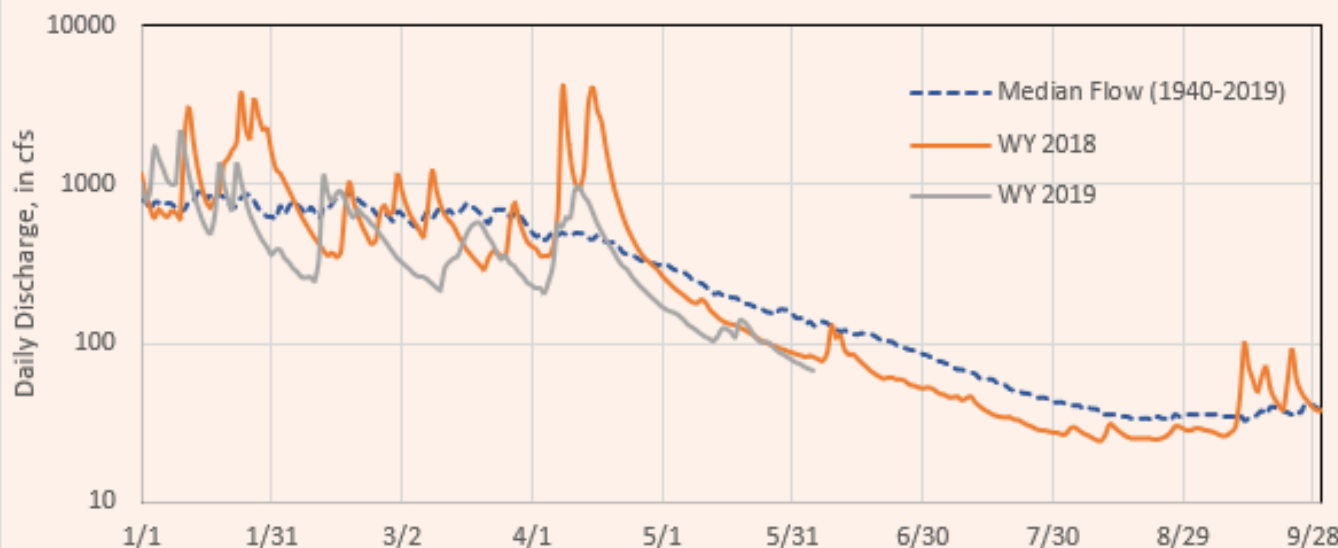


Streamflow Conditions in Washington State as of June 5-6, 2019

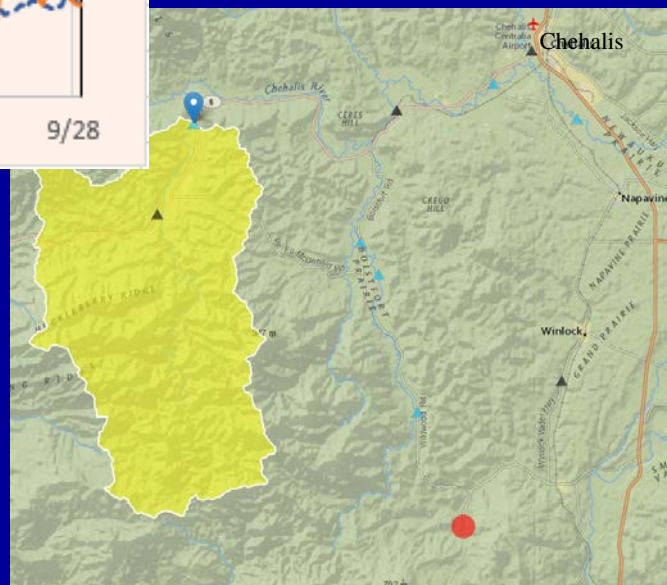
Presented by Mark Mastin to the Washington State
Water Supply Availability Committee
June 7, 2019

