



Office of the Washington State Climatologist

May 5, 2009

Spring is here

On average, April was cool across the state, keeping consistent with the Climate Prediction Center's outlook discussed last month. Typical of spring, the state saw summer-like warm spells, and winter-like cool spells. Figure 1 illustrates the temperature variability experienced at SeaTac Airport for the month. Unseasonably warm temperatures were experienced across the state on April 5-7th (8th as well in eastern WA) and on April 19-21st across the state. Among others, a new daily high temperature record of 74°F was recorded at SeaTac Airport on April 20th. April had its fair share of chilly weather as well, with a record low high temperature of 35°F recorded at Pullman on April 1st. April started out chilly, and snow fell on April 1st in eastern Washington around Spokane, higher elevations around the Puget Sound, and parts of central WA like the higher elevations near Wenatchee (illustrated by the CoCoRaHS map in Figure 2). Snow fell in similar locations on April 13th also.

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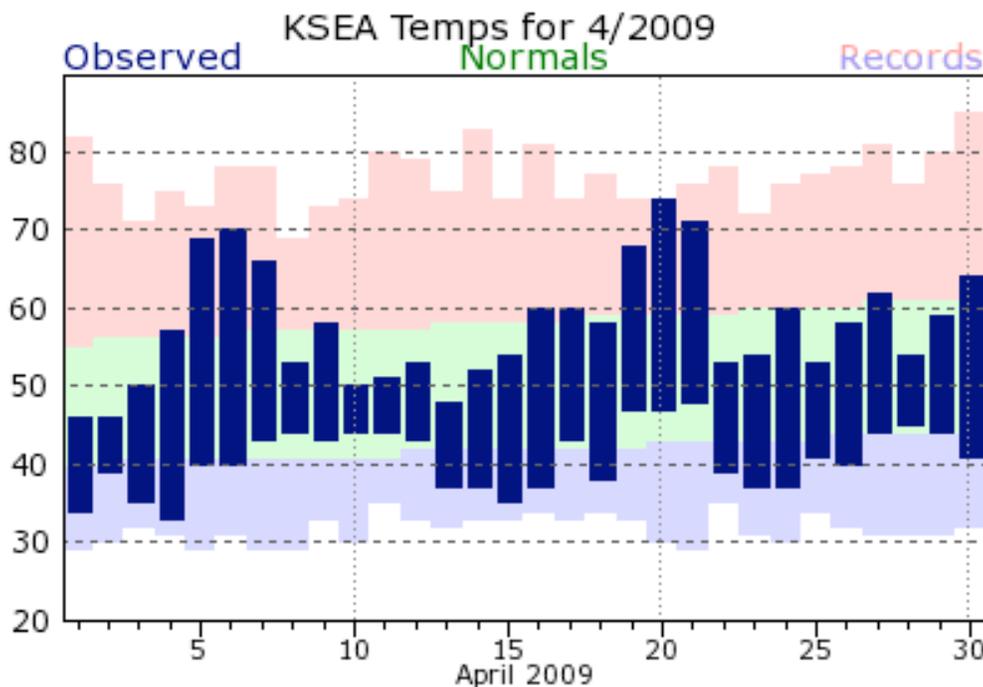


Figure 1: Preliminary temperatures (°F) at SeaTac Airport for April. The green background denotes the normal range of temperatures, red denotes warm records and blue denotes the cold records.

