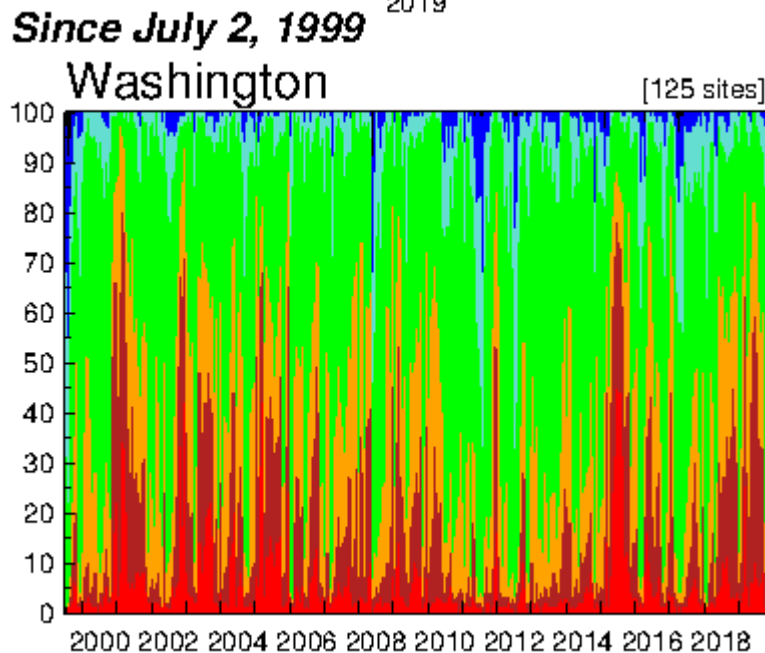
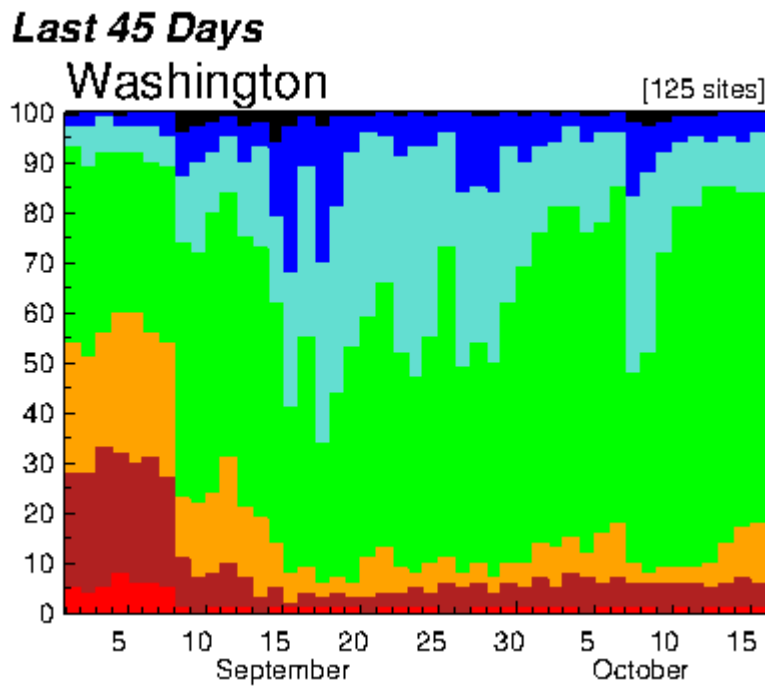


# Streamflow Conditions in Washington State as of October 15-16, 2019

Presented by Mark Mastin to the Washington State Water Supply Availability Committee  
October 17, 2019