Chehalis River near Doty, Sta. # 12020000



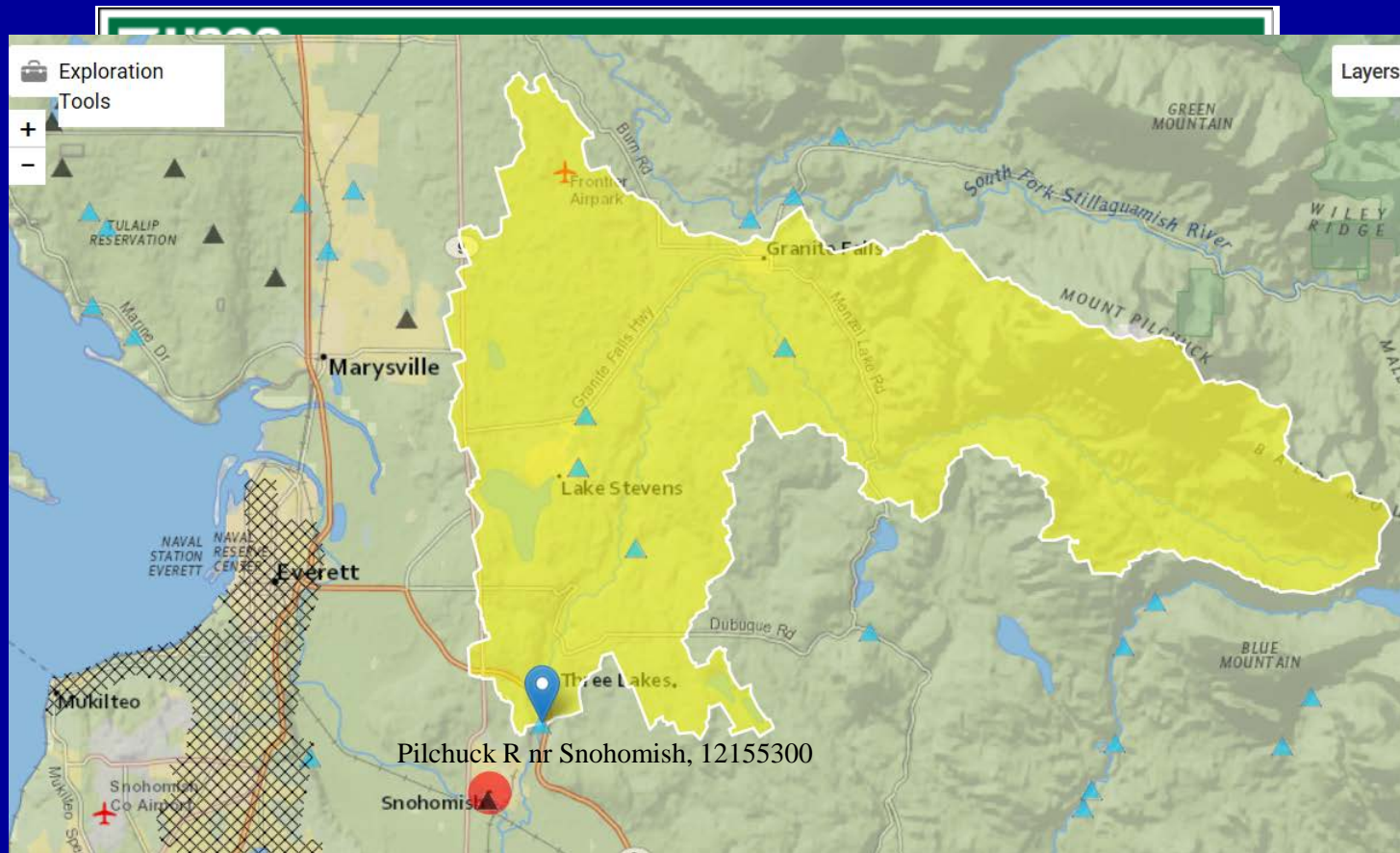
For June 5th:
Median flow = 130 cfs
Current flow = 67.8 cfs

Upper Chehalis River Basin (yellow on map) as an
analog basin for Ryderwood (red dot) water supply