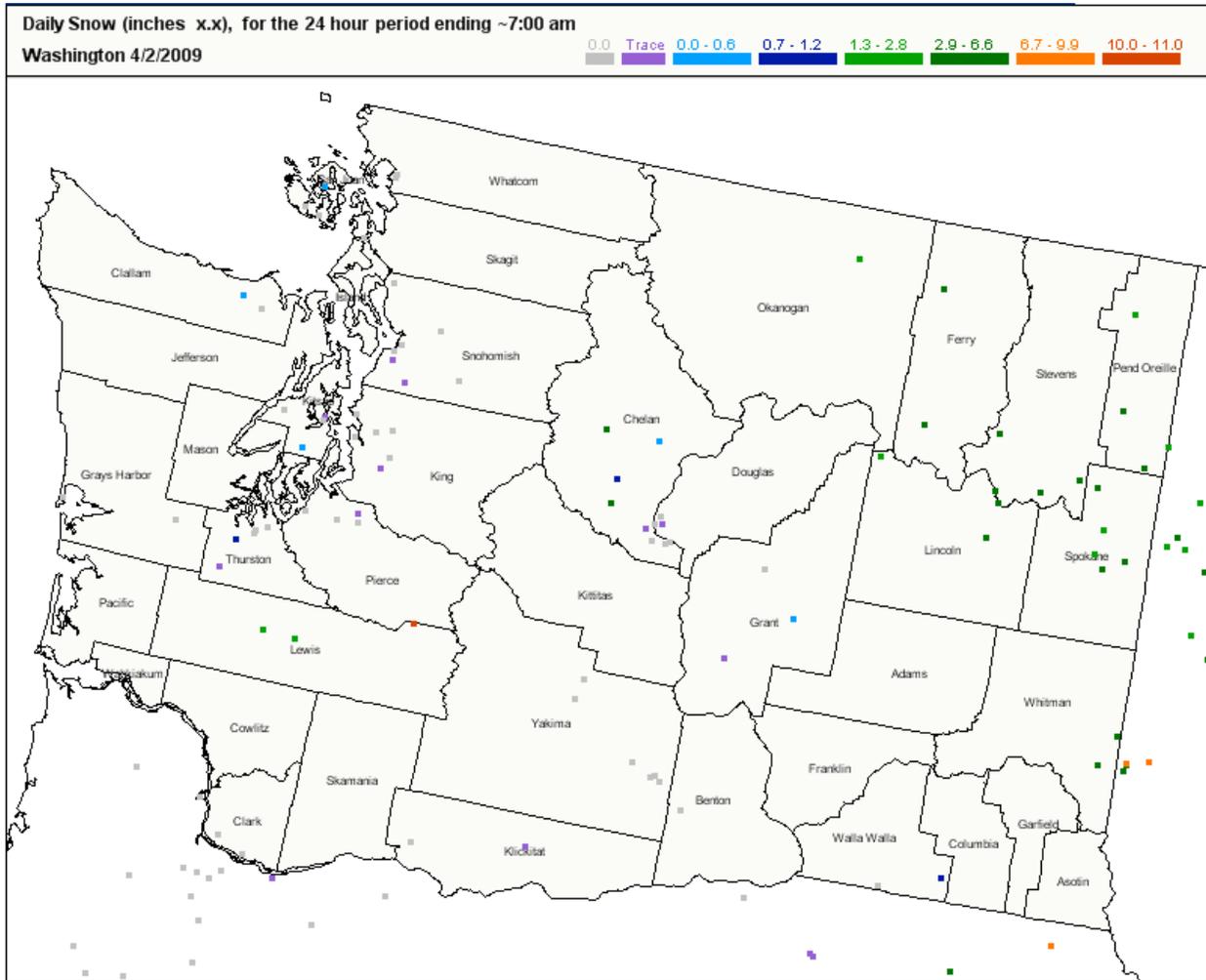


Figure 2: New snow that fell on April 1st and was measured on the morning of April 2nd by CoCoRaHS observers.

Snowpack and Low Streamflow

Figure 3 shows the snow water equivalent (SWE) for Washington as of May 4, 2009. The southern and central Cascades actually built more snowpack in early April and are currently between 94 and 159% of normal. However, the northern Cascades and the Olympic Peninsula still have low snowpack, with SWE between 70-80% of normal, which has already caused low streamflow in the Okanogan and Similkameen rivers. Junior water users have been advised by the Washington Department of Ecology to contact the River Flow Irrigation Line (1-866-277-4092) before irrigation water can be diverted. Water users on the Methow and Wenatchee rivers may also need to have extra regulations this year as a result of the low snowpack.

