YRBWEP Water Conservation Status - September 2026

Michael Horner
Ecology Liaison to USBR-YRBWEP, Office of Columbia River

DEPARTMENT OF ECOLOGY
State of Washington

BUREAU OF RECLAMATION

YRBWEP Phase II

YRBWEP Phase II: Basin Conservation Program

- **1994 YRBWEP federal** legislation (**Title XII,** Public Law 103-434).
- **Purpose:** Increase instream flows & improve agricultural drought resiliency.
- **Funding** (*public only*): Federal (65%); state & district 17.5% each.
- **Participation** (*narrower*): Districts with diversions above Parker and return flows below Parker; Benton ID, Roza ID, Sunnyside Division Board of Control.
- **Goal:** At least 110,000 acre-feet/year for instream flow & 55,000 acre-feet/year for drought resiliency.
- **Methods** (*narrower*): Irrigation efficiency, canal lining, piping, & operational improvements.
- **Result** (*new trust water rights*)**:** Two-Thirds / One-Third Rule - 2/3 in-stream for fish; 1/3 for district drought resiliency.

Phase II Progress: BCP

2025 FULL SUPPLY

58,235 AF

Storable quantity for instream flow (2/3rds block)

SPRING PULSE FLOWS

51,107 AF

Storable water used in 2025

BCP Projects & Districts (examples)

- Storable instream water: Allows targeted pulse flows to aid out-migrating smolts in crucial spring windows.
- Ongoing Conservation Activity: Sunnyside Division Board of Control (SDBOC)
- Efficiency Upgrades: Continued enclosure of open canals to eliminate seepage & evaporation losses across laterals.

YRBWEP Phase III

Phase III: YBIP Enhanced Water Conservation

- **Legislation:** 2019 YRBWEP federal legislation (Public Law 116-9) and 2013 state legislation (Yakima River Basin Water Rights, 90.38 RCW).
- **Purpose:** Restore instream flow, improve drought resiliency, and Wapato Irrigation District conservation.
- **Funding** (*diverse*): federal (Reclamation, BIA, & NRCS), state, irrigation districts, conservation districts.
- **Participation** (*wider*)**:** Irrigation districts, conservation districts, non-profits (e.g., Trout Unlimited), etc.
- **Goal:** 85,000 acre-feet conserved by 2029; 170,000 acre-feet over 30 years.
- **Methods** (*broader*)**:** Agricultural modernization for precise delivery & operational efficiency (like BCP), heritage gardens, etc.
- **Result** *(few new trust water rights):* Conserved water counted as system savings for drought resiliency or instream flow.

Phase III Progress

TOTAL CONSERVATION

73,385 AF

Projects completed & in-progress

Instream Flow

32,800 AF

Not including acquisitions

Out-of-Stream

30,129 AF

Drought resiliency

Enhanced Water Conservation Projects (examples)

- Kittitas Reclamation District (KRD): Canal lining and piping. Wheeling conserved water via canal and upper Yakima tributaries to Roza ID.
- Roza Irrigation District: Canal sealing with over cracks and joints reducing seepage losses to improve drought resiliency
- Wapato Irrigation Project (WIP): Water measurement and turnout upgrades (weirs and check structures), canal lining and piping, aquifer recharge.
- On-Farm: High-efficiency sprinkler and micro irrigation.
- Community Conservation: Heritage Gardens program promoting drought-tolerant landscaping.

Water Conservation Projects



1. Phase II. SDBOC Enclosed Lateral Improvement Project.



3. Phase III. Piping on WIP.



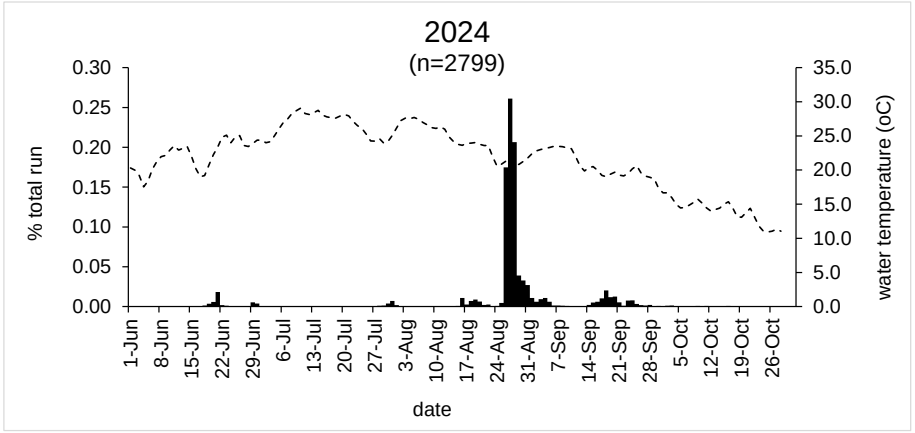
2. Phase III. Sealing Roza Main Canal.

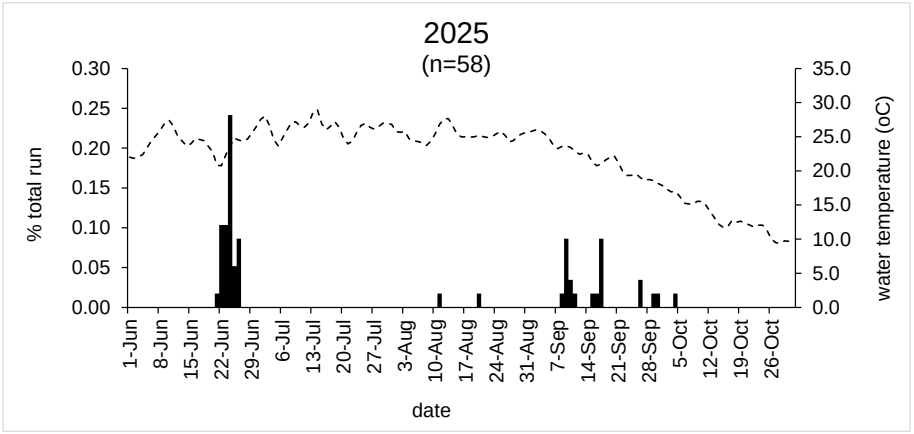


4. Phase III. Heritage garden.

July 7th 2025

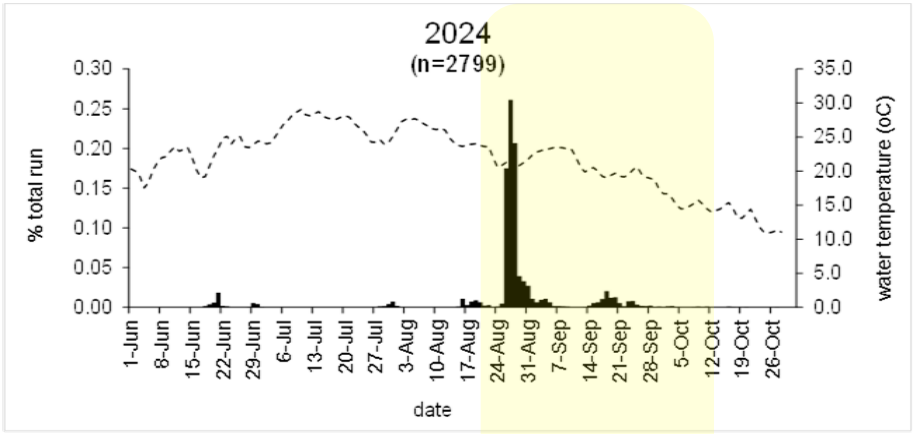


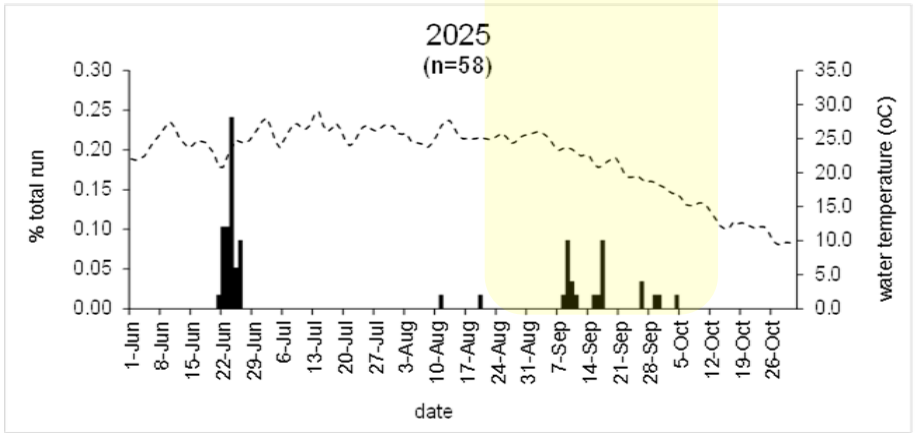


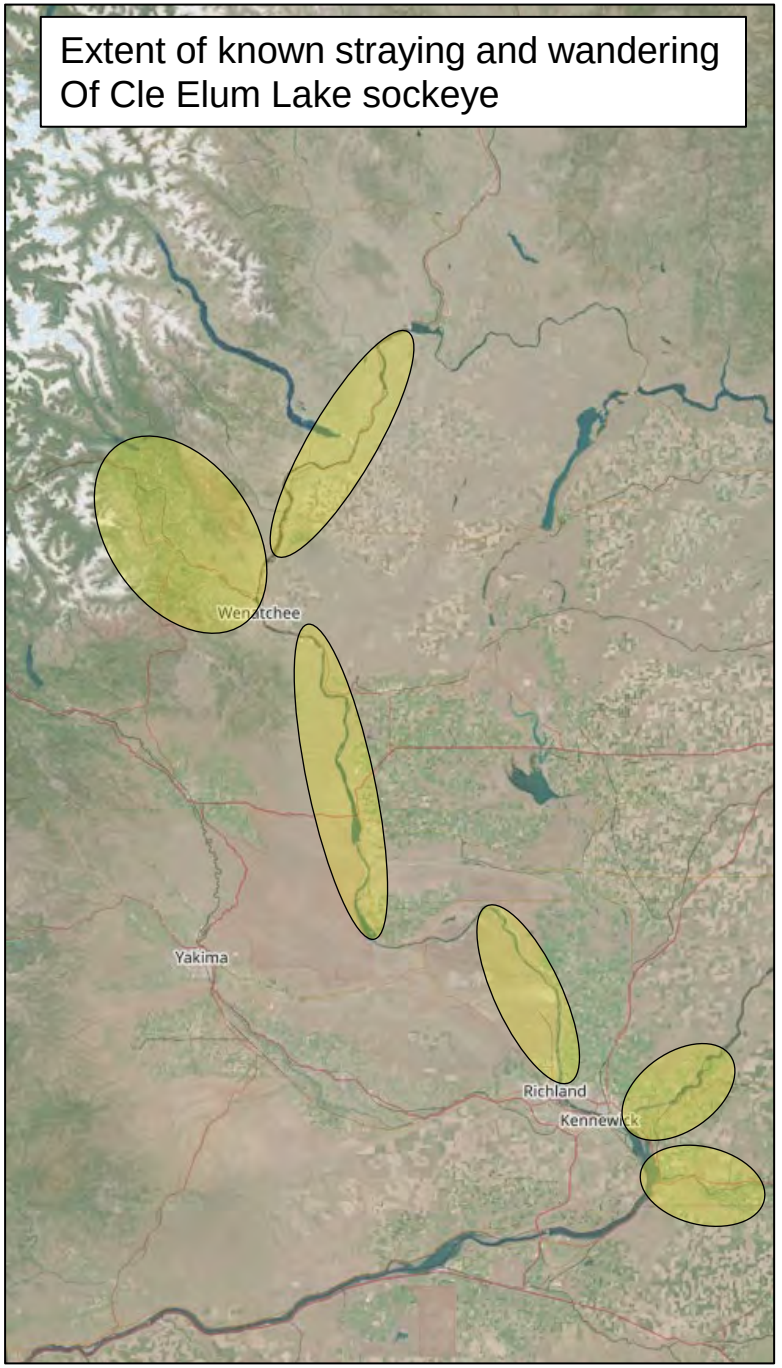


Yakima River water temperature did not dip below 70°F (~21°C) until September 16th

In the past, some fish tough it out and return late, but there is good evidence that many don't make it







July 7th 2025

July 7th 2026

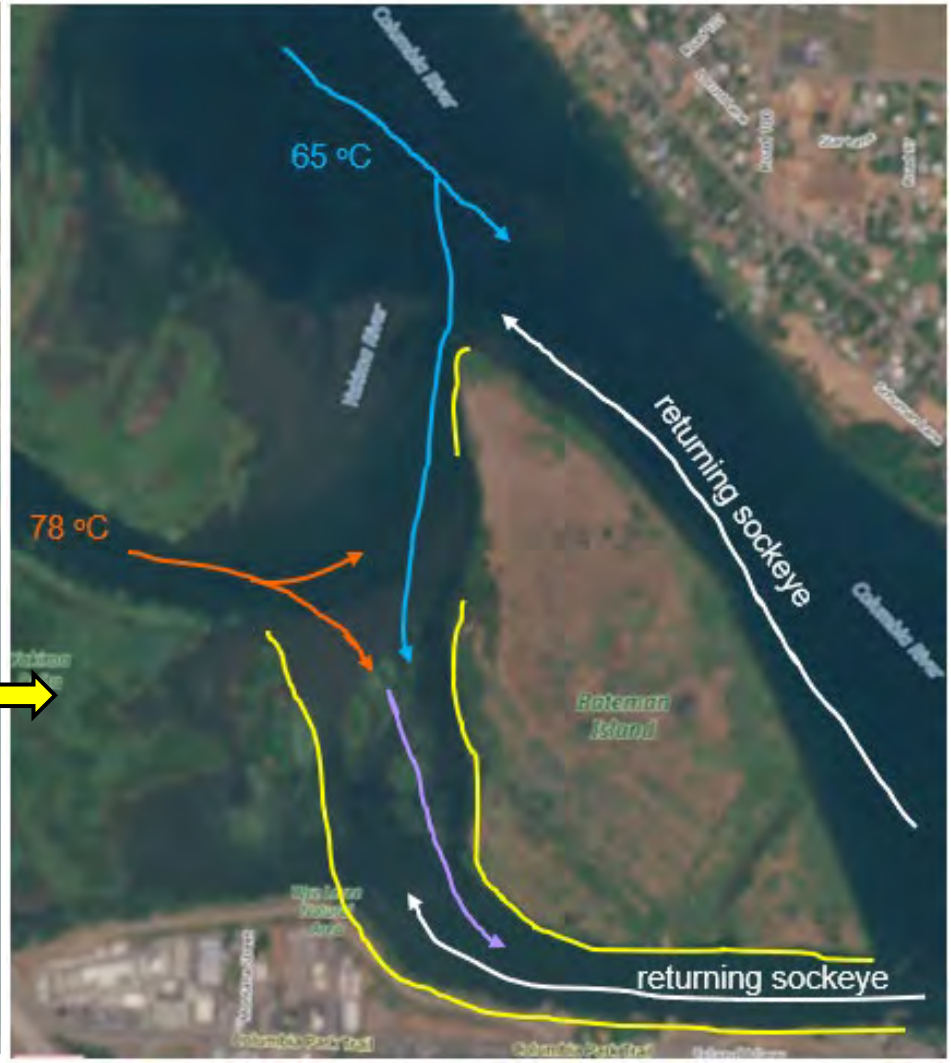


Yakima River water temperature did not dip below 70°F (~21°C) until September 16th

July 7th 2025

July 7th 2026

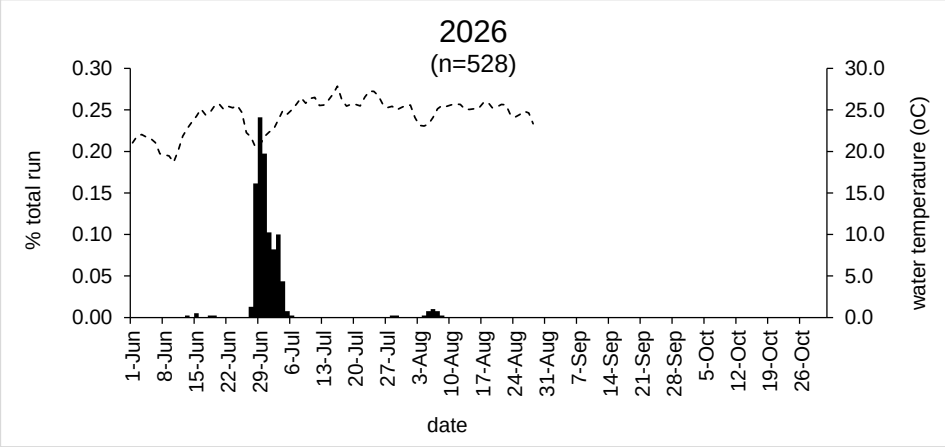




Yakima River water temperature did not dip below 70°F (~21°C) until September 16th

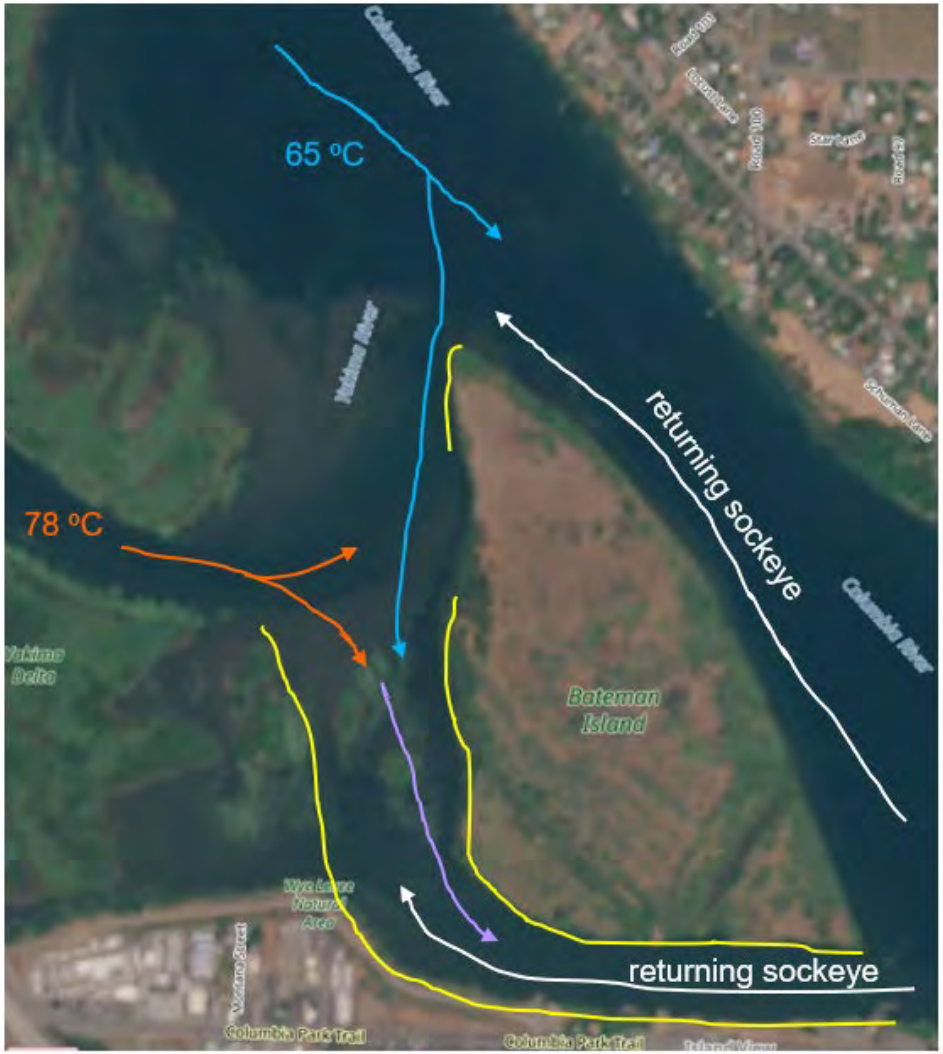
July 7th 2026

Does the current return reflect a positive effect of causeway removal?



return abundance	2024	2025	2026
Bonneville	755,910	166,710	74,031
Yakima	2,799	58	528
% Bonn	0.370%	0.035%	0.713%

So far this year the Yakima proportion of the total Columbia escapement Is twice that of 2024 and 20x 2025…..and we anticipate more fish As the water temperatures cool (late returns holding in the lower Yakima?)



