

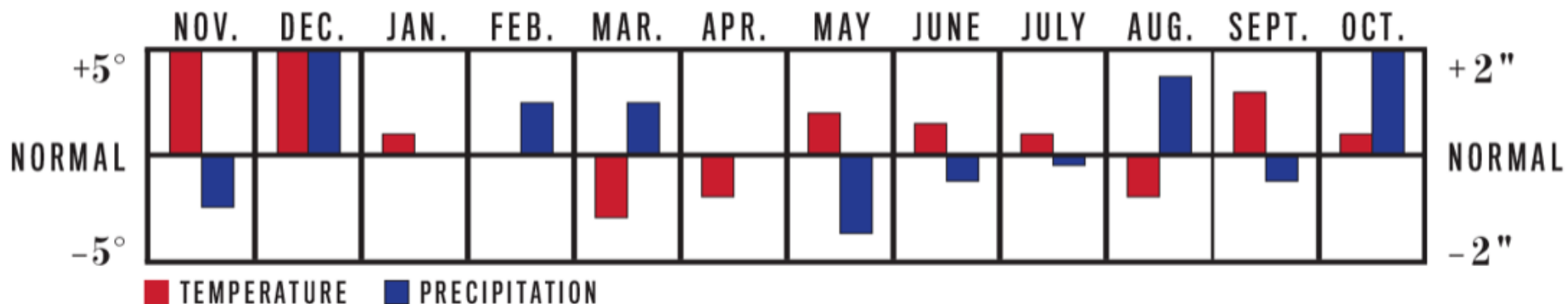
# Streamflow Conditions in Washington State

as of December 11-13, 2019



## 2019-2020 LONG RANGE WEATHER FORECAST FOR PACIFIC NORTHWEST

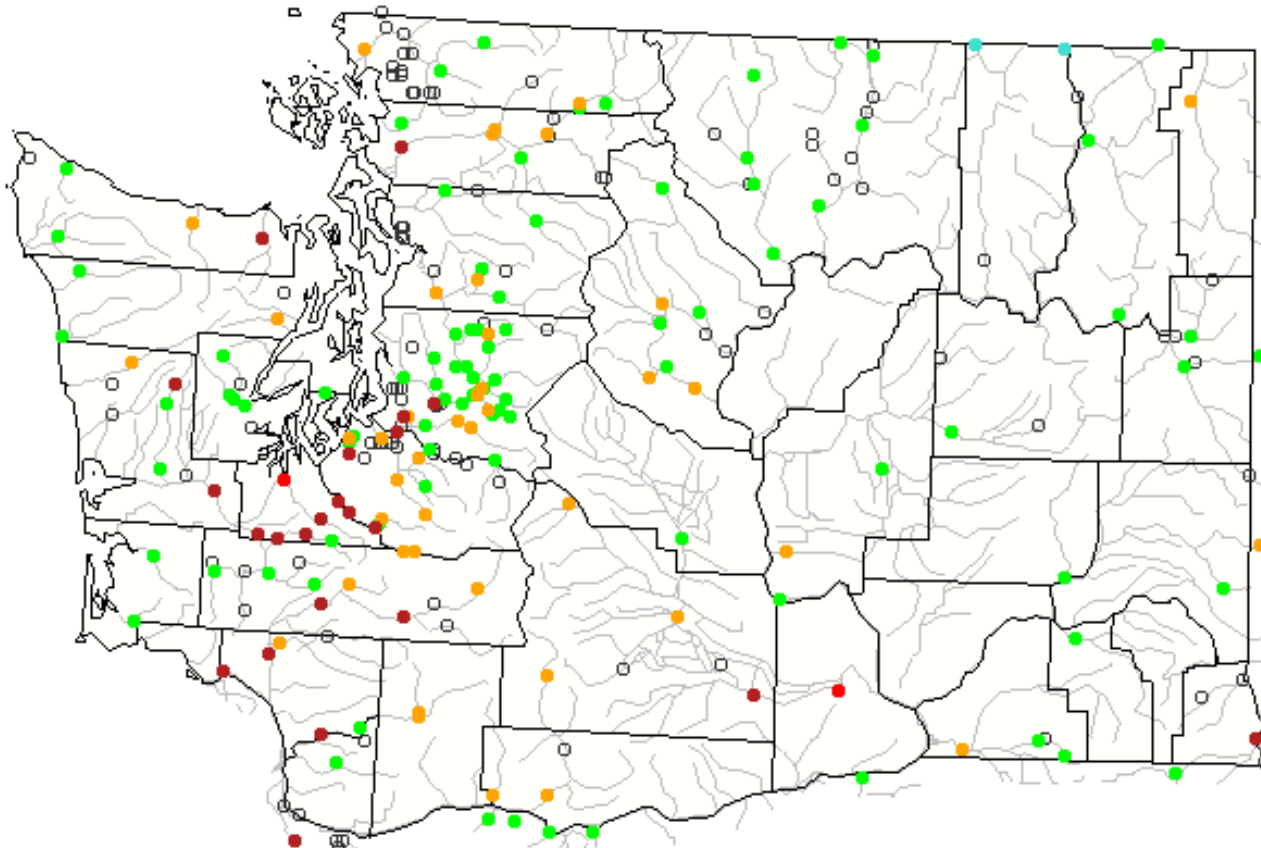
TEMPERATURE AND PRECIPITATION NOVEMBER 2019 TO OCTOBER 2020