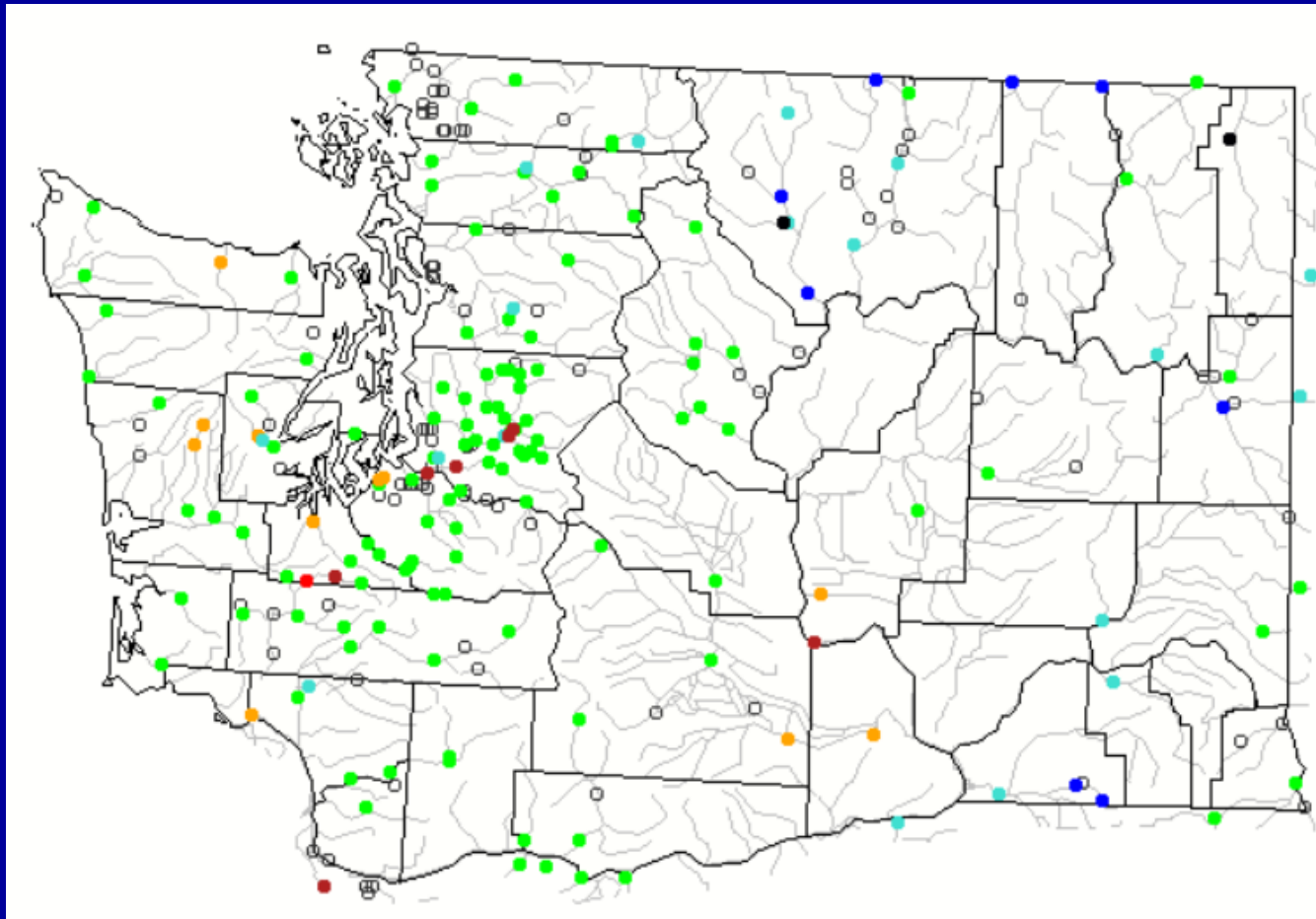
WaterWatch time series plot of real-time streamflow compared to historical streamflow for the day of the year for Washington State.



Explanation - Percentile classes

Low	<10	10-24	25-75	76-90	>90	High	No Data	
	Much below normal	Below normal	Normal	Above normal	Much above normal			

