



Water Supply Update

Water Resources Advisory Committee

Jeff Marti, Water Resources Program

June 14 2021

Photo Caption: Areas where wheat did not head

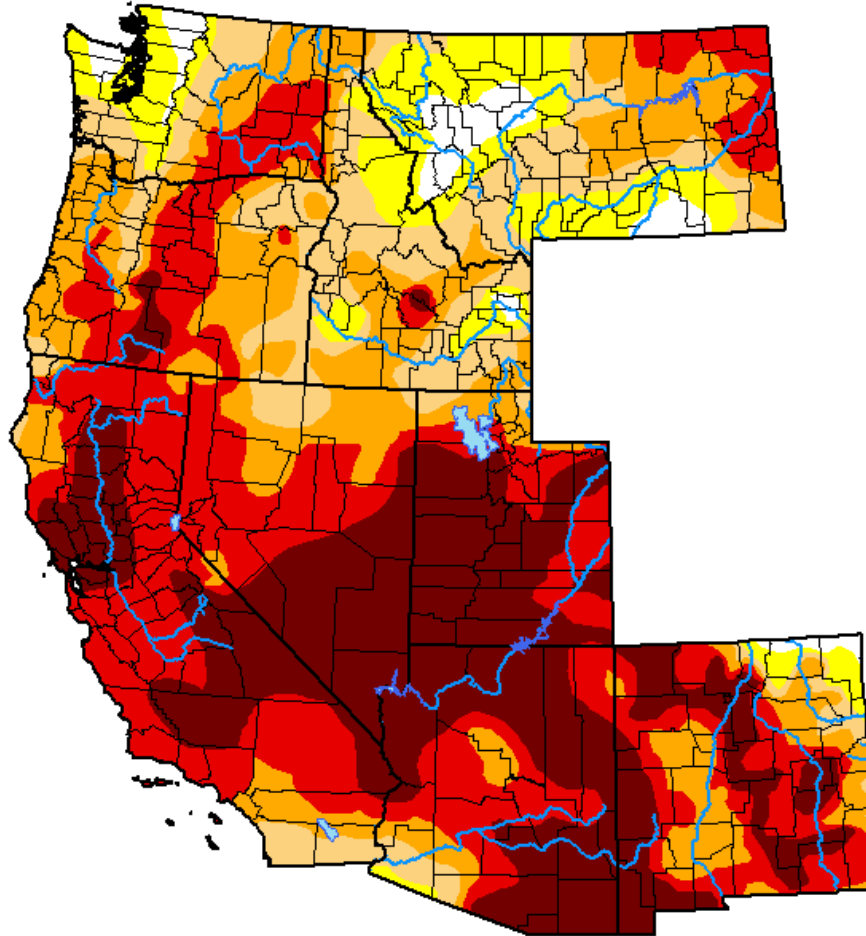
Location: Garfield County

Date: 05/21/2021







Source: Conditions Monitoring Observation System

U.S. Drought Monitor West

June 8, 2021
(Released Thursday, Jun. 10, 2021)
Valid 8 a.m. EDT



Intensity:

-  None
-  D0 Abnormally Dry
-  D1 Moderate Drought
-  D2 Severe Drought
-  D3 Extreme Drought
-  D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <http://droughtmonitor.unl.edu/About.aspx>

Author:

Brian Fuchs
National Drought Mitigation Center



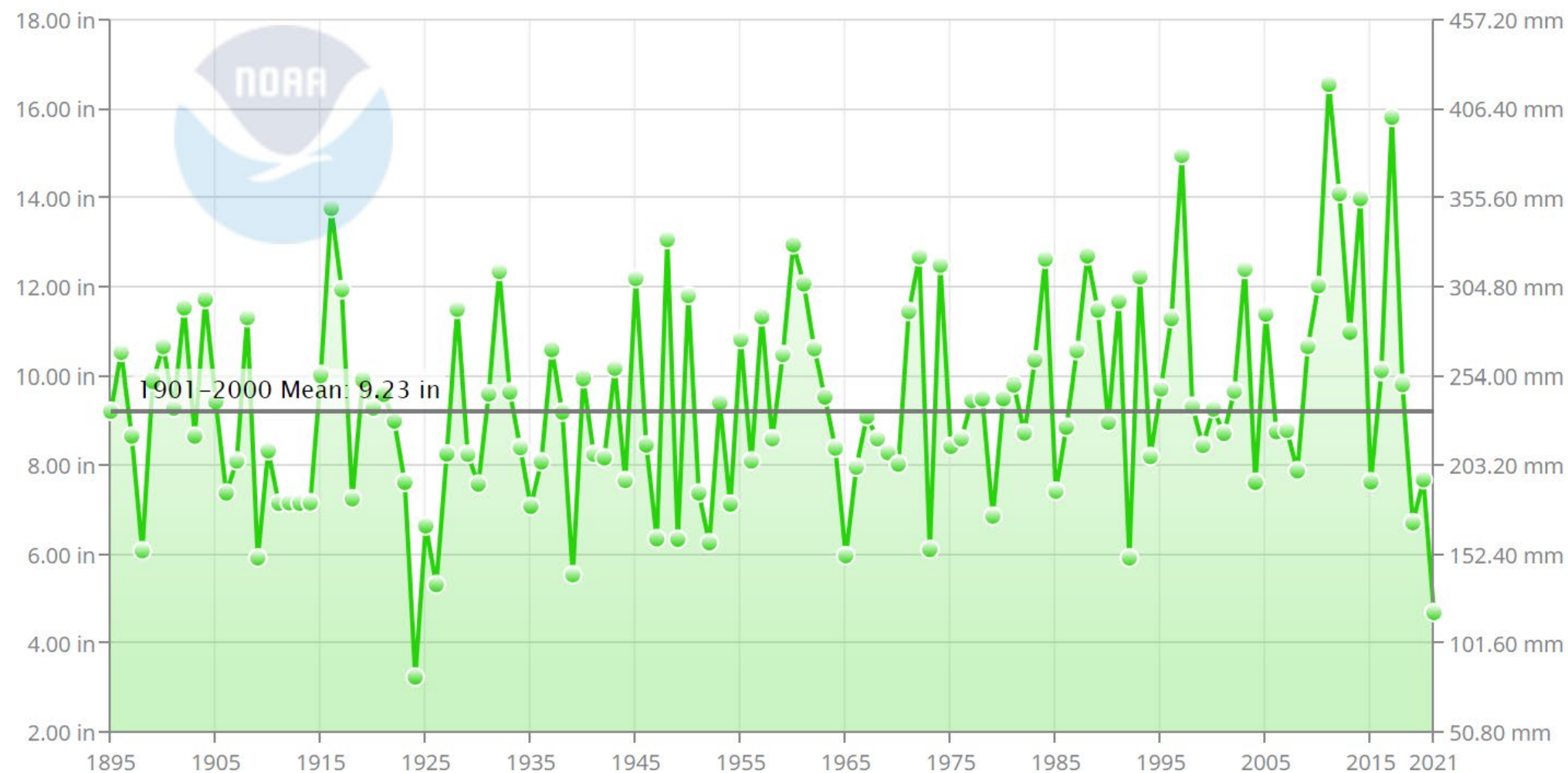
droughtmonitor.unl.edu

2021 Drought Advisory by County



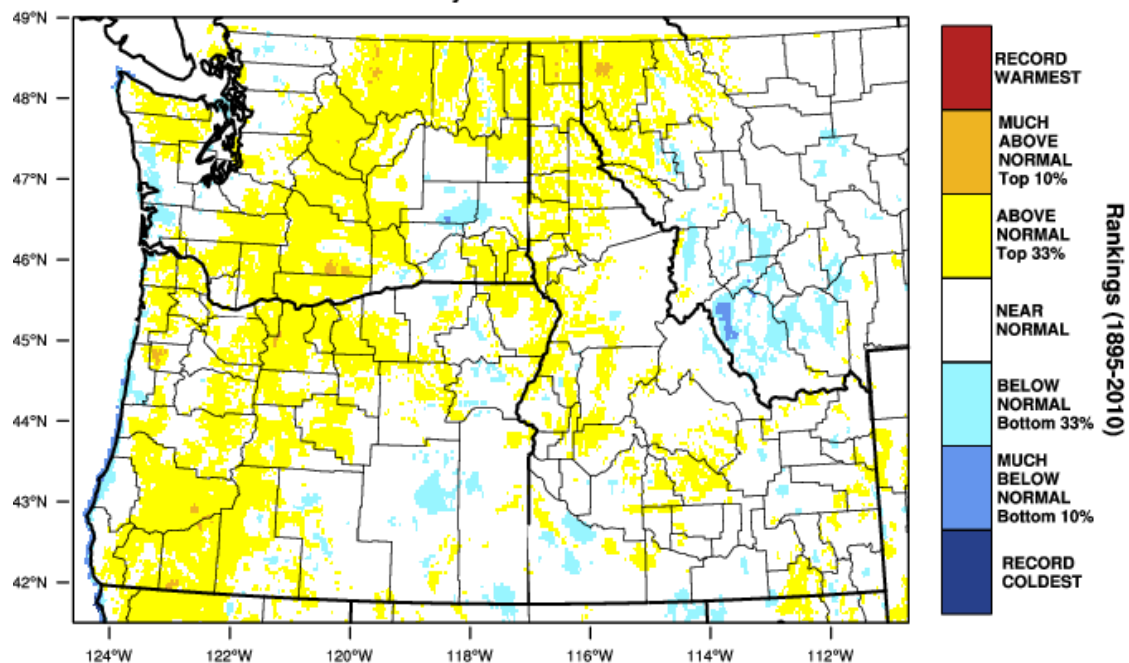
<https://ecology.wa.gov/Water-Shorelines/Water-supply/Water-availability/Statewide-conditions/Drought-response/Drought-conditions>

Washington Precipitation
March–May



Pacific Northwest - Mean Temperature

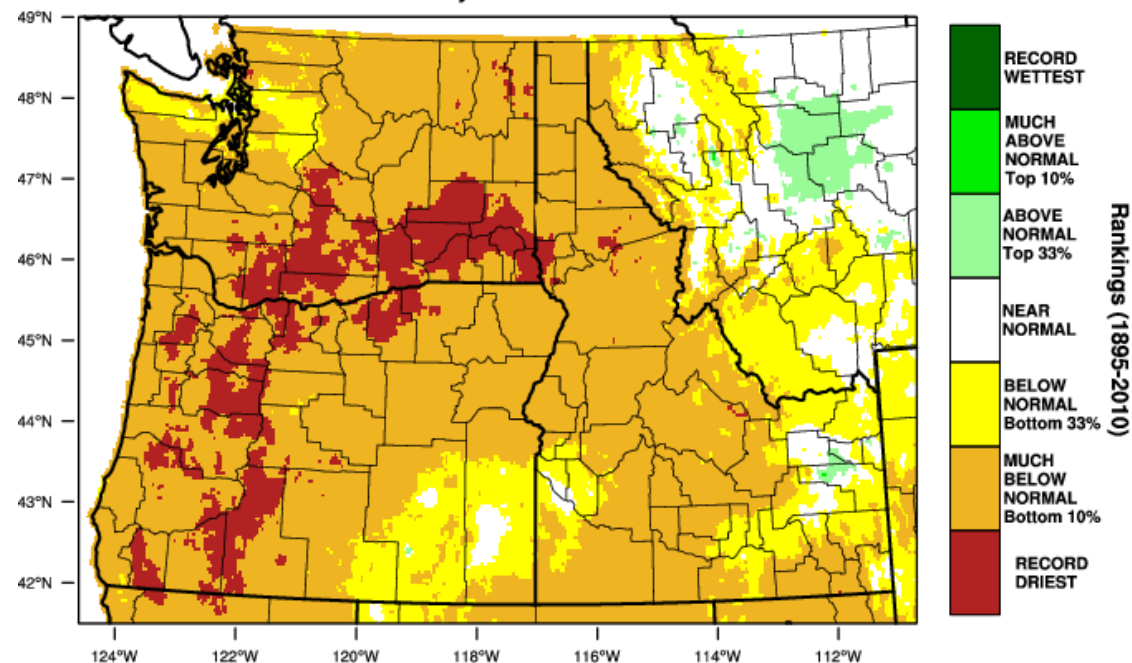
March-May 2021 Percentile



WestWide Drought Tracker - U Idaho/WRCC Data Source - PRISM (Prelim), created 11 JUN 2021

Pacific Northwest - Precipitation

March-May 2021 Percentile

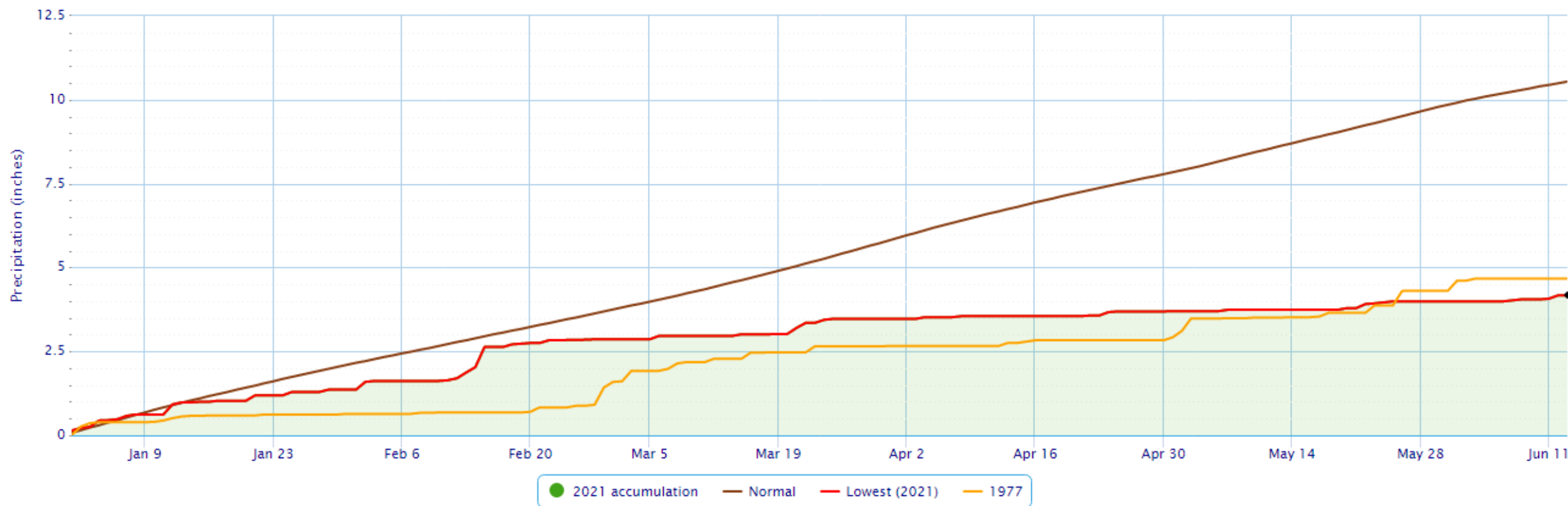


WestWide Drought Tracker - U Idaho/WRCC Data Source - PRISM (Prelim), created 11 JUN 2021

Accumulated Precipitation - WALLA WALLA REGIONAL AP, WA



Click and drag to zoom to a shorter time interval; green/black diamonds represent subsequent/missing values