# 7-day Average Streamflow (for day of the year)









Thursday, December 12, 2019

1-Day Flow



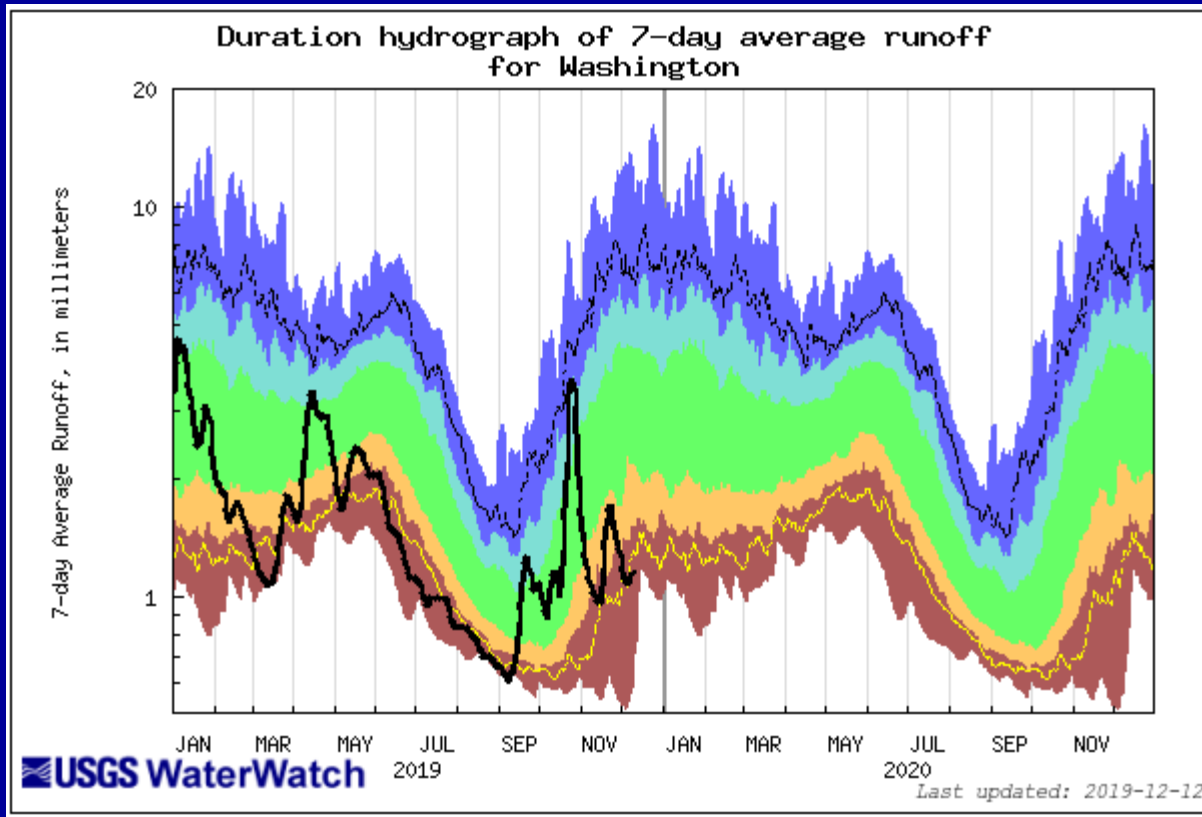
Recent rains will add more runoff and may not have been completely captured in this 7-day average.