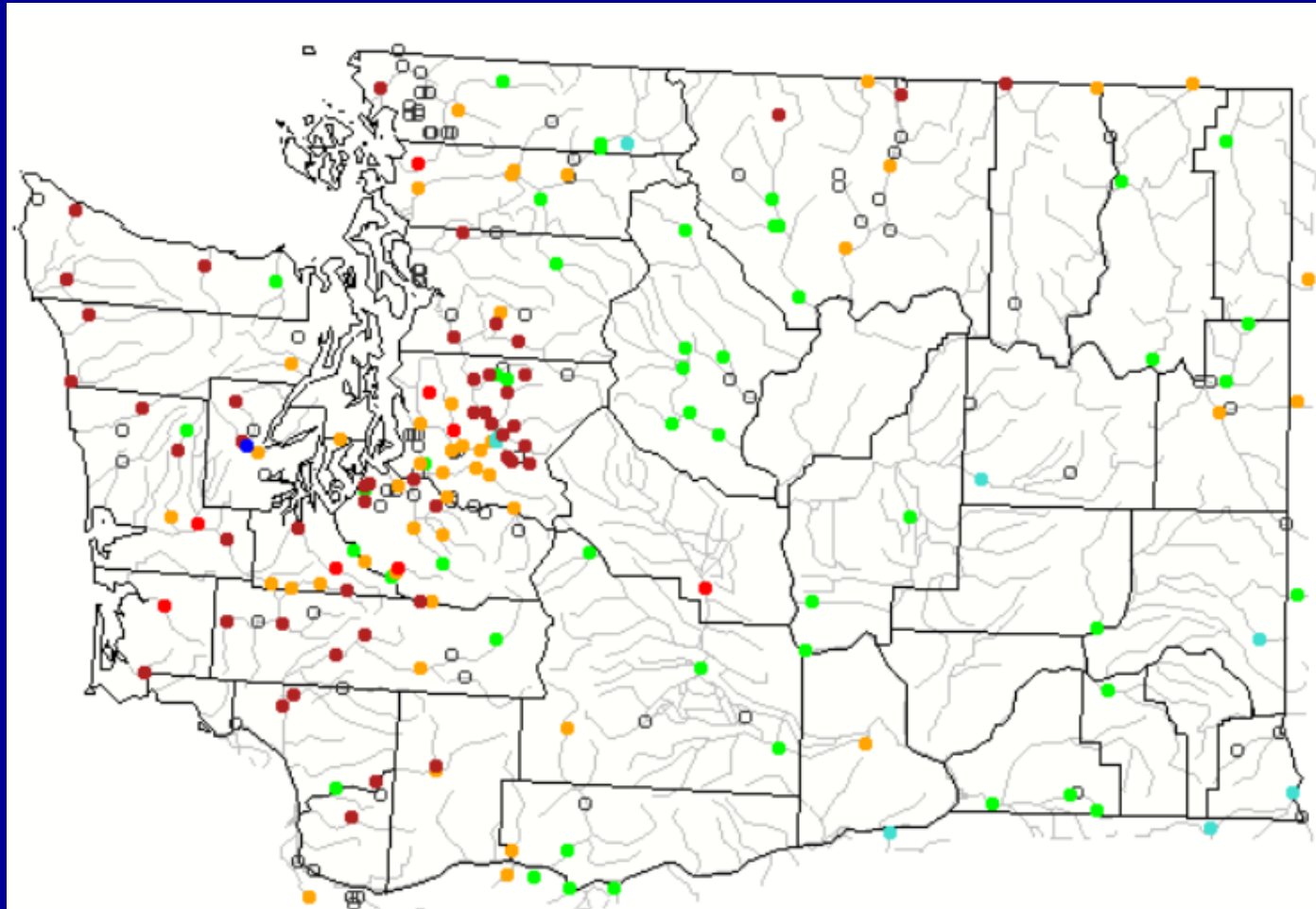


East King and Snohomish County Forecasts

- NRCS has a forecast station on the SF Tolt R nr Index
 - High elevation (1,850 – 5,200 ft)
 - Currently at 124% of average (50% exceedance, April-July)
- Observed flow at Pilchuck R. nr Snohomish as an index station
 - Lower elevation (30- 5,200 ft)











