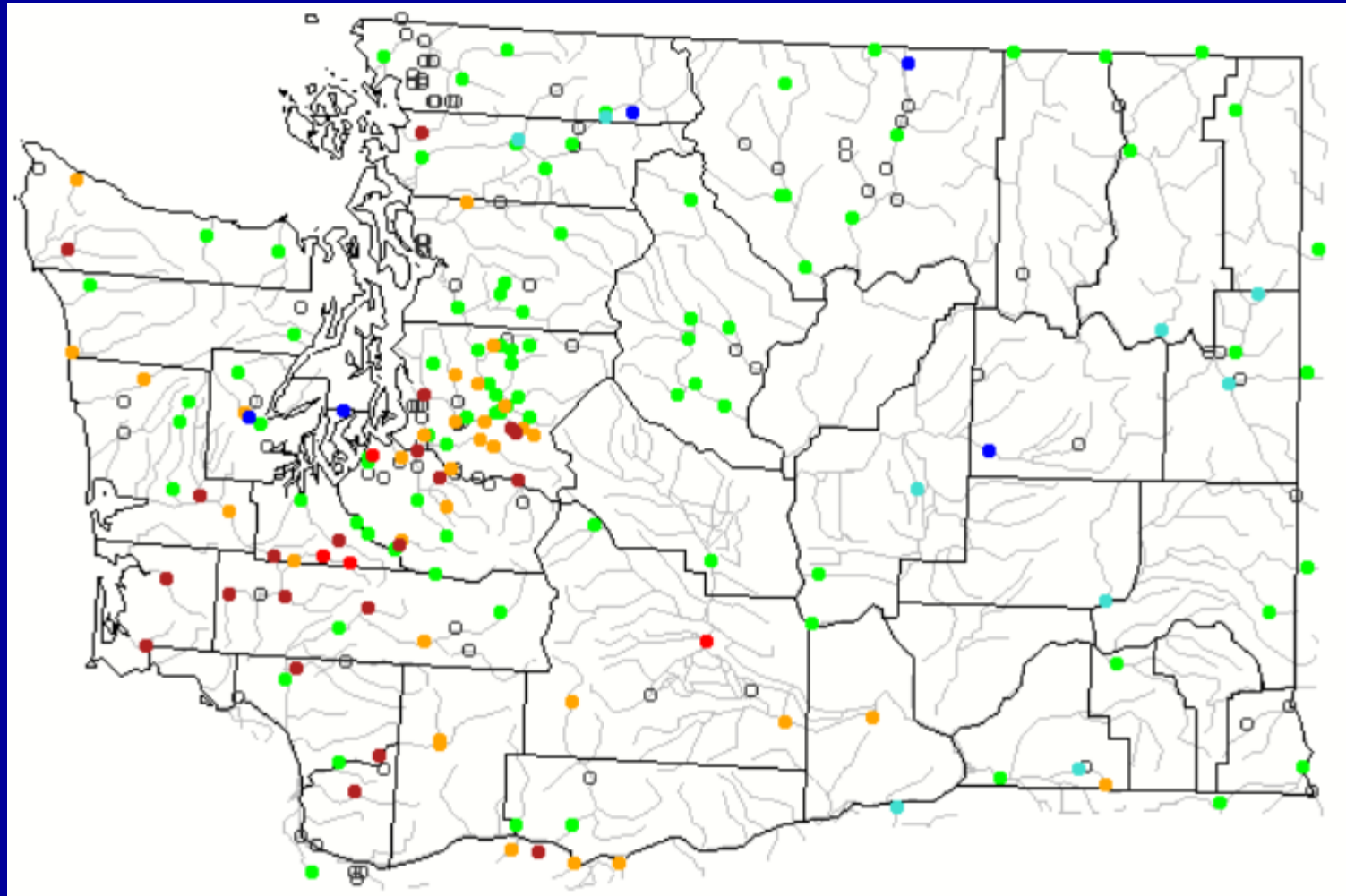


Streamflow Conditions in Washington State Late June 2018

**Presented
to
The Washington State
Water Supply Availability Committee
on
June 29, 2018**

**by
Rick Dinicola**

7-day Average Streamflow

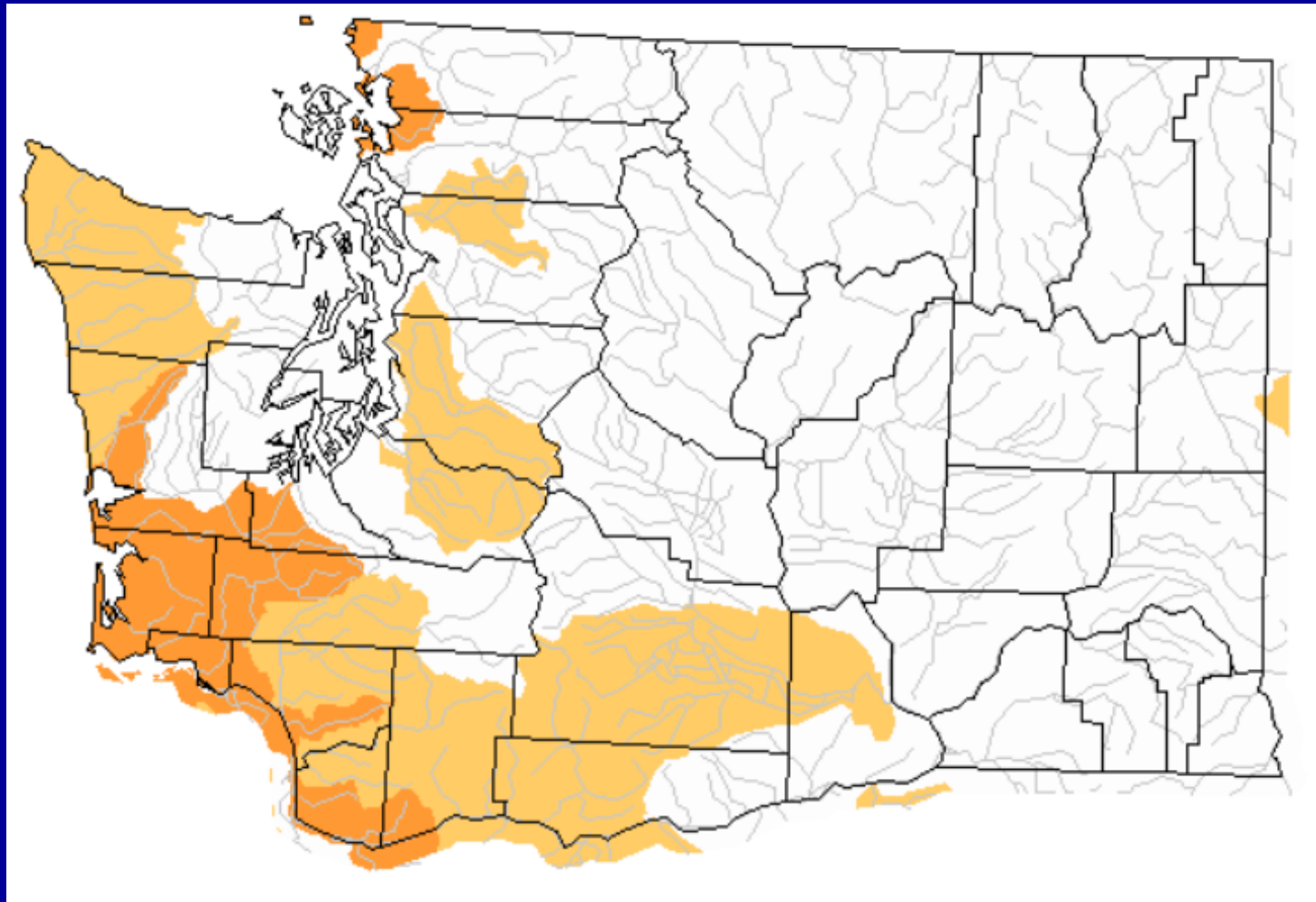