December 12, 2019

Explanation - Percentile classes							
							
Low	<10	10-24	25-75	76-90	>90	High	Not-ranked
	Much below normal	Below normal	Normal	Above normal	Much above normal		

# Duration Hydrograph, Washington State

## 7-day Average Streamflow (through December 11, 2019)

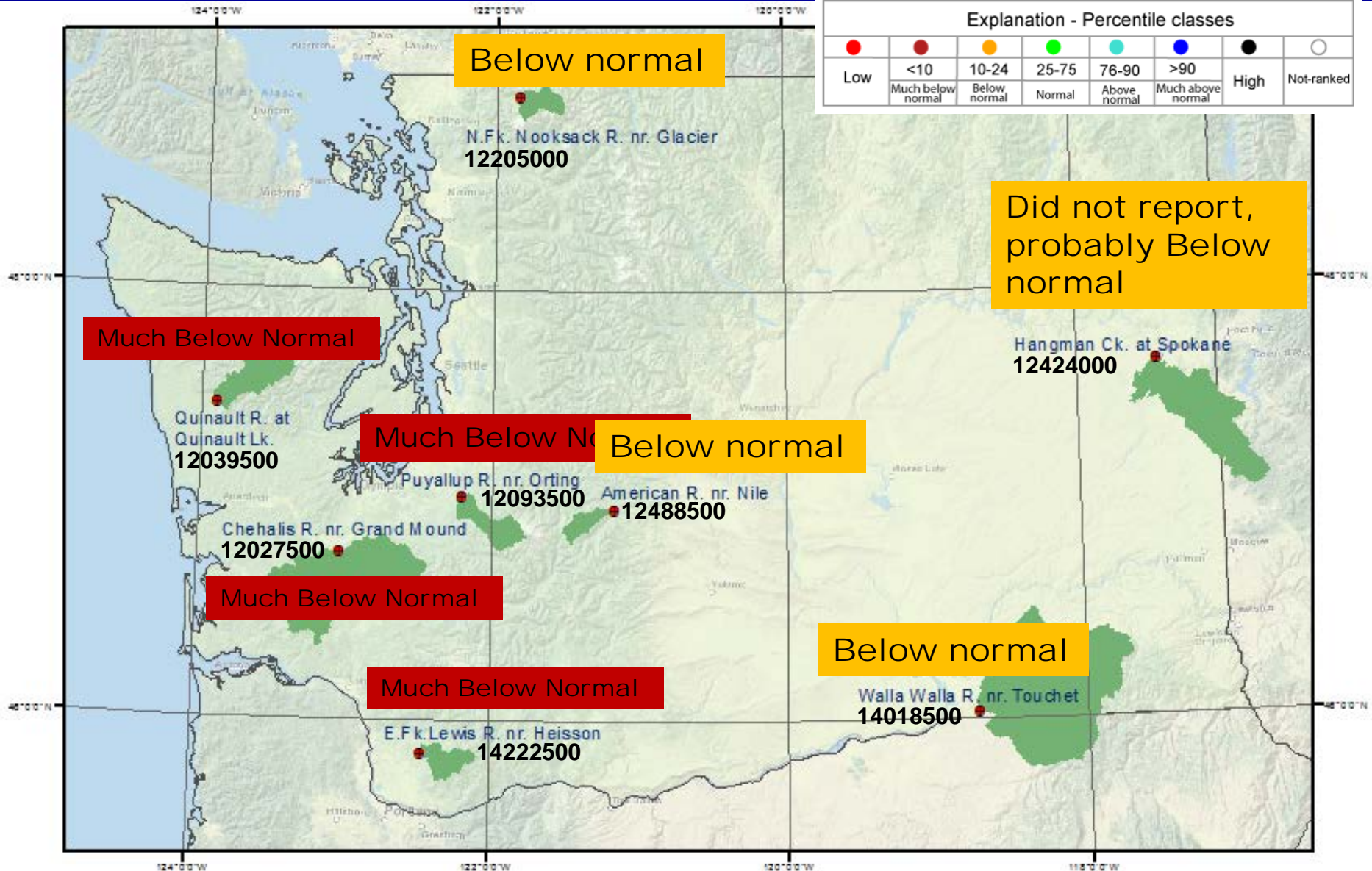