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



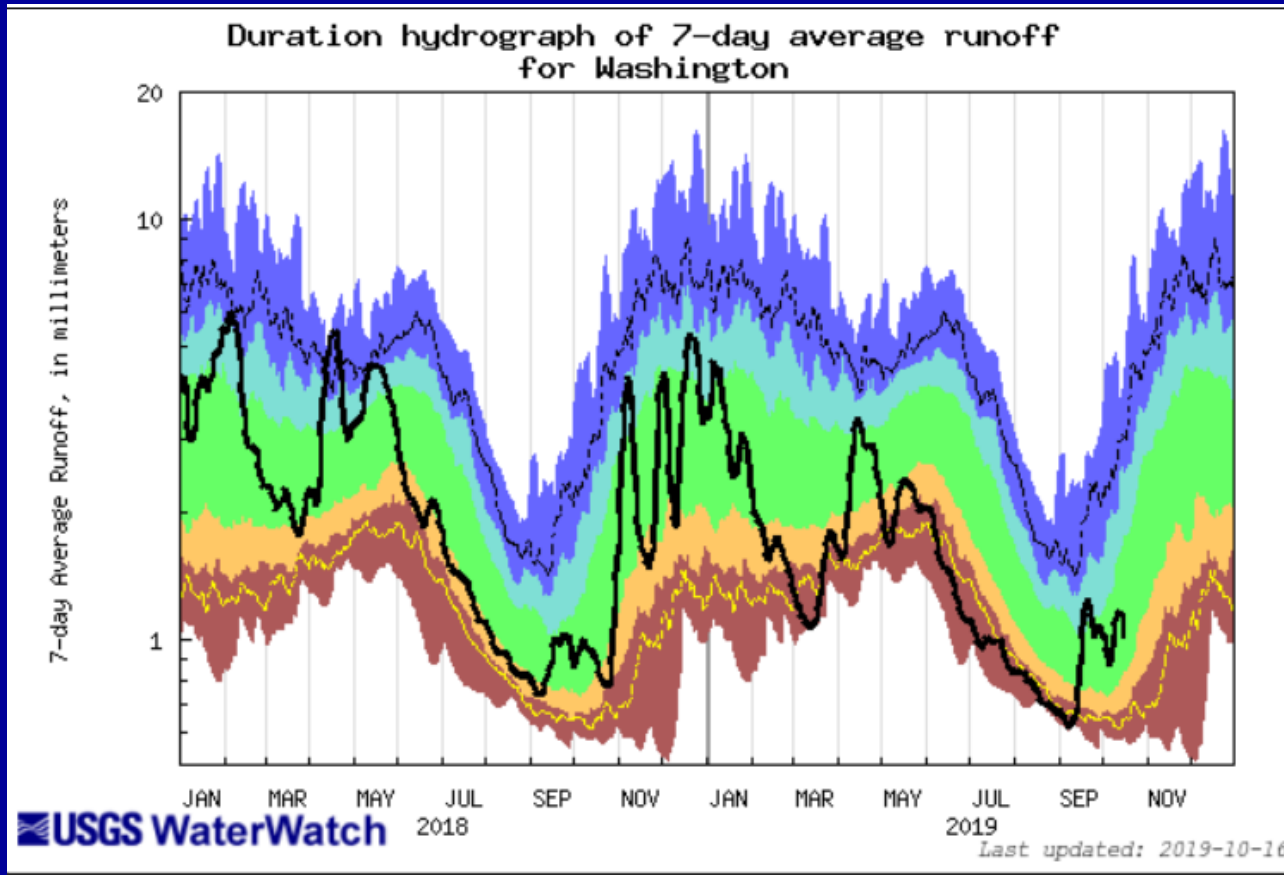
Recent rains will add more runoff and may not have been completely captured in this 7-day average.

October 15, 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	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 (updated October 16, 2019)

