

RIVER AND WEATHER CONDITIONS

Prepared for Waterways Association Meeting 05/10/2017
 National Weather Service Forecast Office, Pittsburgh PA
 For the latest river and weather forecasts--<http://www.weather.gov/pittsburgh>

WEATHER RECAP

After the record warm February 2017, March 2017 had normal temperatures, April 2017 was one of the warmest on record for our area. April had about normal rainfall, but early May saw much above normal rainfall and high water.

OUTLOOK

Rest of Week: Warmer and minimal rain. Small chance of showers late week and Mother day weekend. Rain less than 1.00 inch.

Week of May 15: Average temperatures and relatively dry week. Rain less than 1.00 inch.

Week of May 24: Warmer than normal with average rainfall. Rainfall 1.00-2.00.

Outlook June/July : Warmer than normal. Rainfall below normal but more than last year.

Outlook August: Normal temperatures and rainfall.

HIGH WATER POTENTIAL

High water potential is about normal. Soils are very saturated moist but minimal rainfall for the next week or two.







Spring vegetation/foliage is ahead of schedule. A minimum of 1.50 inch basin wide rainfall in 6 to 12 hours is needed to bring rivers to bank full. Rainfall through the last week May should average around 3.00 inches which is below normal.

Location	Apr 2017 Precipitation	Departure (Inches)	Apr Snowfall	Seasonal Snowfall
Pittsburgh	3.54	+0.43	T(-1.5)	32.0(-9.9)

Location	Apr Average Temperature	Departure Degrees	Extreme High	Extreme Low
Pittsburgh	57.3	+6.3	87 Apr 30	28 Apr 8

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average monthly precipitation	2.7	2.39	2.95	3.11	3.95	4.3	3.83	3.48	3.11	2.29	3.23	2.85	38.19
Average High Temperature	35.7	39.3	49.2	61.7	70.8	79.1	82.5	81.4	74.3	62.6	51.2	39.4	60.7
Average Low Temperature	21.1	23	30	40.2	49.3	58.4	62.8	61.5	54	42.9	34.7	25.3	42
Average monthly snowfall	11.8	10.3	7.6	1.5	0	0	0	0	0	0.4	2	8.3	41.9

WEATHER FORECAST

Wednesday	Wednesday Night	Thursday	Thursday Night	Friday	Friday Night
					
Mostly Sunny	30% Chance Rain	40% Chance Rain	30% Chance Rain	40% Chance Rain	40% Chance Rain
High: 68 °F	Low: 47 °F	High: 65 °F	Low: 48 °F	High: 64 °F	Low: 47 °F

8-14 Day Outlook... Warming up with below normal rainfall.

30 Day Outlook... Warm than normal, below normal rainfall.

Jun-Jul-Aug Outlook... Much Warmer than normal and drier than normal. More Normal August. Tropical season below normal.

Sep-Oct-Nov Outlook... Normal temperatures, and normal rainfall.

Dec-Jan-Feb Outlook... Below normal temperatures and much above normal snowfall.