Powered by ACIS

Click to Plot/Remove Years of Interest		(number of missing days in parentheses)						Resort table by year
1996: - (165)	1992: 6.65	2015: 7.47	1951: 8.90	1976: 9.65	1962: 10.80	2017: 11.85	1953: 13.35	2000: 14.76
1997: - (164)	1952: 6.68	2008: 7.61	2007: 8.96	1956: 9.70	2020: 10.86	1961: 12.57	1983: 13.35	
1998: - (164)	1963: 6.81	1965: 7.67	1994: 9.23	1978: 10.11	1969: 10.91	1988: 12.73	1970: 13.48	
2021: 4.17 (1)	1985: 6.91	2014: 8.15	1967: 9.28	1975: 10.18	1971: 11.06	1958: 12.77	1986: 13.52	
1995: 4.41 (111)	1949: 6.95	1979: 8.16	1960: 9.40	1974: 10.21	1990: 11.23	1959: 12.90	1984: 13.55	
1977: 4.67	1955: 7.06	2001: 8.54	2002: 9.45 (1)	2009: 10.30	1980: 11.30	2004: 12.96	2012: 13.88 (1)	
1973: 5.77	1968: 7.16	1999: 8.57	2018: 9.50	1957: 10.35	1950: 11.35	1989: 13.04	1991: 13.89	
2013: 5.80	1966: 7.29	1954: 8.68	2016: 9.52	1972: 10.41	1982: 11.58	2006: 13.23	1993: 13.99	
1964: 6.02	2005: 7.45	1987: 8.72	2010: 9.61	2019: 10.50	2003: 11.58	2011: 13.23	1981: 14.52	

Note regarding subsequent/missing values



Northwest River Forecast Center

ESP Natural Forecast

[River and Hydrology](#)[Water Supply](#)[Observations](#)[Weather Forecasts](#)[Climate](#)[NWRFC](#)[Home](#)[Zoom Out](#)[--- Quick Zooms ---](#)

ESP Issued: 2021-06-13

Ensemble Date: 2021-06-13

[Permalink](#)

Search

Enter NWS ID:

Map Overlays

- ☒ NWRFC Boundary
- ☐ NWRFC Basins
- ☐ NWS HSAs
- ☐ Counties

ESP Natural Forecast

- ☐ Natural Status
- ☒ Natural % of Normal
- ☐ Rank (ASC)
- ☐ Rank (DESC)
- ☐ Exceedance (%)
- ☐ Percentile (%)

Natural Runoff

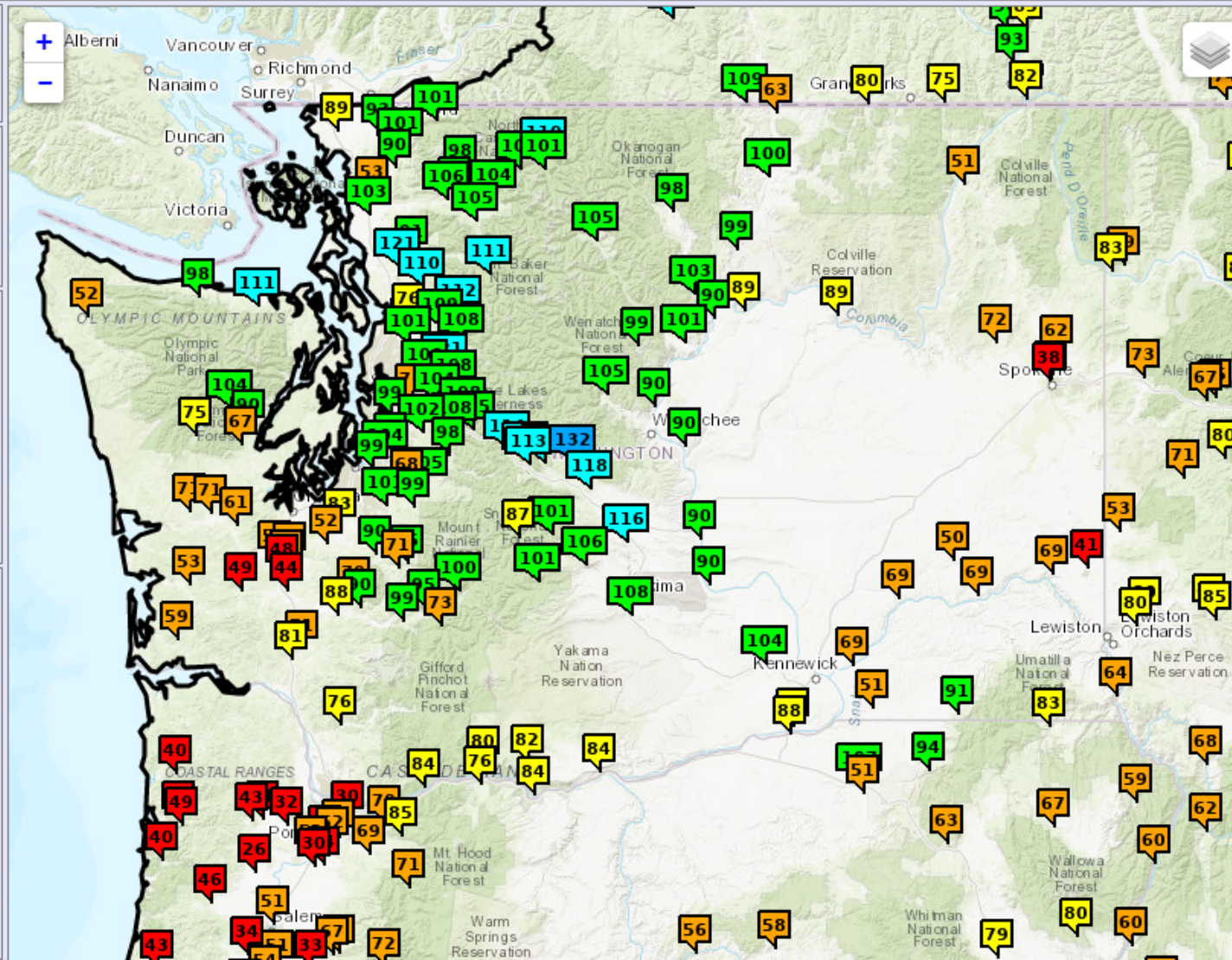
- ☐ Runoff Status
- ☐ Runoff % of Normal

ESP Natural Forecast

Period: APR-SEP

Forecast (% Normal)

- ☐ No Normal, No Data
- ☐ < 25
- ☐ 25-50
- ☐ 50-75
- ☐ 75-90
- ☐ 90-110
- ☐ 110-125
- ☐ 125-150
- ☐ 150-175
- ☐ > 175





Northwest River Forecast Center ESP Natural Forecast



River and Hydrology

Water Supply

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GO

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- ☐ Rank (ASC)
- ☒ Rank (DESC)
- ☐ Exceedance (%)
- ☐ Percentile (%)