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



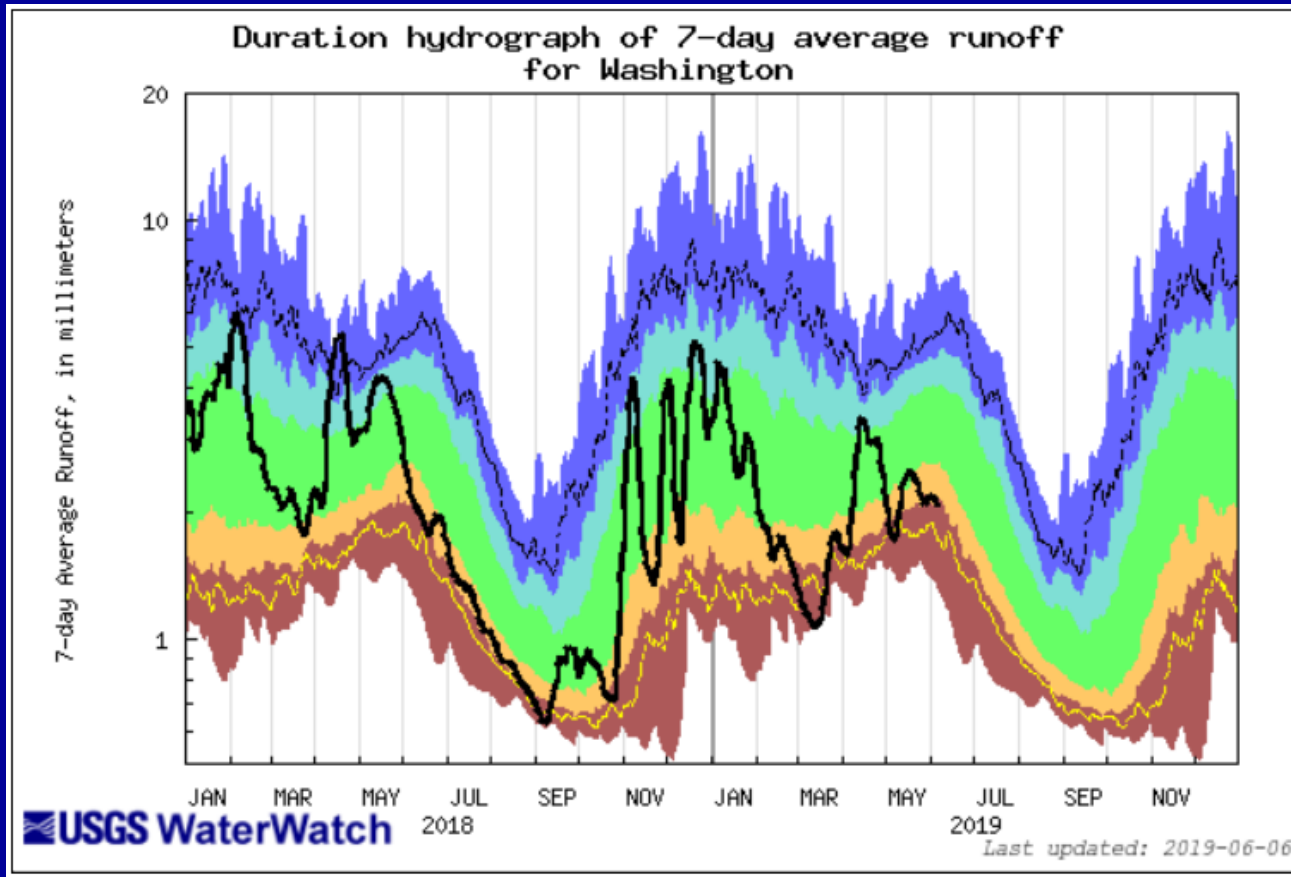
Similar to last month except for lower flows on the Okanogan and Kettle Rivers

June 5, 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 (updated June 6, 2019)