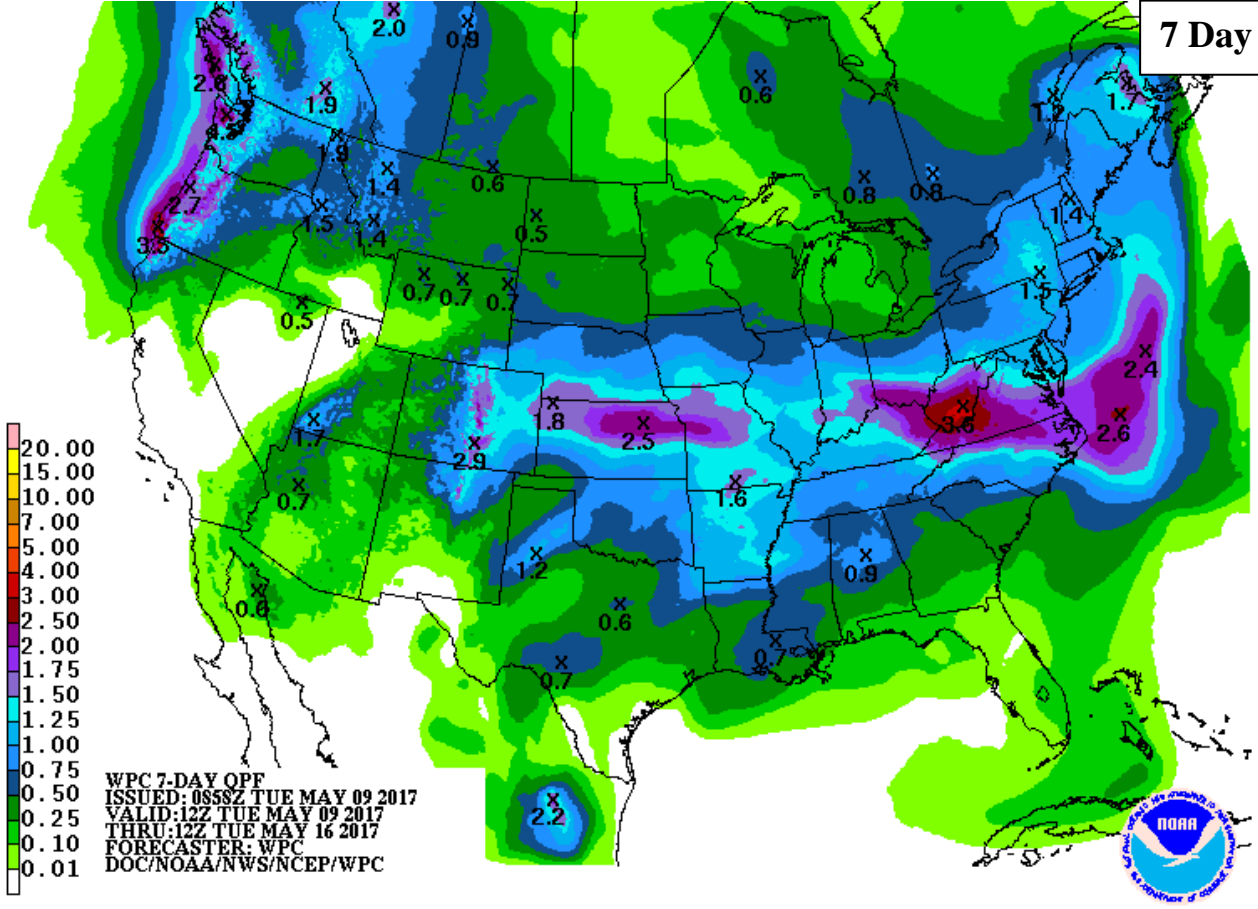
Average Yearly rainfall Pittsburgh: 38.19 inches **So far in 2017:** 15.68 (+3.64)

Totals for: 2016: 35.01 in 2015: 40.56 in 2014: 36.84 in 2013: 36.65 in; 2012: 41.74 in; 2011: 44.24 in; 2010: 37.85 in

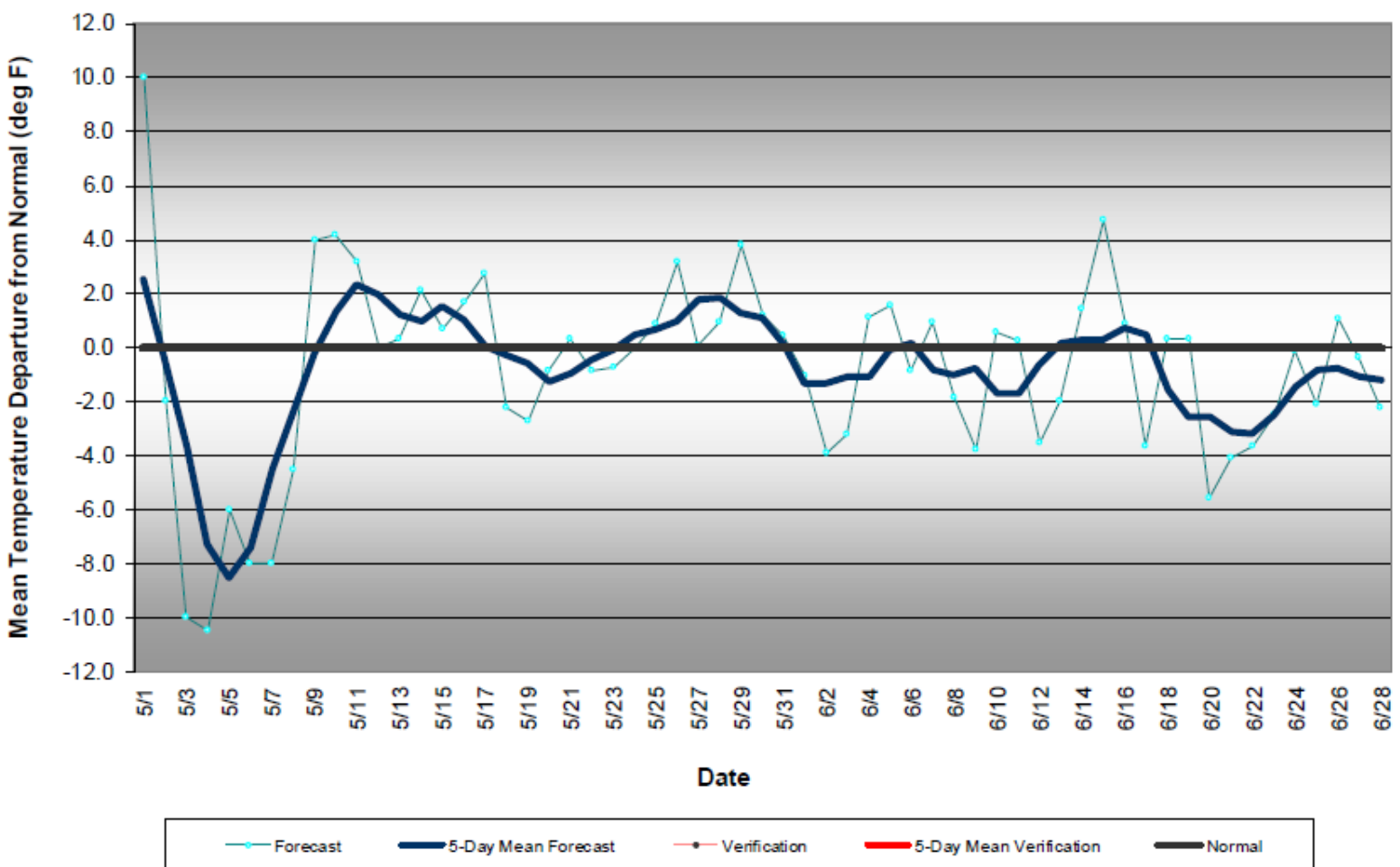
Average Yearly snowfall Pittsburgh: 41.9 inches 2015-16 season: 29.6 inches (-12.3) **So far 2016-17:** 32.0(-9.2)