June 26, 2018






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		

7-day Average Streamflow

Streamflow drought severity by hydrologic unit

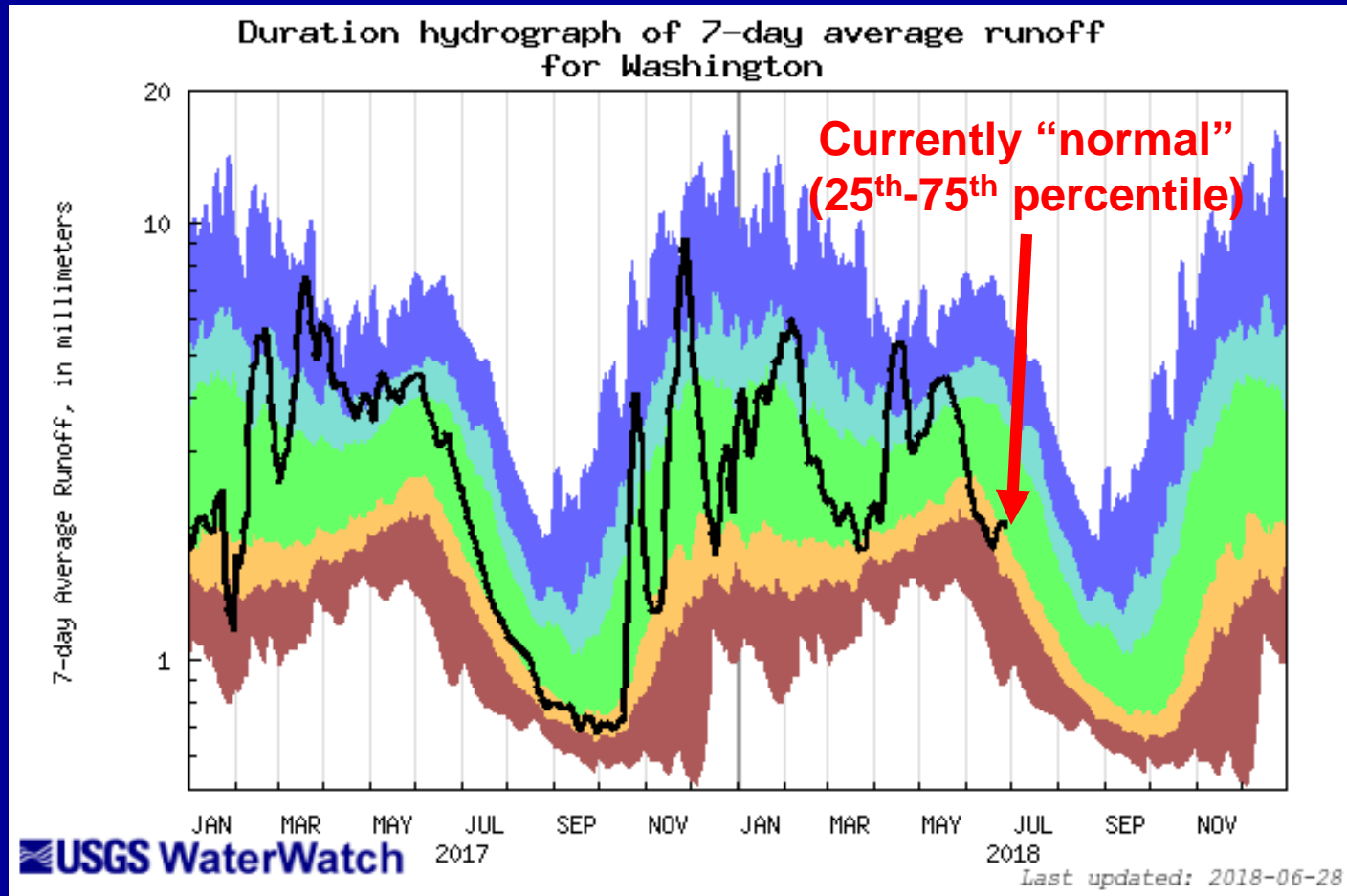


June 27, 2018

Explanation - Percentile classes				
				