Water Stargrass Harvest

2026 Field Season Update



WATER STARGRASS COALITION

2025 Ecology Drought Funding Grant

Equipment Costs: $650,000

2026 Harvesting Ops: $200,000

- 2025 EcoHarvester: $157,300+tax
- Weedoo: $120,055+tax */ each*
  - *3 purchased*
- CID Tether Boat: $72,410 + modifications


2025 Ecoharvester



TC -3012 with Root Rake and Cutter Bar



Operations:

1. Prosser Pool:
   EcoHarvester & Weedoos
2. Benton City:
   Weedoos
3. Horn Rapids:
   EcoHarvester & Weedoos
4. West Richland:
   Weedoos
5. Yakima Delta:
   Ecoharvester & Weedoos

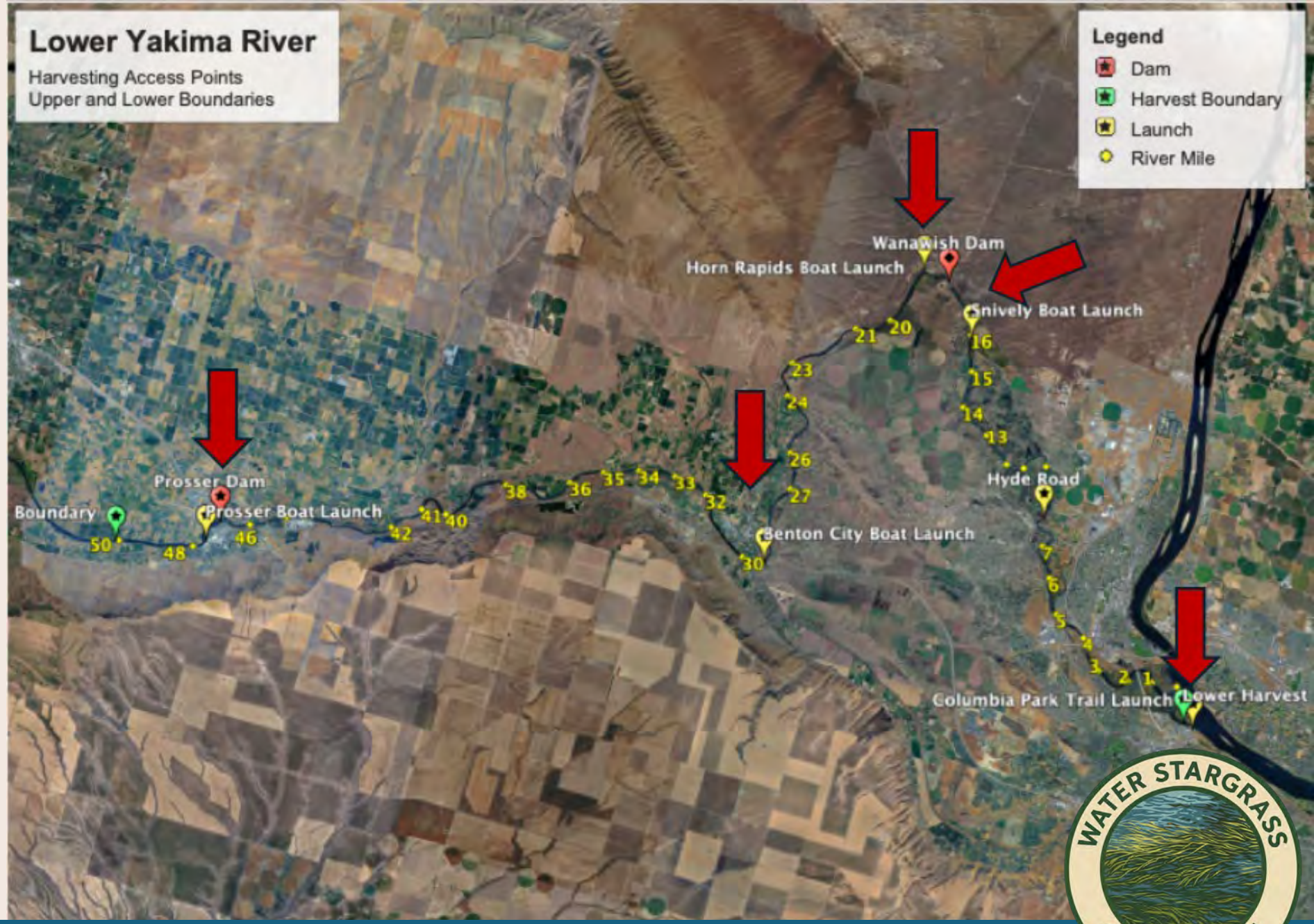
15 River Miles

40 Cut Days

July 1 – Sept 15

Cut and Drift

Removal at Dams



WATER STARGRASS COALITION



Yakima Delta







Snively Reach: West Richland Grass Islands



Hydrojet Pilot Area: Coordinating Efforts

Removal of WSG at CID Intake

Harvesting by CID Staff

~ 150 Cubic Yards Removed in 7 hours

Too shallow for Eco

Utilized Weedoo









Irrigation Impacts

Considerations

- On & Off Season Maintenance
- Water levels create constraints
- Primitive Launches
  - Improvements?
- Public Perceptions
  - Boat Race Weekend
  - Fishing
  - Private Fish Screens
- Smoke/Heat





Prosser Pool - 2025



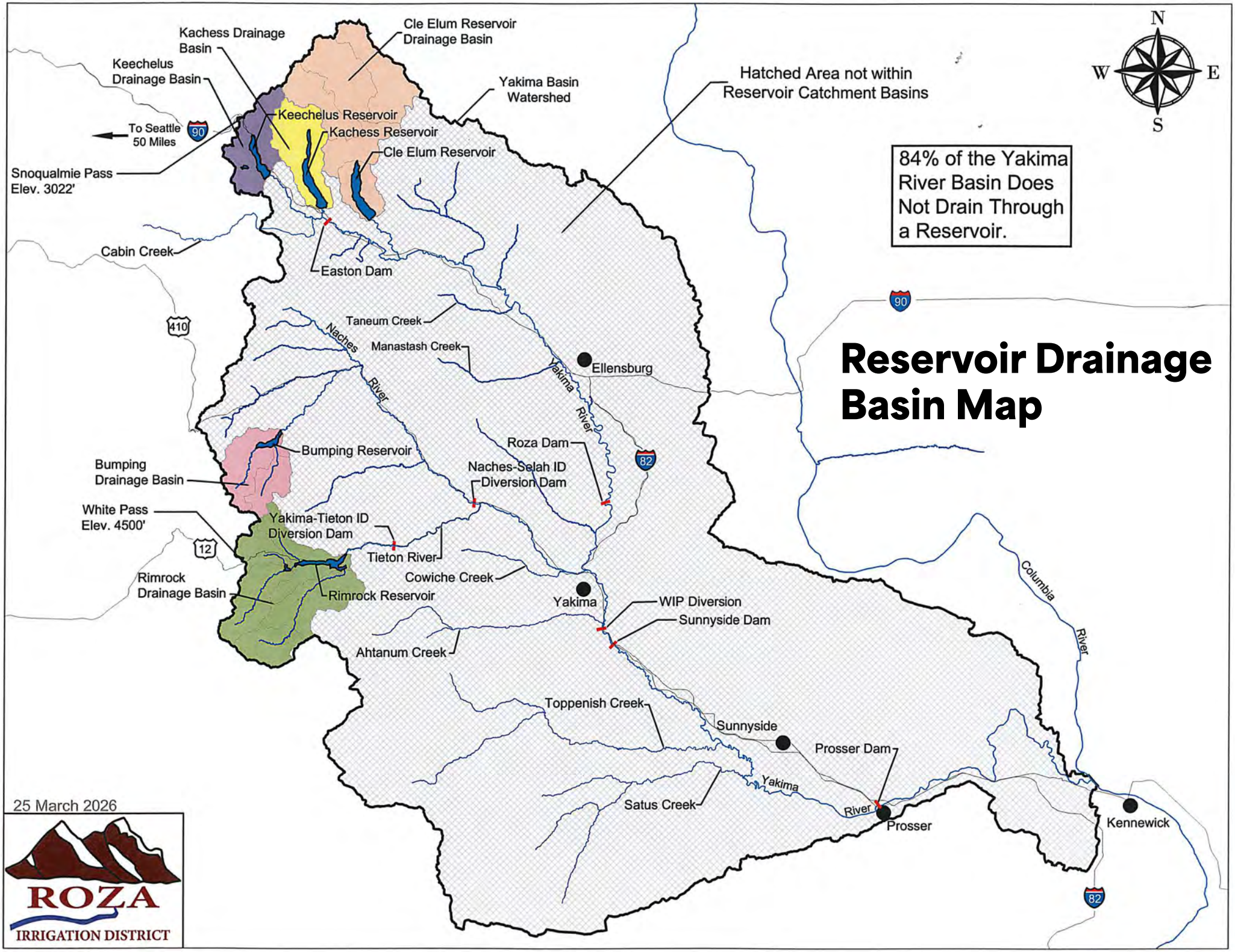
August 20, 2025



September 28, 2025



Prosser Pool: July 22, 2026
Flood Impacts?


Kachess Drainage Basin
Cle Elum Reservoir Drainage Basin
Keechelus Drainage Basin
Yakima Basin Watershed
Hatched Area not within Reservoir Catchment Basins
N
W
E
S
Keechelus Reservoir
Kachess Reservoir
Cle Elum Reservoir
To Seattle 50 Miles
90
Snoqualmie Pass Elev. 3022'
84% of the Yakima River Basin Does Not Drain Through a Reservoir.
Cabin Creek
Easton Dam
Reservoir Drainage Basin Map
410
Taneum Creek
Naches River
Manastash Creek
Ellensburg
Yakima River
Roza Dam
Bumping Reservoir
82
Bumping Drainage Basin
Naches-Selah ID Diversion Dam
White Pass Elev. 4500'
Yakima-Tieton ID Diversion Dam
12
Tieton River
Cowiche Creek
Rimrock Drainage Basin
Rimrock Reservoir
Yakima
WIP Diversion
Sunnyside Dam
Columbia River
Ahtanum Creek
Toppenish Creek
Sunnyside
Prosser Dam
Yakima River
Satus Creek
Prosser
Kennewick
25 March 2026
ROZA
IRRIGATION DISTRICT

PILOT TESTING CONSTRUCTION









Current Hydrologic Conditions and the Very Strong El Niño

Karin Bumbaco

Washington State Climate Office (WASCO)

Climate Impacts Group

University of Washington

September 9, 2026

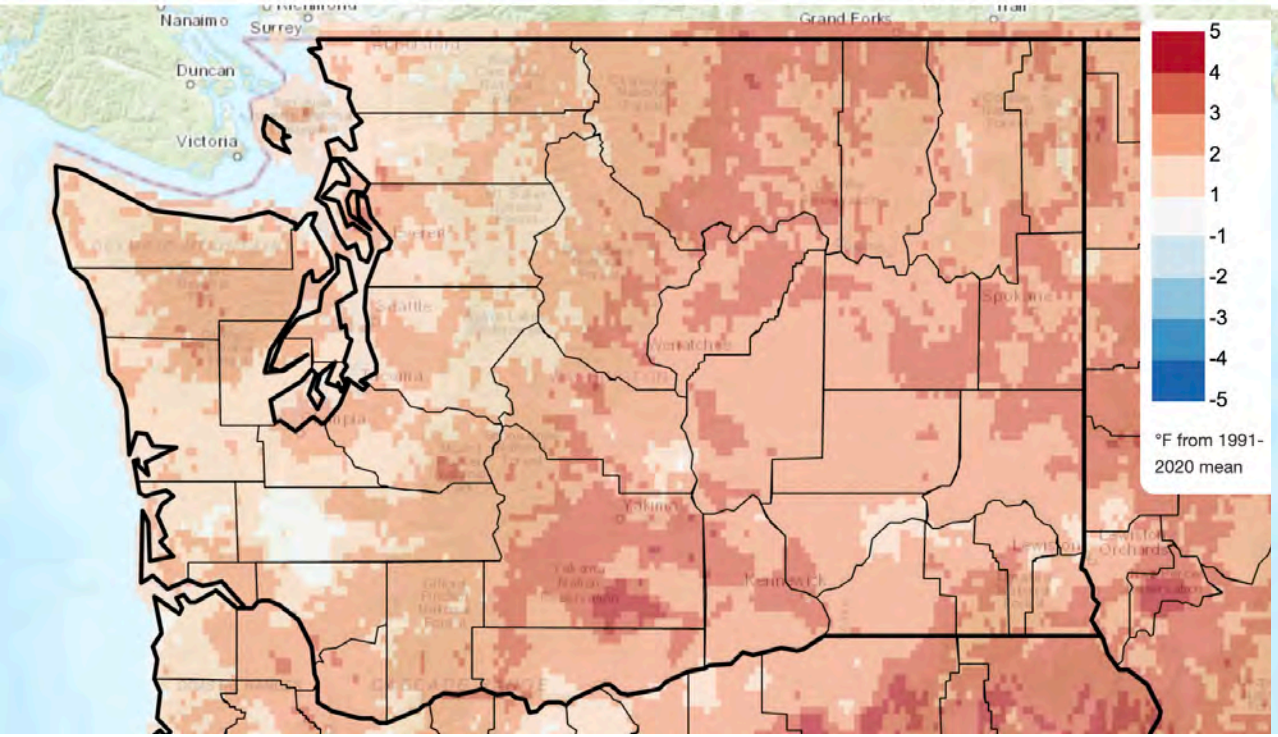


"El Niño is Spanish for.... The Niño!"

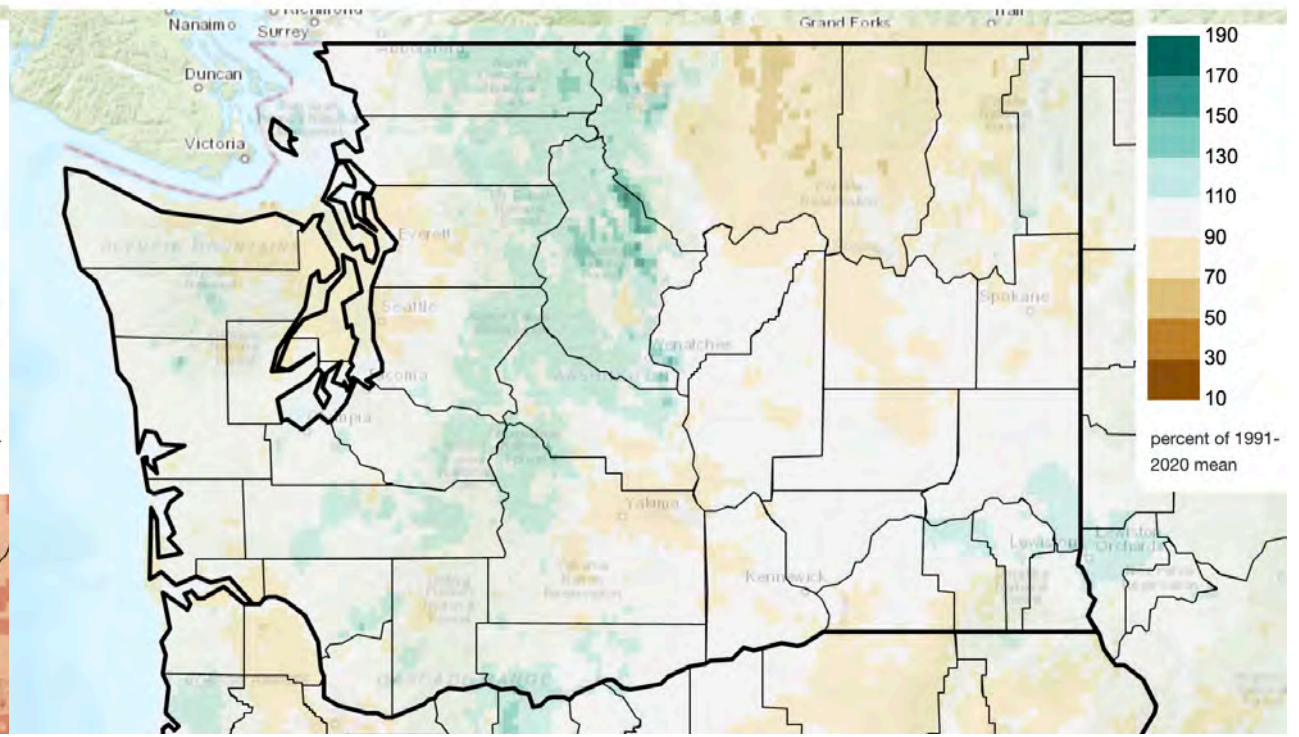
Source: Chris Farley | SNL in 1997

Water Year 2026

Temperature



Precipitation

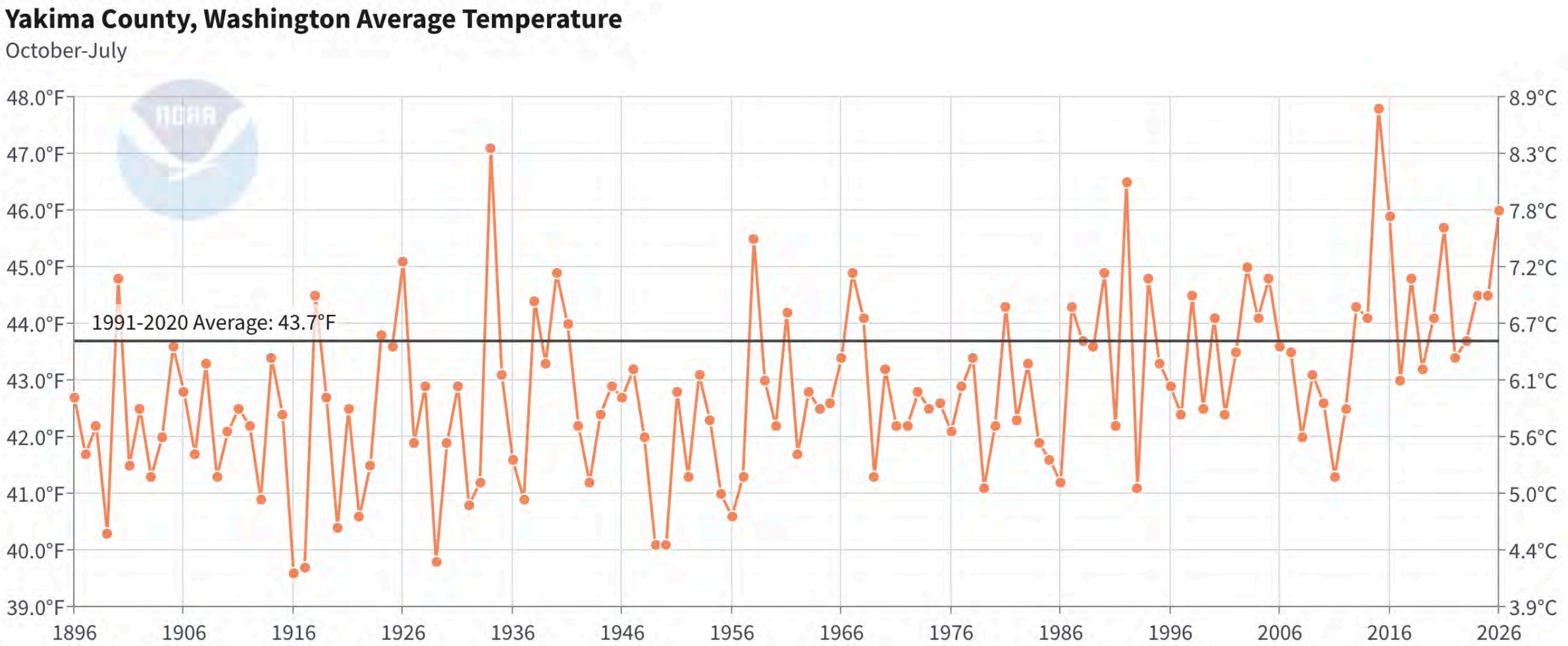


Climate Toolbox

- Averaged statewide, Oct-Jul tied 1992 as the 3rd warmest (+2.6°F)* on record
- Averaged statewide, Oct-Jul precipitation was near-normal (+0.27”; 101% of normal)*

*Records since 1895; Normal is 1991-2020

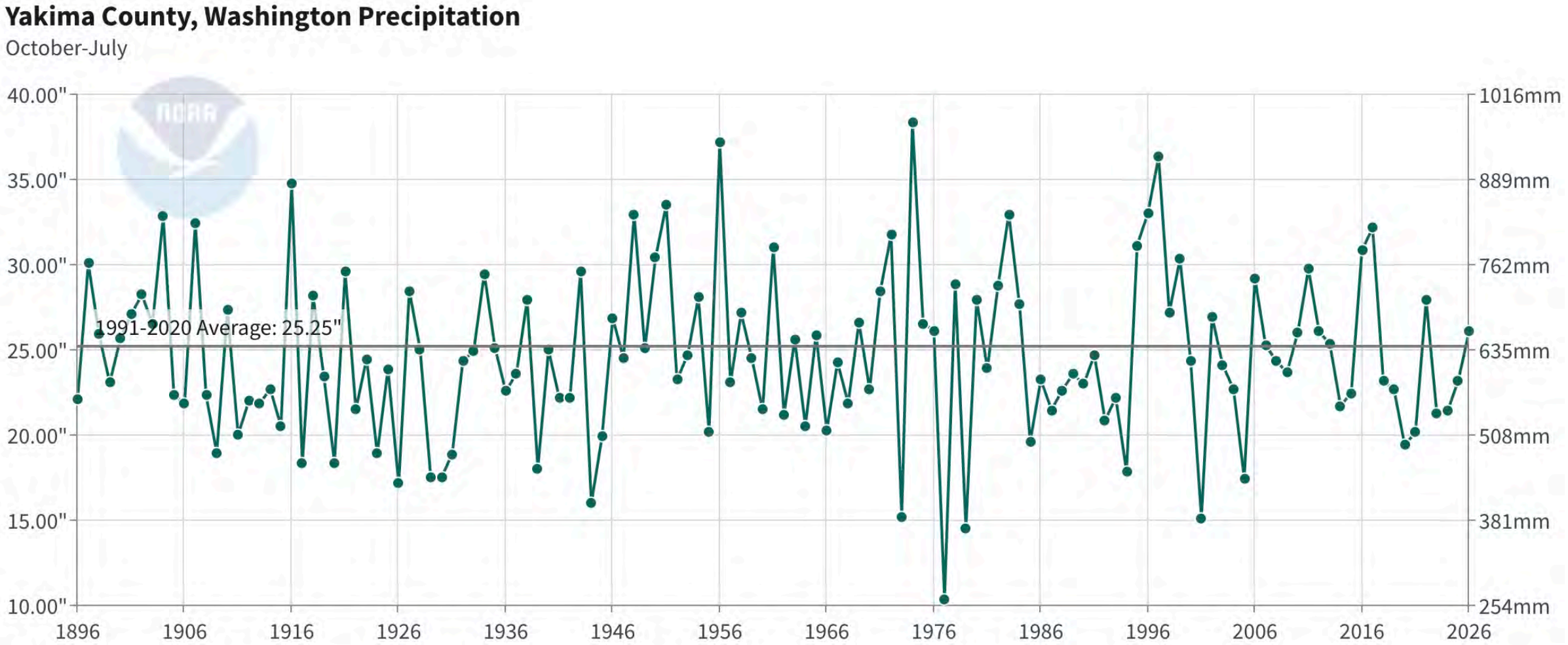
Source: Climate Toolbox - Climate Mapper