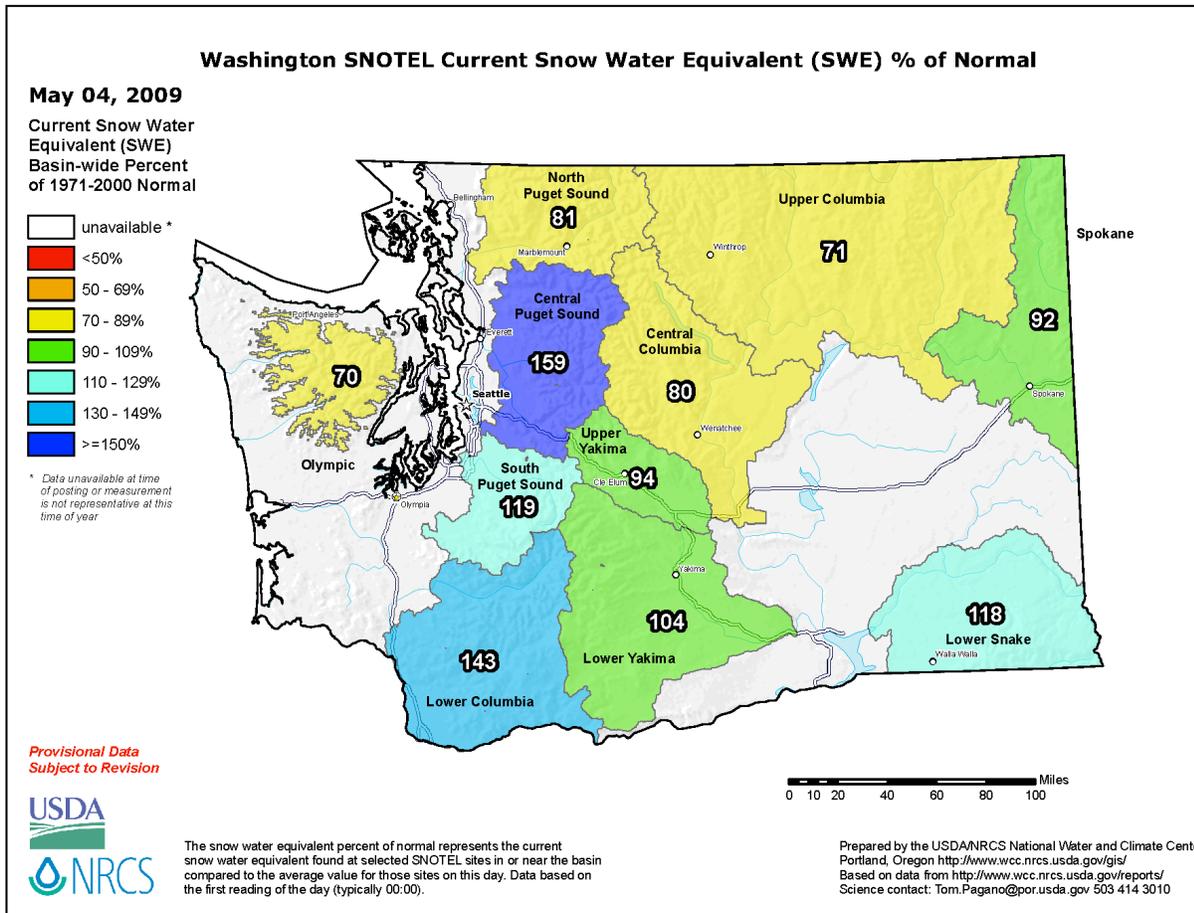


Figure 3: Snowpack (in terms of SWE) percent of normal for Washington as of May 4, 2009. Image is from the National Resources Conservation Service.

As of April 30, the National Weather Service River Forecast Center predicted a 59% of normal streamflow for the Similkameen River from now through September, 59% for the Okanogan near Tonasket, 64% for Methow near Pateros, and 72% for Chelan by the Lake Chelan Dam. The Dungeness River near Sequim on the Olympic Peninsula is predicted to have streamflow that's 80% of normal through September. Figure 4 shows the NWS River Forecast Center's predicted streamflows for Washington where cyan circles represent 110-125% of normal, green 90-110% of normal, yellow 75-90% of normal, and orange 50-75% of normal.