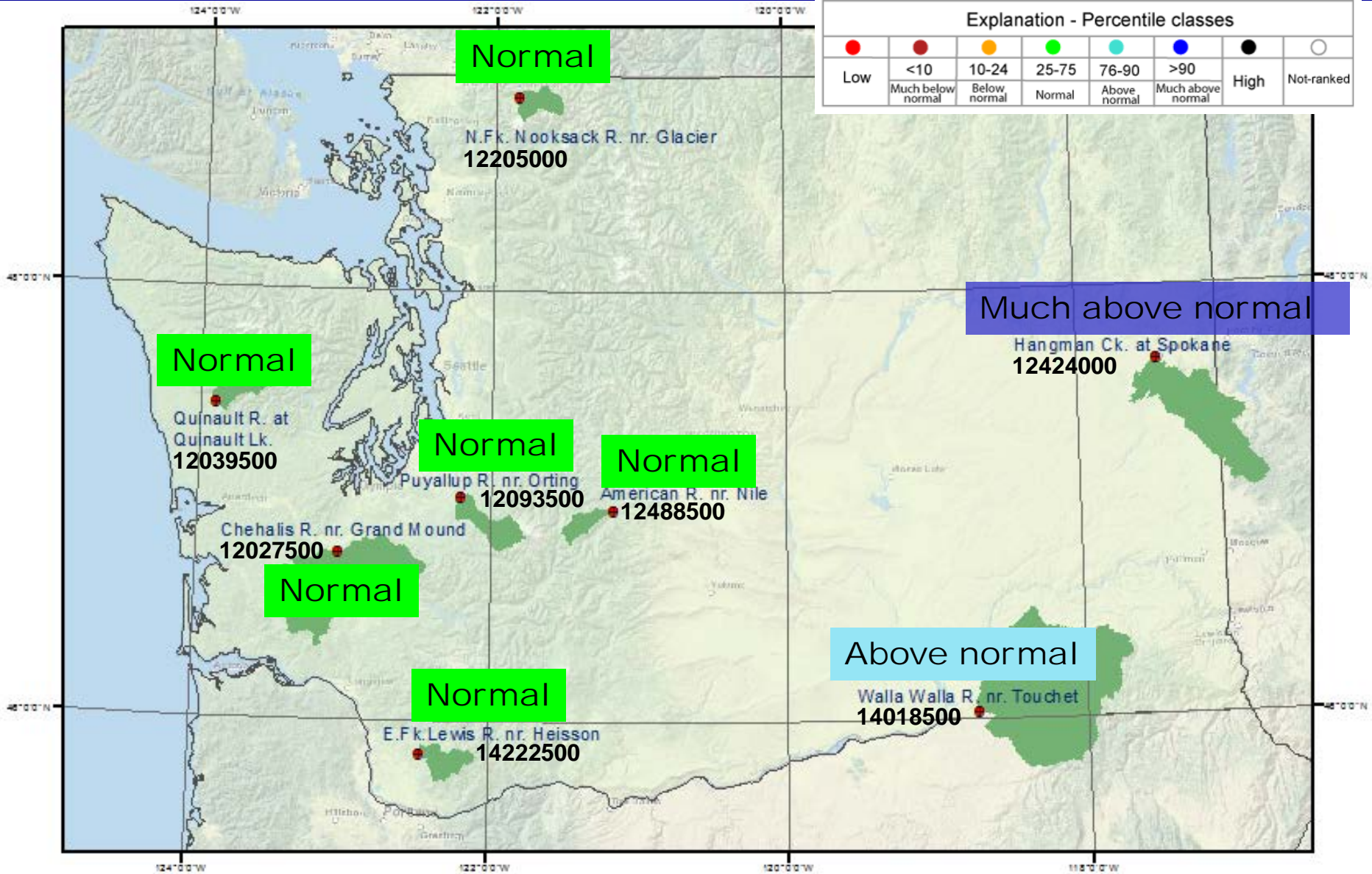


As of October 16, 2019, statewide 7-day average flows are about average.