Water Year-to-date avg T in Yakima County: +2.3°F; 4th warmest

Source: Climate at a Glance: County Time Series

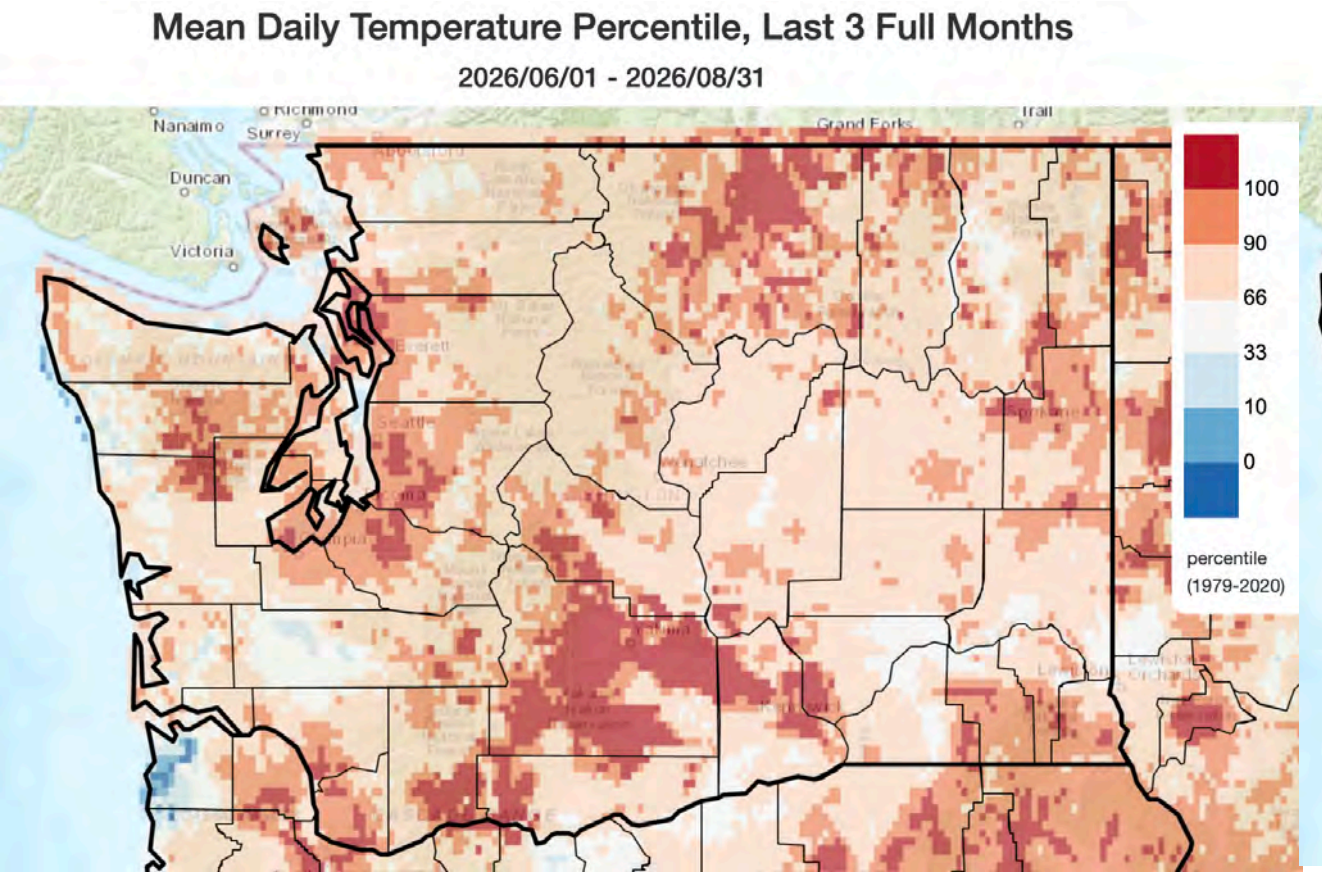
Yakima County Water Year Precipitation

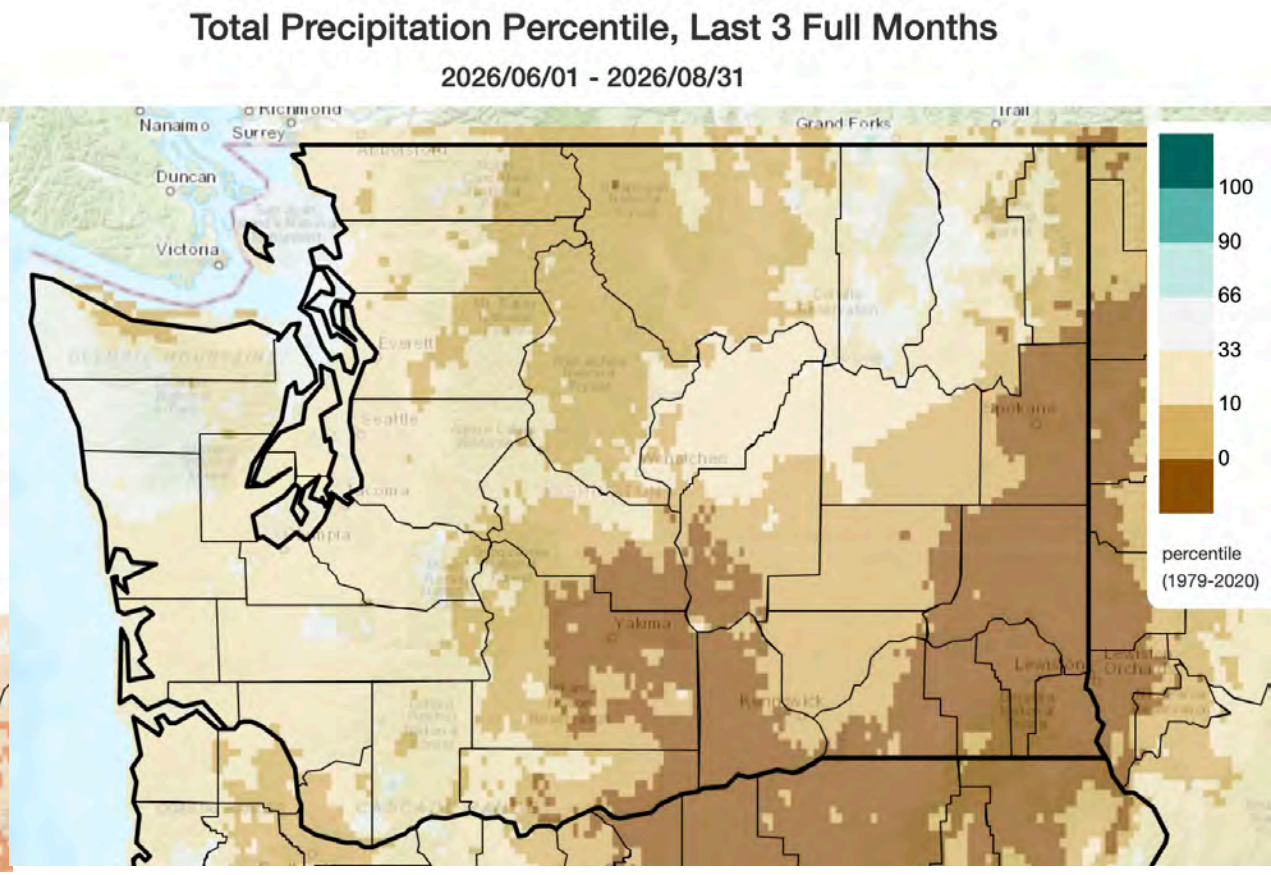


Water Year-to-date precipitation in Yakima County: 103% of normal

Source: *Climate at a Glance: County Time Series*

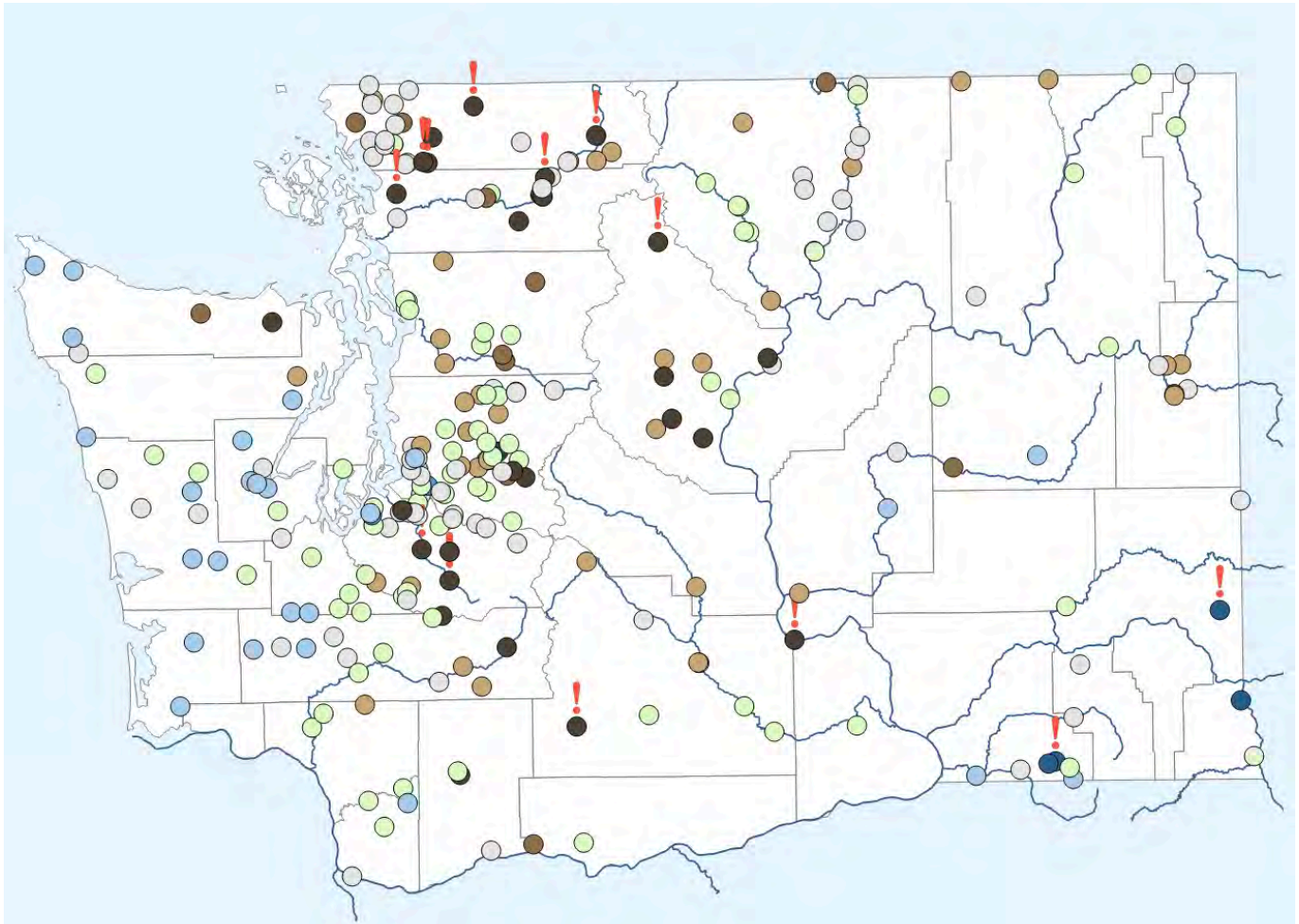
Jun-Aug 2026 Temperature and Precipitation Percentiles





Yakima AP: tied 2025 and 2015 as the 5th warmest Aug on record

Source: [Climate Toolbox - Climate Mapper]



Legend

○ Monitoring location with Discharge, cubic feet per second

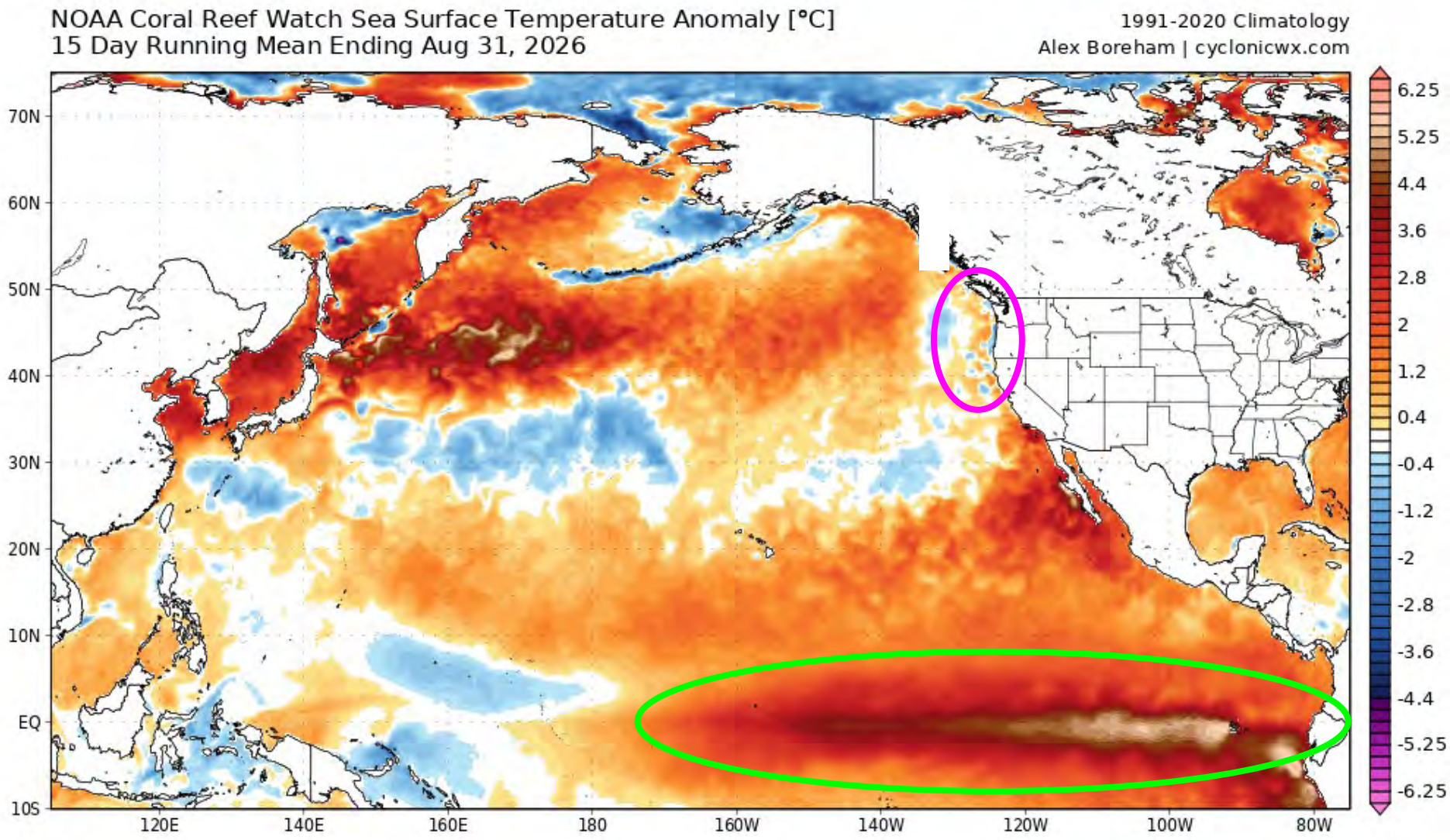
! Extreme conditions

0-5 Extremely below	5-10 Much below	10-25 Below normal	25-75 Normal	75-90 Above normal	90-95 Much above	95-100 Extremely above

No estimate available
Location has less than 20 years of daily data

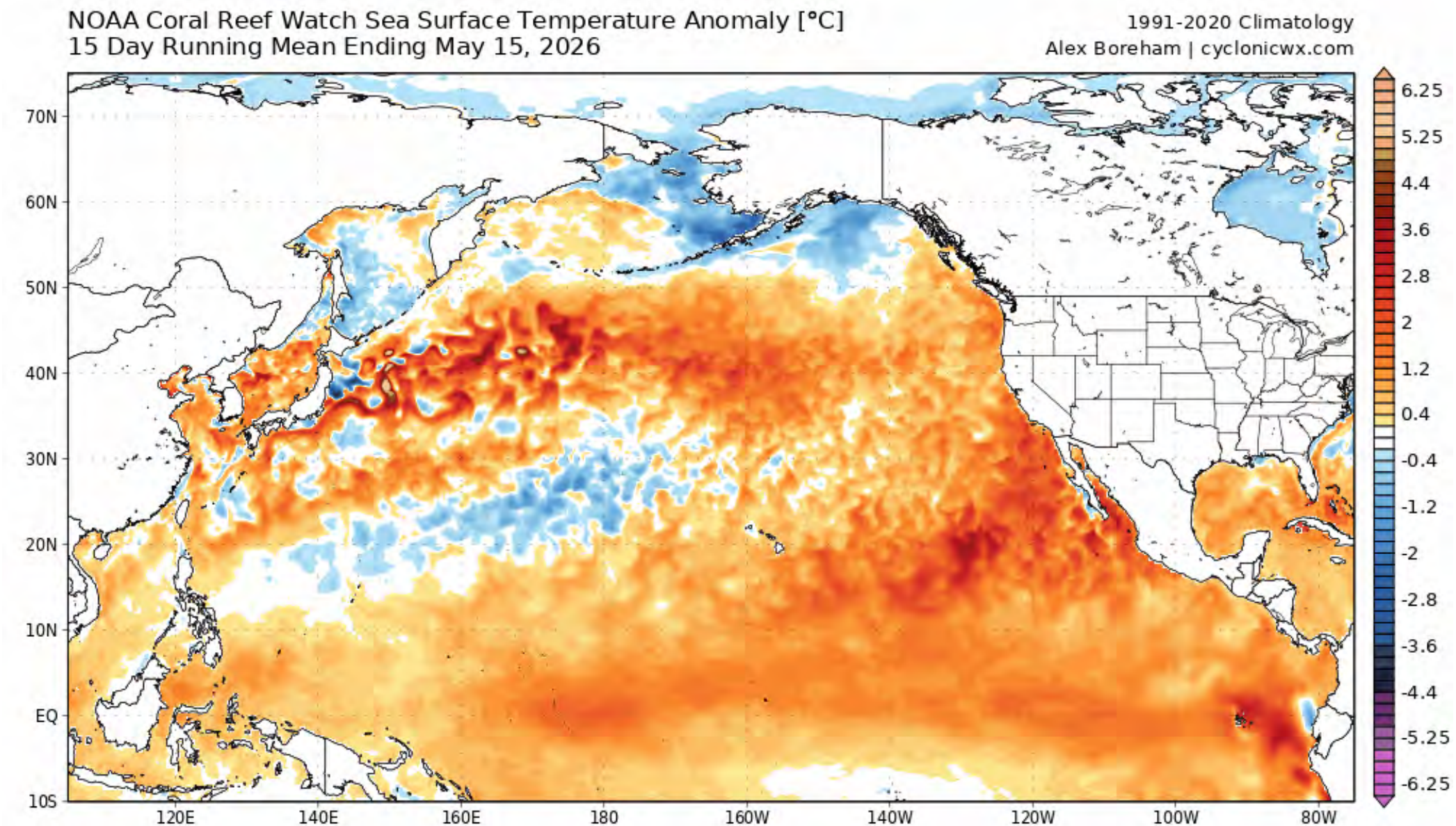
Source: Water Data for Washington State

El Niño



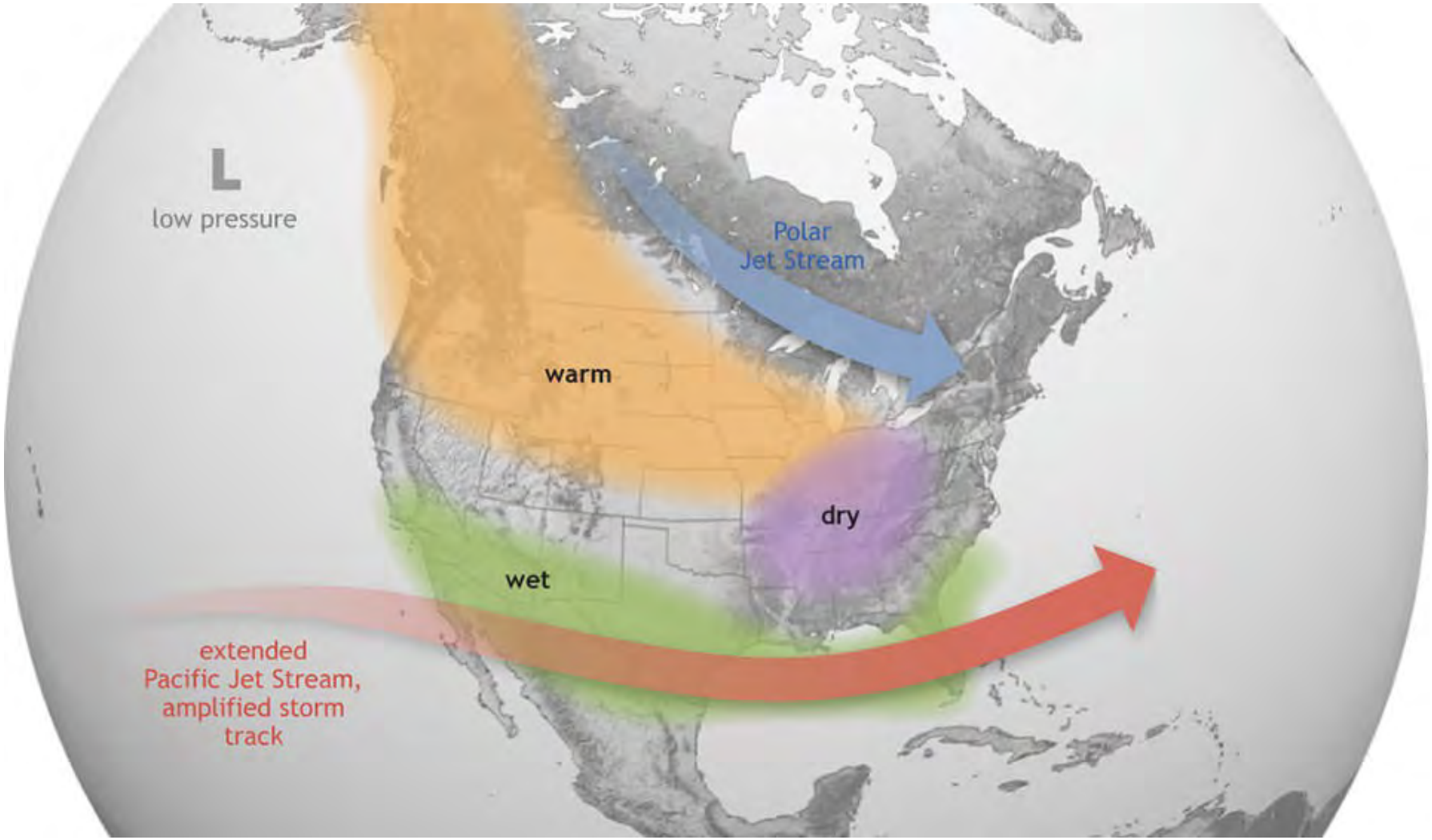
- Very little influence on *terrestrial* conditions in summer.
- "Loads the dice" for warmer and possibly drier winter conditions.

Source: CyclonicWx SST Analysis



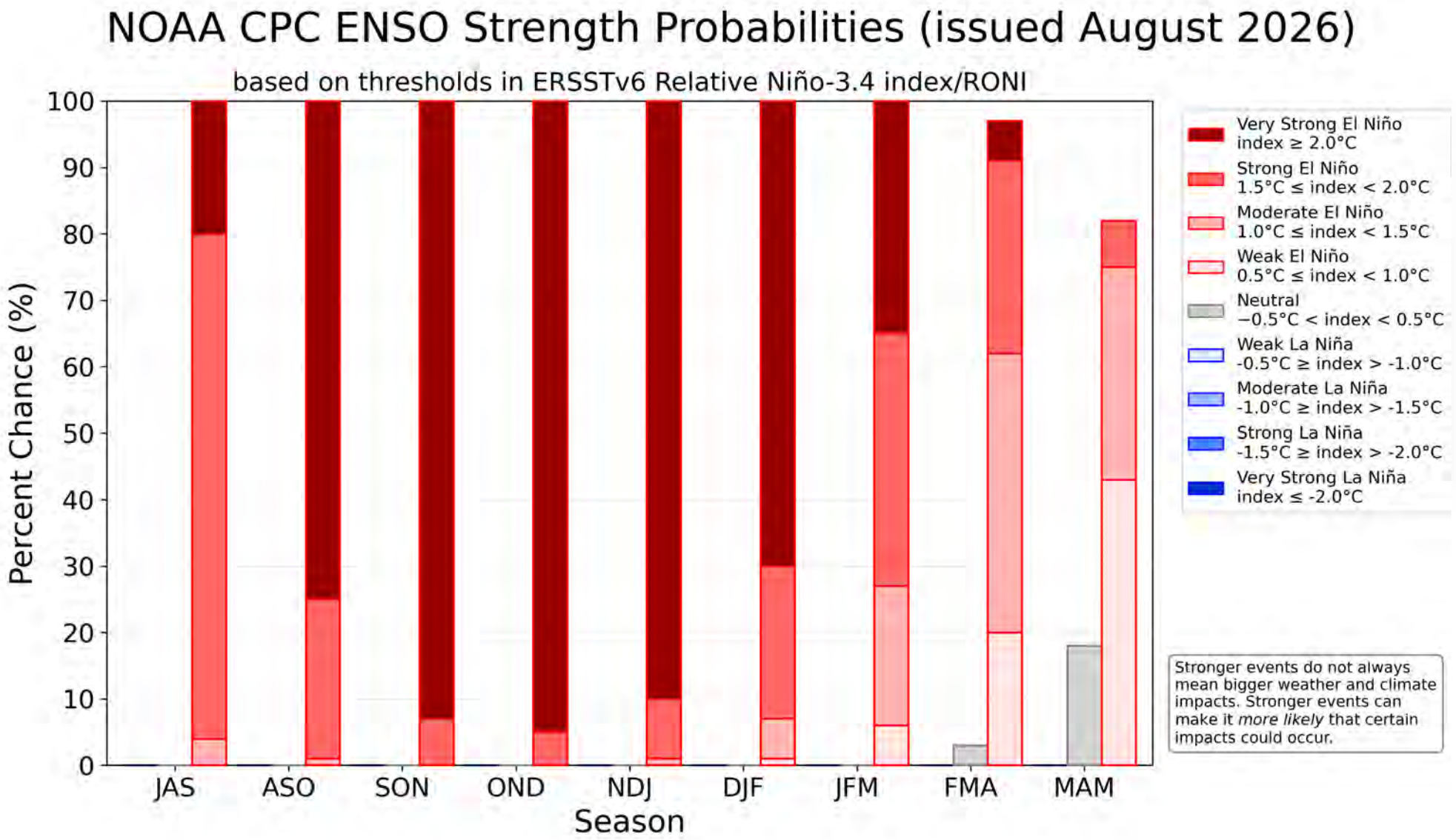
Source: [CyclonicWx SST Analysis]

El Niño changes winter weather pattern globally



El Niño causes the Pacific jet stream to move south and spread further east. During winter, this leads to wetter conditions than usual in the southern US. And warmer and drier in the North.