**As of December 11, 2019, statewide 7-day average flows are much below normal**

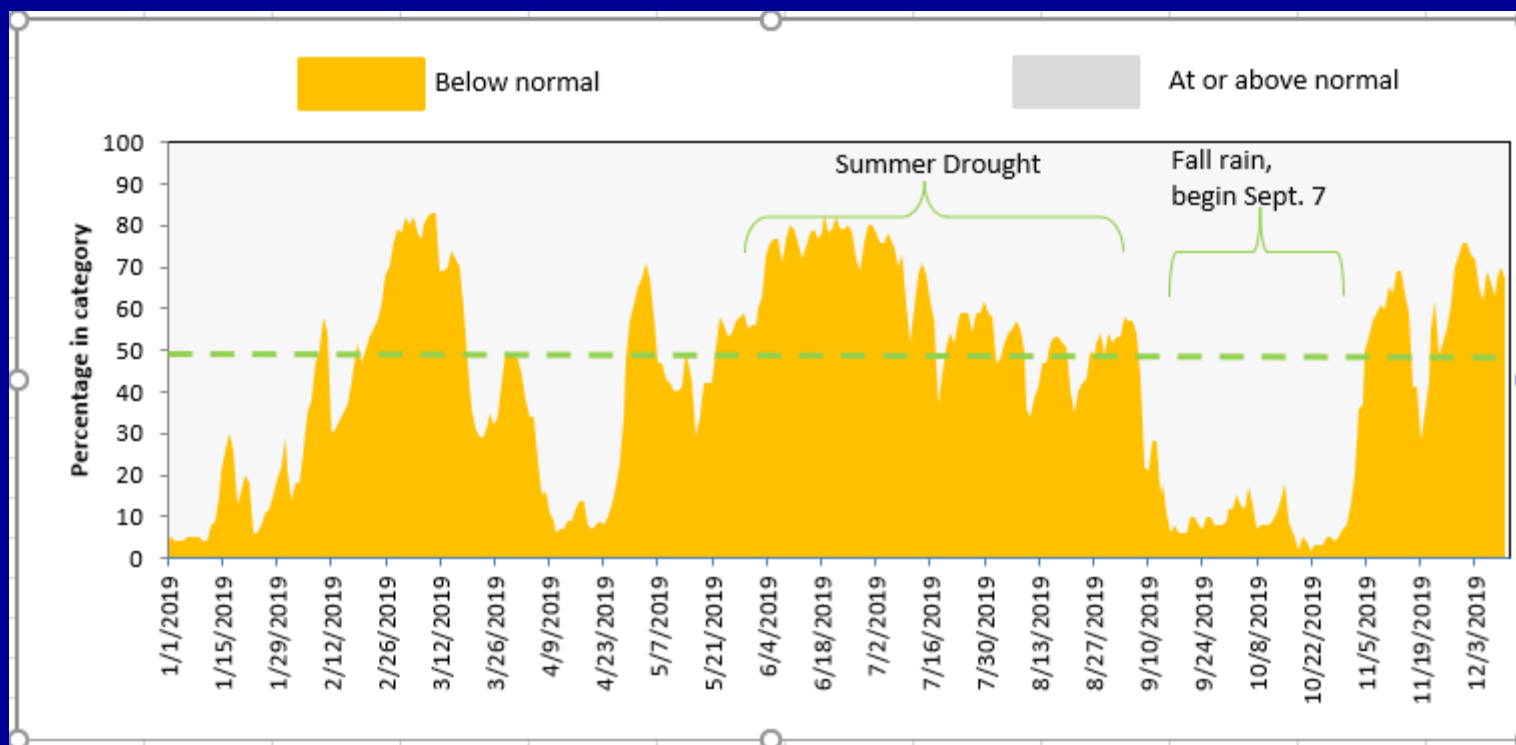
Explanation - Percentile classes						
lowest-10th percentile	5	10-24	25-75	76-90	95	90th percentile -highest
Much below Normal	Below normal	Normal	Above normal	Much above normal		Flow