Low	<=5	6-9	10-24	Insufficient data for a hydrologic region
Extreme hydrologic drought	Severe hydrologic drought	Moderate hydrologic drought	Below normal	

Duration Hydrograph, Washington State

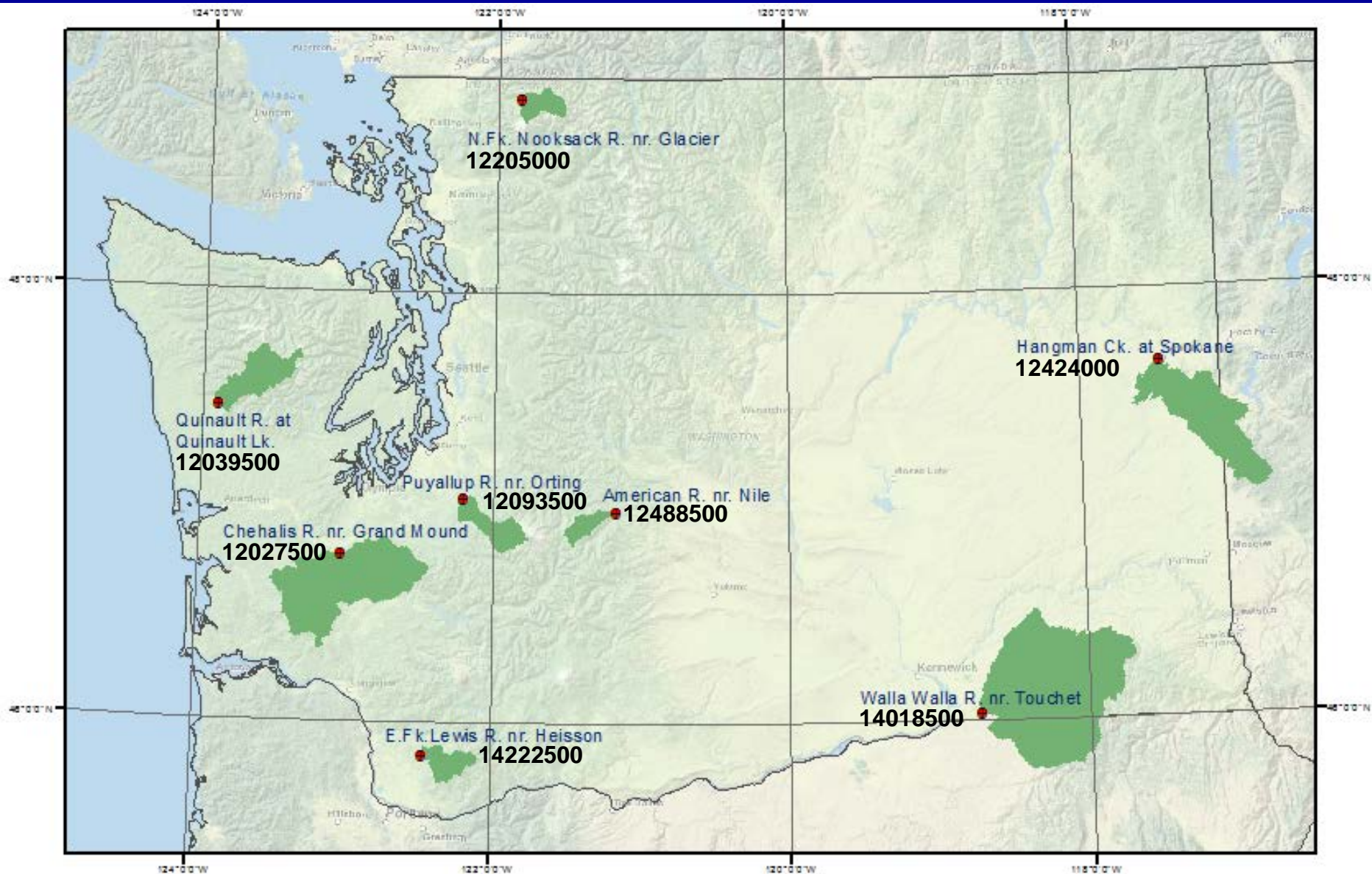
7-day Average Cumulative Streamflow (June 28, 2018)