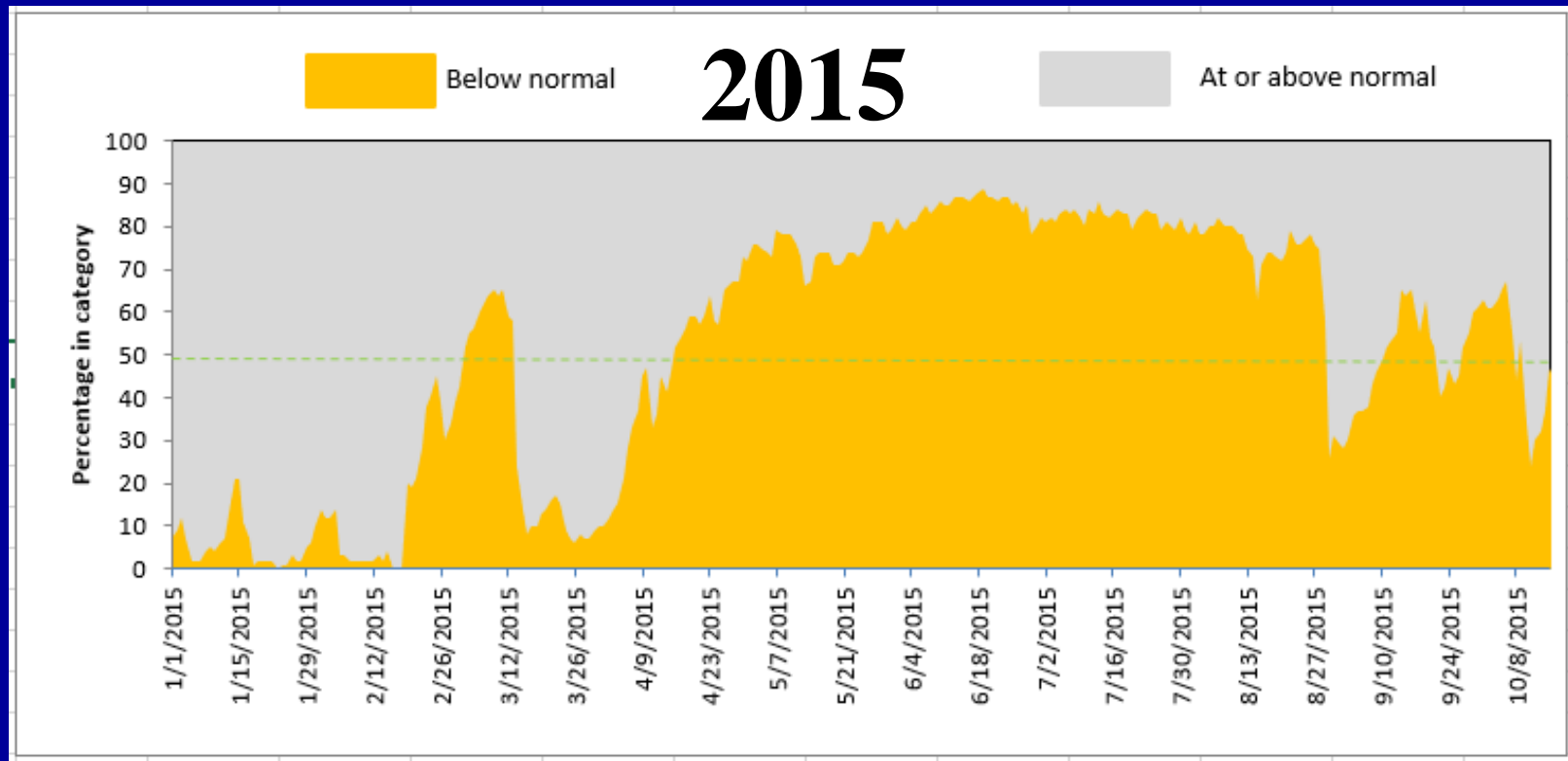
Explanation - Percentile classes						
lowest-10th percentile	5	10-24	25-75	76-90	95	90th percentile -highest
Much below Normal	Below normal	Normal	Above normal	Much above normal		Flow

# Index Gaging Stations, 7-day average streamflow (as of October 15, 2019)

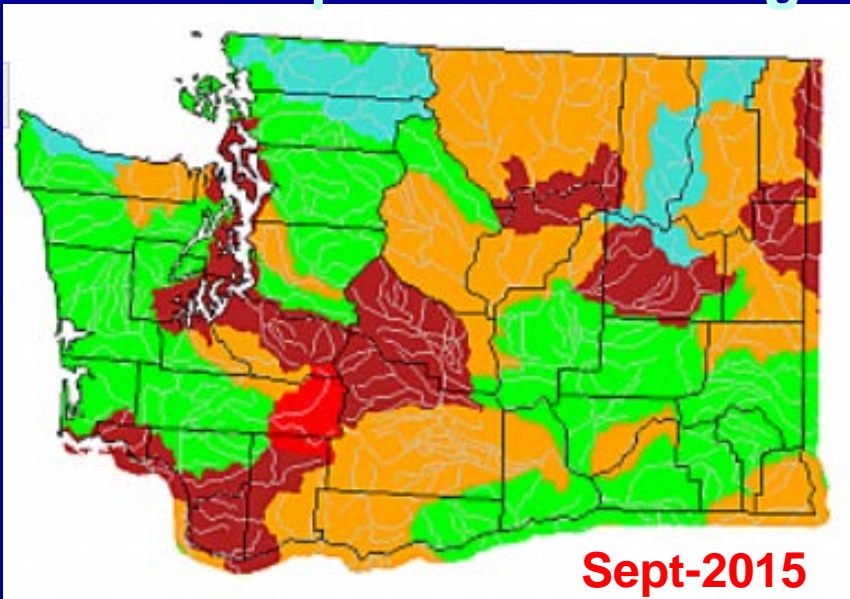
Explanation - Percentile classes							
Low	<10 Much below normal	10-24 Below normal	25-75 Normal	76-90 Above normal	>90 Much above normal	High	Not-ranked