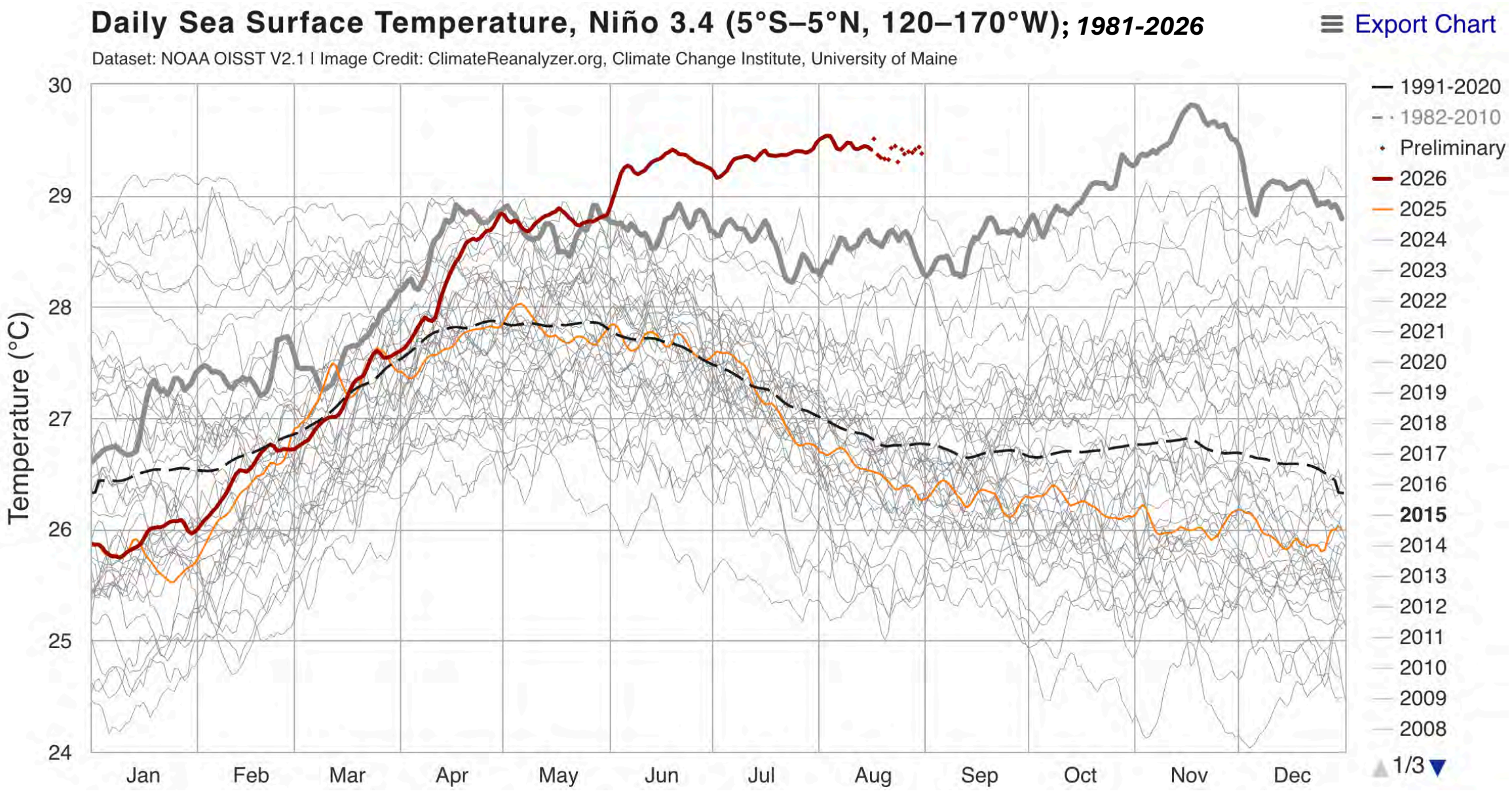
Source: NOAA - What Are El Niño and La Niña?



A “very strong” event is very likely (95% chance).

Strength of SSTs, not necessarily of impacts.

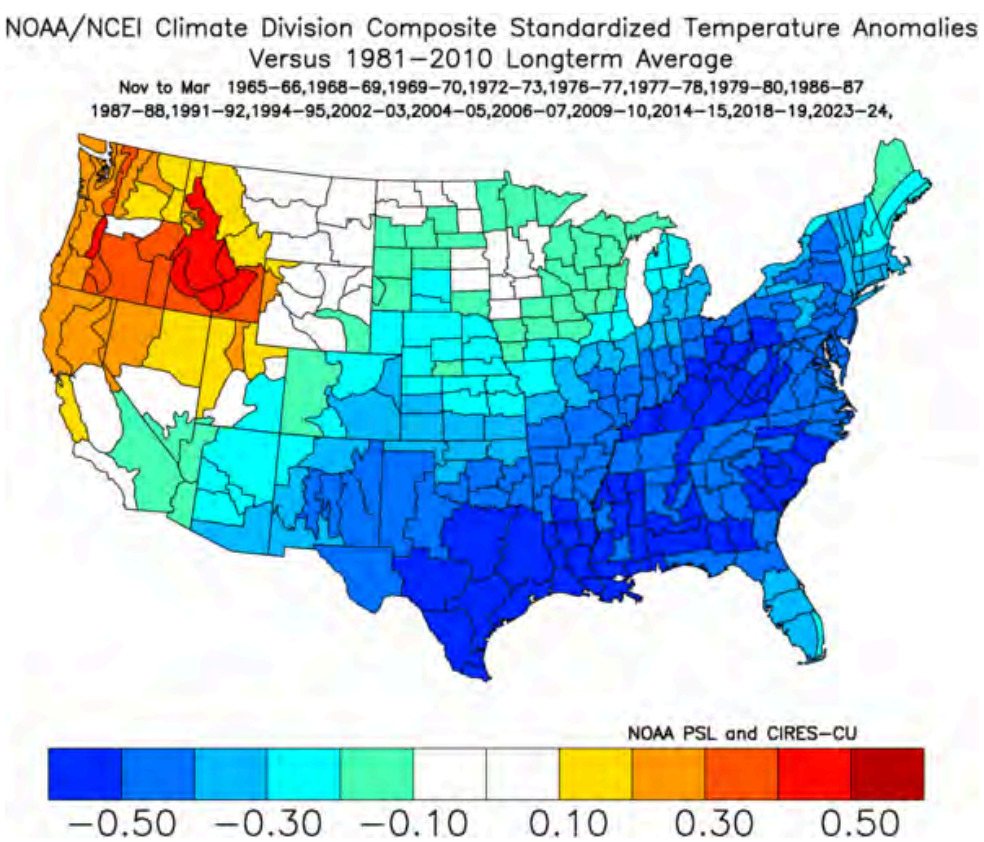
Source: NOAA CPC ENSO Strength Probabilities



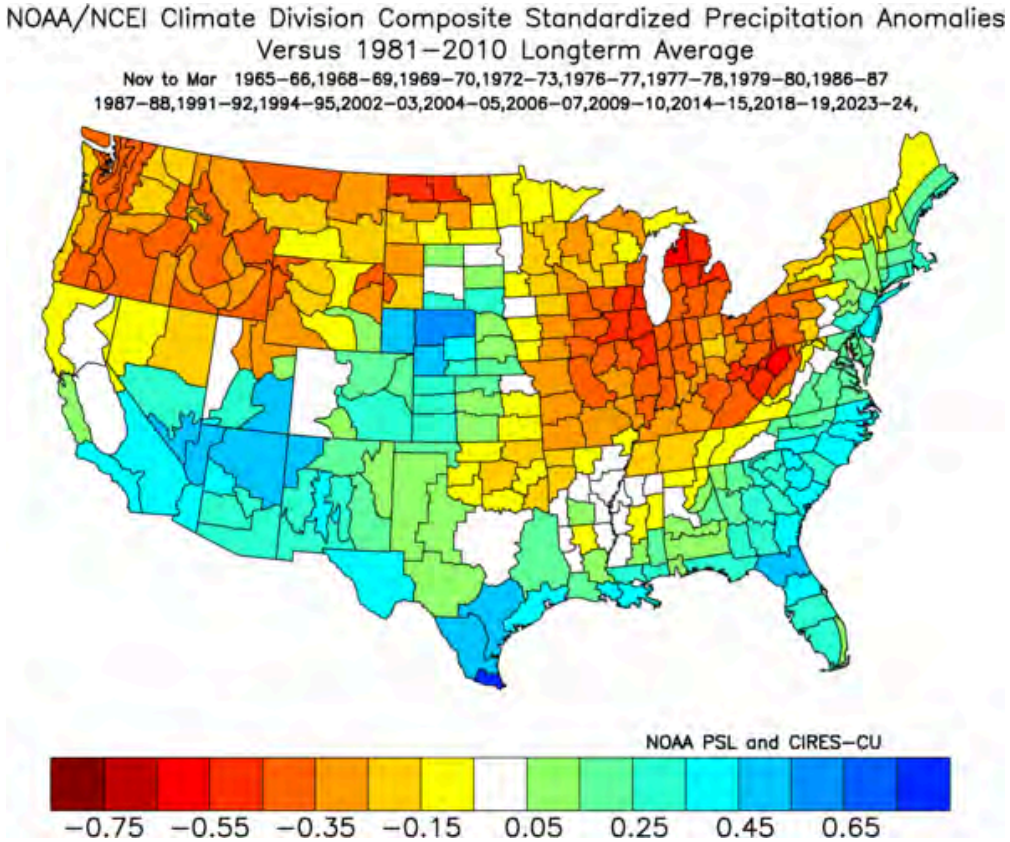
Source: [Climate Reanalyzer Daily Sea Surface Temperature for Nino 3.4]

Average El Niño Winter (Nov-March) conditions

Temperature



Precipitation

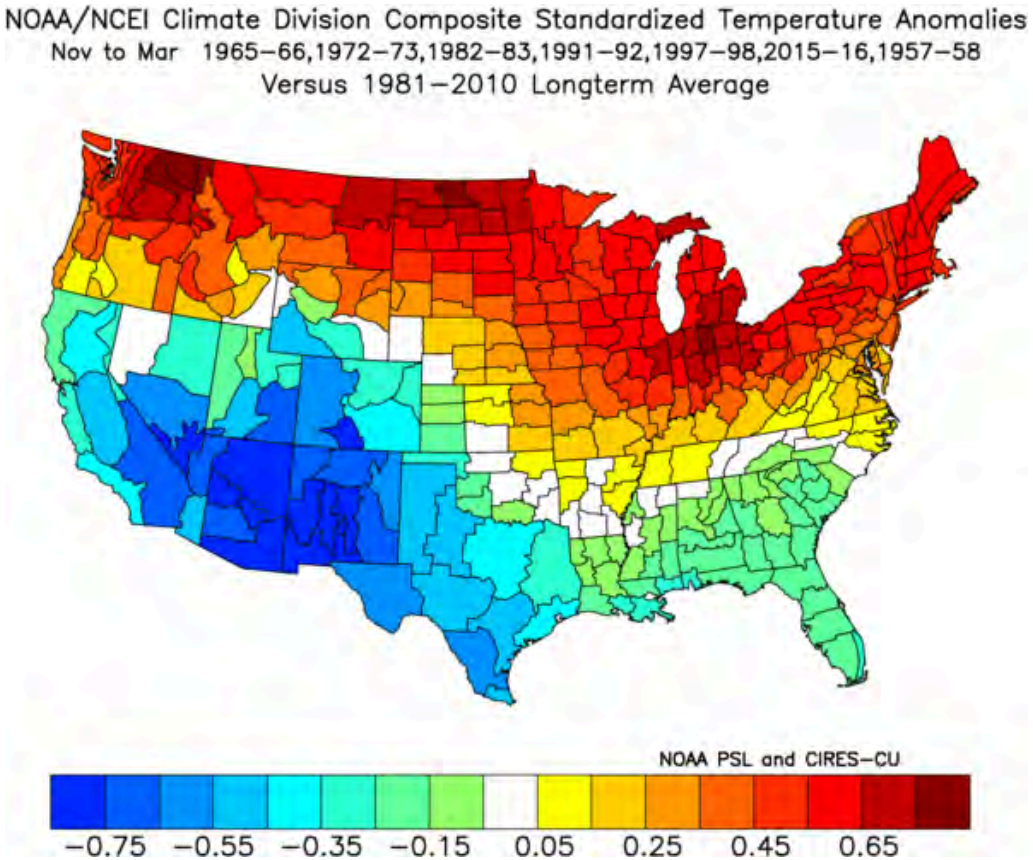


Recent El Niño events (minus three strongest events):
1965/66, 1968/69, 1969/70, 1972/73, 1976/77, 1977/78, 1979/80, 1986/87, 1987/88, 1991/92, 1994/95, 2002/03, 2004/05, 2006/07, 2009/10, 2014/15, 2018/19, 2023/24

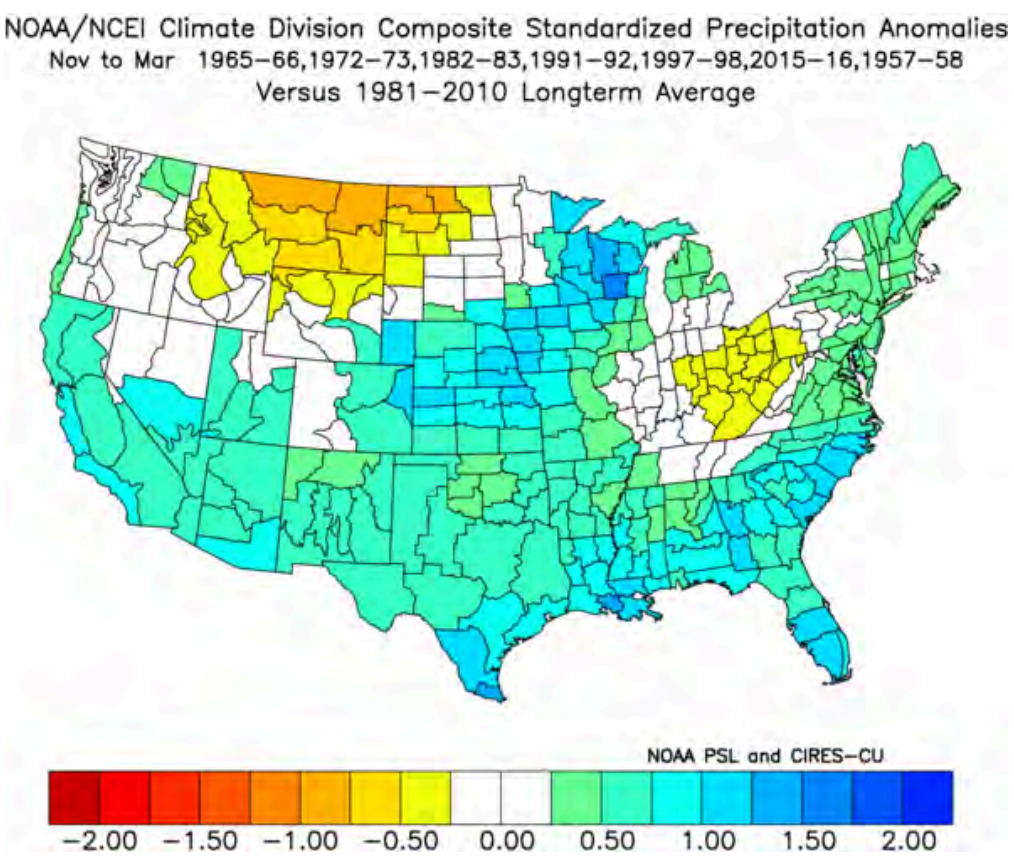
Source: U.S. Climate Divisional Database

Average El Niño Winter (Nov-March) conditions

Temperature



Precipitation

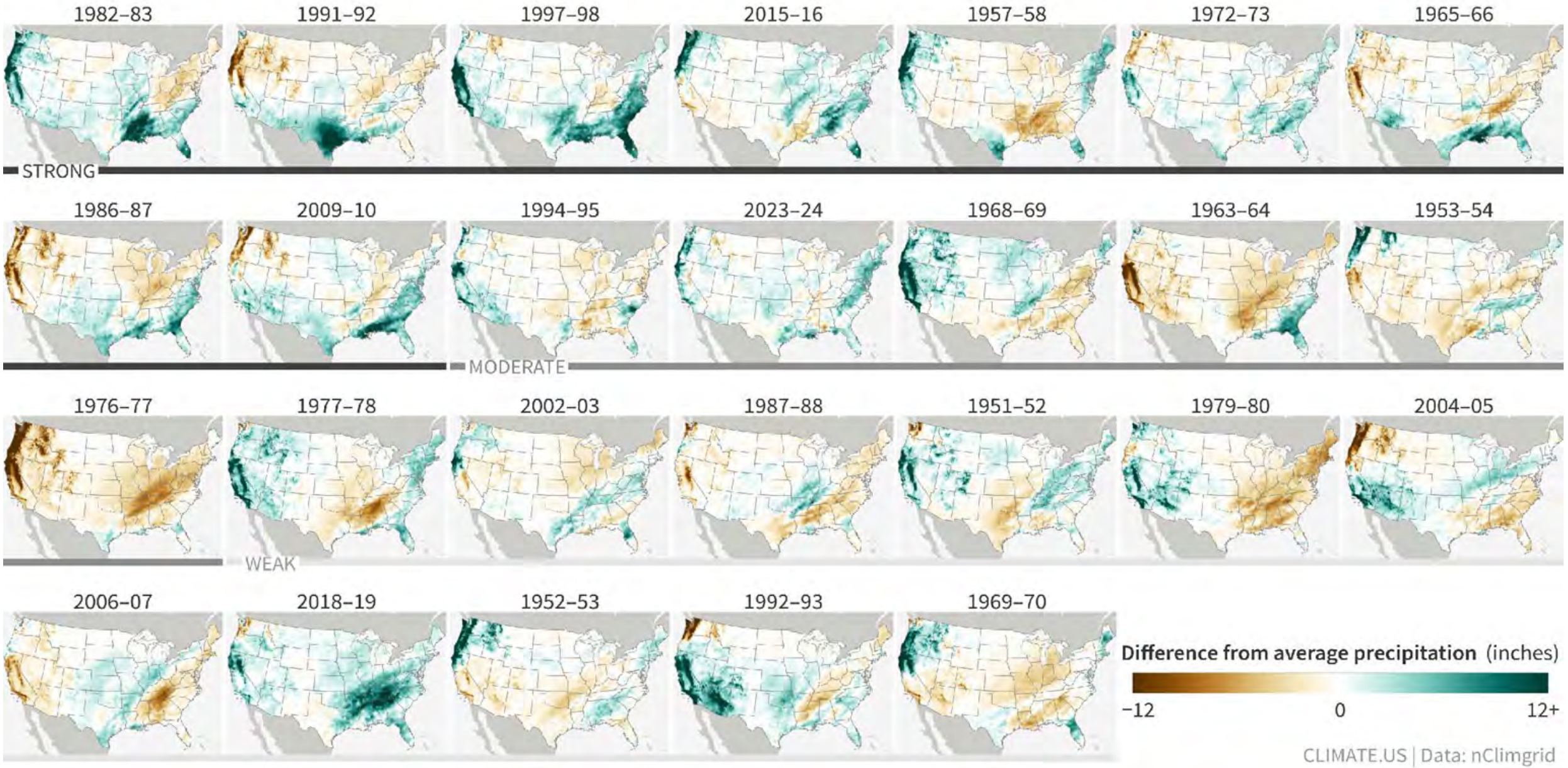


Seven “very strong” El Niño events:
1957/58, 1965/66, 1972/73, 1982/83, 1991/92, 1997/98, 2015/16

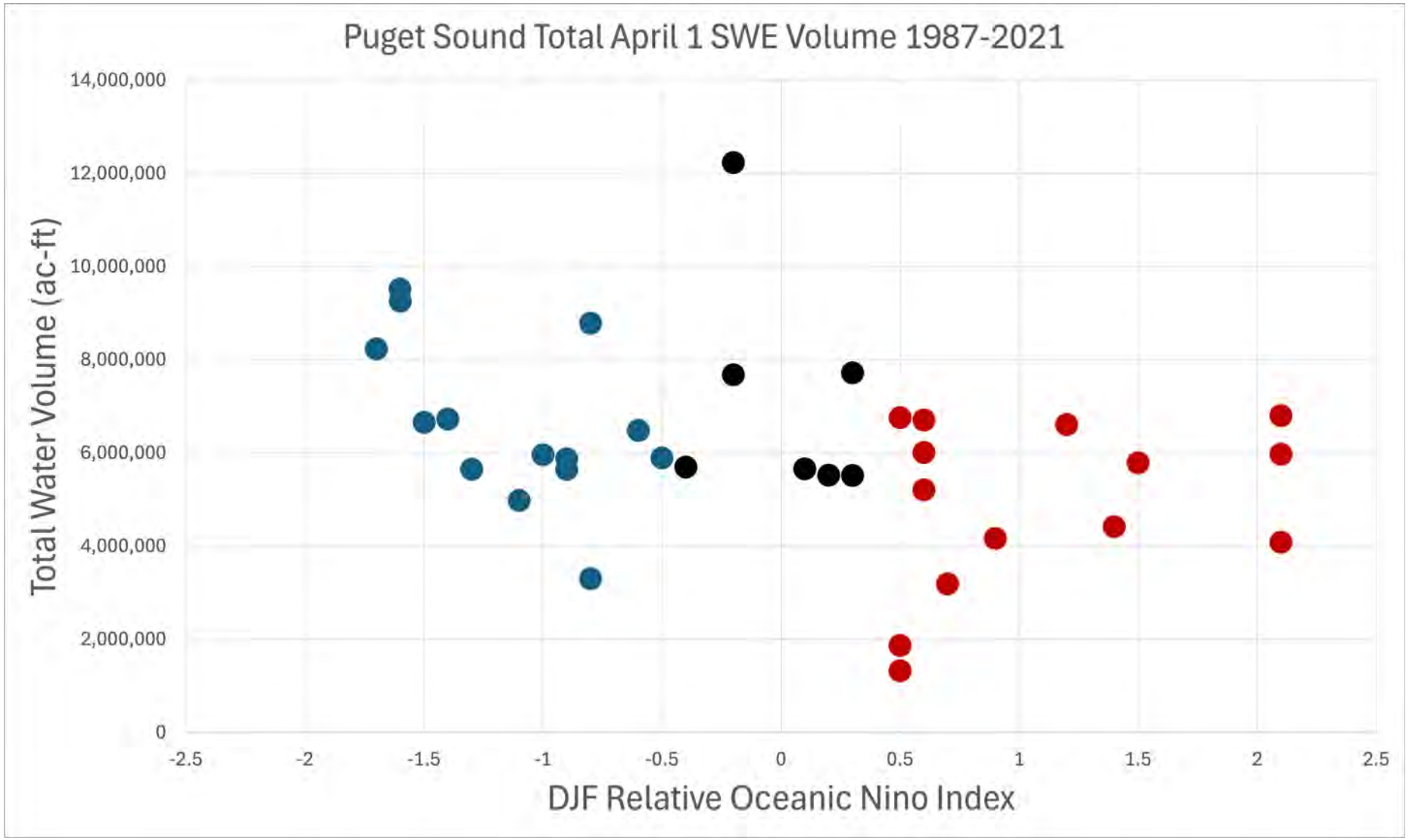
Source: [U.S. Climate Divisional Database]