Natural Runoff

- ☐ Runoff Status
- ☐ Runoff % of Normal

ESP Natural Forecast

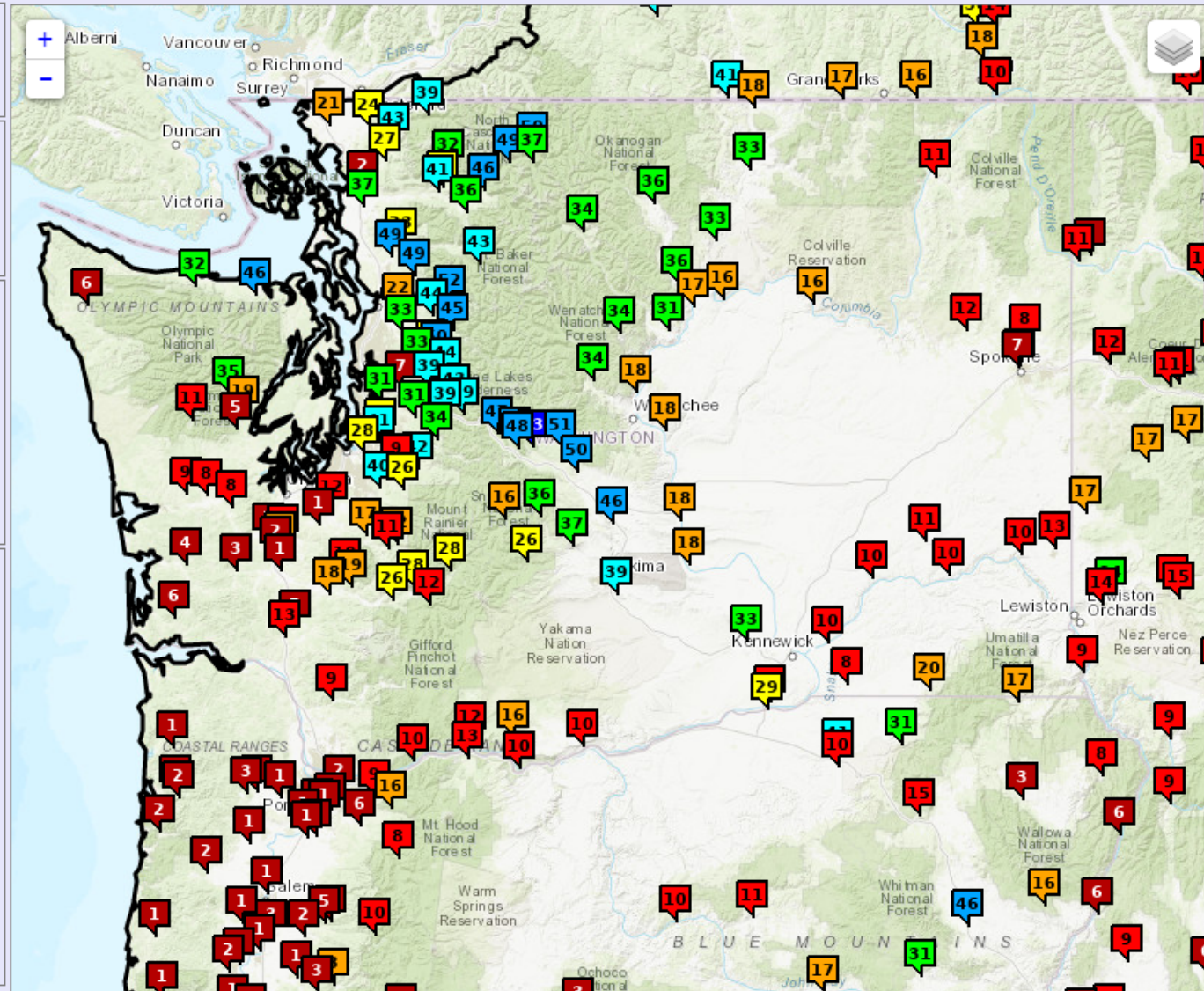
Period: APR-SEP

Rank (Descending)

†Marker Color Shows

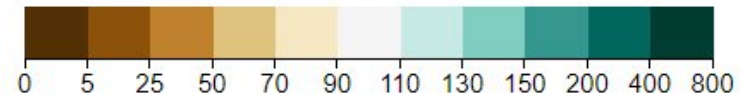
Percentile (%)

- No Data
- 0-10
- 10-20
- 20-30
- 30-40
- 40-50
- 50-60
- 60-70
- 70-80
- 80-90
- 90-100

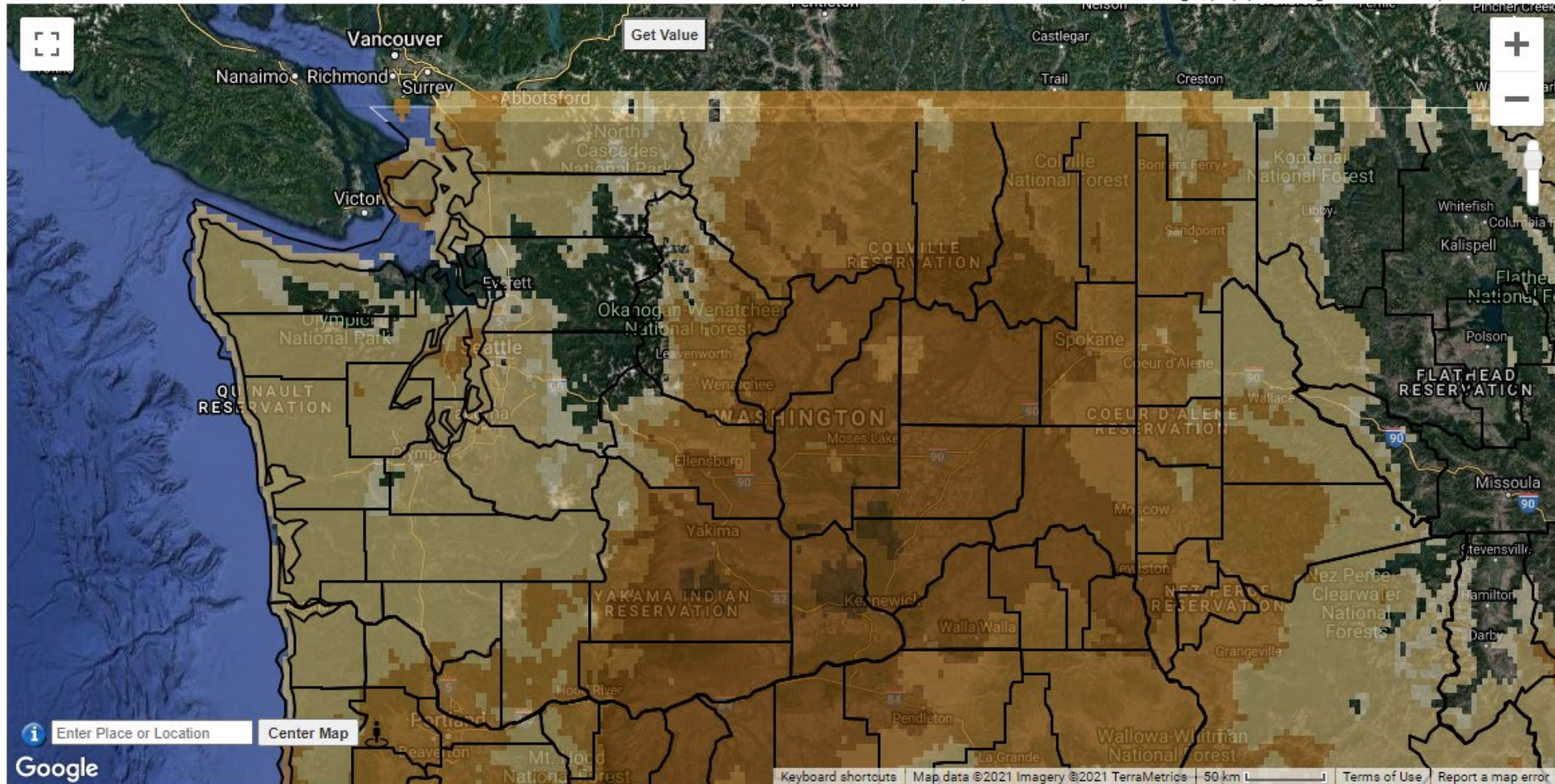


Precipitation Percent Of Average (gridMET)