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

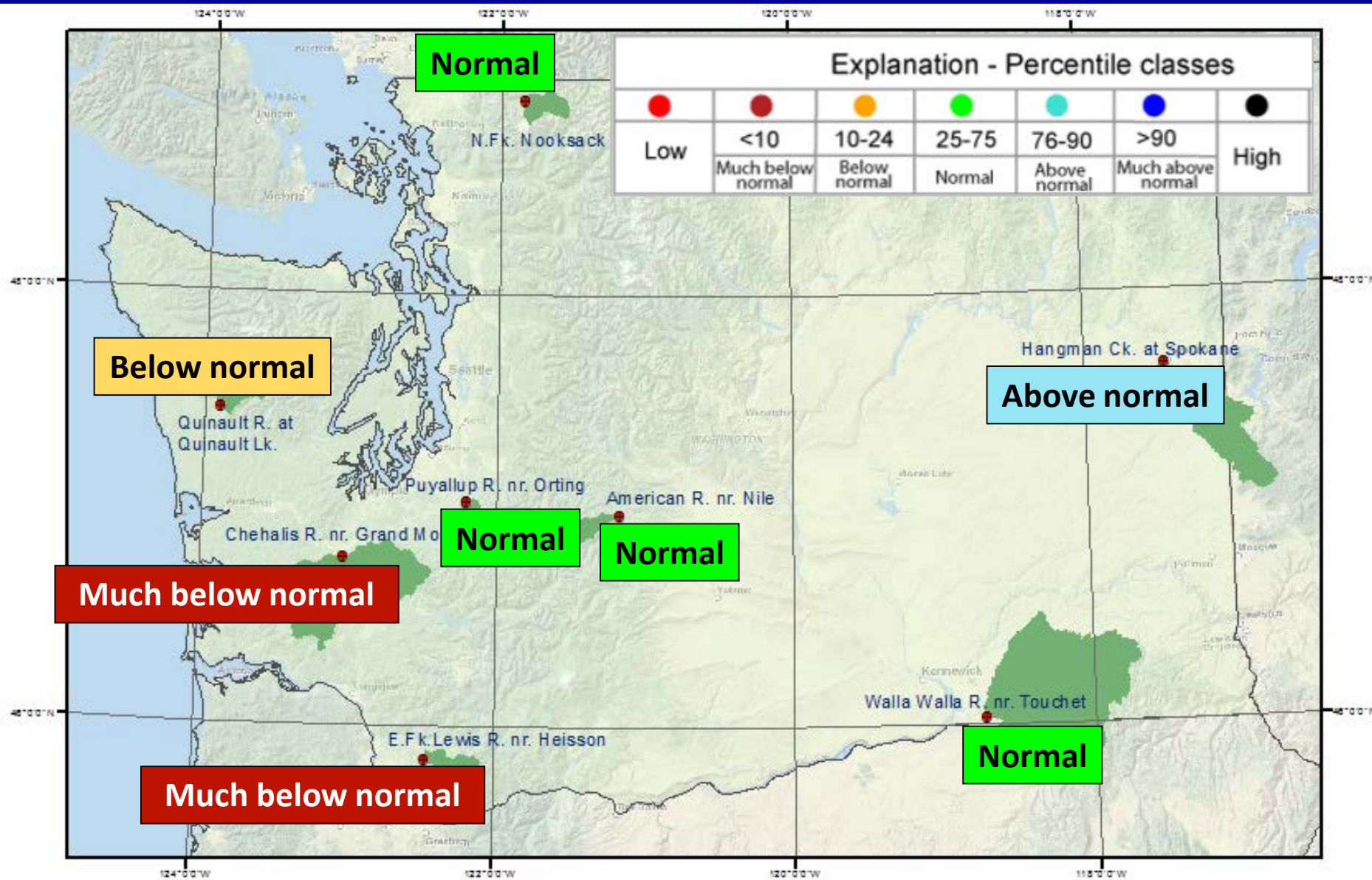
Index Gaging Stations

Stations that measure natural or near-natural streamflow



Index Gaging Stations

7-day average streamflow (as of June 26, 2018)