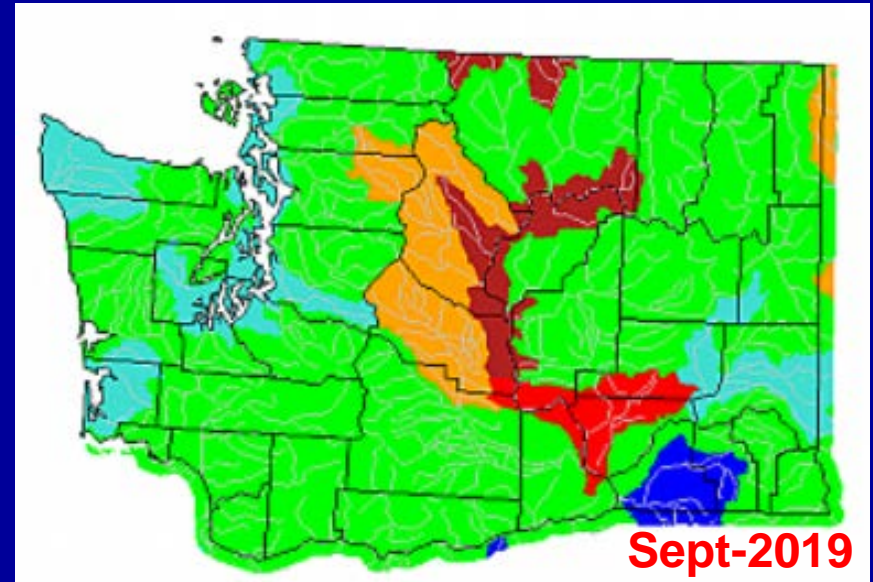
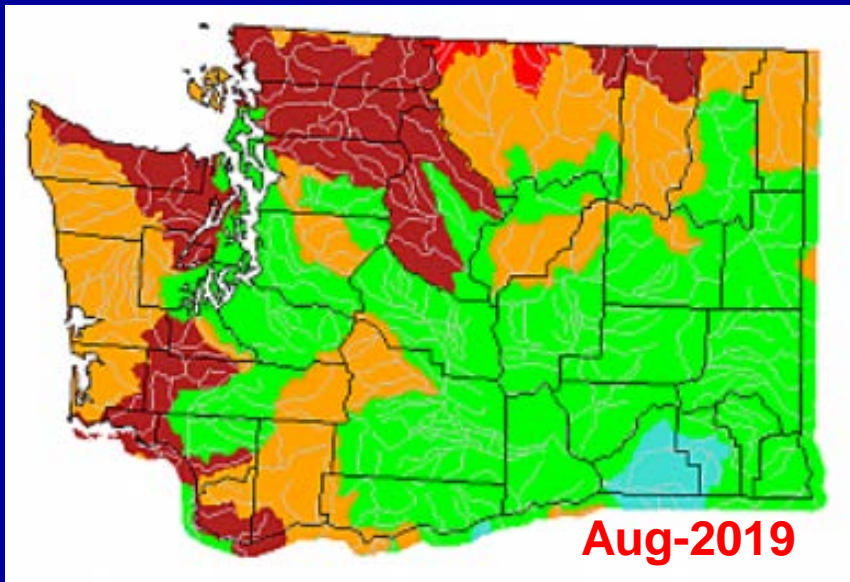
# Daily streamflow in Washington Rivers compared to historical streamflow, Jan 01, 2019 – Oct 15, 2019