2021-03-13 to 2021-06-10, Total, vs. 1991 - 2020



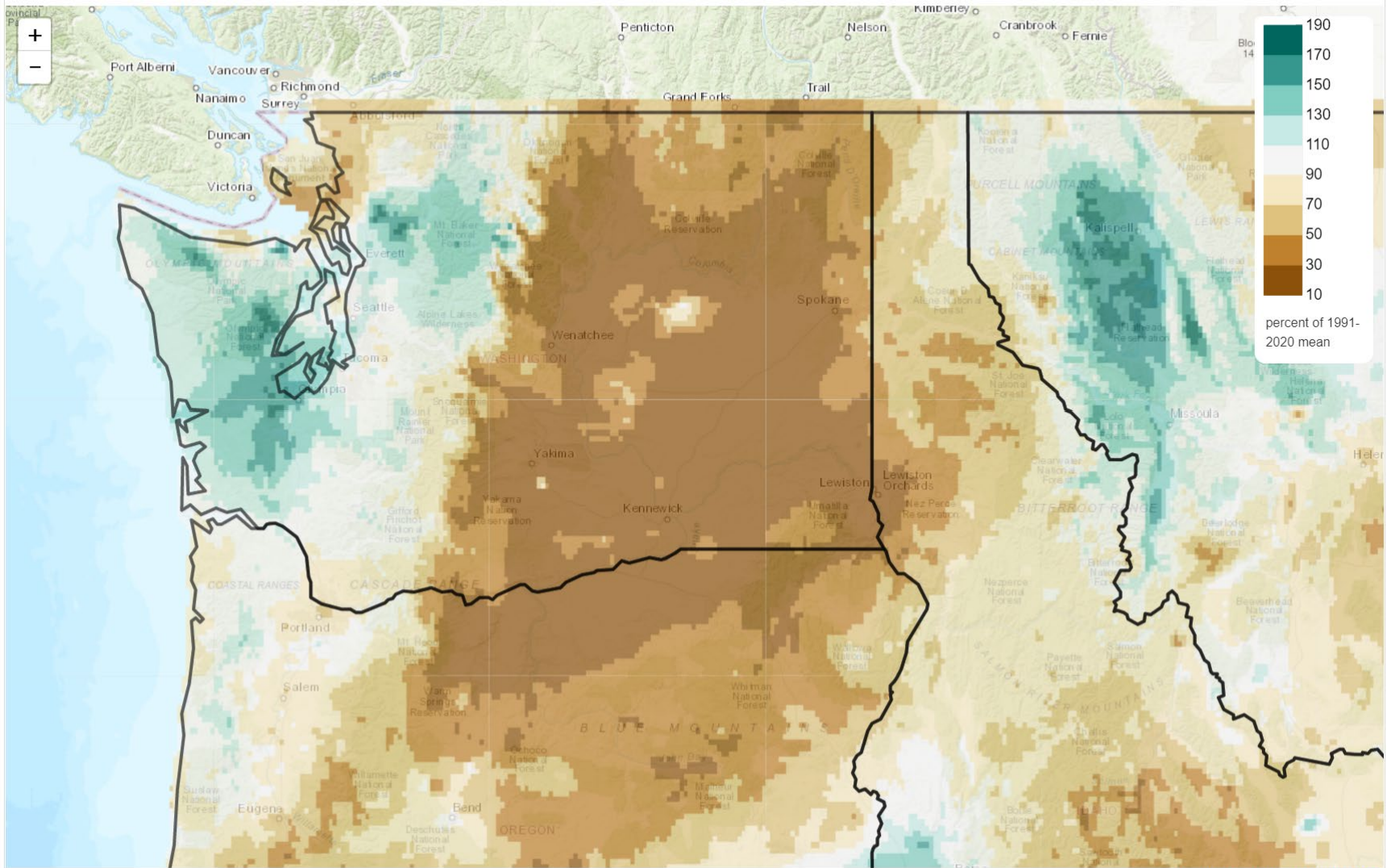
Precipitation Percent of Average (%) (masking above 75 %)



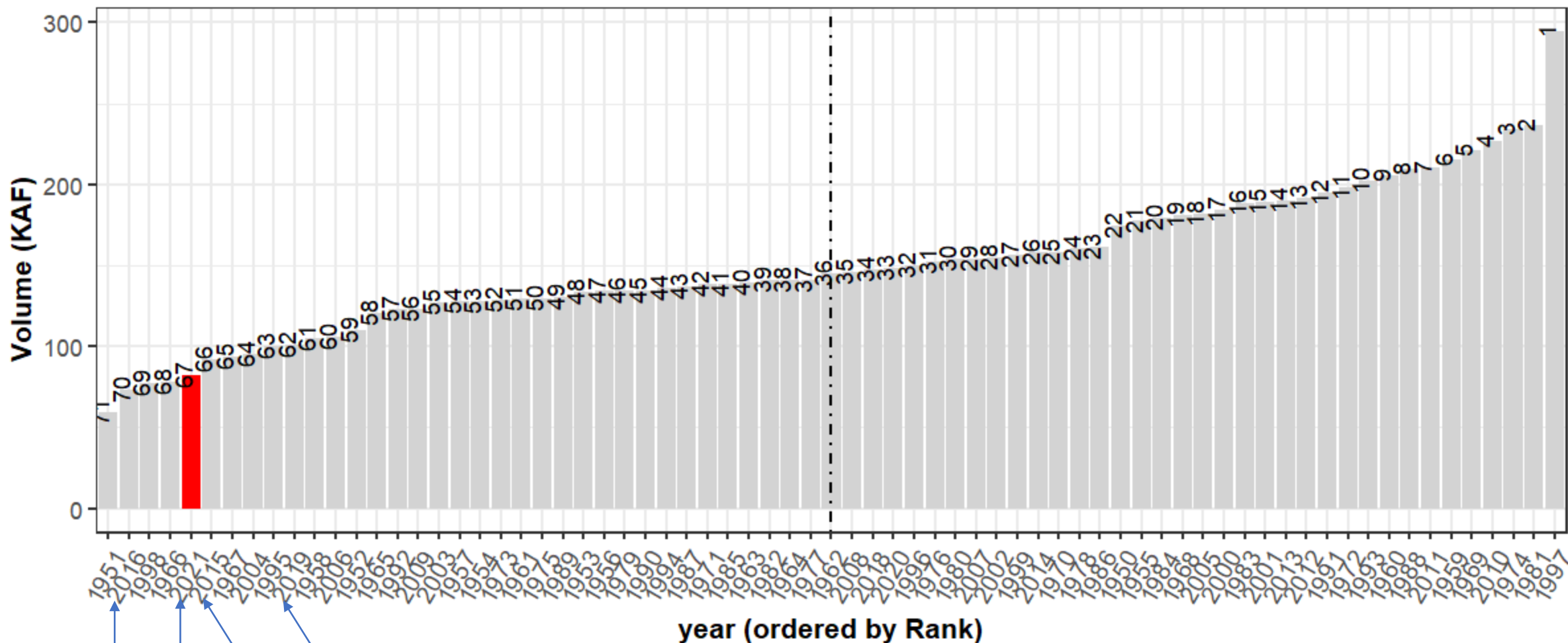
Generated by ClimateEngine.org

Total Precipitation Anomaly, Last 30 Days

2021/05/14 - 2021/06/12

Climate Toolbox, Data: [gridMET](#)

CALAWAH - NEAR FORKS | 2021 FORECASTED RUNOFF (APR-SEPT) COMPARED TO HISTORIC RUNOFF (1949-2020)



NWRFC DATA 2021-06-13

More Affected Users

Non-irrigated lands used for dryland and rangeland production are likely to be most affected. Non-irrigated producers in Eastern WA are expecting reduced yields as a result from this year's precipitation deficit.

Irrigation users with junior water rights may be required to restrict their diversions to protect senior water rights later in the summer.

Small water systems dependent on shallow wells are most vulnerable to impacts in dry years.

Drought conditions can cause severe stress to fish coping with low streamflows and high water temperatures. Wildlife can struggle to find water sources and forage.

The Northwest Interagency Coordination Center forecasts that significant fire potential is expected to increase to above average in June across central Oregon into southeast Washington and continue through August.

Less Affected Users

Farms and communities receiving water from the Columbia River and Lake Roosevelt are not expected to experience shortages this year if current weather trends continue.

The federal Bureau of Reclamation forecasts that both senior and junior water users in the Yakima Basin are expected to receive their full water supply this summer.

Mid to large-size water systems plan to meet customer water requirements during critical years and are not expected to encounter shortage issues.



Drought-affected wheat (Columbia County)



A report from Walla Walla
County
6/3/2021

Top image -- We generally get 90-120 bales of grass hay off this section, This year we had to mow it under and burn it as it was all foxtail, dried out.



Bottom image -- The sheep pasture has zero forage - the grass is gone and all that is growing is fox tail. We have had to move to feed morning and night as there is no forage. We generally only feed 1x a day. Hay usage is up.