Precipitation during all El Niño winters since 1950, sorted by strength

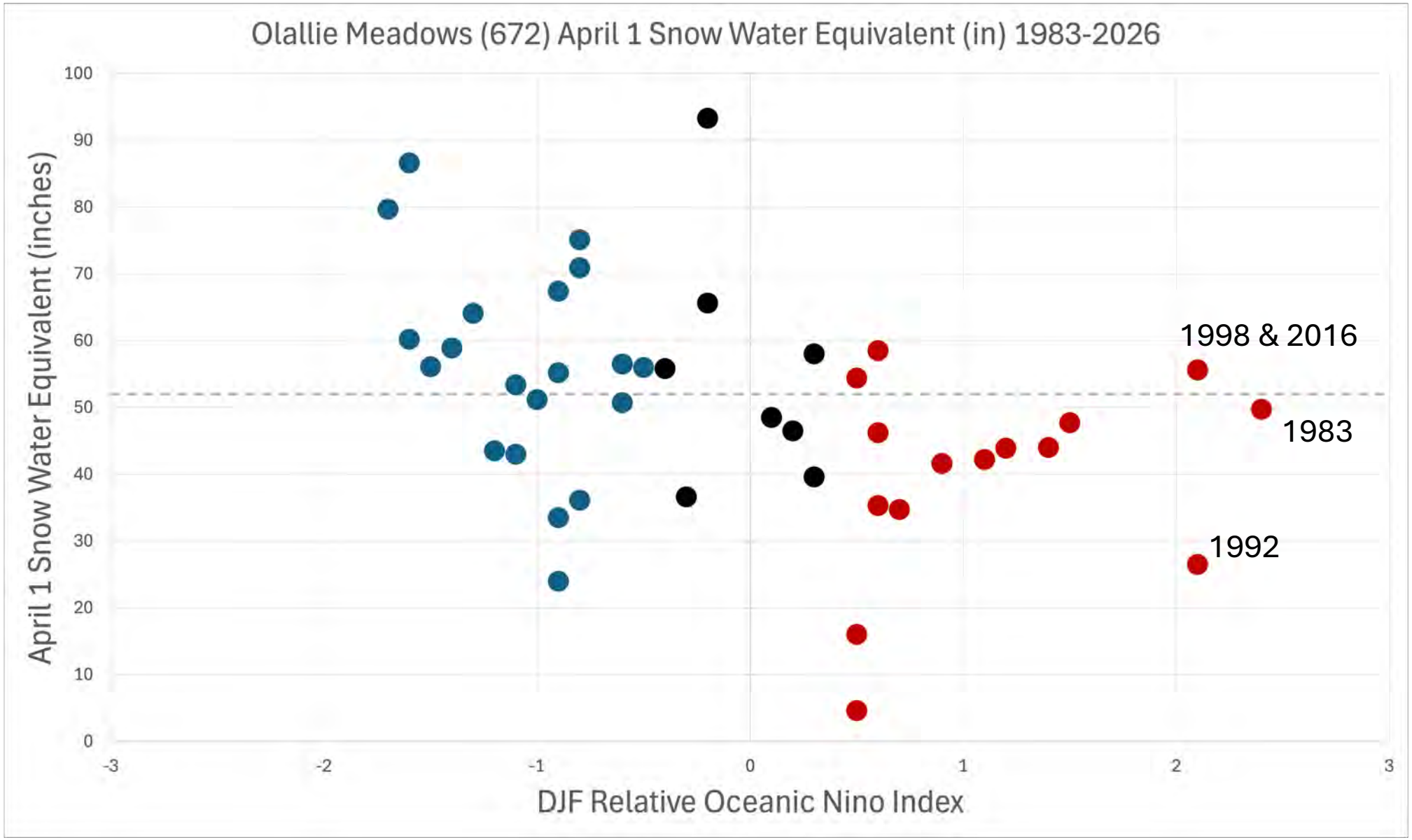
December–February compared to 1991–2020 average



Source: [U.S. Precipitation During Every El Niño Winter Since 1950]



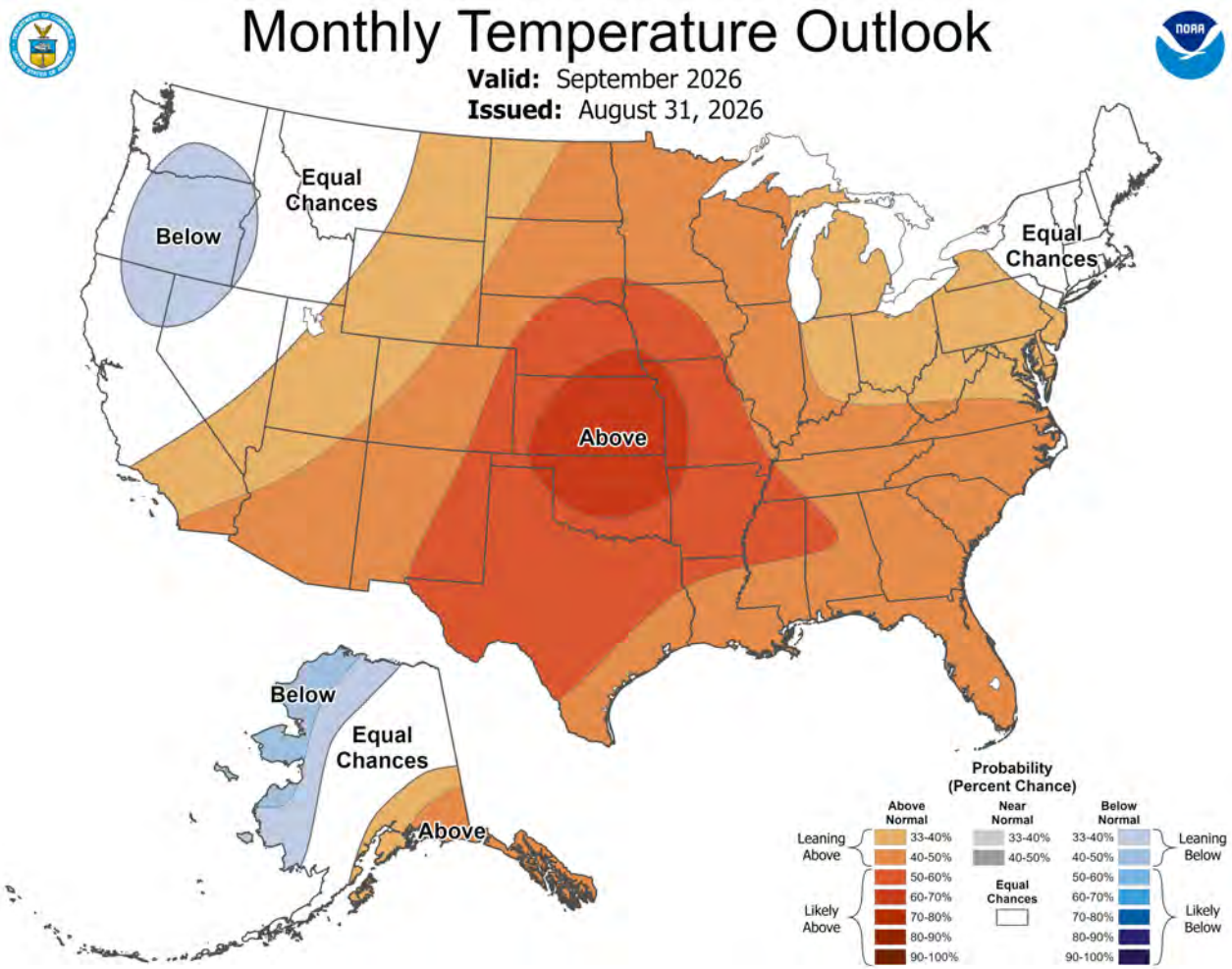
Source: WASCO with data from Western US Snow Reanalysis dataset

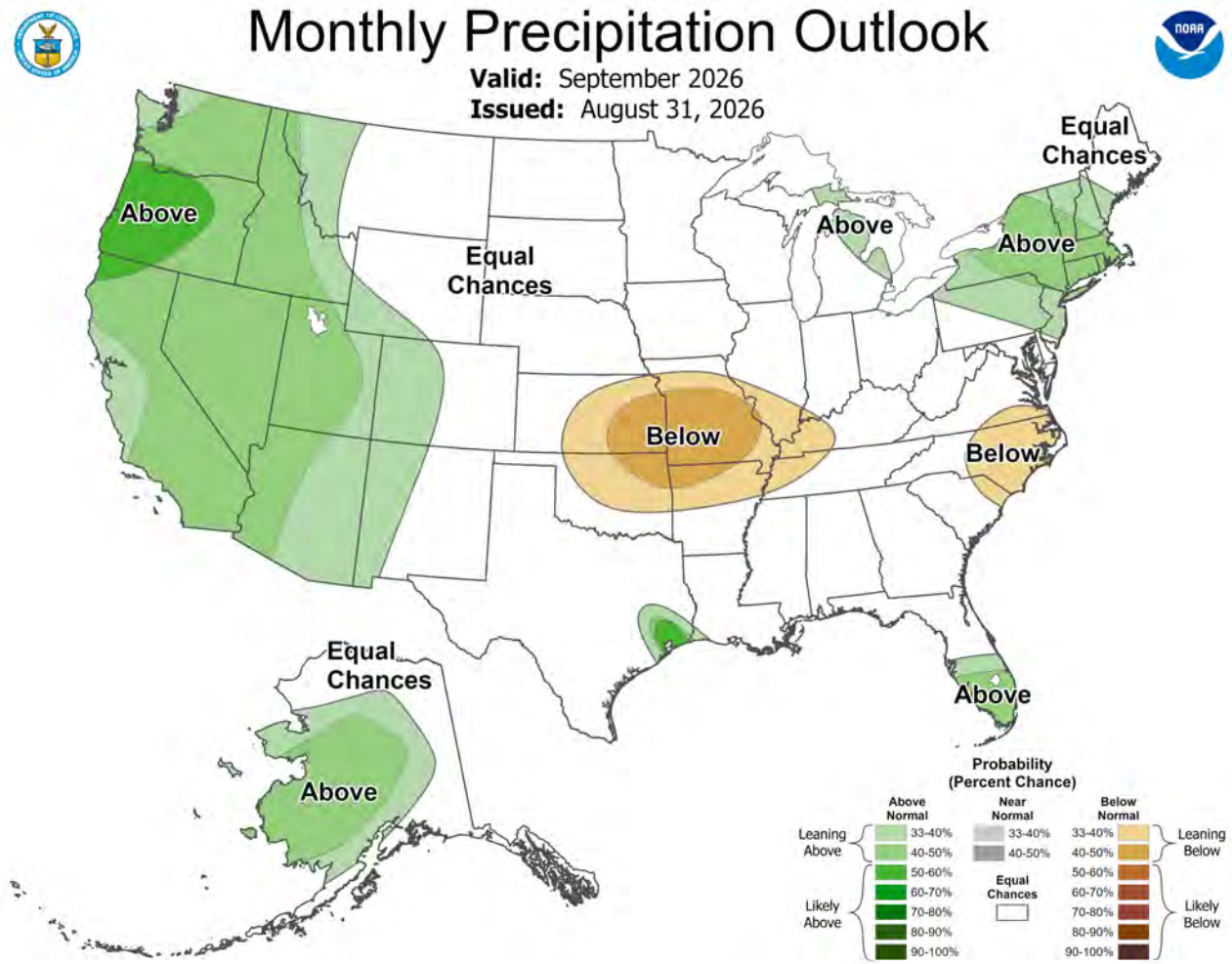


Source: WASCO with data from NRCS and CPC

Seasonal Outlooks

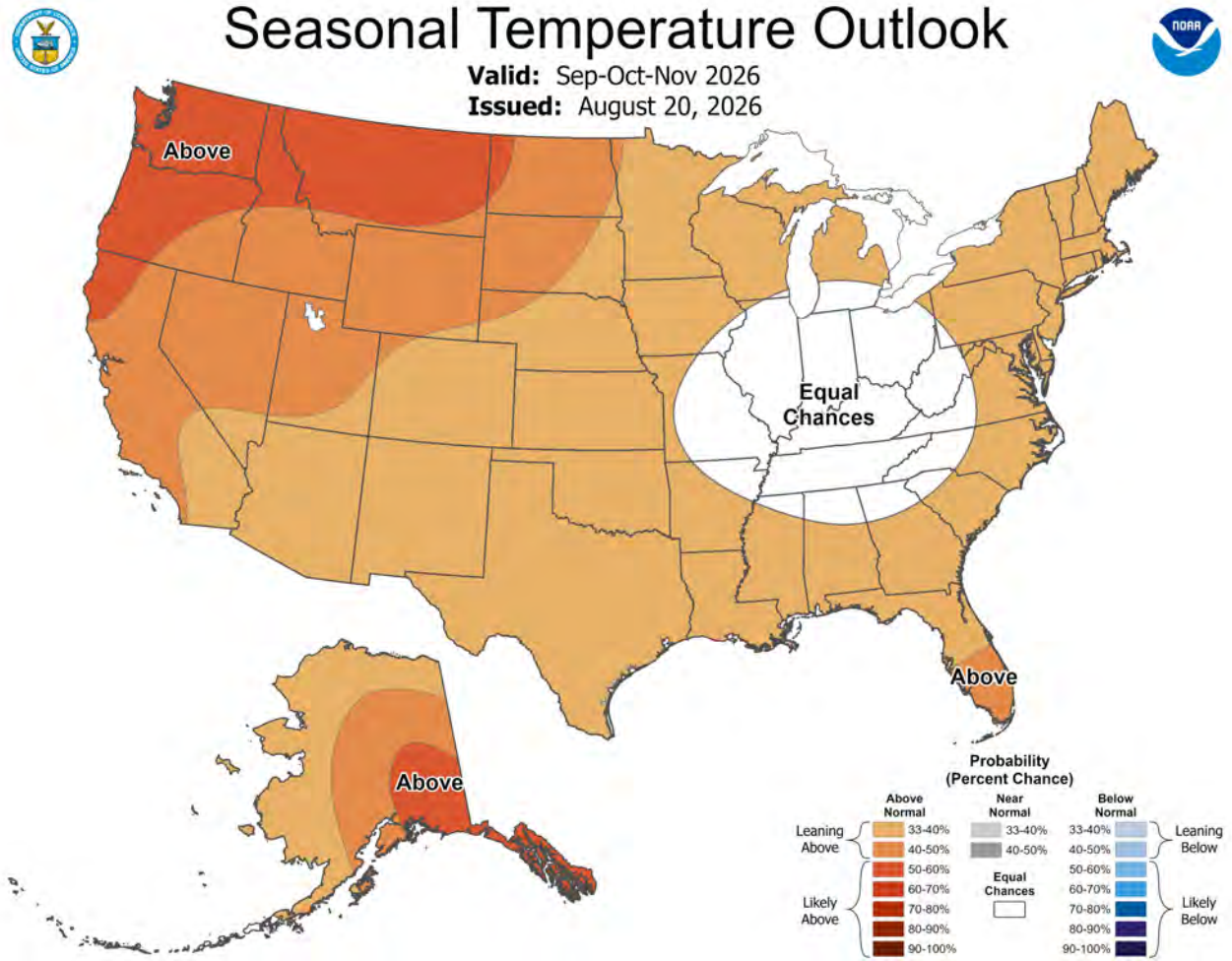
Climate Prediction Center: **Sept** Outlook

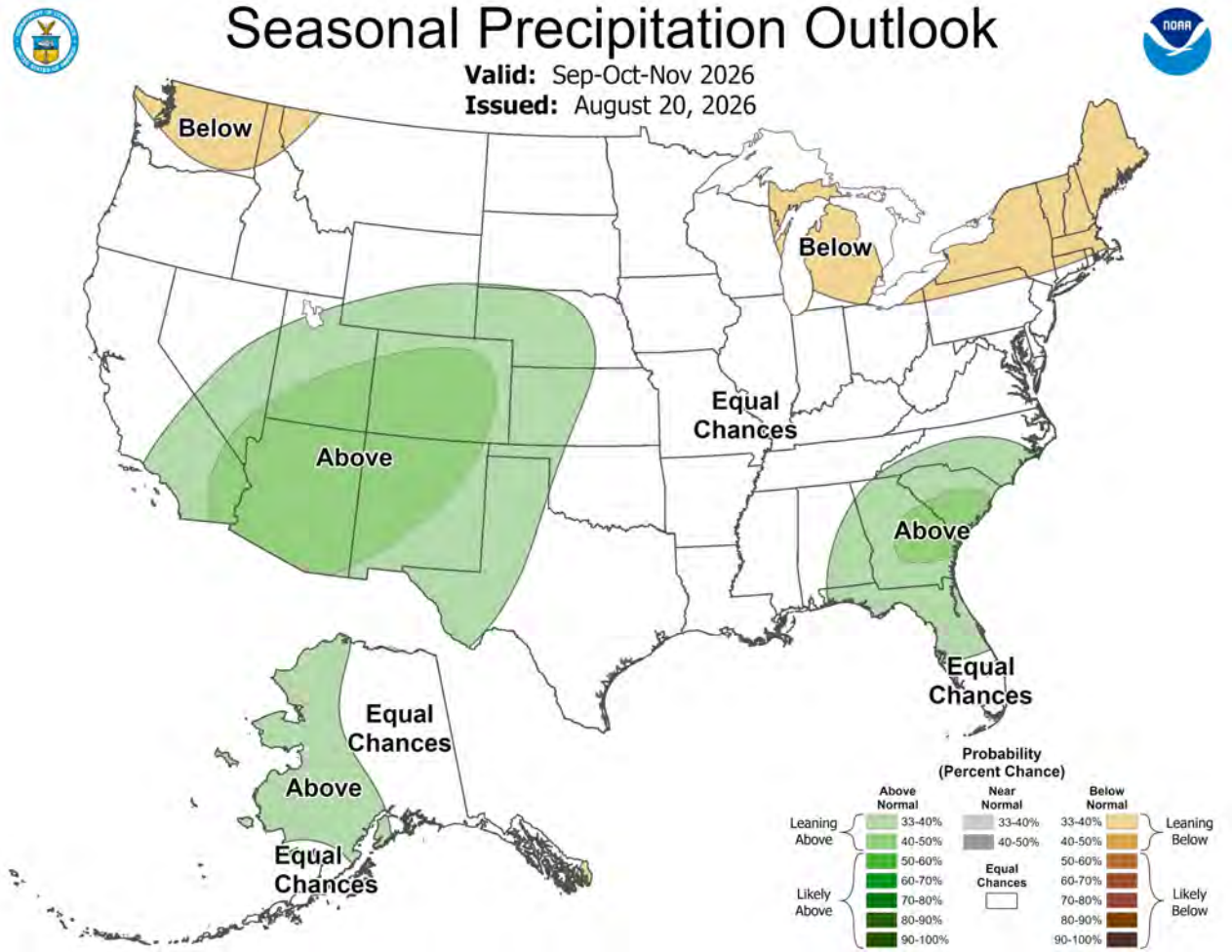




Source: NOAA Climate Prediction Center

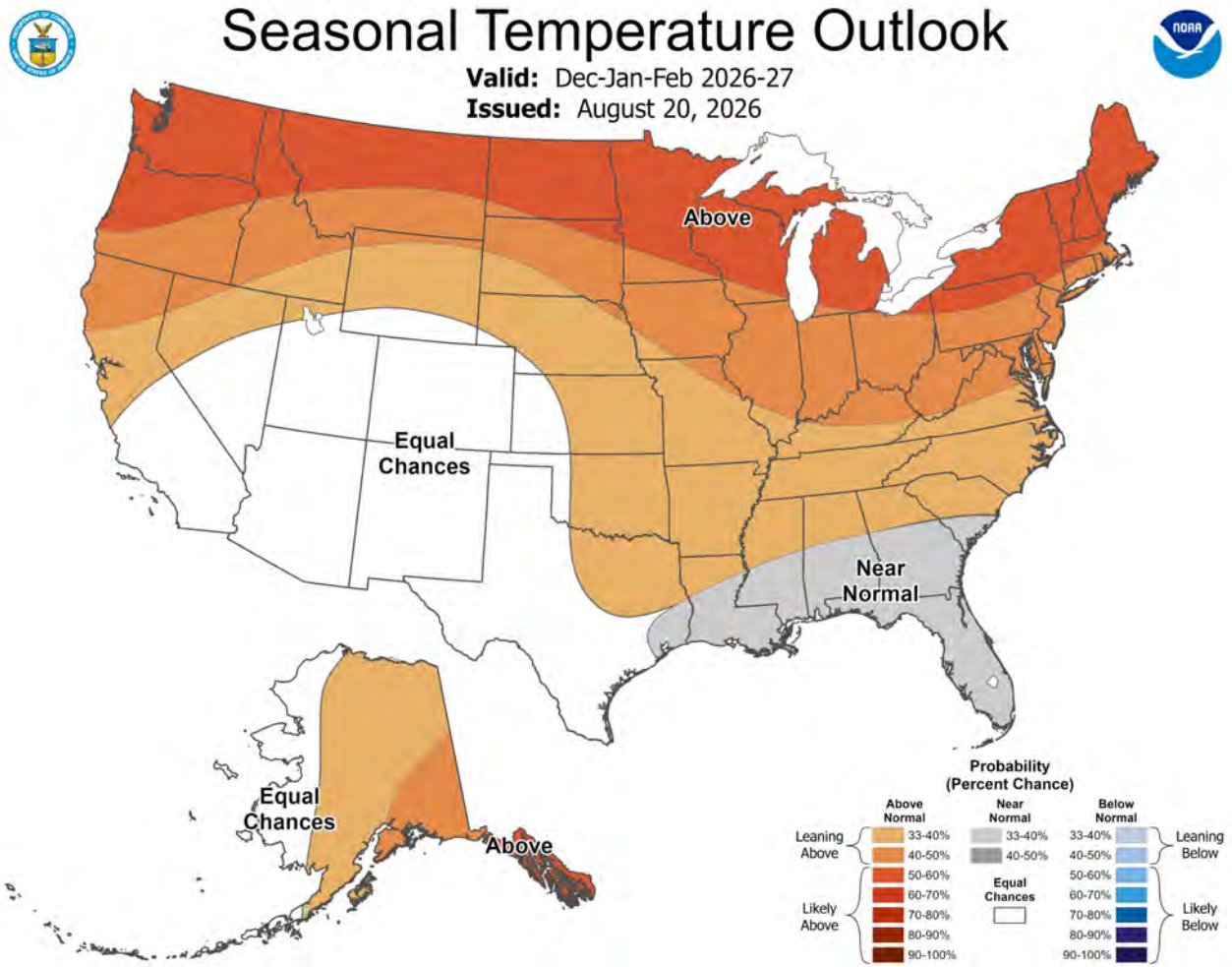
Climate Prediction Center Outlook: **Sep-Nov**