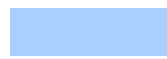
Daily streamflow in Washington Rivers compared to historical streamflow

June 27, 2017 – June 26, 2018

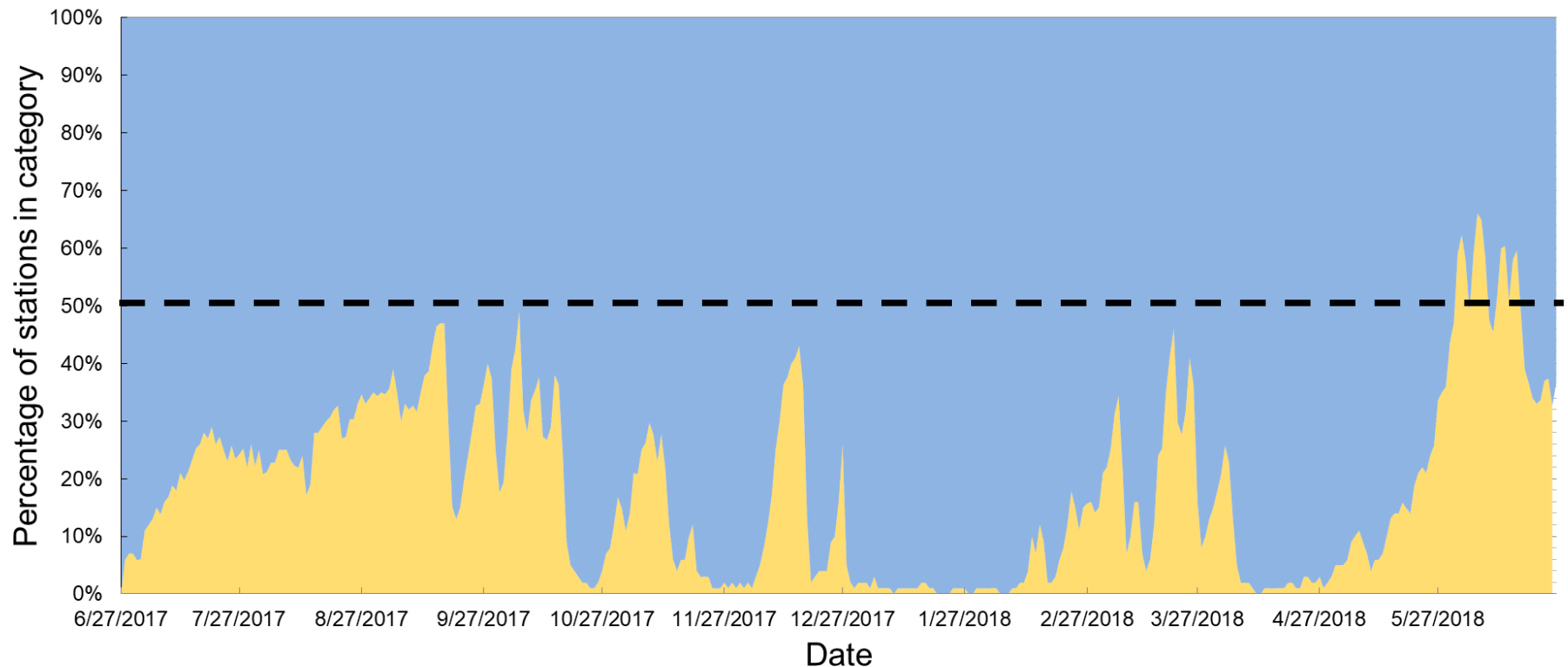
Percentage of stations (n=~150) with streamflow:



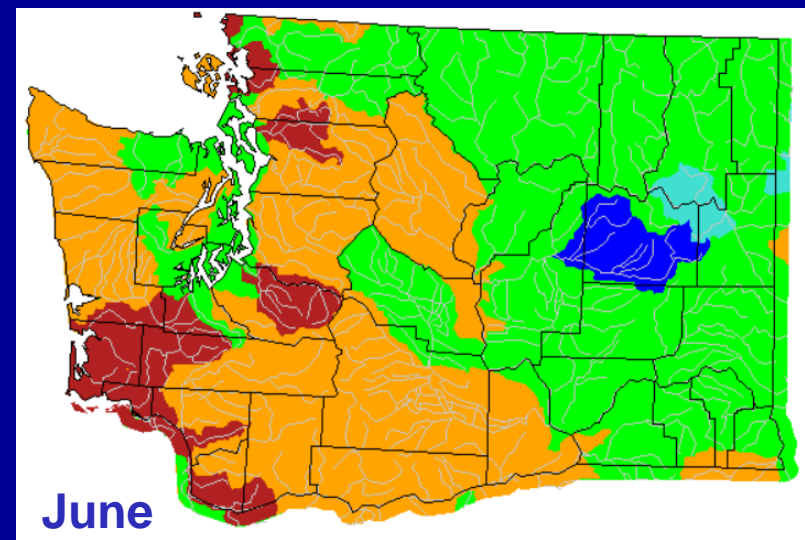
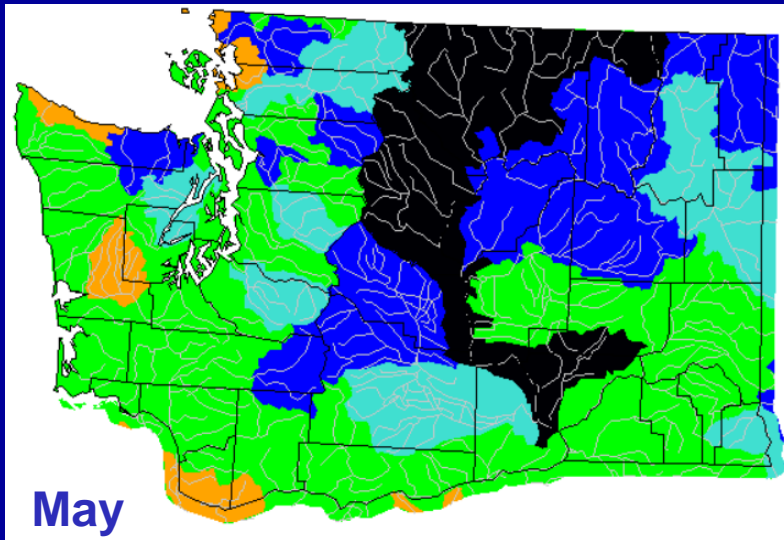
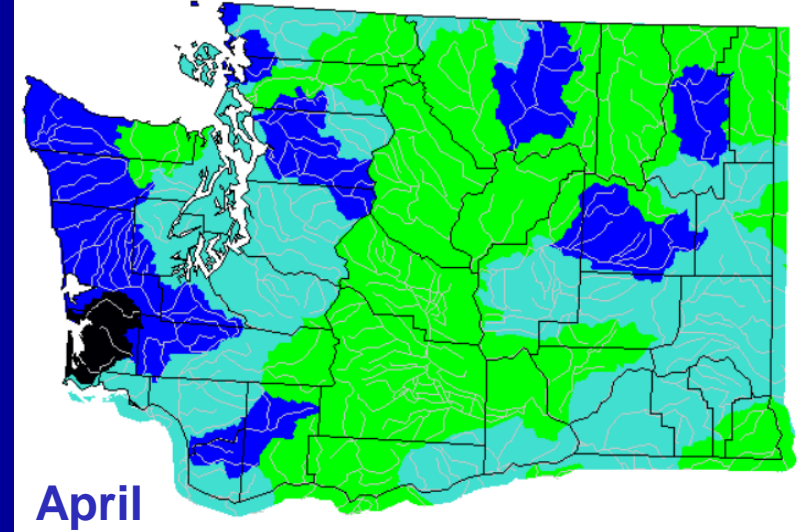
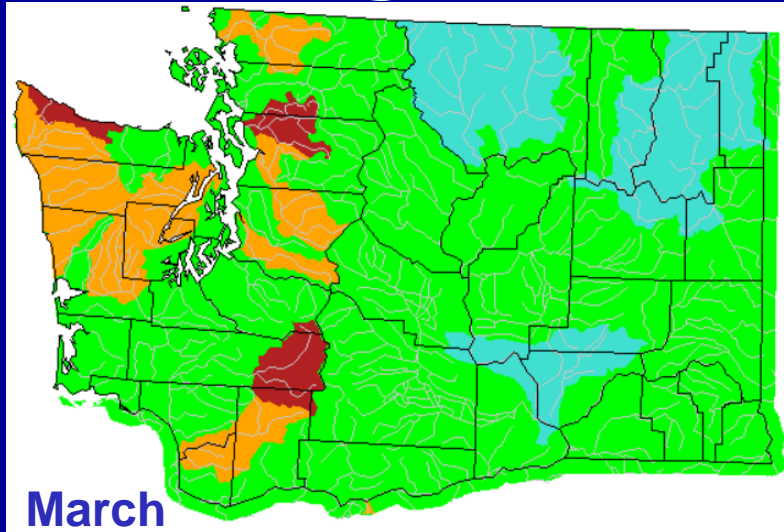
Below normal



