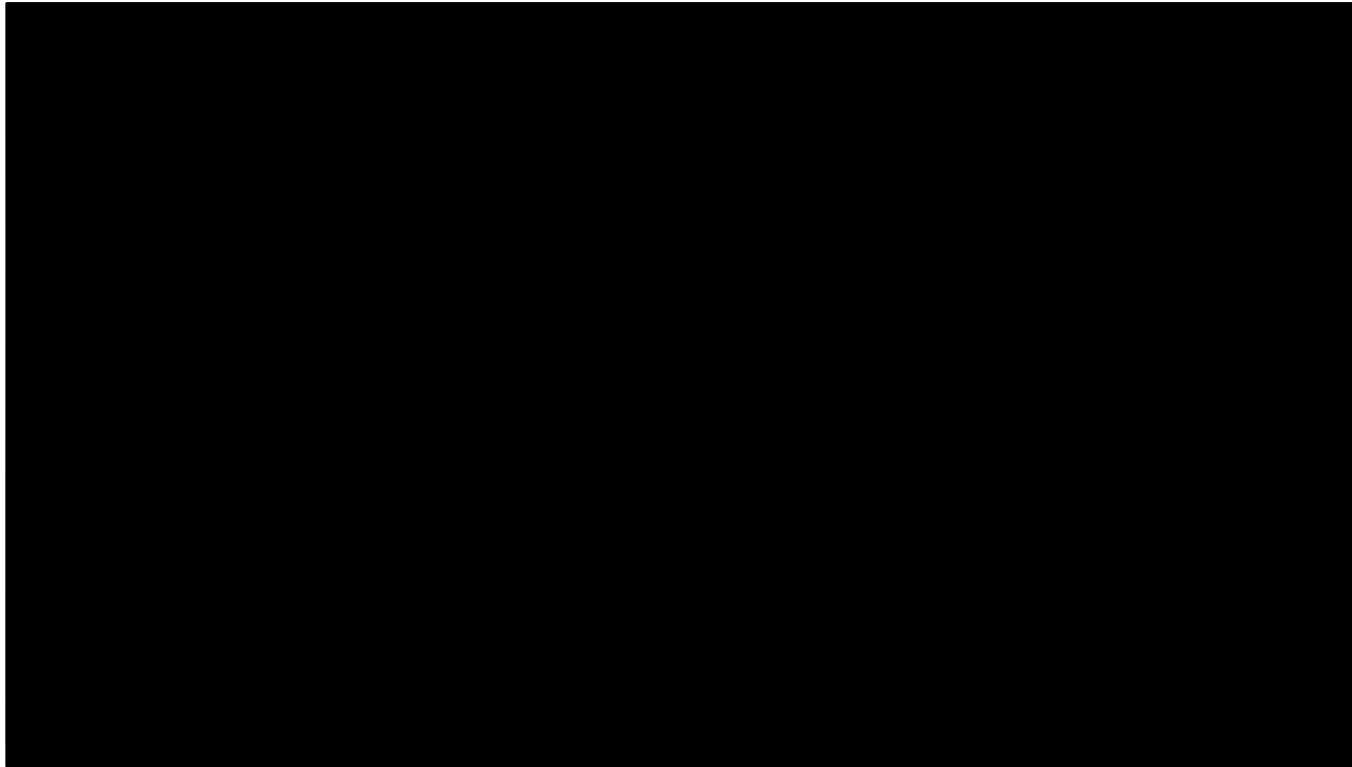


Fuels and Fire crews digging handline to prepare for fall Rx broadcast burn.



Starvation Flats Rx Cultural Broadcast Burn

Consequences of Inaction



Yakima River Basin Water Enhancement Project

Enhances water supply for:

- Irrigation
- Instream flows for salmon
- Yakama Reservation water needs
- Part of the larger Yakima Basin Integrated Plan (30-year climate resilience strategy).

How They Intersect

WATERSHED HEALTH

Wildfire mitigation protects rivers, streams, and riparian zones.

YRBWEP depends on stable, healthy watersheds for water quality and fish habitat.



CLIMATE CHANGE ADAPTATION

Wildfire preparedness reduces climate-driven fire impacts.

YRBWEP addresses drought, declining snowpack, and water scarcity.



Shared Tribal Resource Protection

BOTH EFFORTS SAFEGUARD:

- Salmon habitat
- First foods
- Cultural landscapes
- Treaty-protected resources

YAKAMA NATION PLAYS A LEADERSHIP ROLE IN BASIN-WIDE PLANNING.



Governance & Collaboration

- Yakama Nation participates in the **Yakima Basin Workgroup**.
- Wildfire preparedness informs broader water and habitat strategies.
- Both programs contribute to long-term ecological resilience.



Summary

- The programs are **separate but complementary**.
- Wildfire resilience supports watershed stability.
- Watershed stability supports YRBWEP water and habitat goals.
- Together, they strengthen Yakama Nation lands and the entire Yakima Basin.