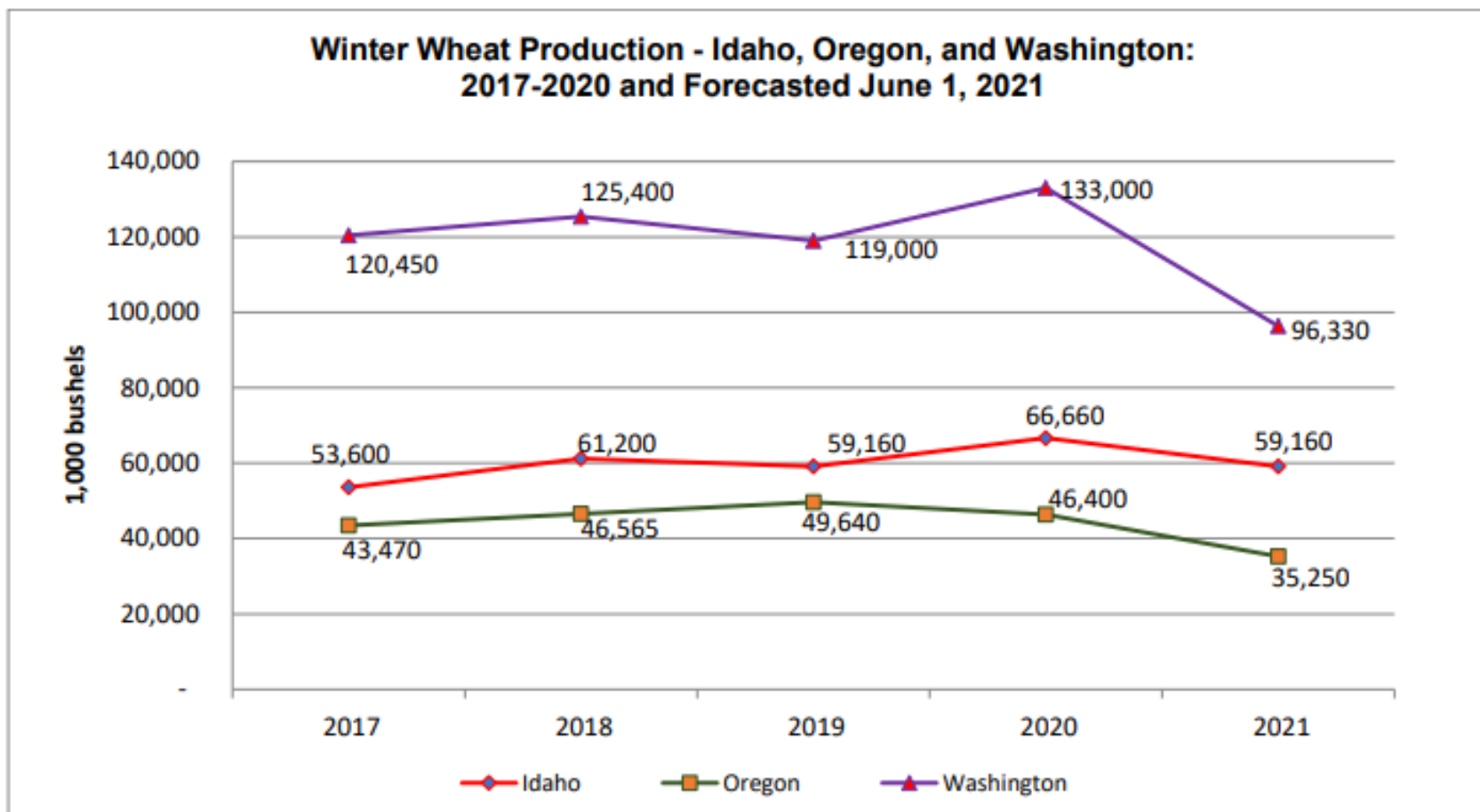
How localized or widespread are the conditions you are reporting?

Very common in our area. All of my neighbors are experiencing the same issues. I am unable to buy cattle hay as all of our hay producers are experiencing the same shortage and are retaining the bulk of hay for their own cattle. There will be a severe hay shortage due to extended feeding for all cattle producers.

A report from
Asotin County
5/19/202

Our pastures have dried up and only had about 30% of their normal yield. Our pasture normally holds out till mid June. We are importing hay from outside the region to feed our cows. We were forced to sell all of this year's slaughter animals early due to lack of feed. The animals averaged only 350lbs hanging weight. They normally average 800lbs when slaughtered in early to mid June historically.

We have had several springs for our cattle under produce and we are hauling water every other day to supplement the springs.



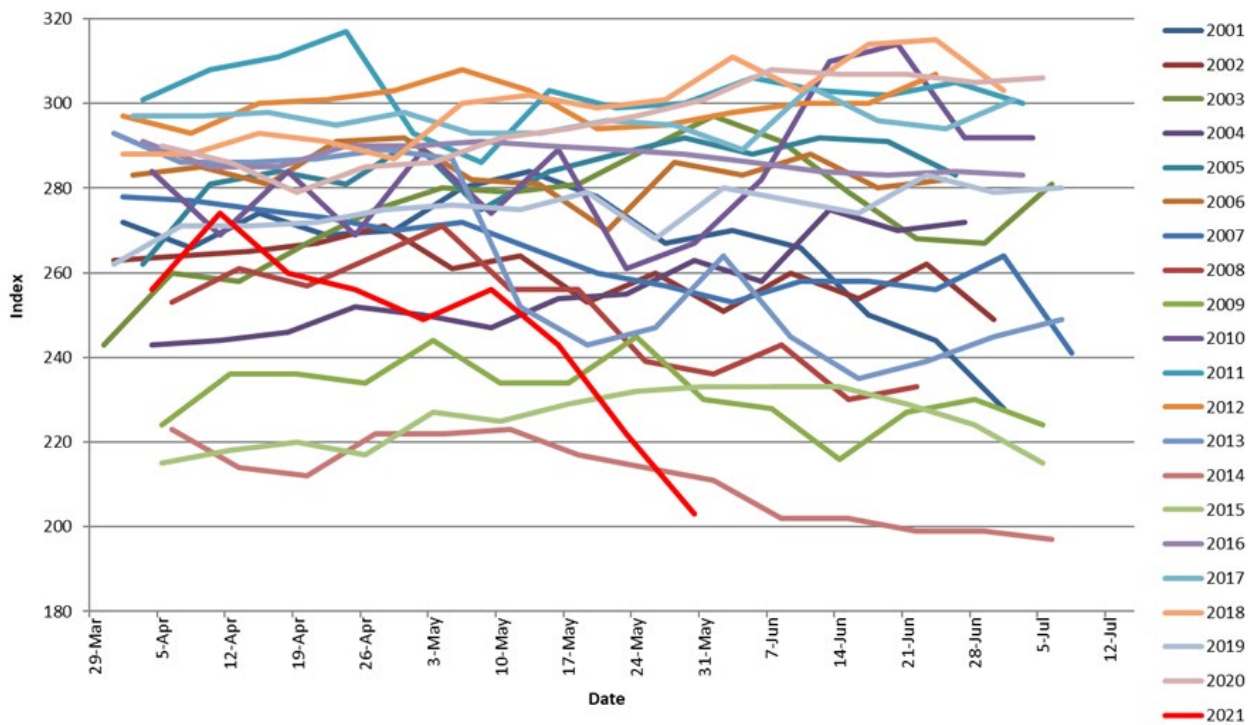
WA ↓ 28%

OR ↓ 24%

ID ↓ 11%

Washington winter wheat production is forecast at 96.3 million bushels, down 28 percent from 2020. Harvested area, at 1.69 million acres, is down 60,000 acres from the previous year. Yield is forecast at 57.0 bushels per acre, down 7.0 bushels from the May 1 forecast and down 19.0 bushels from last year.