At or above normal



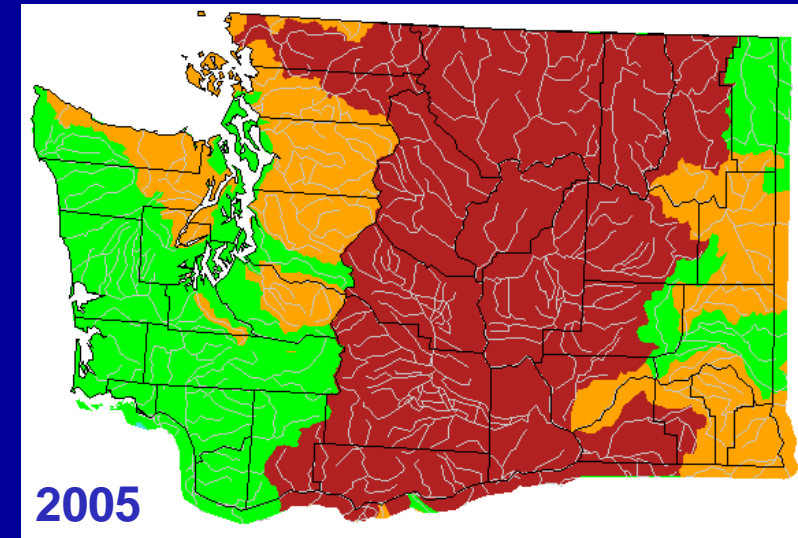
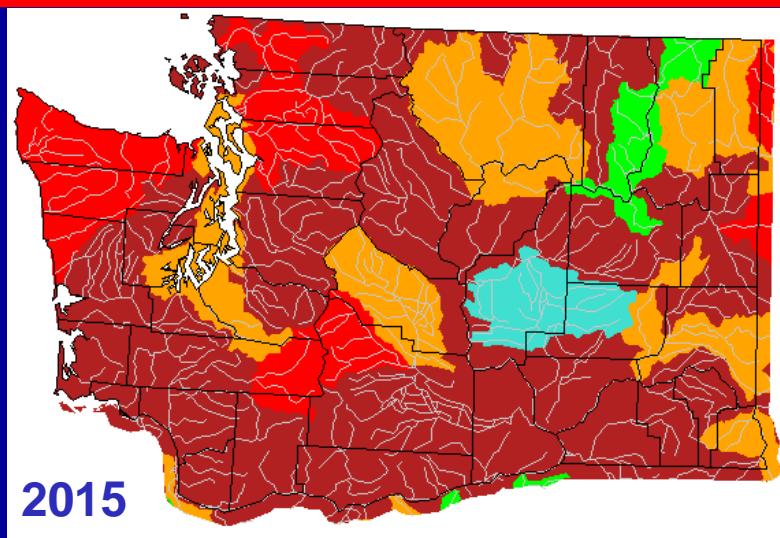
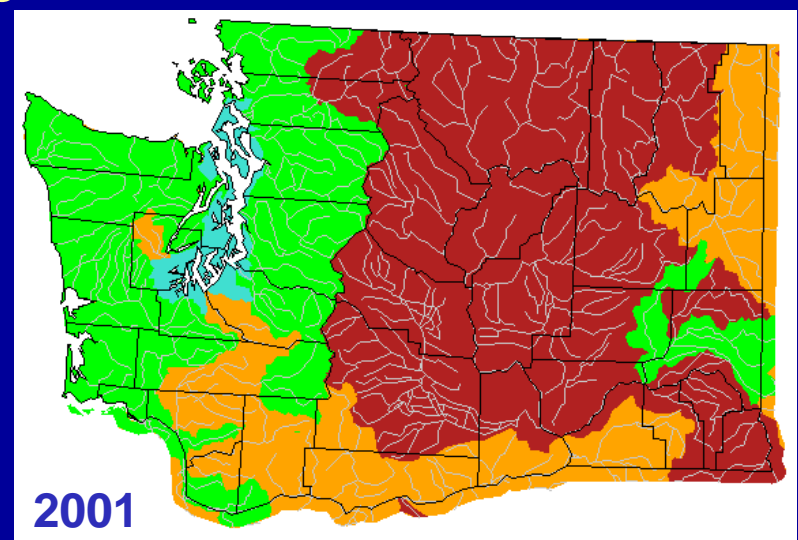
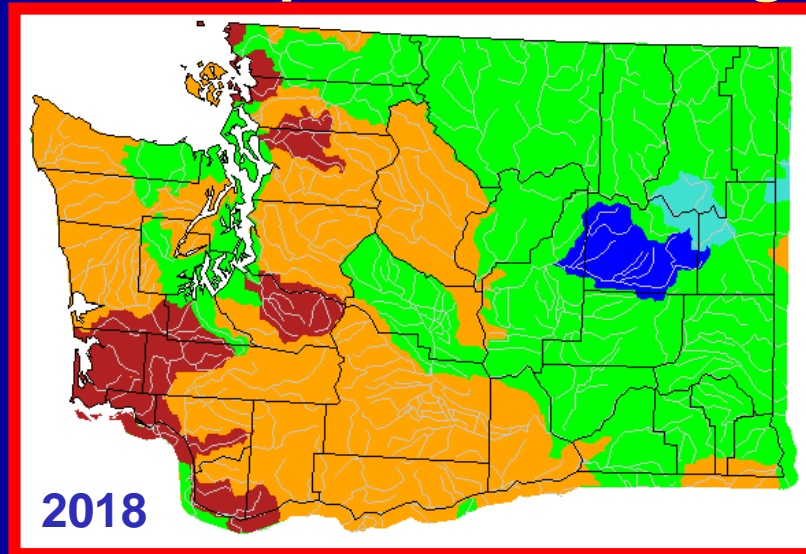
Average ~Monthly Streamflow 2018