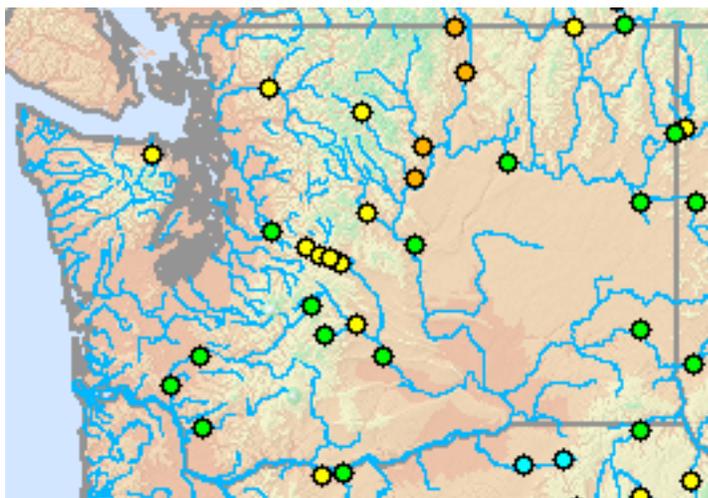
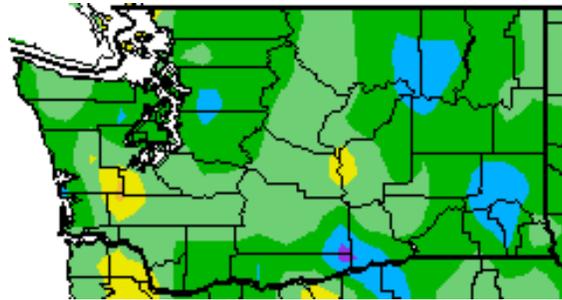


Figure 4: Predicted streamflow for April through September for WA from the NWS River Forecast Center (http://www.nwrfc.noaa.gov/water_supply/ws_fcst.cgi).

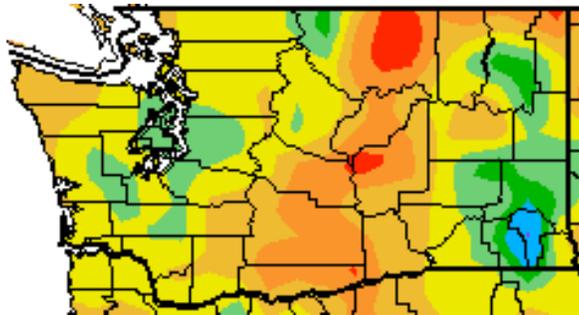
Climate Summary

The departure from normal temperature image from the High Plains Regional Climate Center illustrates April's below normal temperatures across the state. While the temperature was near-normal ($\pm 1^\circ\text{F}$) in some locations (ex. Olympia, see Table 1), it also fell 2-3 $^\circ\text{F}$ below normal in others (ex. Pasco, see Table 1). Vancouver was an exception, with an average April temperature 1.7 $^\circ\text{F}$ above normal.

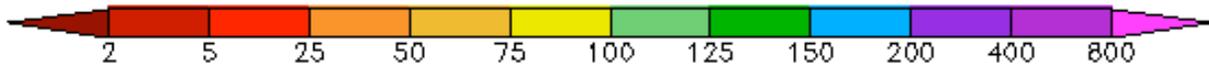
Precipitation was near-normal throughout the Puget Sound and even above normal in southeastern Washington, but was between 25-75% of normal throughout the eastern Cascades for April. It was also dry (50-75% of normal) on the northwestern Olympic Peninsula, and very dry in Yakima (47% of normal), Ephrata (37% of normal), and Omak (17% of normal). The normal baseline on the charts below is from 1971-2000.



Temperature ($^\circ\text{F}$)



Precipitation (%)



(April temperature ($^\circ\text{F}$) departure from normal (top) and April precipitation % of normal (bottom).

Source: High Plains Regional Climate Center (<http://www.hprec.unl.edu>).