WA WINTER WHEAT Condition Index

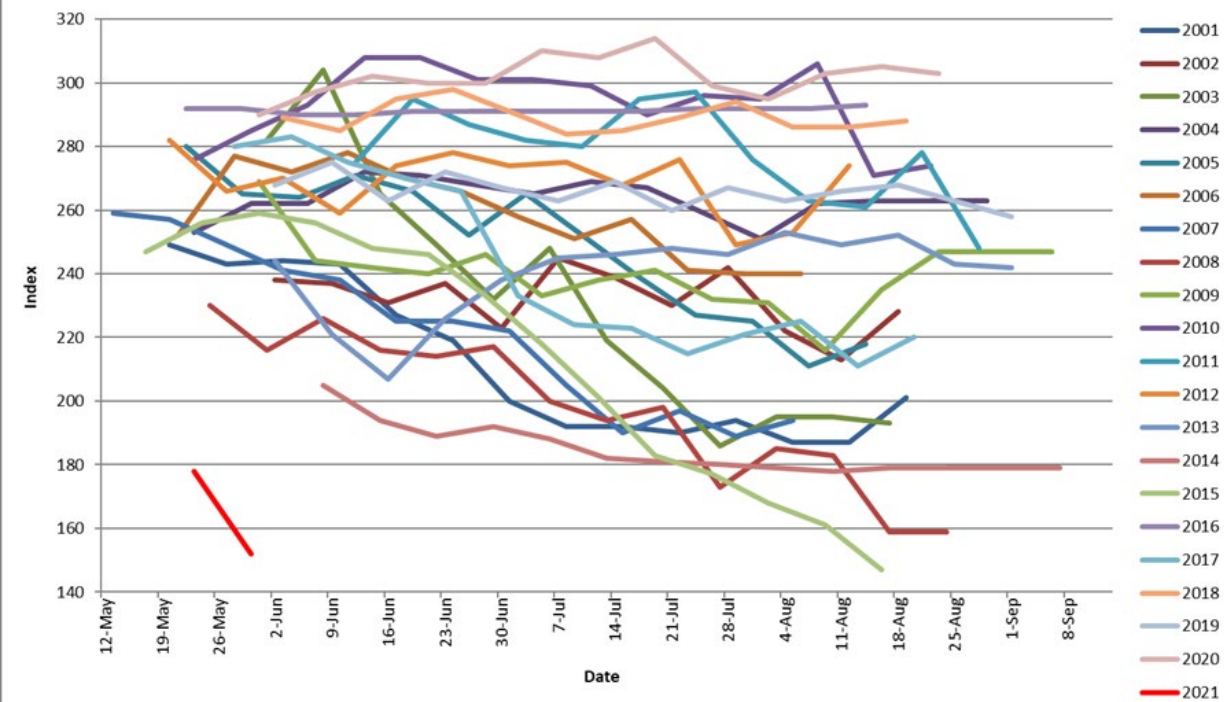


Based on NASS crop progress data.

Index Value | 400 = All Excellent, 0 = All Very Poor

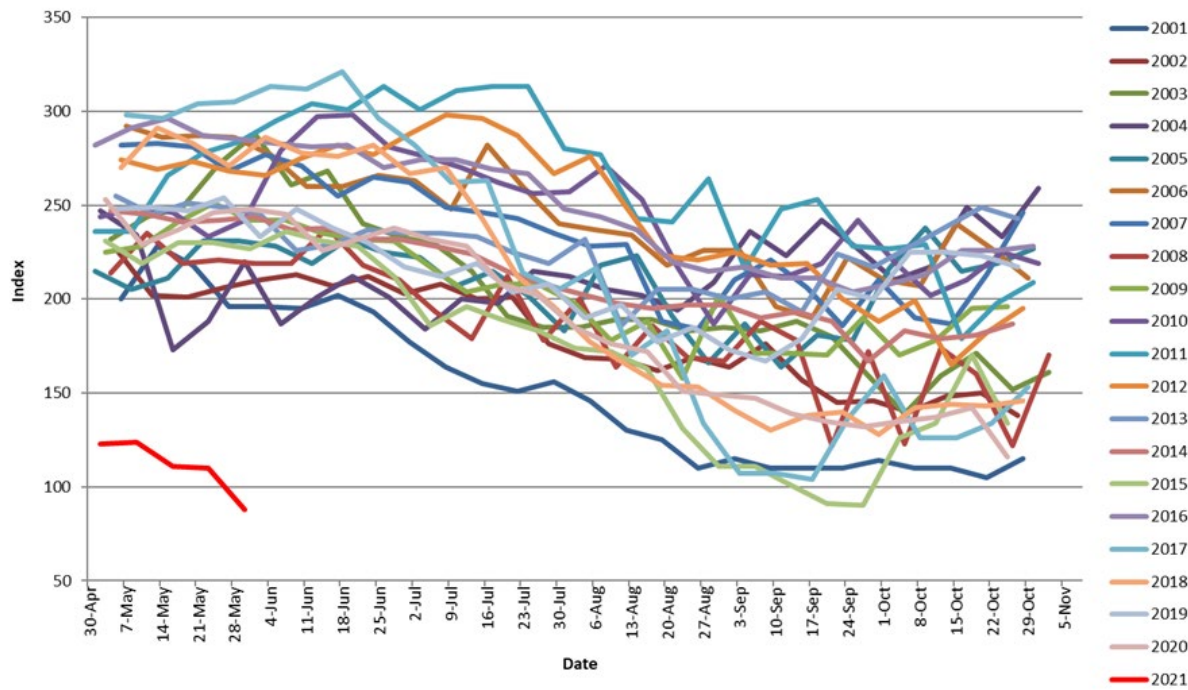
Charts courtesy of
Brad Rippey, USDA Meteorologist
Office of the Chief Economist
World Agricultural Outlook Board
Washington, D.C.

WA SPRING WHEAT Condition Index



Based on NASS crop progress data.

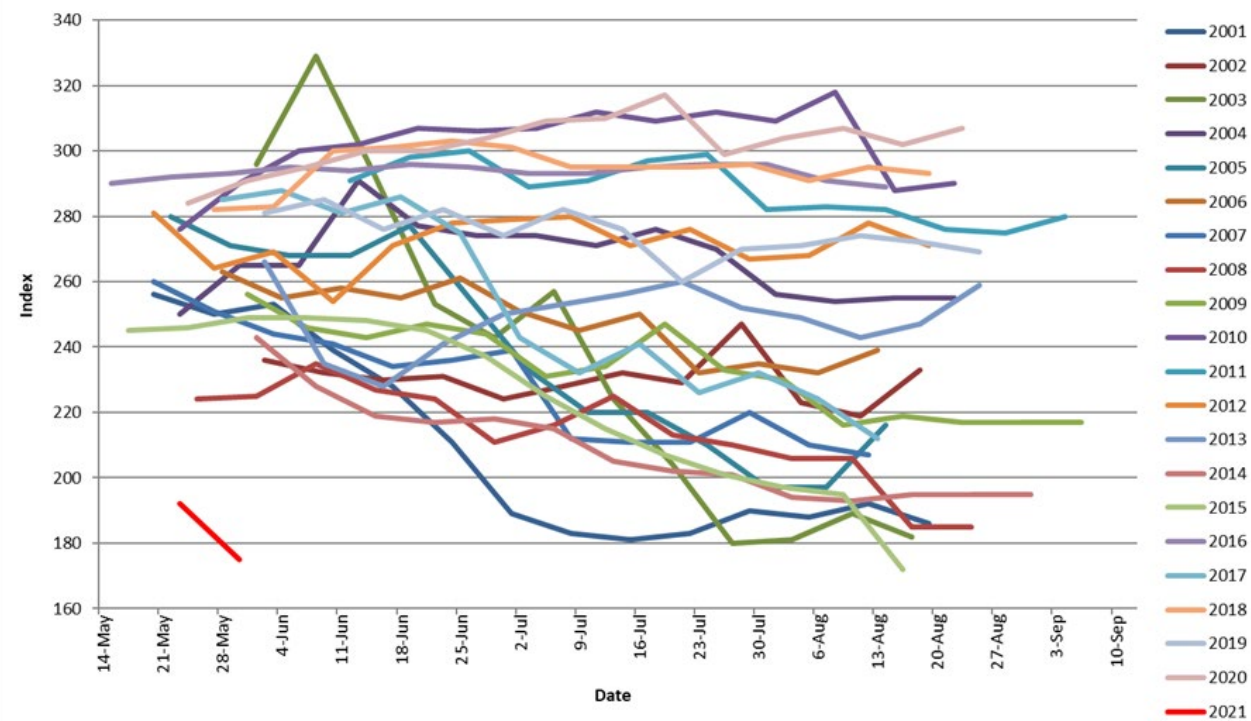
WA PASTURE AND RANGE Condition Index



Based on NASS crop progress data.

Charts courtesy of
Brad Rippey, USDA Meteorologist
Office of the Chief Economist
World Agricultural Outlook Board
Washington, D.C.