# Index Gaging Stations, 7-day average streamflow (as of December 12, 2019)

Explanation - Percentile classes							
<span style="color: red;">●</span>	<span style="color: red;">●</span>	<span style="color: orange;">●</span>	<span style="color: green;">●</span>	<span style="color: cyan;">●</span>	<span style="color: blue;">●</span>	<span style="color: black;">●</span>	<span style="color: gray;">○</span>
Low	<10 Much below normal	10-24 Below normal	25-75 Normal	76-90 Above normal	>90 Much above normal	High	Not-ranked

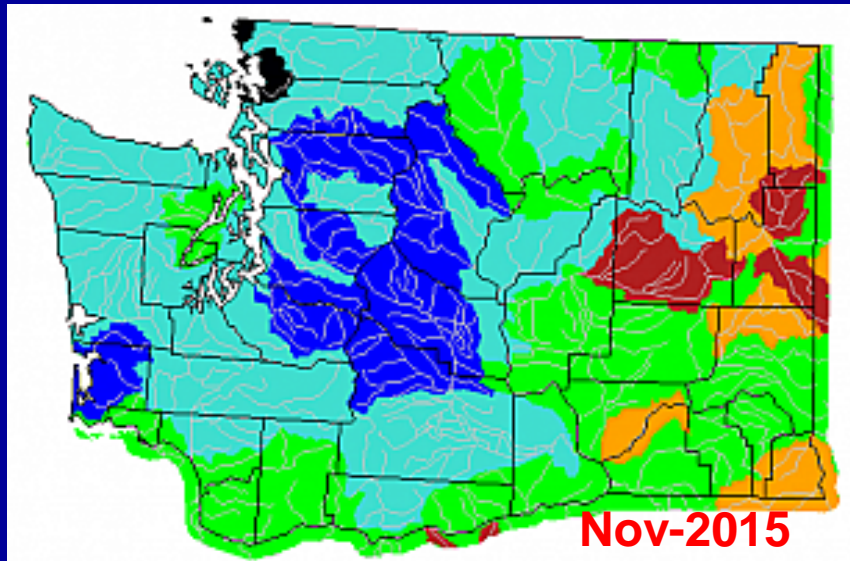


# Daily streamflow in Washington Rivers compared to historical streamflow, Jan 01, 2019 – Dec 11, 2019

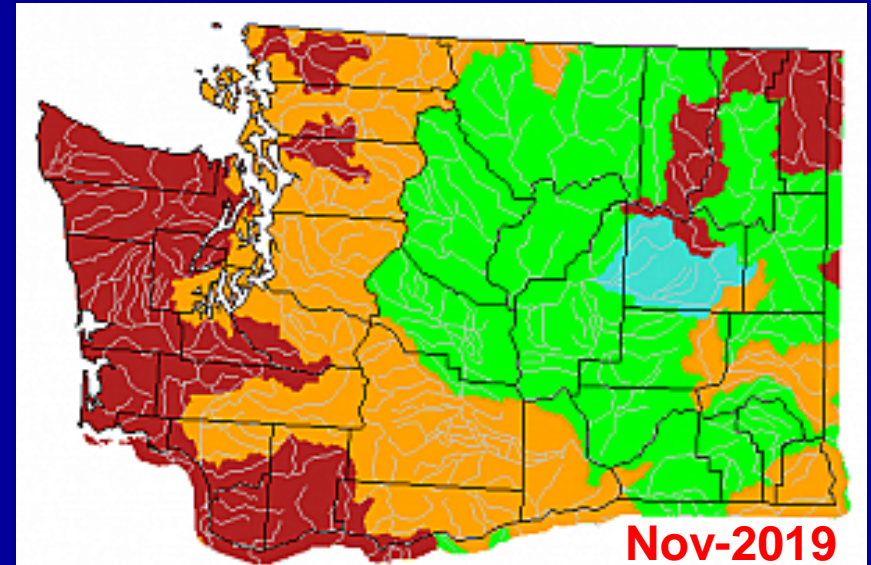
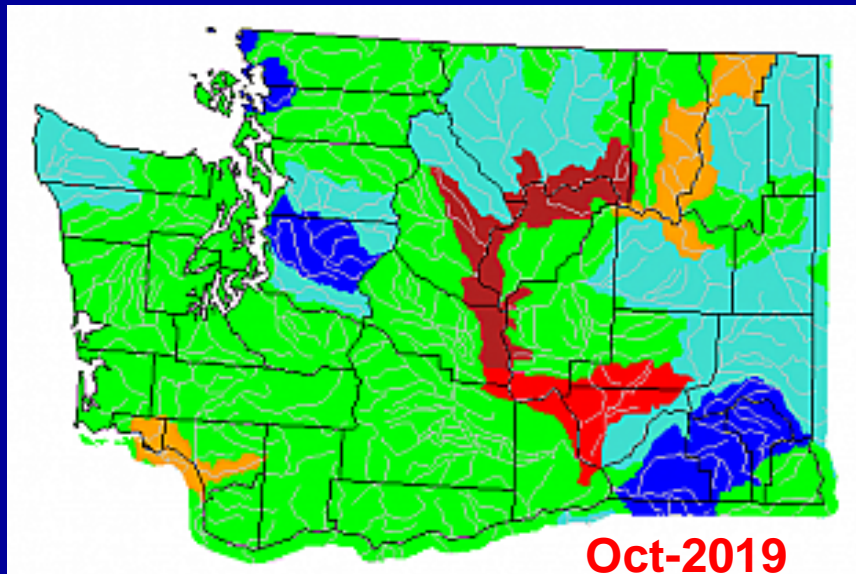




# November 2015 and October-November 2019 Monthly Streamflow



Explanation - Percentile classes						
Low	<10	10-24	25-75	76-90	>90	High
	Much below normal	Below normal	Normal	Above normal	Much above normal	



