

Water Supply Availability Meeting

Friday, June 29, 2018

Regional Climate Perspective | Karin Bumbaco and Nick Bond

We're definitely on the normal side for the water year so far. October – May, .7 degrees above normal.

In April, there were no drought concerns, however May was a game changer. .

For the state as a whole, temperatures for the month of May were more unusual than the precipitation. Compared to historical records, temperatures were warm statewide. This was the second warmest May on record. May precipitation was much drier than usual west of the Cascades with some areas in eastern WA receiving above normal precipitation. June, however, has been much drier than usual statewide with temperatures near-normal. Averaged together, May and June were warmer and drier than normal.

30 day average SST anomalies- near the equator is a little bit warmer than normal, so this is influencing our forecast. Looks more likely that we'll have El Nino for the coming fall and winter.

Expect warmer, drier weather in the next couple of weeks.

Temperature predictions based on offshore SST in May. The forecast for June-August 2018 will be on the warm side, but not as warm as 2015. If the CFS forecast is right, the weather will be a little warmer than usual. CFSv2 Model- the latest forecast is consistent with the ones from early May. We don't do as well with precipitation in July than we do with temperature forecast, but the official summer outlook is for warmer and drier conditions than usual.

Climate Model Projections for September – November will be drier than normal in the PNW. What's interesting- these models have biases, which shows a weak indication one way or another. So far, there is no indication that end of summer, early fall is going to be wet. Even if we have a great snowpack, spring is the time of year where it's important to monitor what's going on. Nick said 1994 might serve as a good analog year. Conditions support the possibility of some major heat waves.

Final Remarks:

- Our spring weather matters
- This summer is apt to be warm and perhaps dry
- El Nino of weak-moderate intensity is increasingly likely by fall

Water Supply Update | Andy Bryant and Marilyn Lohmann

NWS Water Supply Forecast

The numbers look good from April – September, but most of that volume has already occurred. Looking at the rest of the forecast period through the water year, we see some potentially low streamflow. Generally, low streamflow brings high water temperatures, which can be concerning for fish habitat. When we look at the NWR Forecast Center April – September, we can see that for almost every basin in the state, we are significantly above average. Snowmelt and periods of rain in April and early May in NW Washington helped. We can see the impact of the dry and warm conditions we had in late spring and early summer.

Okanogan– we saw high run-off in May. Spring brought a huge snowpack, but when we look at June and July, our monthly volume is likely to come in significantly below average. Going from NE WA to SE WA, we see that Walla Walla's April through September comes in close to average. May-September is likely to be significantly below average and is expected to continue through the rest of the water year.

Forecasts show the dry conditions we've been exposed to over the last month or so. Going to NW WA on the west side of the Cascades comes in pretty close to average. Haven't seen too much fluctuation in this area. When we look at June and July volumes, there are concerns about low streamflow extending throughout the state.

SW WA Chehalis- Water supply for April increased significantly, has dropped since, but still comes in above average. April through September is going to be driven by precipitation from fall and winter. Recently dry conditions have affected this forecast. June, July, and August are likely to be significantly below average for streamflow. Potential impacts for SW monsoon- We'll have to wait and see how this plays out. One-Month Precipitation outlook for July, August, and September an active SW monsoon and likely above average precipitation is expected. Hopefully we'll be able to draw some of that moisture to other areas, but unsure how likely that is. Questions? Mobile.weather.gov

Above average wildfire forecast.

Rick Dinicola | USGS

Spring flow Conditions- What's happened in the last two months and right now- Things are changing quickly. 7 day average streamflow as of June 26th- normal to below normal, in SW Washington we are seeing the driest conditions as well as central north Cascades. Hydrologic drought is not the state's definition of drought. Cumulative streamflow, normal conditions right now, but this will probably drop. Last year at this time, we had a much gradual melt-out season. Again, spring matters.

Index Gaging Stations- Natural or near natural streamflow, things are changing quickly, Puyallup and American river are right at 25 to 26 %, but will drop unless we get some precipitation from this cooler weather. Things are pretty dry in the SW. In March, for streamflow, we were accumulating a fair amount of snowpack, in May, it started melting out, and in June, things have gone from well above normal to below quite rapidly. Waterwatch.usgs.gov to get more Average Streamflow Maps. Don't have an extensive Groundwater network Davenport well Scatter Creek well, is relatively shallow well in sand and gravel, not a lot of long term memory, where as in Davenport there's a lot of year to year carryover.

Summary

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

Status and Forecast for Yakima Basin Water Supply | Chris Lynch, Bureau of Reclamation

Because of early may runoff the water supply deteriorated. They did fill reservoirs, but they started using them earlier than normal. Last year, reservoirs were being used on June 29, however this year they began using them on June 11. A users should get an adequate supply for their summer usage at about 96 percent. Well above average runoff in May. Chris will have a forecast update on Monday, July 9.

Paul Faulds, City of Seattle

Filling the reservoir fuller than normal was a good call, however with the weather being hot and dry, consumption is up. Running different model scenarios on a weekly basis. Looks like they'll be fine through the summer and though the fall. Overall, they feel pretty good where they're at now.

John Chandler | Puget Sound Energy

Baker Lake and Lake Shannon are both full. Snowmelt runoff tends to last longer. Baker project is only about 20 percent flow of the Skagit. 60 percent is unregulated. This part could get relatively low in July and August (which they don't regulate).

Kiza Gates | WDFW

Hearing about impacts in the places they normally do. One stranding reported on the Teanaway River in the Upper Yakima watershed. Might see more low flows this summer than they did last summer.

Sheryl Howe | Department of health

Forks is concerned with their declining water levels. DOH has sent out a letter to all water systems on the west side, starting with those Olympic Peninsula. They will encourage customers to wisely use their water.

It's likely that water availability and flows will get a little more stressful. From a public health standpoint an advisory is encouraged. Would want to look basin by basin.

Chris says Yakima proration should stay in the 90ish range. Once prorated post 1905 are curtailed. There will be some junior users that have to turn off.

Jeff recommends that state agencies meet again regarding Advisory.

Paul with SPU- Glen George in Tacoma reported they reached full refills in their reservoir, but have activated their wells for storage for fish later, but no concerns. Paul will send link to get weekly updates regarding water supply.

Next WSAC meeting, Friday, August 10