2014-15: 47.2 in 2013-14: 63.4 in; 2012-13: 57 in; 2011-12: 37 in; 2010-11: 57 in; 2009-10: 77 in

7 Day rain forecast



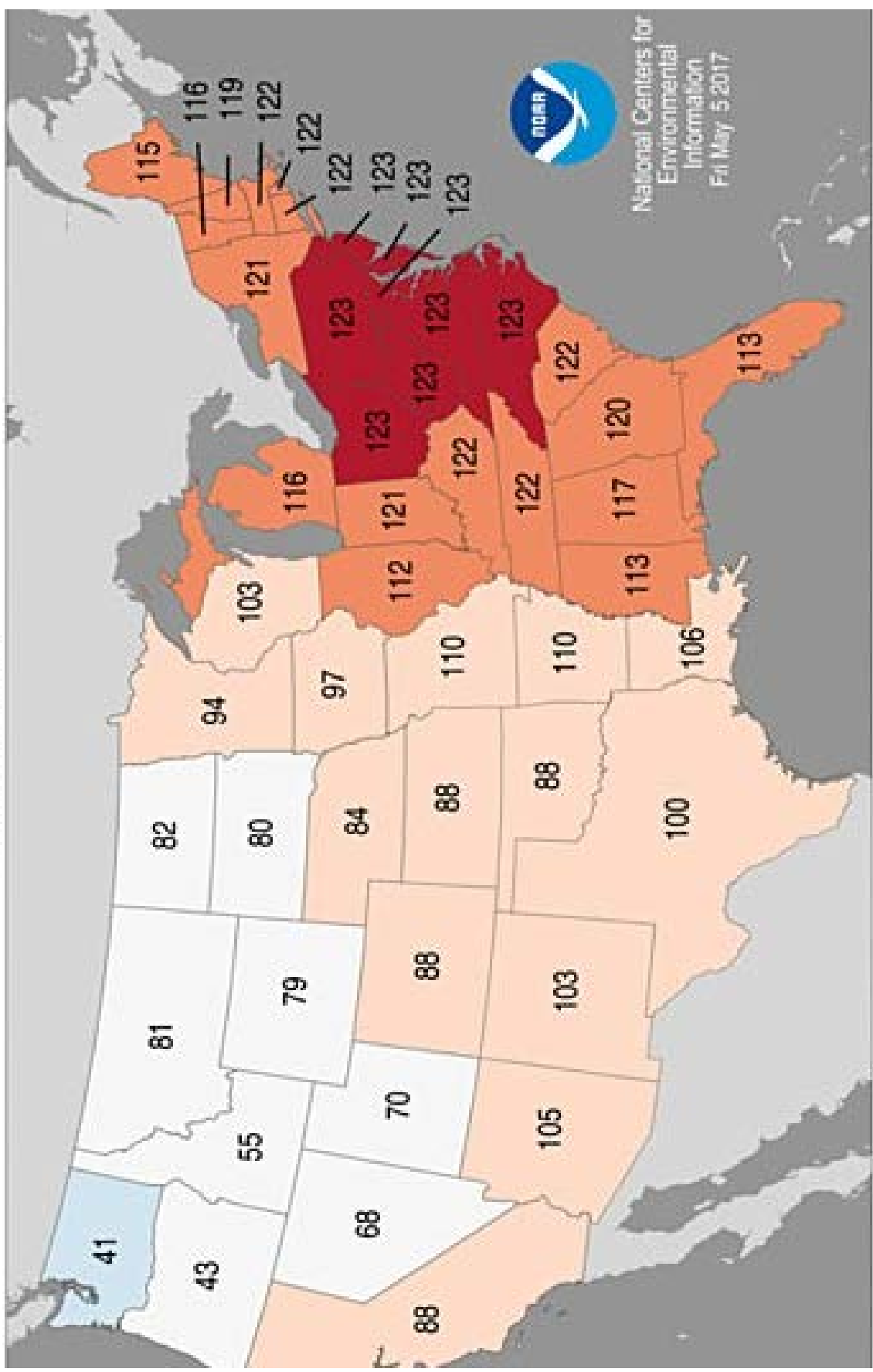
**Western Pennsylvania Temperature Forecast
 May - June 2017**