WA BARLEY Condition Index



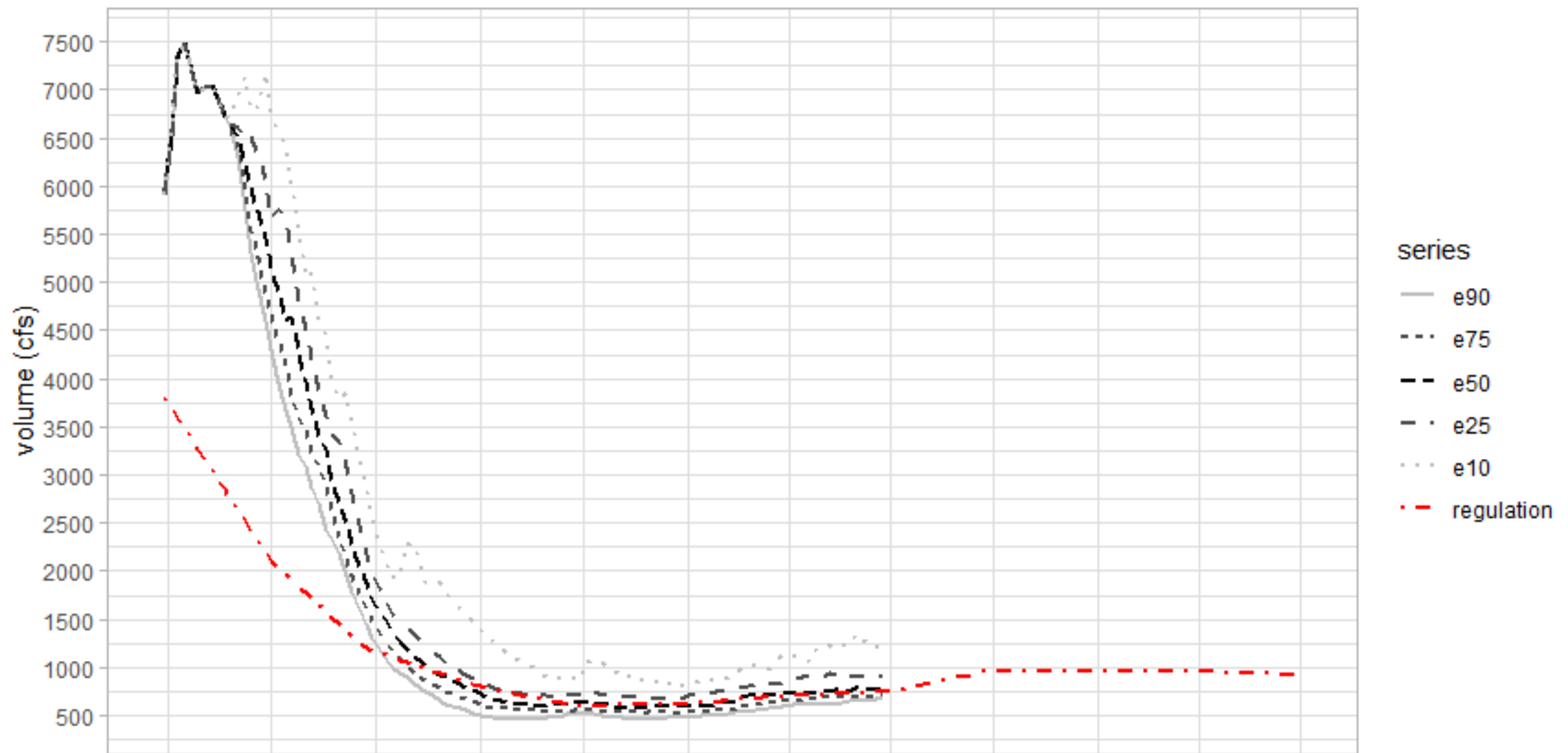
Based on NASS crop progress data.

Summing it up

- Washington state had an exceptionally dry spring.
- The impacts of the dryness are falling unevenly on different classes of water users (e.g., irrigated vs. non-irrigated), depending on their ability to benefit from our above normal snowpack.
- Federal disaster designation in effect for most of eastern Washington
- Curtailment underway in the Walla Walla and soon to occur on the Little Spokane.
- We continue to monitor water supply.
- Elevating the advisory to a drought emergency not under consideration at this time, but this could change.

Thank you

2021-06-13 | ensemble forecast vs Okanogan at Malott regulation flows

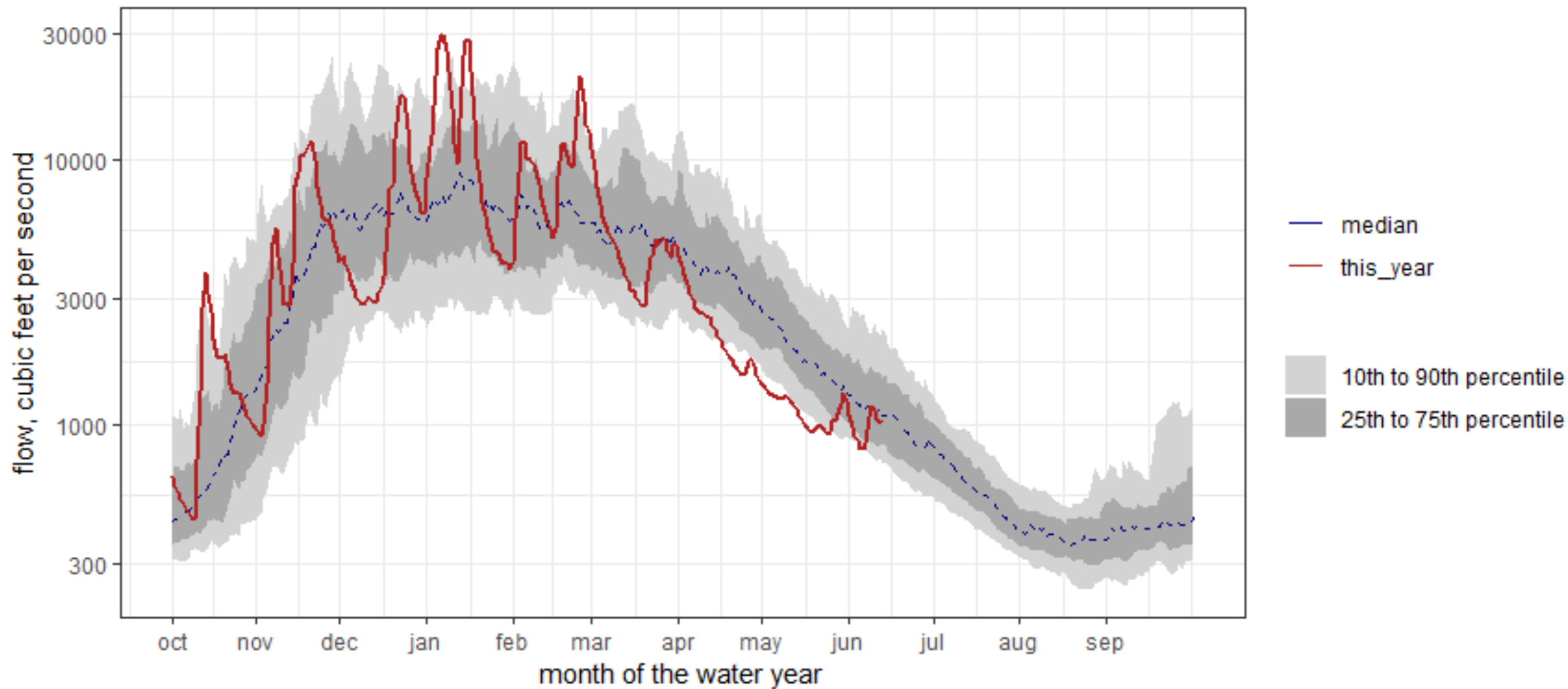


CHEHALIS RIVER AT PORTER, WA

Daily flows

USGS gauge 12031000

Data series start date: 1952-02-01



Data: USGS

graph inspired by

<https://github.com/johnrfleck/water-tools>