# Sept 2015 and August and Sept 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

September 1, 2019 to October 16, 2019

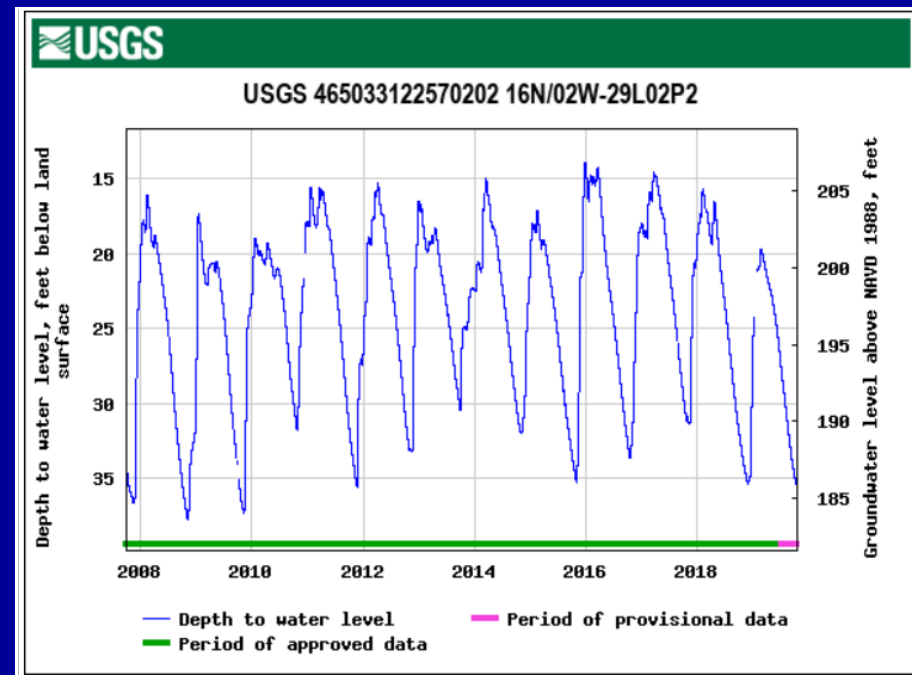
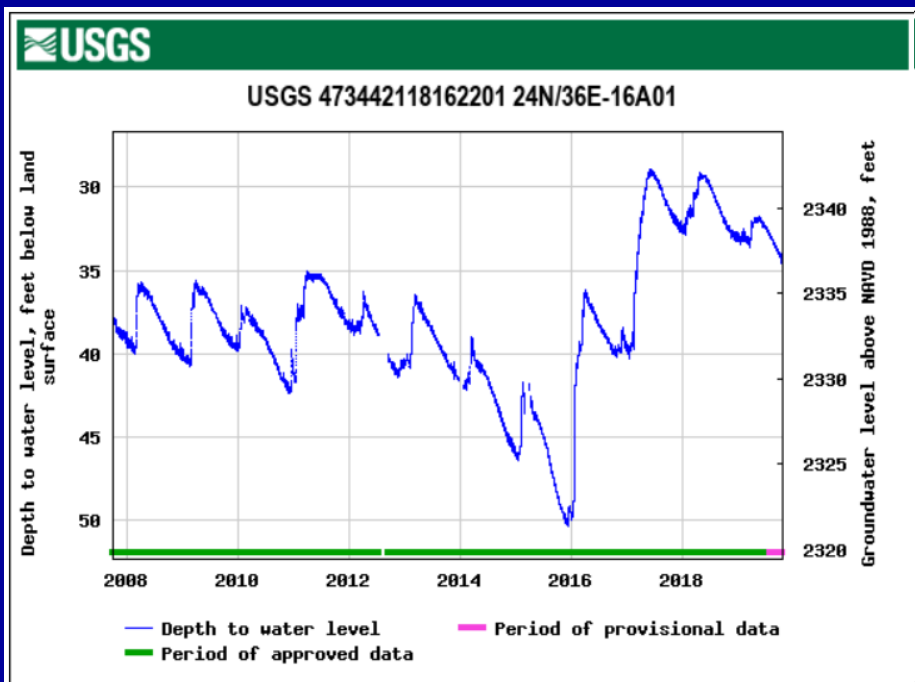
and Oct. 1, 2007 to October 16, 2019

## Davenport well

- 117-ft deep
- Wanapum Basalt

## Scatter Creek well

- 82-ft deep
- Sand and gravel



# Summary

## Streamflow and Groundwater Conditions as of October 15-16, 2019

- ✓ **7-day average streamflow** showed mostly **Normal** conditions on the west side of the State and **Above Normal** to **Much Above Normal** on the East side of the State.
- ✓ As of October 15th, daily mean streamflow is at Normal and Above at 82 percent of the 151 reporting streamflow sites.
- ✓ **7-day average streamflow at eight index gaging stations:**
  - West side had all five sites as Normal
  - East side had a site in each of the categories, Normal, Above Normal, and Much above Normal.
- ✓ **Groundwater level** in the eastern Washington well showed an up and down pattern with an overall drop in water levels over the last month, but is still above the long-term normal. The Scatter Creek well levels showed no response to recent rains and have been slowly dropping over the last couple of months. The water levels are a bit lower than where it usually is this time of year.