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

Average June Streamflow 2018

Comparison to drought years 2001, 2005, 2015



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

Long-term Groundwater Conditions

Oct. 1, 2007 to June 28, 2018

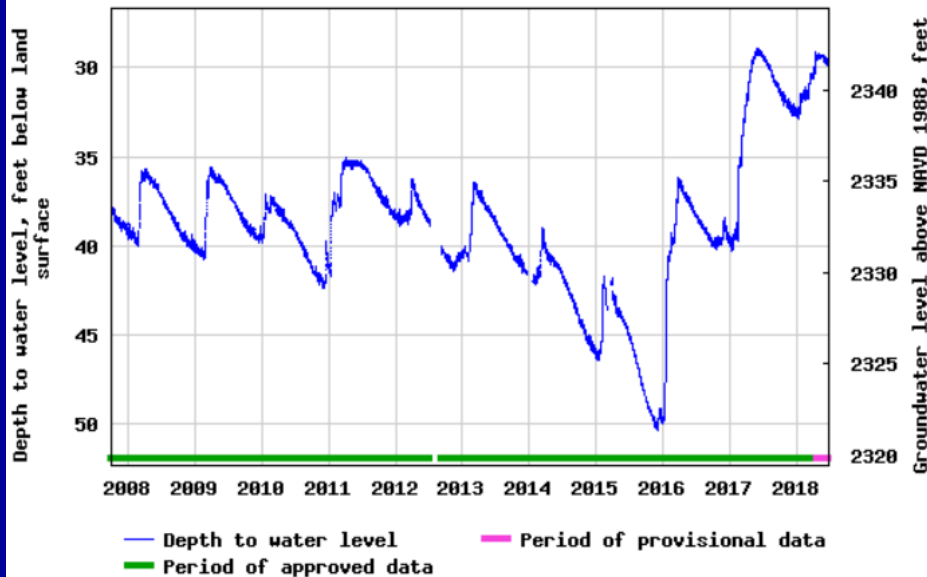
Davenport well (Lincoln Co.)

- 117-ft deep
- Wanapum Basalt

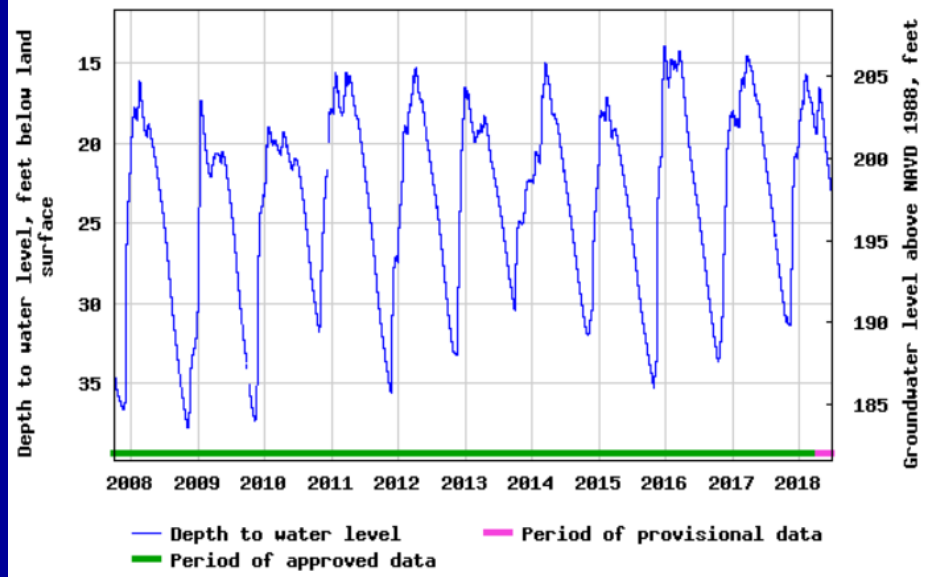
Scatter Creek well (Thurston Co.)

- 82-ft deep
- Sand and gravel

USGS 473442118162201 24N/36E-16A01



USGS 465033122570202 16N/02W-29L02P2



Summary

Streamflow Conditions as of June 28, 2016

- 7-day average cumulative streamflow statewide currently “normal” (between the 25th and 75th percentile)
 - Hydrologic drought moderate in SW Washington
 - June 2018 drought conditions less widespread than June conditions in other drought years
- Daily mean streamflow below normal at 37% of stations
- Highly variable streamflow over the last four months
- Groundwater levels in shallow basalt rebounded from 2015 drought and remain high
 - Levels in sand and gravel aquifer within typical range