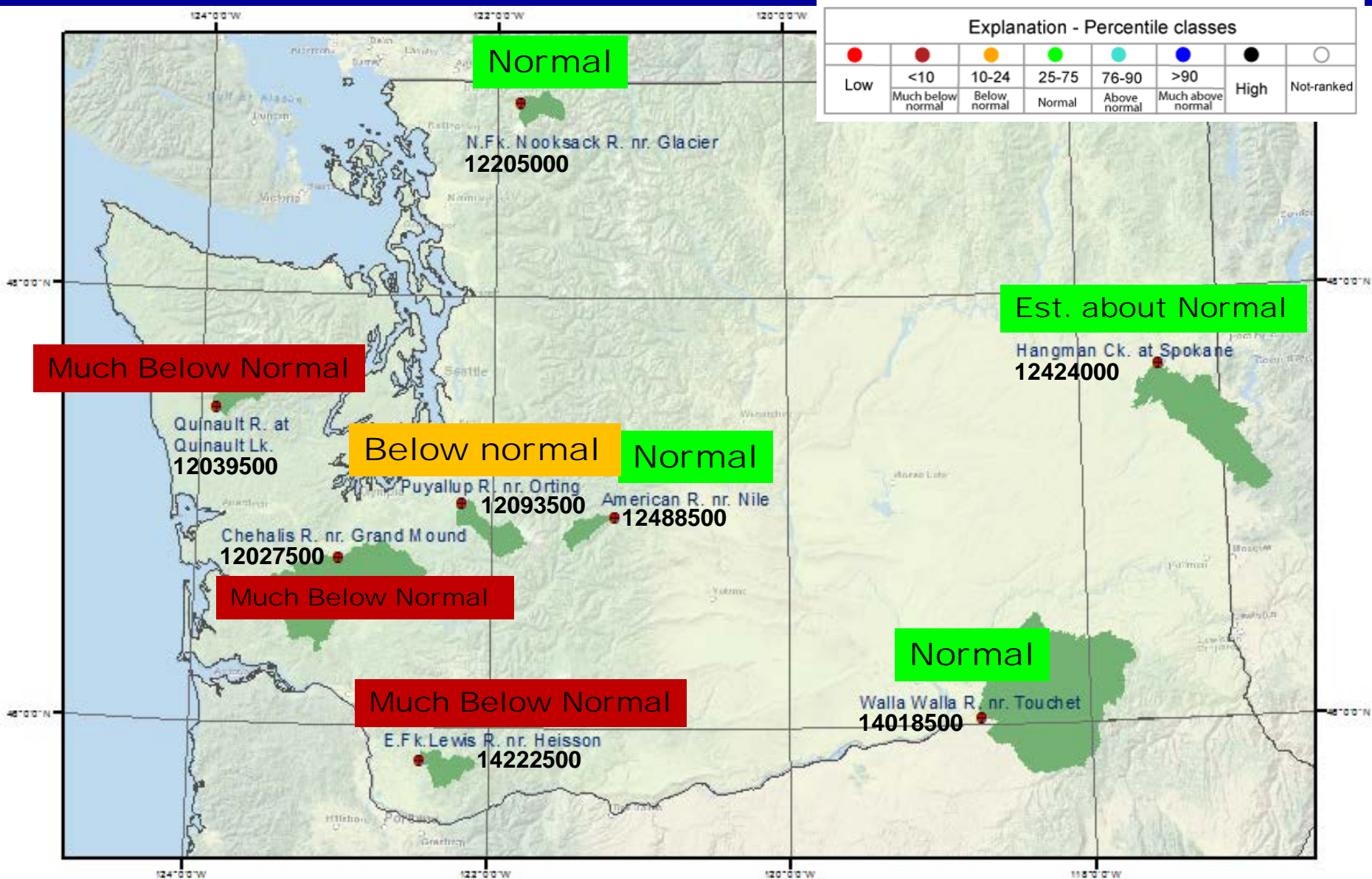


As of June 6, 2019, statewide 7-day average flows are about at the 10% percentile, on the border of Much Below Normal and Below Normal categories.