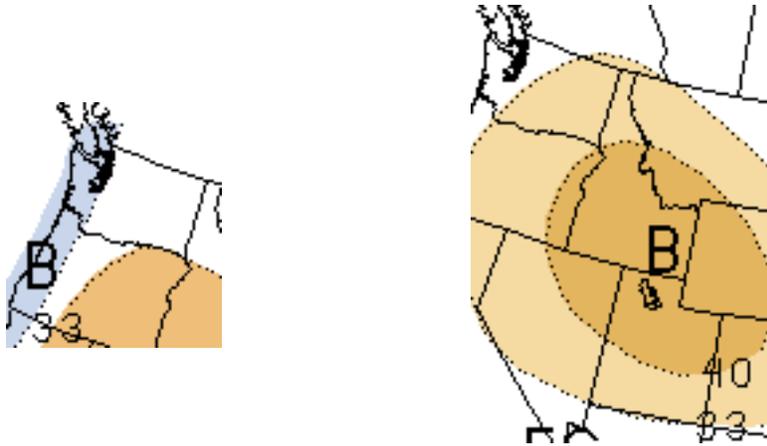
	Temperature (°F)			Precipitation (inches)		
	Avg	Normal	Departure from Normal	Total	Normal	% of Normal
Olympia	47.0	47.4	-0.4	3.13	3.58	87
Seattle	49.1	50.1	-1.0	2.94	2.84	104
Sea-Tac	49.2	50.2	-1.0	3.36	2.59	130
Vancouver	51.8	50.1	1.7	2.56	3.07	83
Spokane	45.2	46.5	-1.3	1.29	1.28	101
Omak	47.9	49.6	-1.7	0.19	1.11	17
Ephrata	50.3	51.6	-1.3	0.16	0.43	37
Pullman	45.1	46.2	-1.1	2.10	1.72	122
Pasco	51.3	54.1	-2.8	0.64	0.51	125
Yakima	48.2	48.6	-0.4	0.25	0.53	47

Table 1 - April Climate Summaries from locations in western Washington and eastern Washington (highlighted in orange) from NWS (climate normal baseline is 1971-2000).

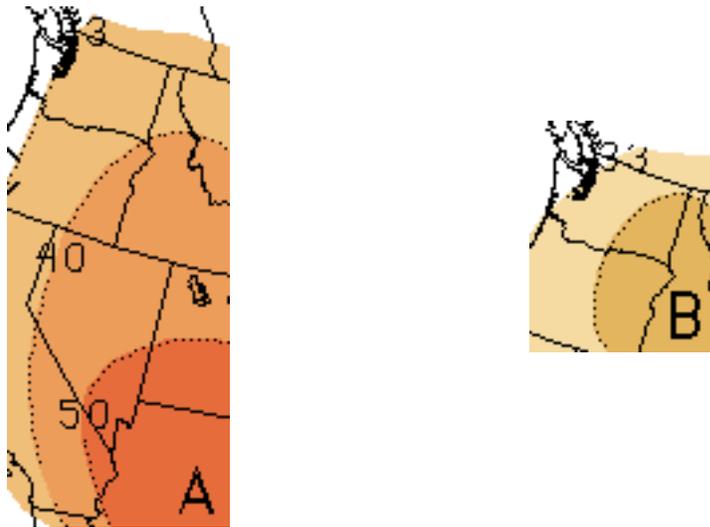
Outlook

The seasonal climate forecast by the NOAA Climate Prediction Center for May-June-July (MJJ) calls for a 33% chance of cooler than normal temperatures throughout the Olympic Peninsula and western Puget Sound. The rest of Washington has an equal chance of below, equal to, or above normal temperatures. The MJJ precipitation outlook calls for at least a 33% chance of below average precipitation for eastern WA.

The outlook for June-July-August (JJA), calls for at least a 33% chance of above normal temperatures for most of WA except the Olympic Peninsula. There is at least a 33% chance of below normal precipitation for most of the state, and at least a 40% chance of below normal precipitation for southeastern WA. The northern Olympic Peninsula has an equal chance of below, equal to, or above normal precipitation.



(May-June-July outlook for temperature (left) and precipitation (right) from the CPC).



(June-July-August outlook for temperature (left) and precipitation (right) from the CPC).

According to the Climate Prediction Center, the La Niña has continued weakening and is expected to continue the transition to neutral conditions. The negative SSTs in the central and east-central Pacific have continued to weaken since February (<http://www.cpc.noaa.gov/products/precip/CWlink/MJO/enso.shtml>).

CoCoRaHS



Thank you, observers, for participating in CoCoRaHS! We are always looking for new volunteers, so if you're interested in observing or know someone who is, please register at www.cocorahs.org or email us at wash.cocorahs@gmail.com.