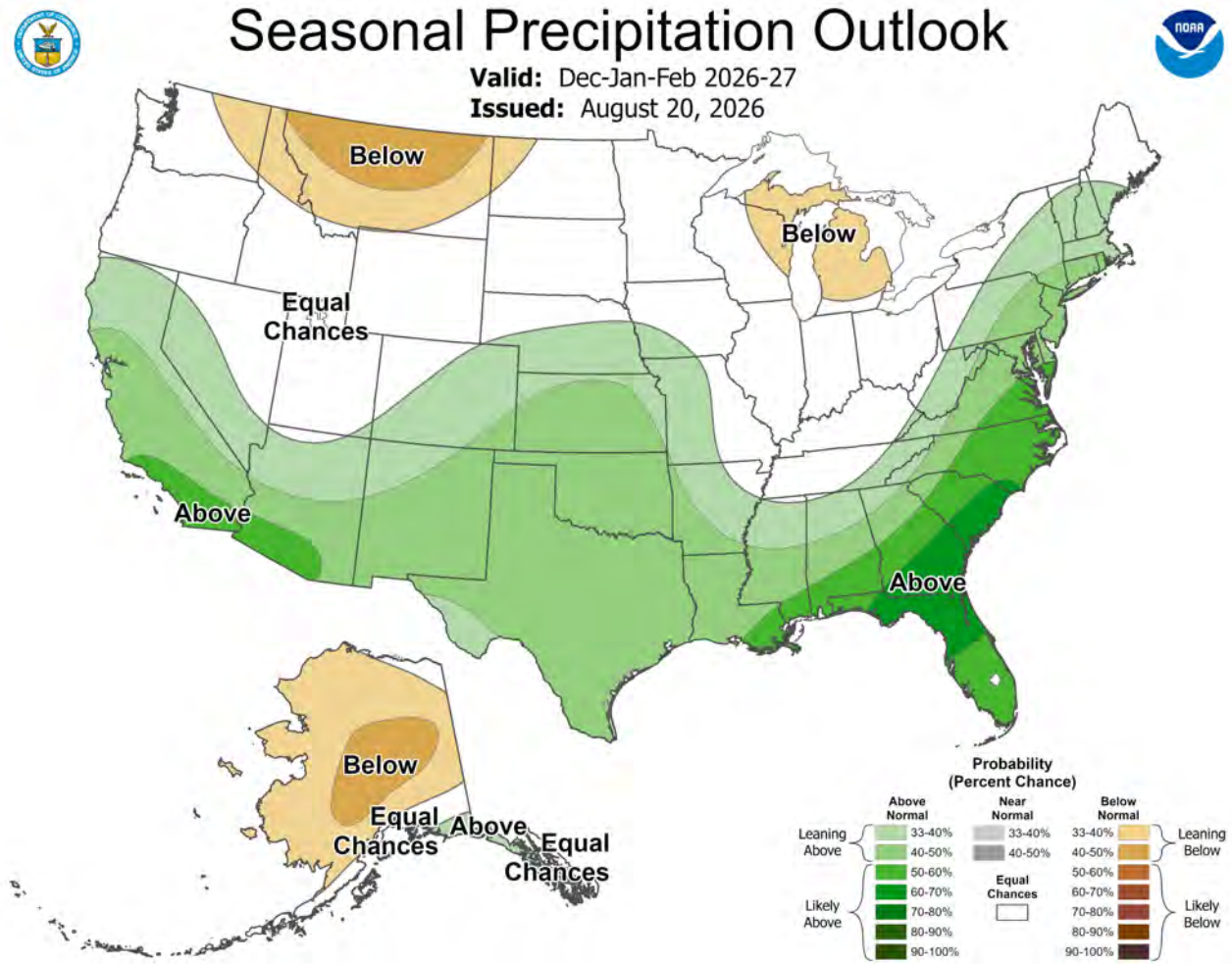




Source: NOAA Climate Prediction Center

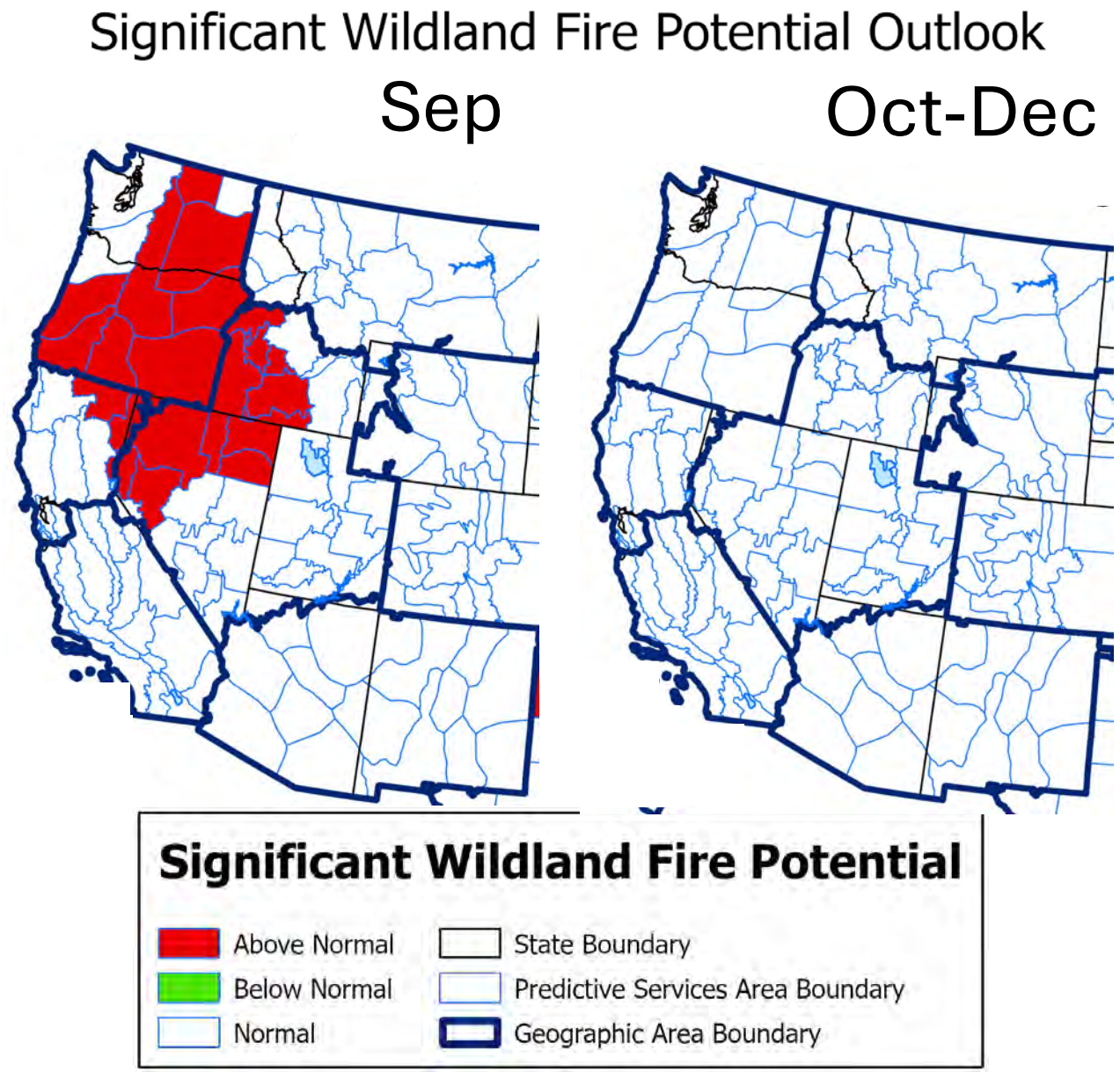
Climate Prediction Center Outlook: **Dec-Feb**





Source: [NOAA Climate Prediction Center]

Elevated wildfire potential for September



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

Source: *NIFC Monthly and Seasonal Significant Wildland Fire Potential Outlook*

Key Take-Aways

- 2026 Water Year has been warmer than normal with near-normal precipitation for WA state and Yakima County
  - Jun-Aug was drier than normal but not exceptionally so
- A very strong El Niño is present in the tropical Pacific and will likely impact our weather this winter
- Washington typically has warmer and drier than normal winters with less snowpack by April 1 during El Niño years
  - Temperature signal is more robust
  - A handful of “very strong” El Niño years had normal snowpack
- Odds are tilted toward a wet September, but a warmer/drier Sept-Nov
  - More confidence in above normal temps for Dec-Feb; precip uncertain

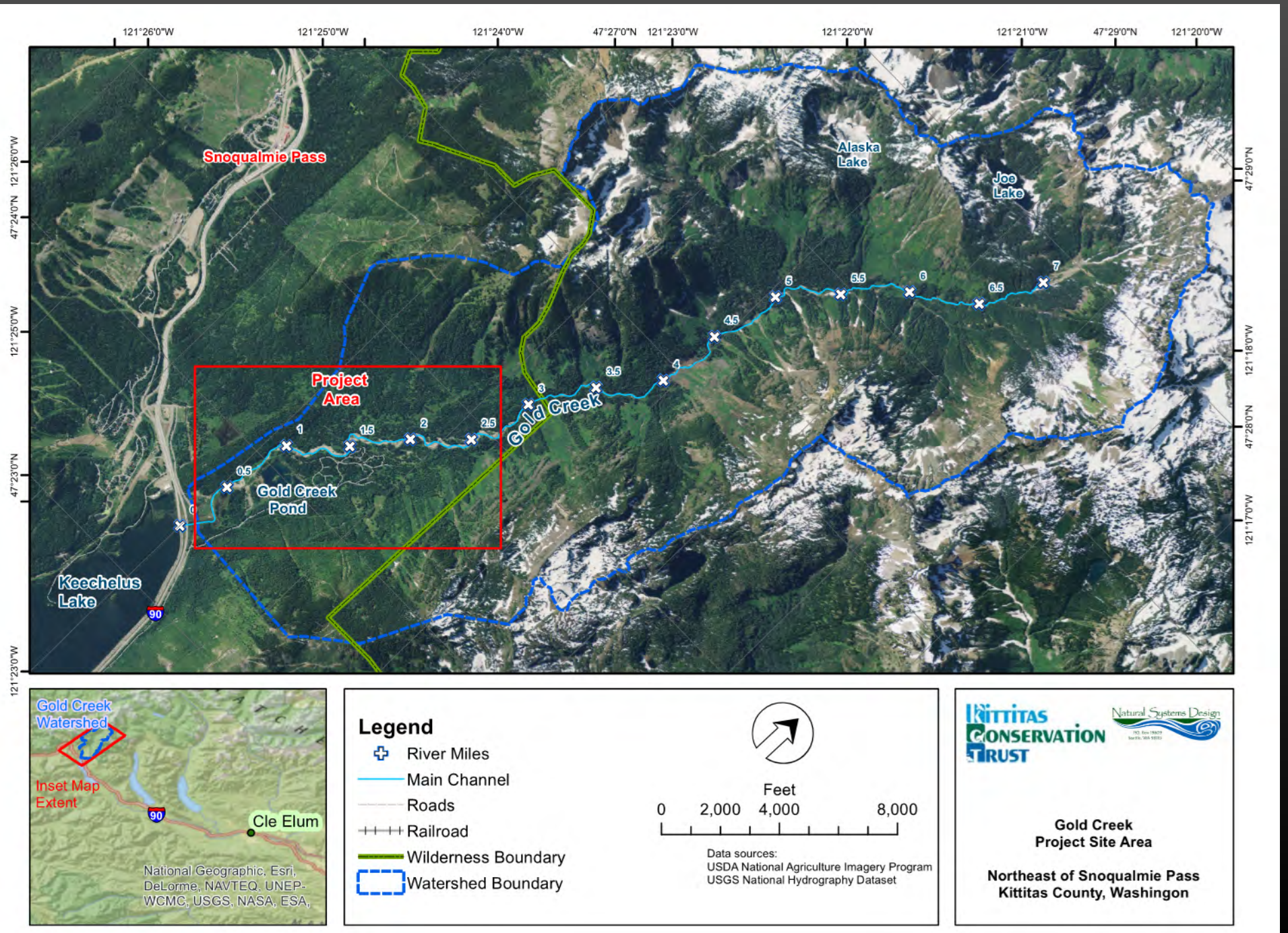
Enhancing the Source
& Restoring the Flow

Gold Creek Valley Restoration



2026 – Phase 1 Update

YBIP September 2026



Gold Creek Valley Restoration Project Site Area & Location

Kittitas Conservation Trust

Ebb, Flow and Excavation

A Timeline of Events and Disturbances at Gold Creek Valley

The creation of the reservoir removed the creek's delta **and miles of critical habitat.** Timber harvest removed wood in the streams and led to the formation of an overly wide creek. To meet need, multiple pits were excavated in Gold Creek Valley lowering the water table until reclaimed. Initially when Gold Creek Pond formed, the area was considered restored. However, years of work and research now show that problems from these impacts persist can be addressed with more active forms of restoration.

Westward Expansion → Early Impacts → Continued Development → Age of Diagnosis and Healing



























Permanent Indian settlements within Kittitas County are documented
c. 8050 B.C.E.

early 1800s
This region was historically a forested wetland mosaic

Lewis & Clark
Pop. Est. of Yakama Klickitat Tribes
9,000
1807

1855
Stevens Treaty Established Yakama Reservation and Ceded Lands. Miners enter Yakama Lands

Mining Begins in Gold Creek Valley
Coal, gold, copper and other metals
1880

1909
Railroad Completed over Snoqualmie Pass

Sunset Highway Construction
From 1914 - 1930's Funded with federal highway dollars
1914

1917
Keechelus Dam Complete
128 foot earthen dam which raised the level of Lake Keechulus level by 60 feet

Gravel Mining Begins in Lower Gold Creek Valley
First recorded pit site located down valley from Gold Creek Pond parking area
1929

1944
The valley before the gravel pit was created.Future imprint of the pit/pond in green.

Clear-cut Logging in Gold Creek Valley Begins
Cleared most of the valley floor of trees, creek bed used for timber hauling
1950

1964
Wetland to Pit Gravel extraction begins at site now known as Gold Creek Pond

Expansion of I-90
More gravel mining
1970

1973
Endangered Species Act

Aerial View Gravel Pit
1977

1979
Reclamation of Gravel Pit Begins
Marks an end to gravel extraction, marks the beginning of Gold Creek Pond

Bull Trout Redd Annual Surveys Begin
2 Recorded Redds
1984

1996
Highest Redd Survey Results in Gold Creek
51 redds documented
Highest count = 51
lowest count = 2

Bull trout listed as federally threatened
1999

2009
I-90 Wildlife Bridges Coalition
I-90 Snoqualmie Pass East construction begins. The project includes wildlife undercrossing bridges and overcrossing land bridges

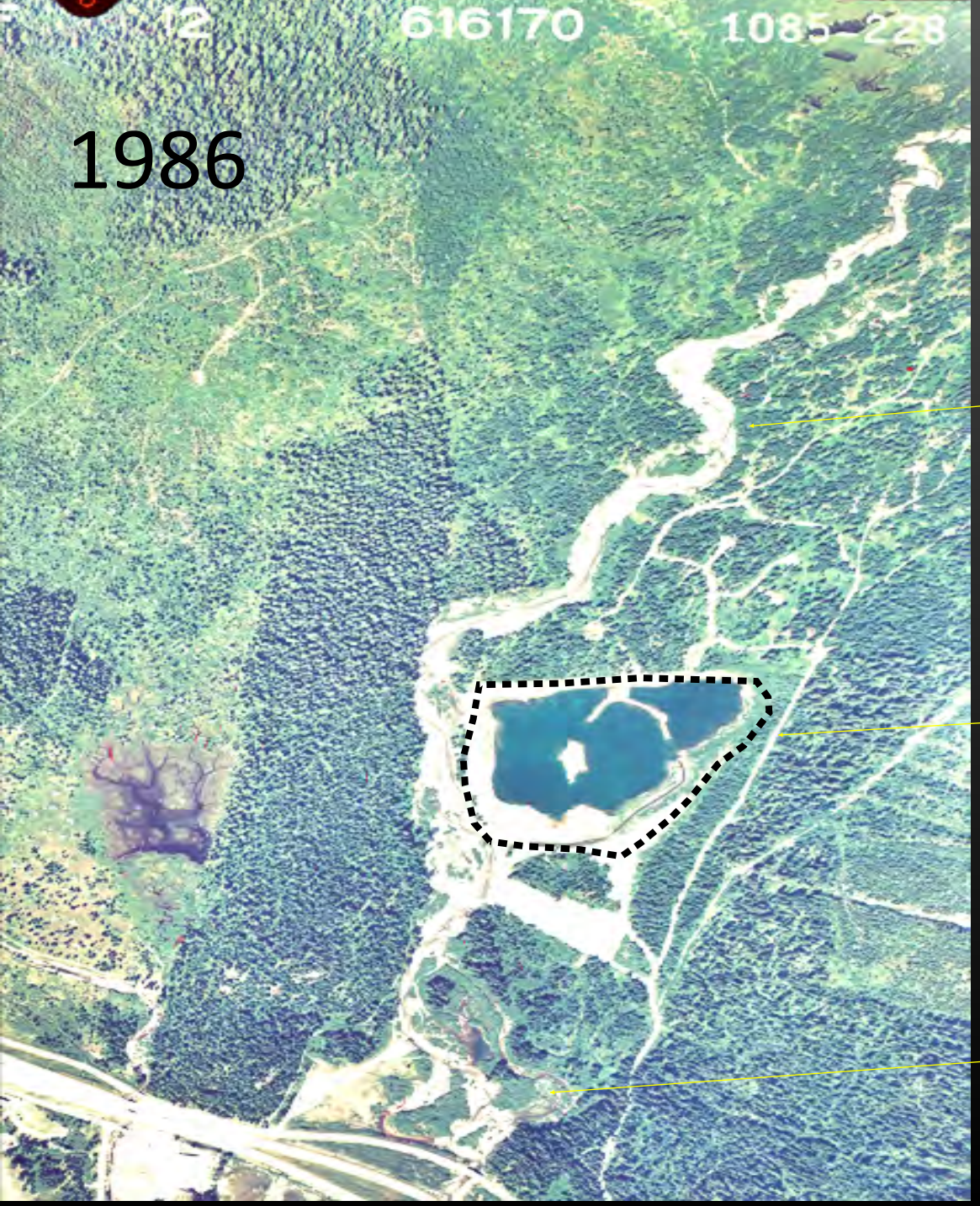
Yakima Bull Trout Action Plan
Completed by local Bull trout biologists in the Yakima Basin
2012

2013
Marks the Beginning of Restoration Planning
Washington Department of Fish and Wildlife and Kittitas Conservation Trust begins studying Gold Creek

Final USFWS Bull Trout Recovery Plan
(Revised in 2017)
2015

Planning & Feedback Started for Future Valley Restoration Work
2020

USDA United States Department of Agriculture



Impacts from Logging, Mining & Development

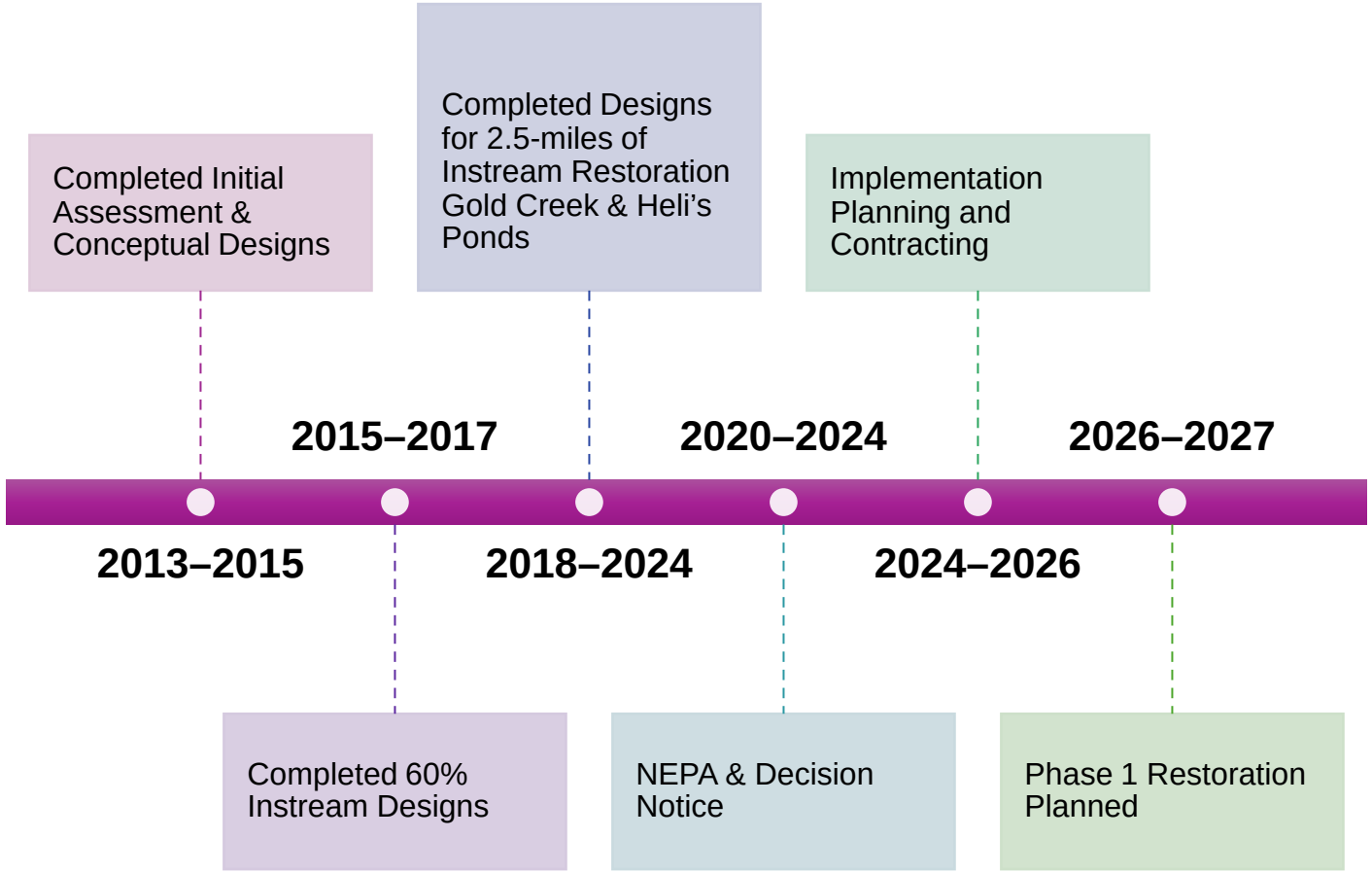
Gold Creek over widened
Today it is 90% wider than in 1944

Large Gravel Borrow Pit
750,000 cubic yards

Initial State Highway gravel mining

Kittitas Conservation Trust

Timeline since 2013



KITTITAS CONSERVATION TRUST

Investments in Planning & Permitting

Funding Source	Total Amount
WA State Recreation and Conservation Office Salmon Recovery Funding Board	**$365,141**
Dept of Ecology/RCO Yakima Basin Integrated Plan – Bull Trout Enhancement Funding	**$1,734,014**
US Fish and Wildlife Recovery Funding	**$63,000**
Kittitas Conservation Trust	**$71,512**
Total	**$2,233,667**