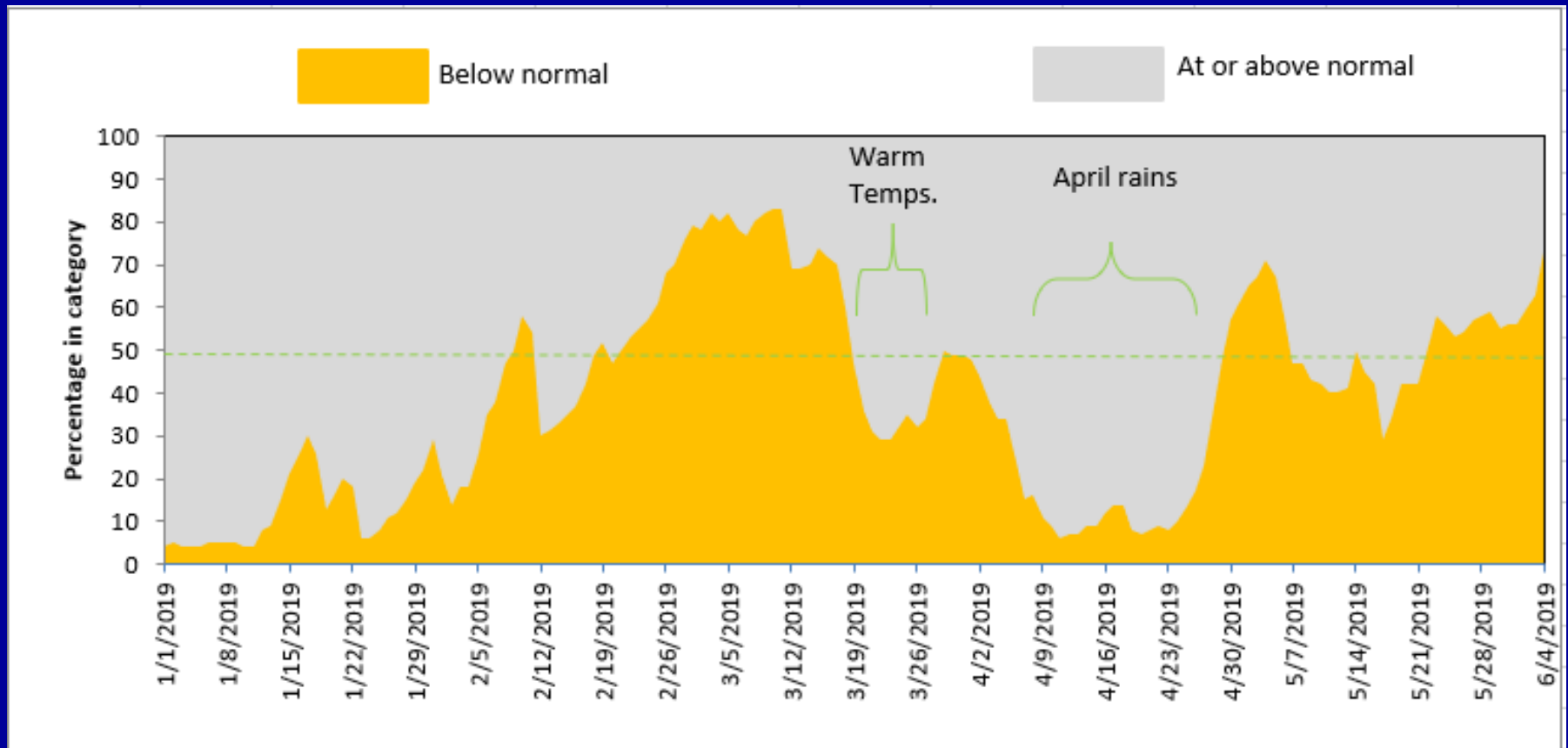
Explanation - Percentile classes						
lowest-10th percentile	5	10-24	25-75	76-90	95	90th percentile-highest
Much below Normal	Below normal	Normal	Above normal	Much above normal		Flow

Index Gaging Stations, 7-day average streamflow (as of June 6, 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

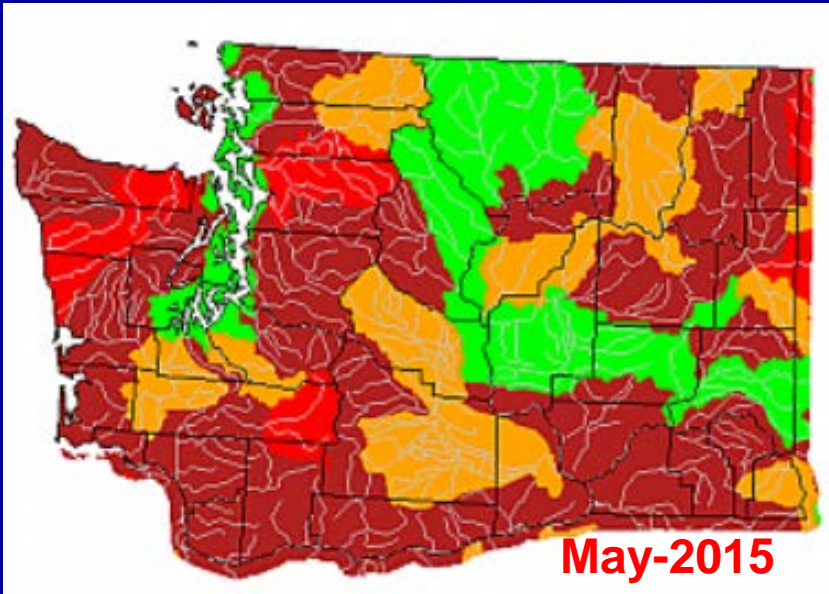


Daily streamflow in Washington Rivers compared to historical streamflow, January 01, 2019 – June 5, 2019