# Groundwater Conditions

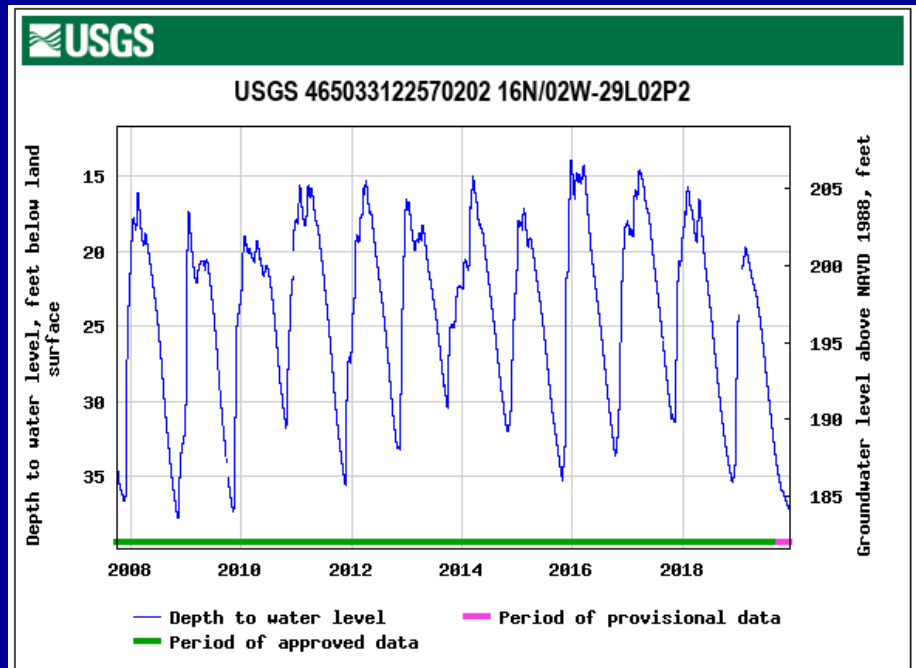
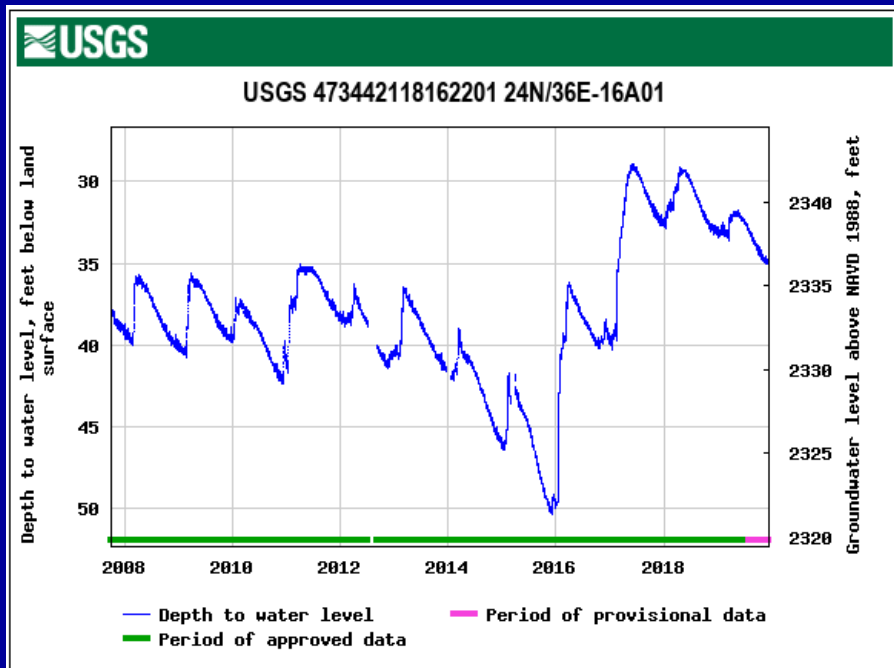
December 1, 2019 to December 13, 2019  
and Oct. 1, 2007 to December 13, 2019

## Davenport well

- 117-ft deep
- Wanapum Basalt

## Scatter Creek well

- 82-ft deep
- Sand and gravel



# Summary

## Streamflow and Groundwater Conditions as of December 11-13, 2019

- ✓ **7-day average streamflow** showed mostly **Normal** conditions in the North-Central region, **Below Normal** for the rest of the east side of the State and **Below to Much Below Normal** on the East side of the State.
- ✓ As of December 12th, daily mean streamflow is at **Normal and Above** at only 32 percent of the 150 reporting streamflow sites (In October it was 82 percent).
- ✓ **7-day average streamflow at eight index gaging stations:**
  - West side had four sites as **Much Below Normal** and one site as Below **Normal**.
  - East side had all sites as, **Below Normal**. (Hangman Ck. did not report, but appears to be in the Below Normal class)
- ✓ **Groundwater level** in the eastern Washington well showed an up and down pattern over the last month, but is still above the long-term normal. The Scatter Creek well levels showed a response to fall rains, but it is about a month later than usual. The water levels are a bit lower than where it usually is this time of year.