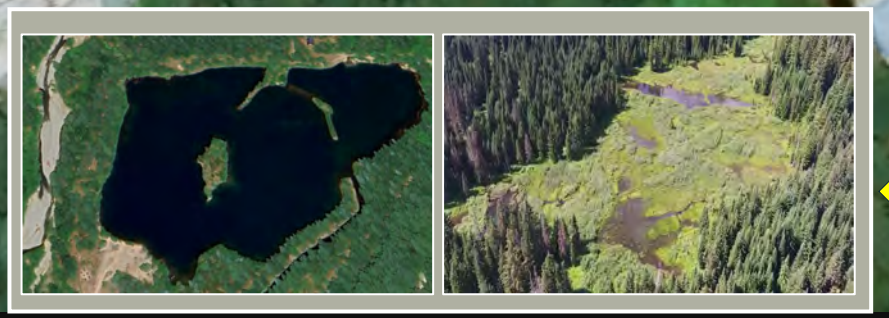
Gold Creek Valley Restoration Project

Side Channels
-Slow water refuge
-Reconnect floodplain
-Recharge aquifer
-Deflect high velocities

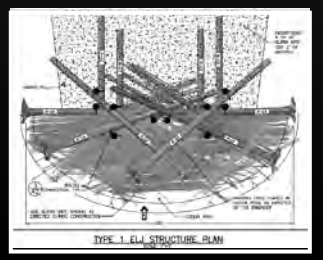
Current Condition
-Over-widened
-Eroding banks
-Lack of instream habitat
-Lack of roughness
-Lack of vegetation
-2 miles of dewatering

Floodplain Fill
-Narrow channel
-Vegetative islands
-Bank protection
-Floodplain roughness

Restoration
-141 Log Jams
-1.4 miles side channels
-120,000 native plants
-900,000 cy fill
-$14.7 M invested to date

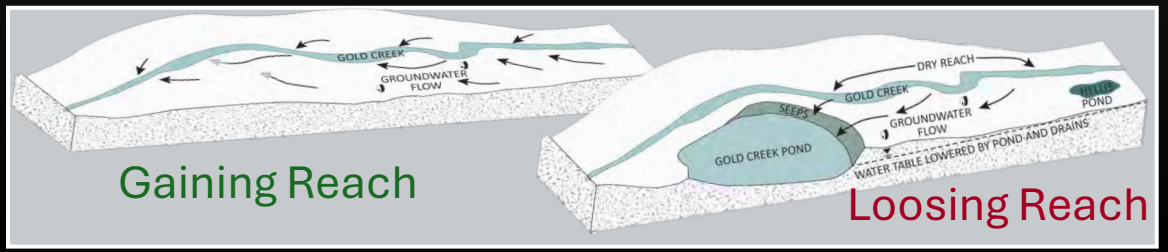


Pond Fill
-Reduces siphoning effect
-Cool water storage
-Diversity of habitat



Engineered Log Jam
-Reduces velocities
-Narrows channel
-Protects eroding banks
- Creates instream habitat





Setting the Stage…



KITTITAS CONSERVATION TRUST

De-fishing the Pond





Heli's Pond Fill Before/After







Helicopter ELJ Construction







KITTITAS CONSERVATION TRUST

ELJ Construction











KITTITAS CONSERVATION TRUST



Gold Creek Valley Restoration

by the numbers

Item	Quantity
River Miles Restored	2.5 miles
Engineered Log Jams Constructed	141
Side Channels Constructed	1.4 miles
Riparian & Forested Wetlands Restored	47 acres
Floodplain Reconnected	245 acres
Plants Planted	15,410
Fill Placed	294,470 cu/yds

Phase 1 Secured Funding

Funding Source	Amount
US Bureau of Reclamation R24AP00213	$2,263,473.00
US Fish & Wildlife F24AC01331	$5,000,000.00
US Fish & Wildlife F24AC02540	$403,916.70
US Forest Service 25-PA-11061700-308	$100,000.00
WA State RCO 23-1220	$560,000.00
WA State RCO 24-1715	$789,840.00
ECY Streamflow 00239	$5,000,000.00
ECY YBIP 00064	$760,100.00
Total	**$14,887,239.70**
Federal Funding Total	**$7,767,389.70**
State Funding Total	**$7,119,940.00**



Next Steps That Require Partner Support

Secure Funding for Pond filling

- Federal/State Grants
- Private Funding
- Other Support

Permitting

- 401 Water Quality – Pond Fill
- BA/BO for Future Phases

KITTITAS CONSERVATION TRUST


YAKIMA BASIN FISH & WILDLIFE RECOVERY BOARD
WASHINGTON WATER TRUST
Conservation Northwest
BUREAU OF RECLAMATION
DEPARTMENT OF ECOLOGY
State of Washington
KITTITAS RECLAMATION DISTRICT
KRD
TROUT UNLIMITED
CONFEDERATED TRIBES AND BANDS
YAKAMA NATION
TREATY OF 1855
COLUMBIA
U.S. FISH & WILDLIFE SERVICE
FOREST SERVICE
US
DEPARTMENT OF AGRICULTURE
WASHINGTON STATE
Recreation and Conservation Office
Mid-Columbia FISHERIES ENHANCEMENT GROUP
Washington Department of FISH AND WILDLIFE
FROM THE CASCADES..TO THE COLUMBIA
KITTITAS COUNTY
This River Runs Forever
Yakima Basin Integrated Plan
FORT&RRA
FOR THE PEOPLE. FOR THE LAND. FOREVER.
MOUNTAINS to Sound
GREENWAY
NATIONAL HERITAGE AREA



Lower Toppenish Creek Habitat Restoration



Yakama Reservation Watersheds Project

Audrey Scott, Lower Toppenish Creek Habitat Restoration

YRBWEP Workgroup Meeting

September 9, 2026

Planning to Implementation: The Next Decade of Habitat Restoration

- Yakama Reservation Watersheds Project (YRWP)
  - Focuses on On-Reservation Project Implementation
  - Toppenish Creek, Satus Creek, and Ahtanum Creeks
  - Yakima River RM 60-107- “Wapato Reach”
- Toppenish Creek Corridor Enhancement Plan (2019)
  - Authorized under YRBWEP Phase II (1994)
  - Guides the overall implementation of projects in the Toppenish Watershed
  - Planning-level document



From Planning to the Reach Scale

Action	Number	Planned Strategy
	1	Recharge the Toppenish Creek alluvial fan
	2	Restore drained wetlands
	3	Restore the diked reach between Olney Dam and the 3-Way Diversion
	4	Rebuild the Unit 2 diversion dam and restore adjacent area
	5	Reroute canal spills from Simcoe Creek
	6	Reroute irrigation drainage away from Toppenish and Simcoe creeks
	7	Minimize waste, leakage, and return flow on Unit 2
	8	Divert lower Marion Drain directly to the Satus Area
	9	Raise the water surface of upper Marion Drain to benefit Toppenish Creek flow
	10	Restore channelized and entrenched sections of Toppenish and Simcoe creeks

TCCEP Identified Actions

- TCCEP identified 10 Action Items for implementation
  - Within those items, there are numerous potential projects
- How do we identify and sequence high-value projects within an expansive landscape?

Reach Assessments

- Reach Assessment
  - An evaluation of in-stream habitat conditions utilizing a combination of field data collection and desktop analysis.
  - Goals:
    - Identify key ecological concerns regarding habitat, geomorphology, and hydrology.
    - Develop a restoration strategy to address resource concerns in an efficient manner that considers the specific environmental conditions.

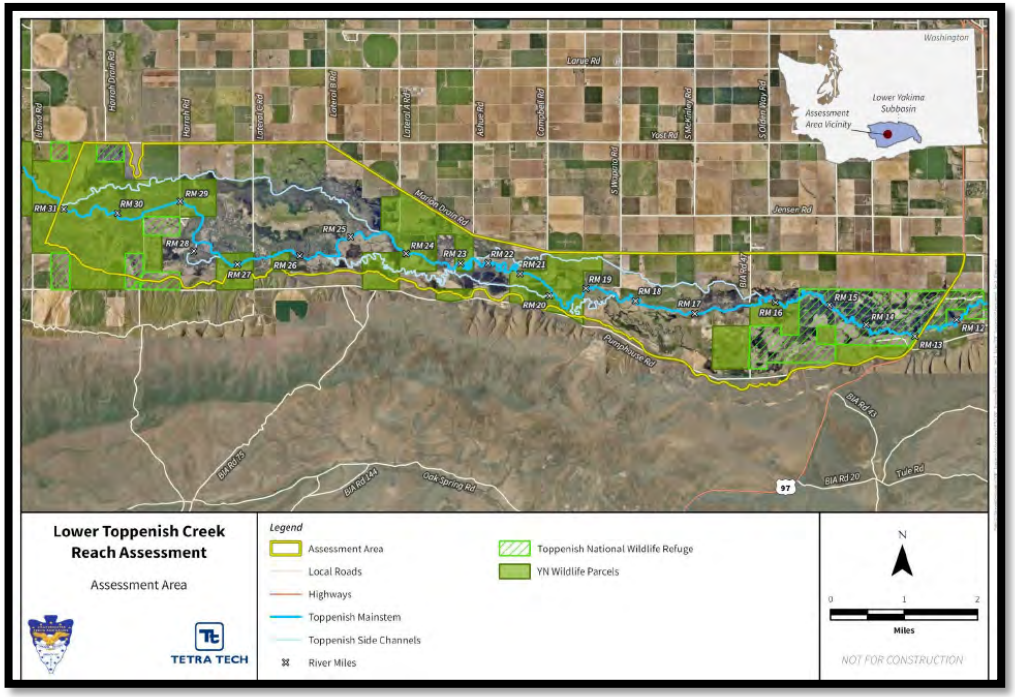
Reach Assessments 101:

1. Define the reach and assessment objectives.
2. Review existing M&E data and background information.
3. Conduct field surveys and collect habitat measurements.
4. Assess current habitat conditions.
5. Identify habitat limiting factors.
6. Evaluate restoration opportunities.
7. Prioritize restoration actions.
8. Develop recommendations and restoration plans.
9. Monitor results and adaptive management as needed.

Lower Toppenish Creek Reach Assessment (LTCRA)- Scope

Geographic Extent

- Toppenish Creek RM 13-30
- 19 miles of side channels
- Ponds and floodplain features



Assessment Included:

- Forest Service Level II Habitat Survey
- Geomorphic Assessment
- 2D HEC-RAS Hydraulic Model
- Stranding Analysis
- Reach-Based Ecosystem Indicator (REI) Development
- Project Identification & Prioritization


Washington
Lower Yakima Subbasin
Assessment Area Vicinity
Larue Rd
Harrah Drain Rd
Harrah Rd
Lateral C Rd
Lateral B Rd
Lateral A Rd
Ashue Rd
Campbell Rd
Yost Rd
S McKinley Rd
S Olden Way Rd
S Wapato Rd
Jensen Rd
Marion Drain Rd
RM 31
RM 30
RM 29
RM 28
RM 27
RM 26
RM 25
RM 24
RM 23
RM 22
RM 21
RM 20
RM 19
RM 18
RM 17
RM 16
RM 15
RM 14
RM 13
RM 12
BIA Rd 47
Pumphouse Rd
BIA Rd 43
BIA Rd 15
BIA Rd 144
Oak Spring Rd
BIA Rd 20
Tule Rd
97
Lower Toppenish Creek Reach Assessment
Assessment Area
TETRA TECH
Legend
Assessment Area
Local Roads
Highways
Toppenish Mainstem
Toppenish Side Channels
River Miles
Toppenish National Wildlife Refuge
YN Wildlife Parcels
N
0
1
2
Miles
NOT FOR CONSTRUCTION

Values at Risk

ESA Designated Middle Columbia Steelhead (***Oncorhynchus mykiss***)

Pacific Lamprey (***Entosphenus tridentatus***) and resident fish

Terrestrial Wildlife

Migratory Waterfowl

Native Plant Species

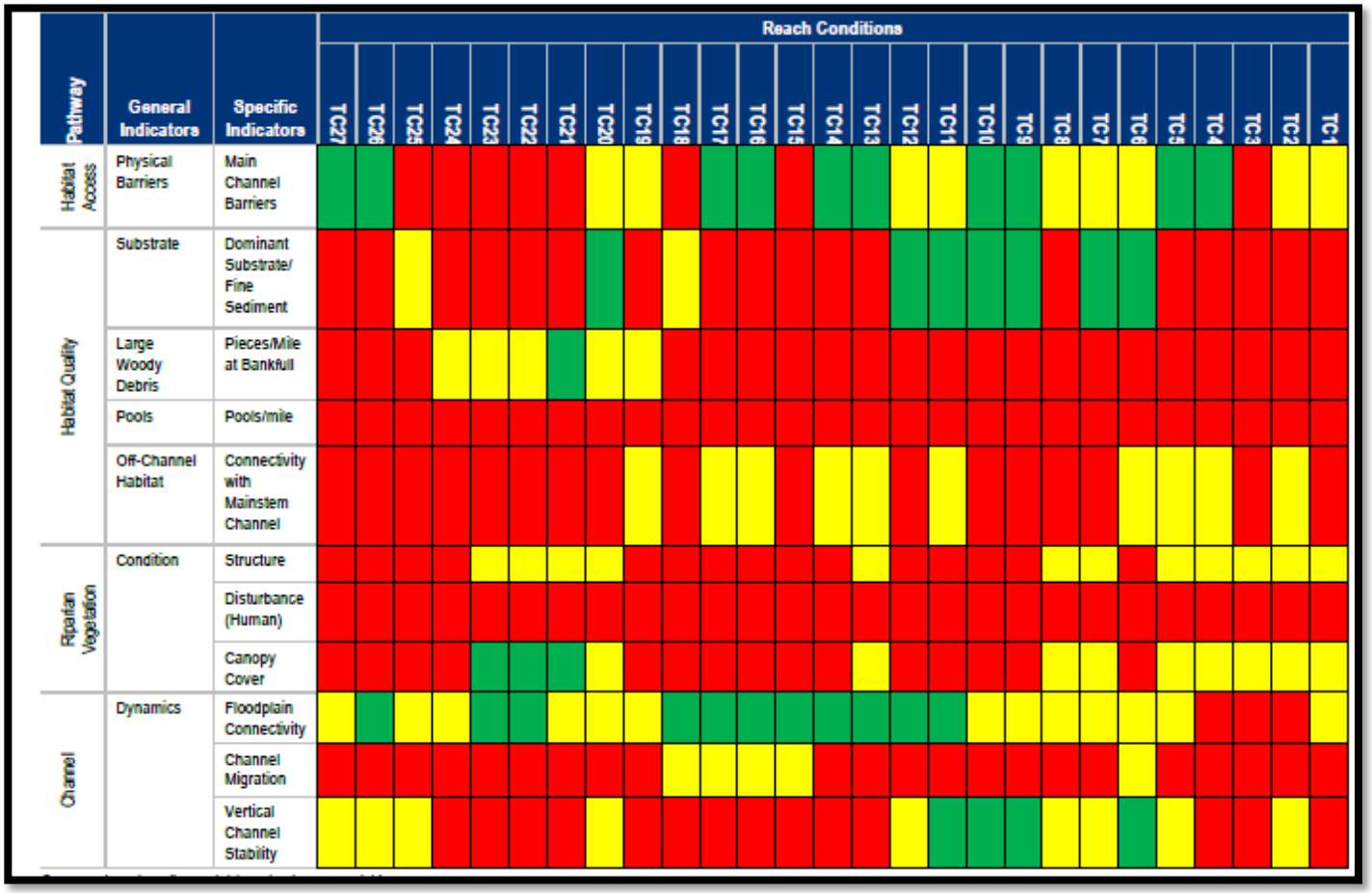


Resource Concerns

- Lack of O.mykiss Habitat
- Juvenile Fish Stranding
- Anthropogenic Floodplain Manipulation
- High Summer Temperatures
- Riparian Invasive Species Dominance
- Poor Water Quality



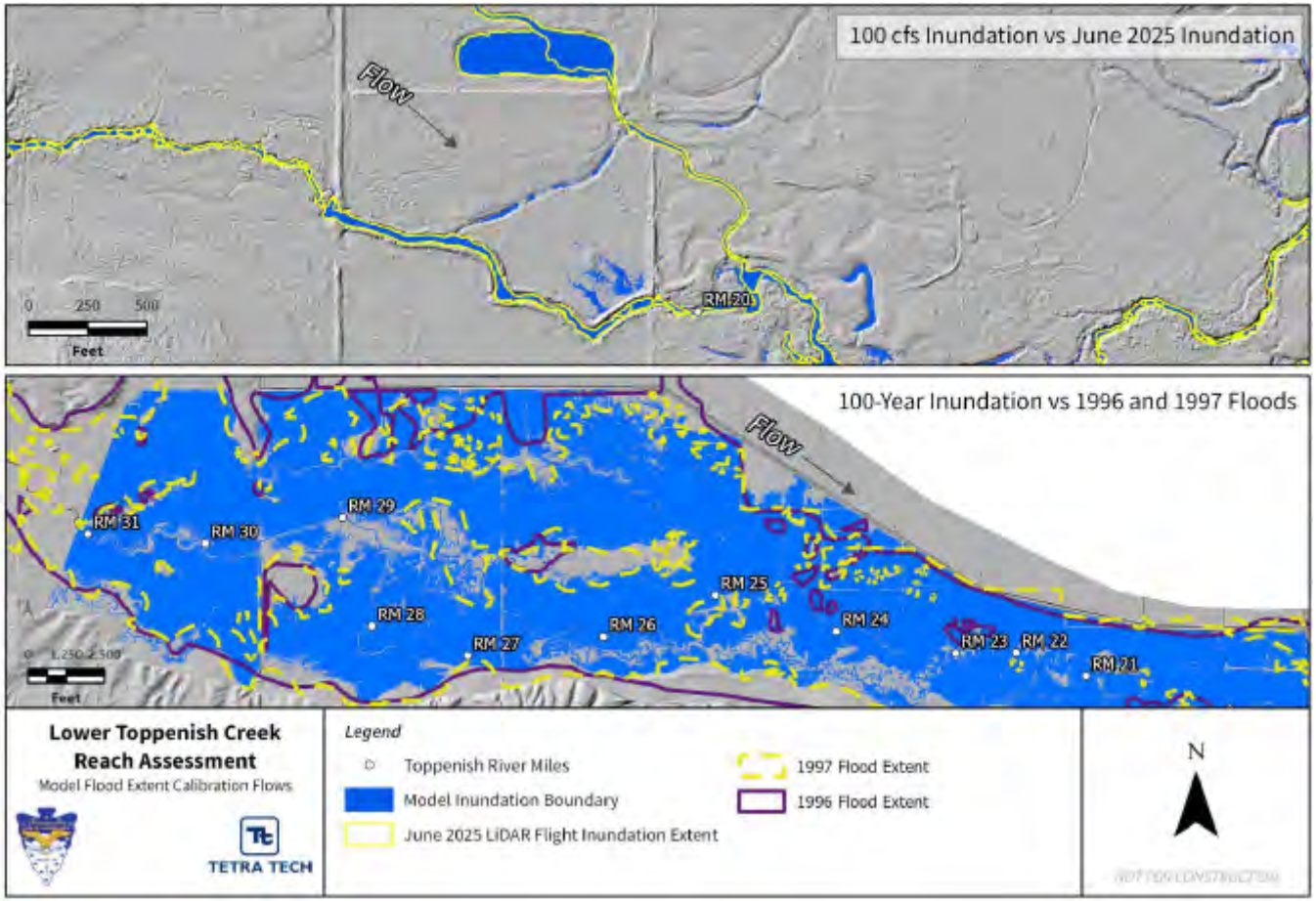
Reach Based Ecosystem Indicators (REI)



Red= Unacceptable

Yellow= At Risk

Green= Adequate



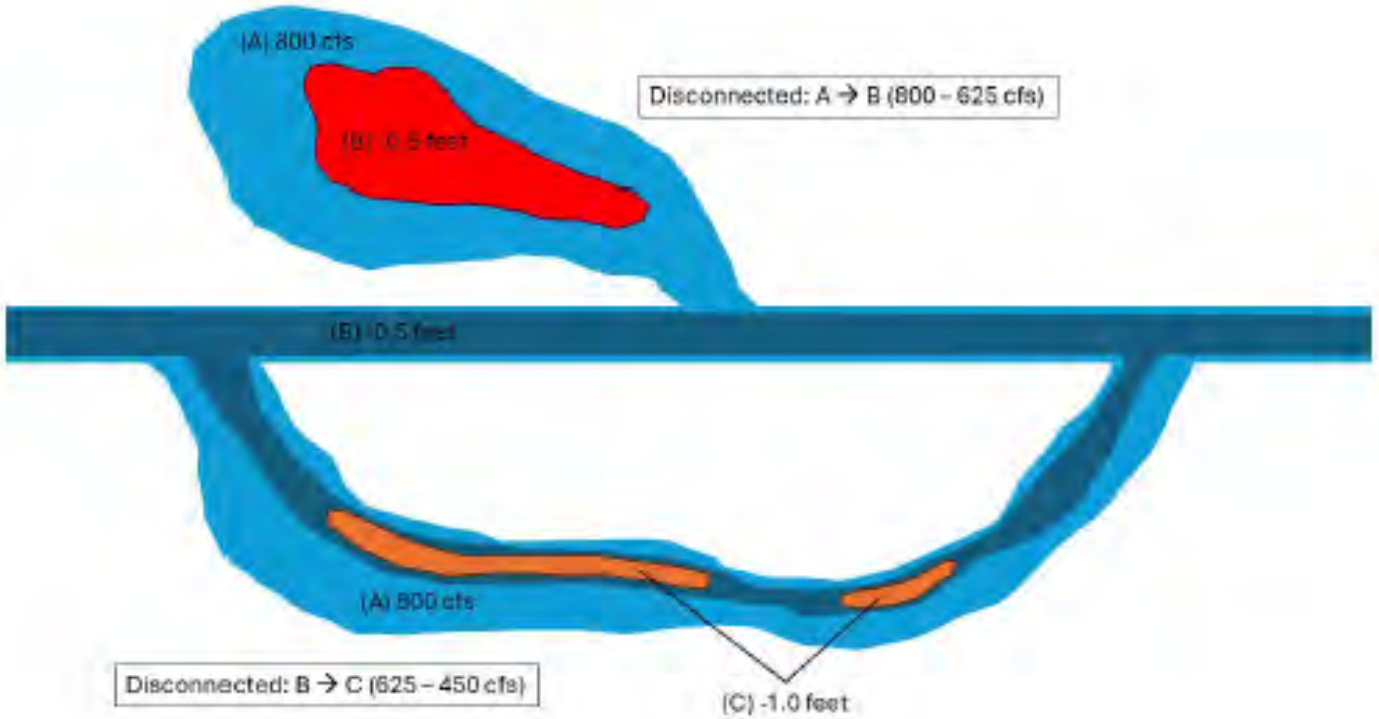
2D Hydraulic Modeling

- Topobathymetric (Blue/Green) LiDar Collection and RTK Measurements
- USACE River Analysis System (HEC-RAS) software
- Inundation and Habitat Suitability Modeling

Flow Statistic	Lower Toppenish Creek Flow (cubic feet per second)
Average June Inflow Upstream of Assessment Area	100
Average April Inflow Upstream of Assessment Area	200
1.05-year (bankfull)	350
1.5-year	800
2-year[1]	1,078
100-year[1]	7,913