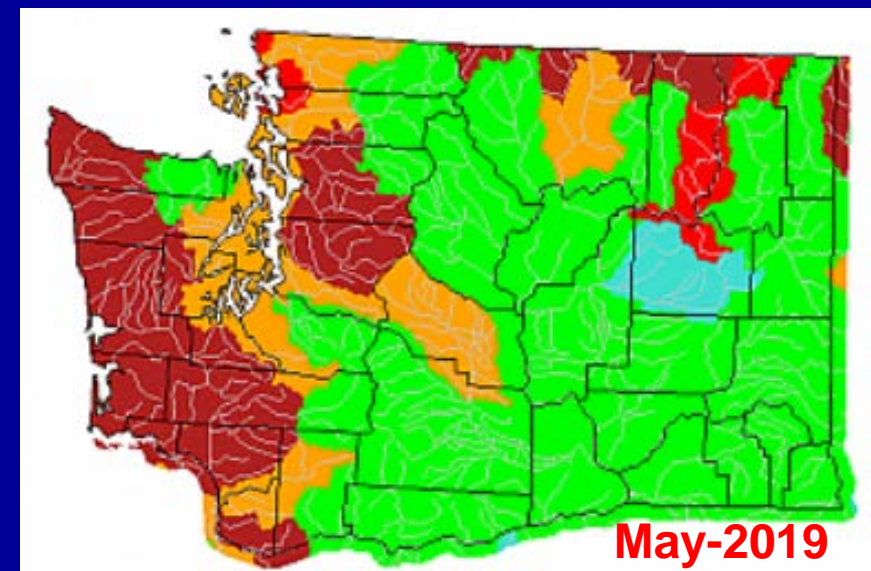
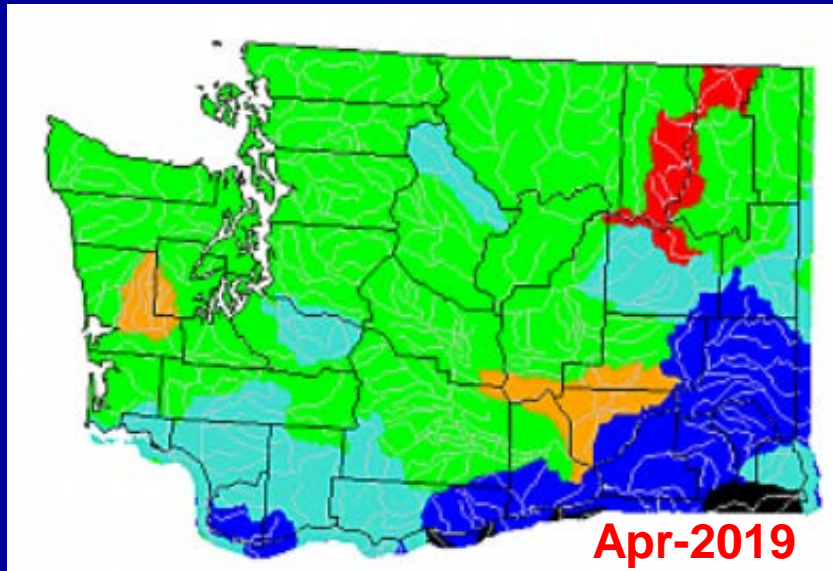


May 2015 and April and May 2019

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

January 1, 2019 to June 6, 2019

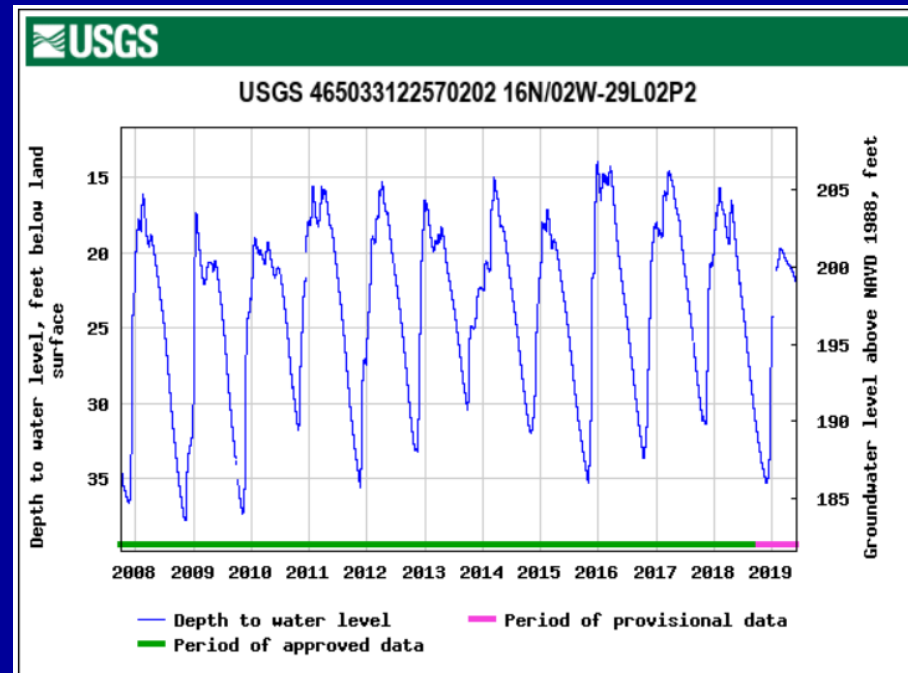
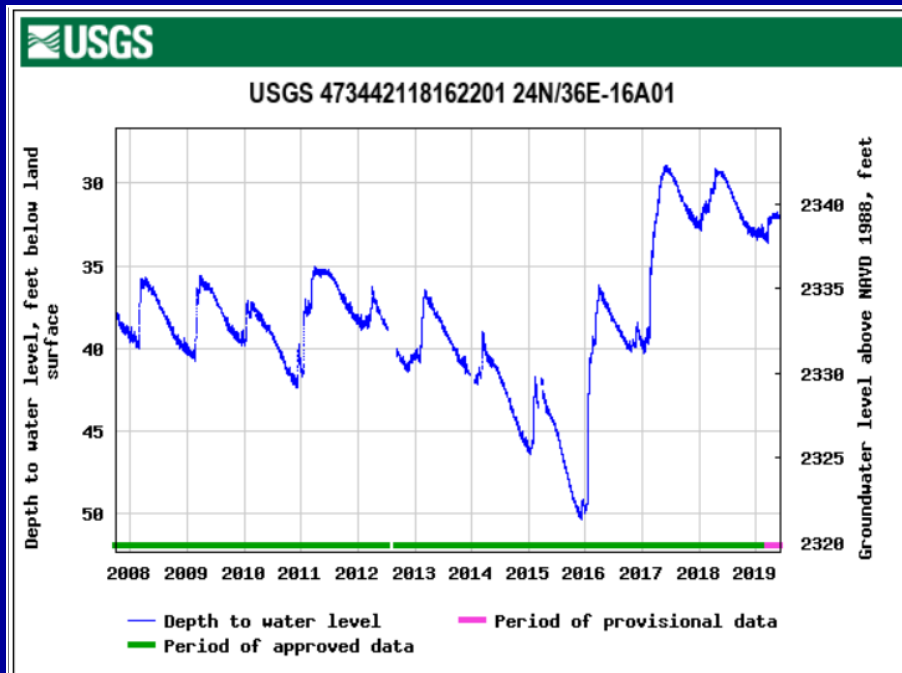
and Oct. 1, 2007 to June 6, 2019

Davenport well

- 117-ft deep
- Wanapum Basalt

Scatter Creek well

- 82-ft deep
- Sand and gravel



Summary

Streamflow and Groundwater Conditions as of June 5-6, 2019

- ✓ 7-day average streamflow is mostly much below normal to below normal on the west side of the state with several record 7-day low flows for the day. It is mostly below normal to normal on the east side of the State with comparatively lower flows in the north-central over last month.
- ✓ As of June 6, daily mean streamflow is at normal and above at 27 percent of the 153 reporting streamflow sites.
- ✓ 7-day average streamflow at eight index gaging stations:
 - West side had three Much Below Normal stations, one Below Normal, and one Normal
 - East side had all three stations in the Normal category.
- ✓ Groundwater level in the eastern Washington well showed a gradual drop over the last month, but is still above normal. The Scatter Creek well levels have been slowly dropping over the last couple of months and it is lower than where it usually is this time of year.