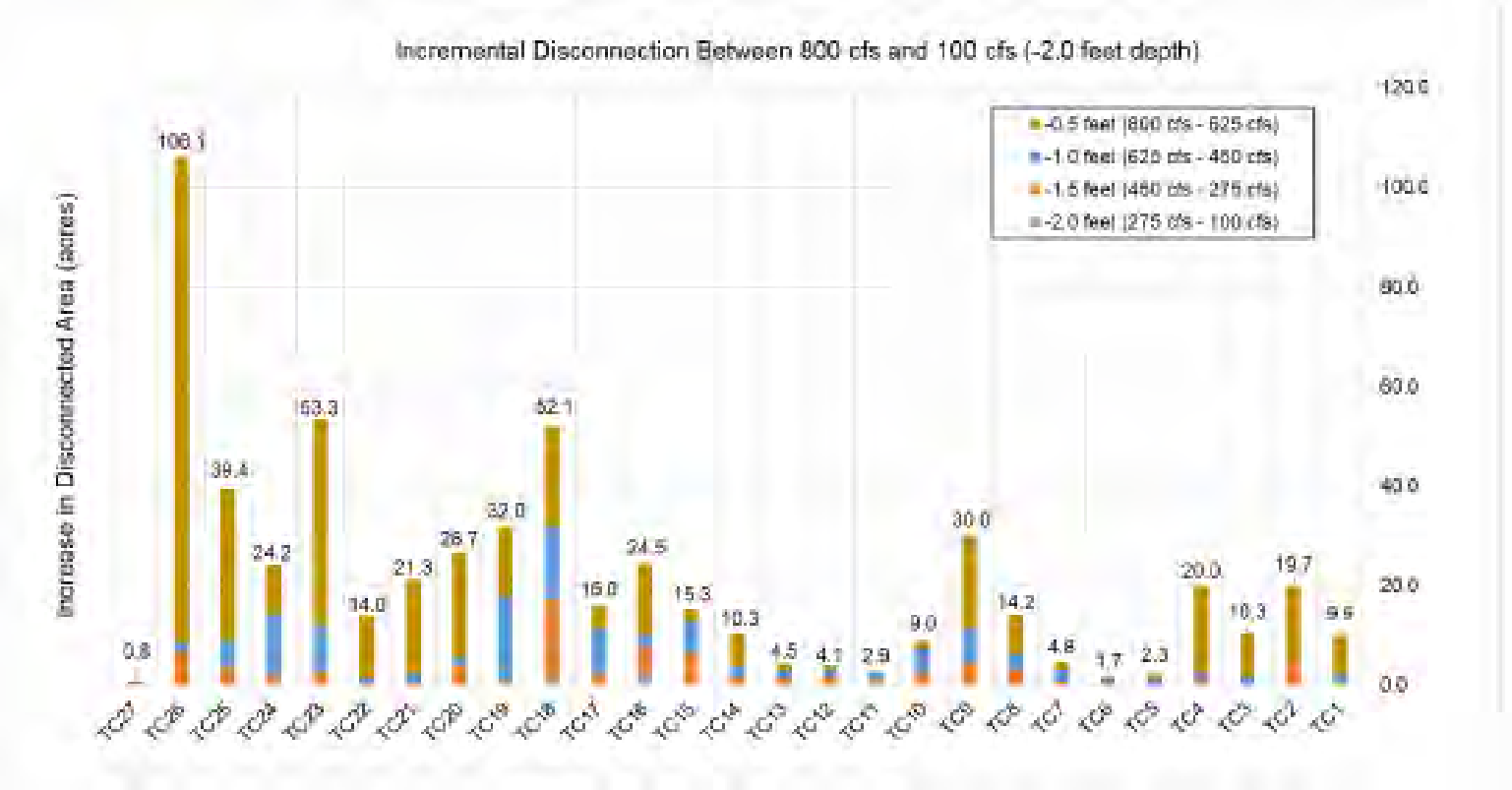
1/ Sum of the HEC-SSP Bulletin 17B curve return interval flows for Toppenish and Simcoe Creeks.

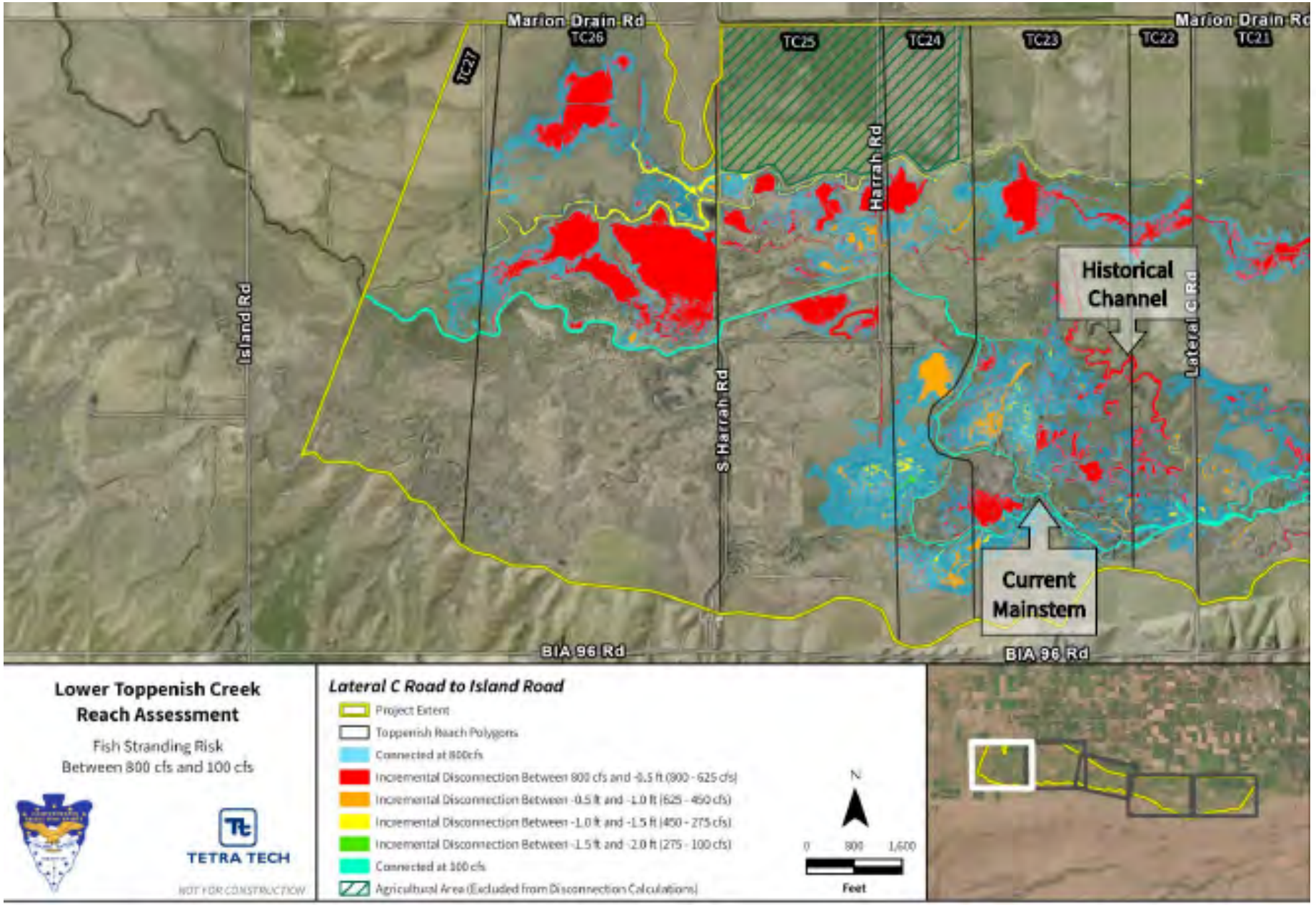
Stranding Analysis



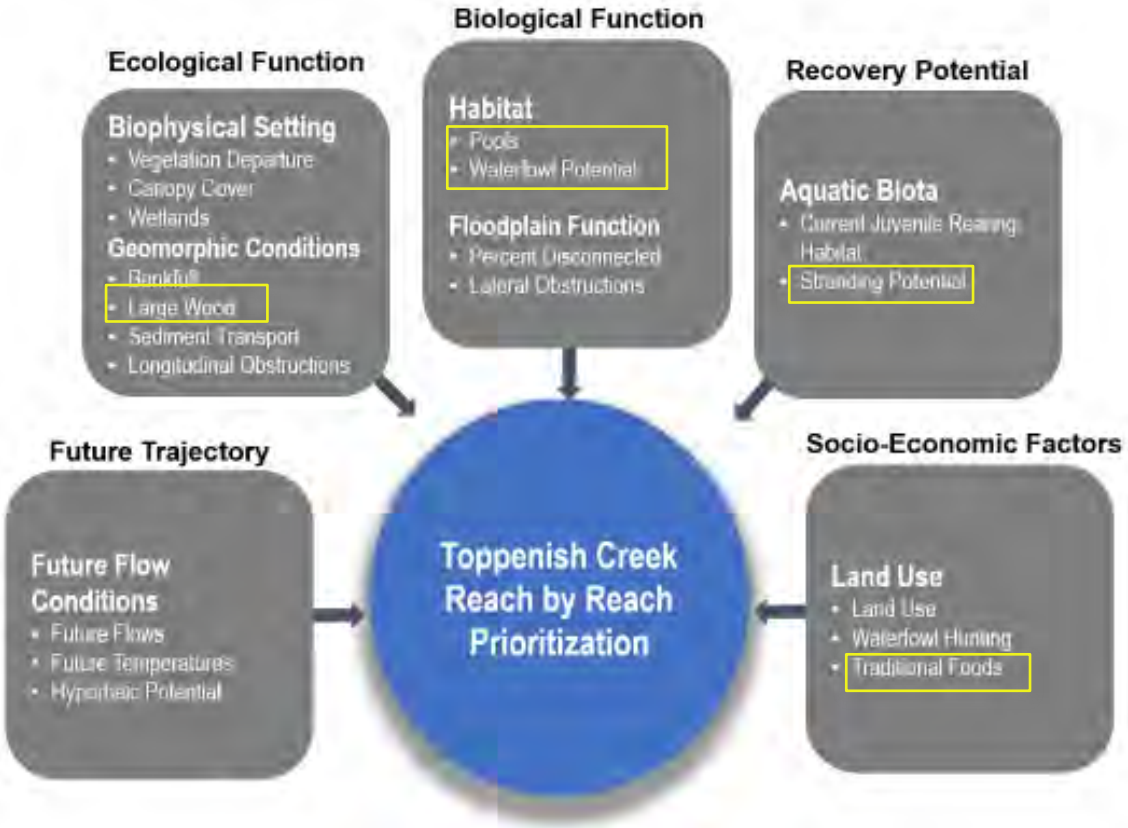
Stranding risk was characterized by the acres of disconnected floodplain during drawdown scenarios. Stranding increases the risk of smolt mortality.

Stranding Analysis



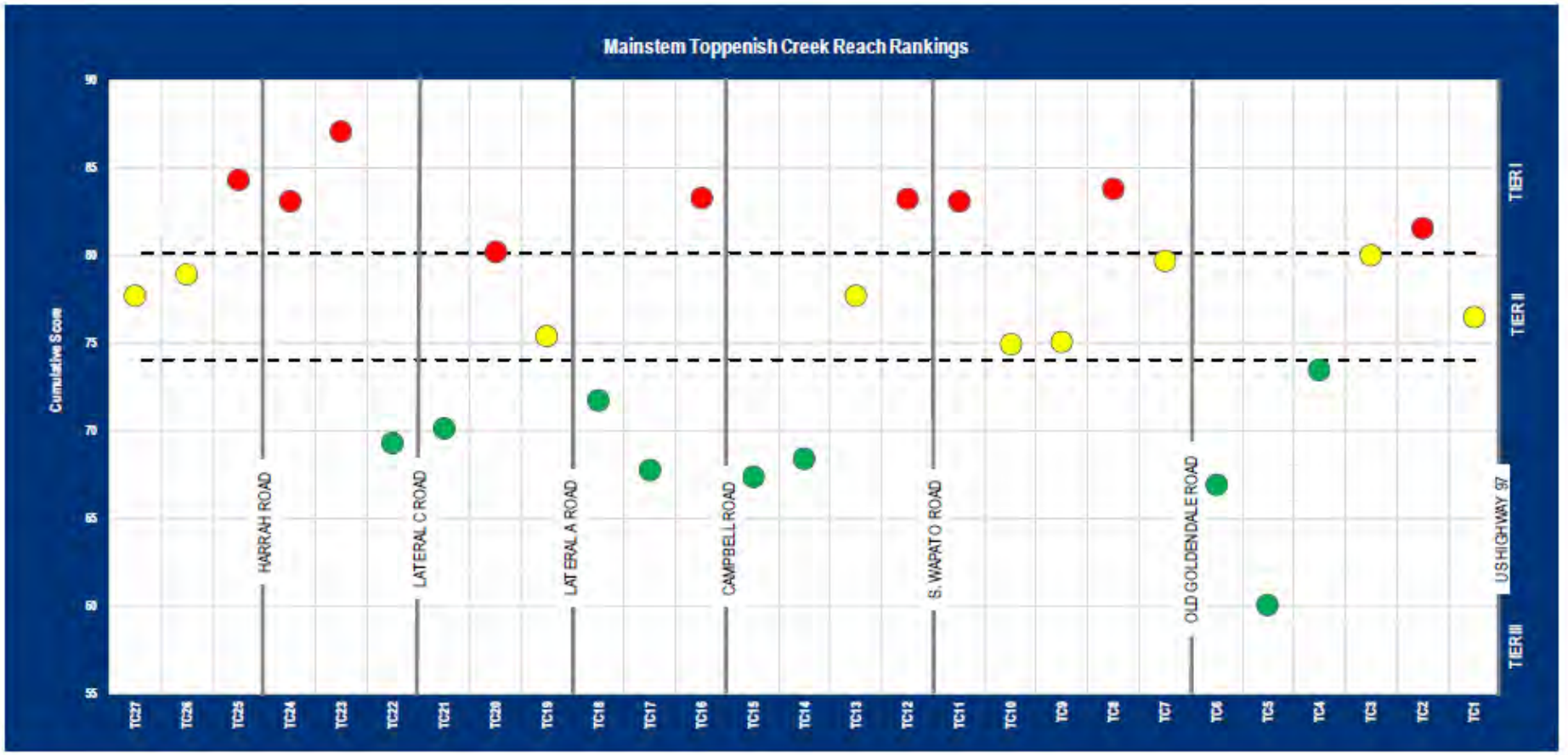


Stranding Risk: TC26



Project Prioritization

- Characterizes departure from historical conditions.
- Based on habitat data and hydraulic modeling.
- May be updated as restoration projects are completed.



Flow Direction

Reach Prioritization Results

Higher score = more departed from historical conditions.

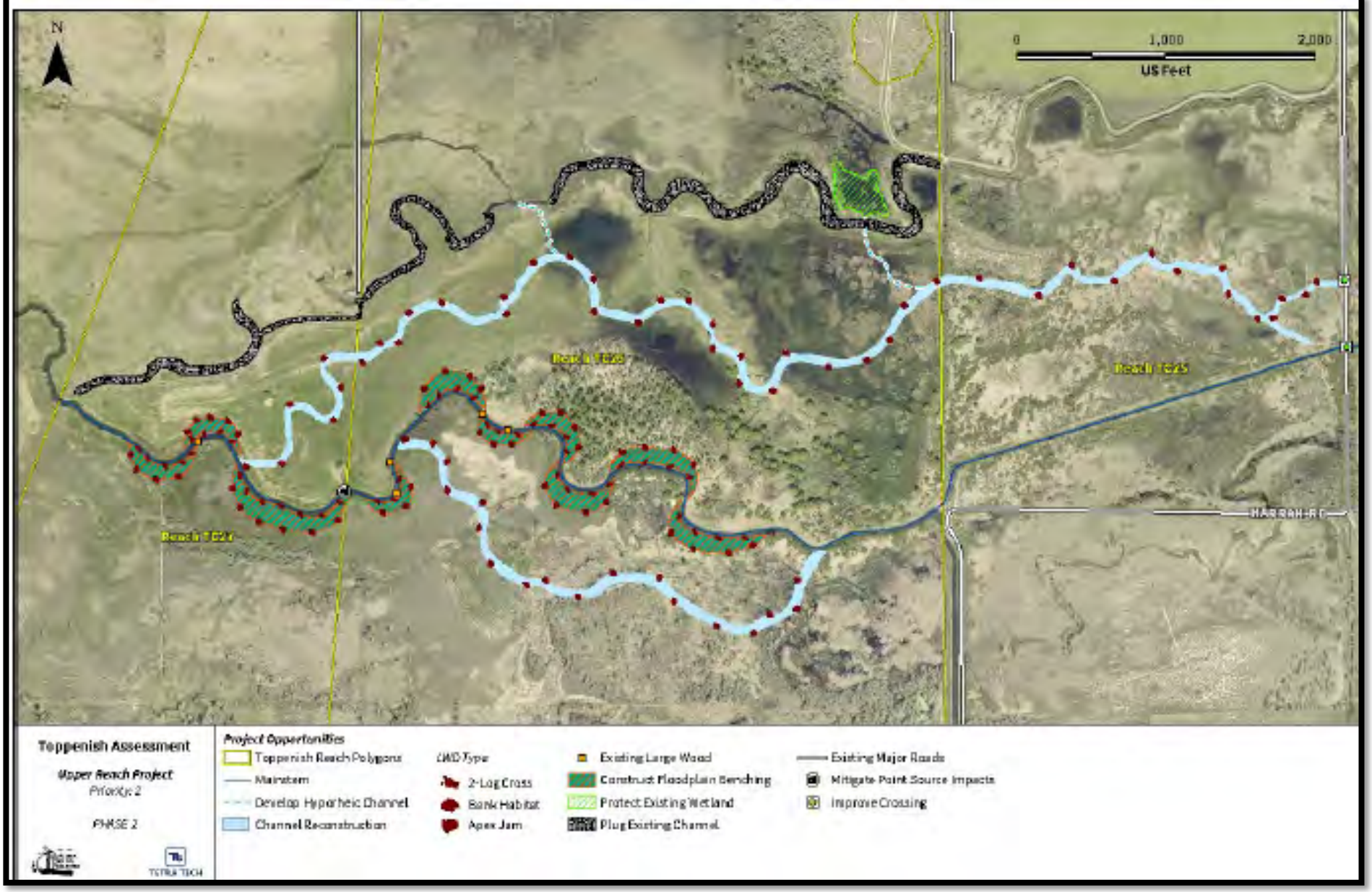
Project Identification and Ranking

Yakama Nation Fisheries

Table 47. Project Opportunities Prioritization Results Summary.

Project	Mainstem Reaches	Average Mainstem Channel Prioritization Score	Average Side Channel Prioritization Score	Project Prioritization Score	Project Ranking	Project Phase(s)
National Refuge Project	TC1-TC5	74.3	N/A	74.3	6	Phase I – Mainstem Channel Corridor Phase II – Floodplain Reset
Old Goldendale Project	TC6-TC10	76.1	76.4	76.2	5	Phase I – Channel Enhancements Phase II – Wetlands and Floodplains
Snake Creek-Toppenish Creek Project	TC11-TC14	78.1	75.9	77.0	3	N/A (one phase)
Campbell Road to Lateral A Project	TC15-TC18	72.5	74.1	73.3	7	Phase I – Lateral A Fish Screen Phase II – Lateral A and Mainstem Channel Phase III – Tule Wetlands Phase IV – Tule Mainstem and Northern Channel
Lateral A to Lateral C Project	TC19-TC21	75.2	78.4	76.8	4	Phase I – Royals Dam Phase II – Diversion Screening Phase III – Reach TC19 to TC20 Phase IV – Reach TC21
Lateral C to Harrah Project	TC22-TC24	79.8	84.0	81.9	1	Phase I – Piggot Dam Phase II – Willows Gun Club Screening and Improvements Phase III – Reach TC23 Reconstruction Phase IV – Lawrence Ditch Enhancements
Upper Reach Project	TC25-TC27	80.3	82.3	81.3	2	Phase I – Mainstem Channel and Northern Channel Phase II – Northern Floodplains and Wetlands

N/A = no assessed side channels identified in the project reaches



Conceptual Designs

YRWP Future Work

- Implementation of projects identified in the LTCRA.
- Middle Satus Creek Riparian Reach Assessment (2026)
- Ahtanum Reach Assessment- 62nd to Forks (2028)
- Wapato Reach Assessment (2029)
- LTCRA Phase 2 (2030)
- Yakama Reservation Watersheds Project Prioritization Synthesis (2031)







Thank you! Questions?



Backup Documentation for Questions

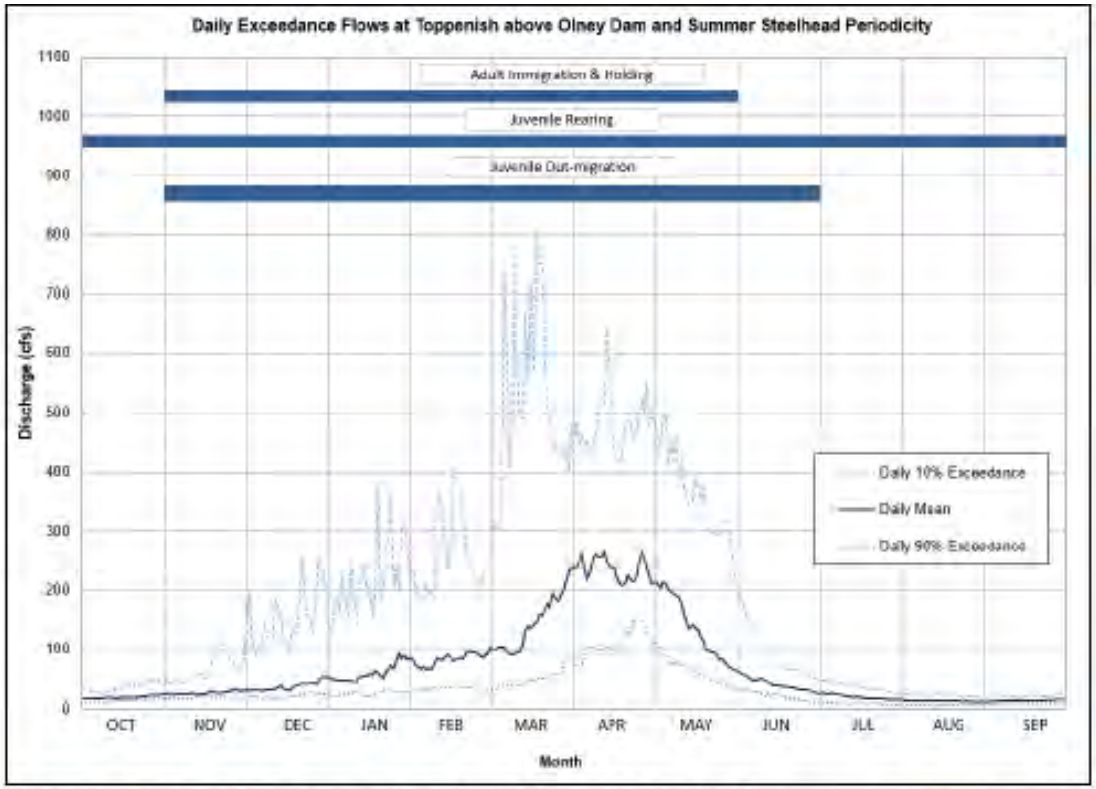


Figure 19. Steelhead life history timing and use of Toppenish Creek in the assessment area and annual discharge daily mean, 10 percent exceedance, and 90 percent exceedances at Toppenish Creek near Fort Simcoe, Washington above Olney Diversion (USGS #12506000; Conley, et al. 2009; CBR 2025).