Statewide Average Temperature Ranks

April 2017

Period: 1895-2017



National Centers for
Environmental
Information
Fri May 5 2017

- Record Coldest (1)
- Much Below Average
- Below Average
- Near Average
- Above Average
- Much Above Average
- Record Warmest (123)

PENNSYLVANIA 2017 SUMMER OUTLOOK

LESS SULTRY THAN 2016

**Warmest conditions come during
the first half of the summer
(a couple of 100s)**

Pleasant spells in August

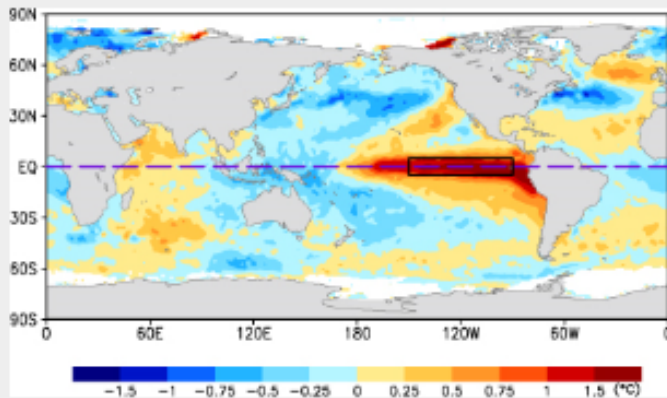
**Rainfall below average again,
but better than last summer**

Summer forecast: A hot 1st half of summer in PA (a few 100° days possible eastern PA), w/ a more pleasant Aug. Not quite as dry as last summer

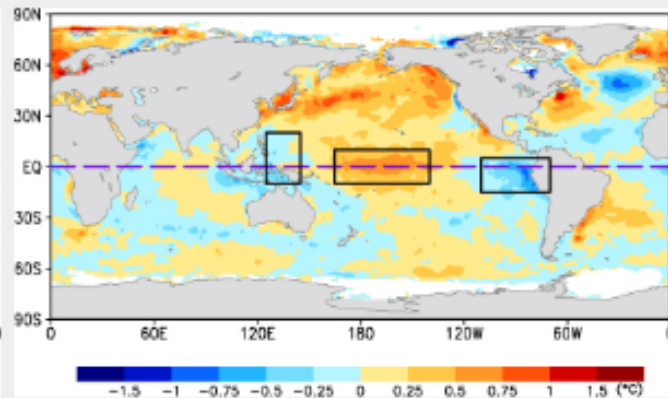
The El Niño Modoki

El Niño Modoki is a coupled ocean-atmosphere phenomenon in the tropical Pacific. It is different from another coupled phenomenon in the tropical Pacific namely, El Niño. Conventional El Niño is characterized by strong anomalous warming in the eastern equatorial Pacific (see figure below). Whereas, El Niño Modoki is associated with strong anomalous warming in the central tropical Pacific and cooling in the eastern and western tropical Pacific (see figure below). Associated with this distinct warming and cooling patterns the teleconnections are very different from teleconnection patterns of the conventional El Niño. Hence, the new phenomenon is of interest to the climate community.

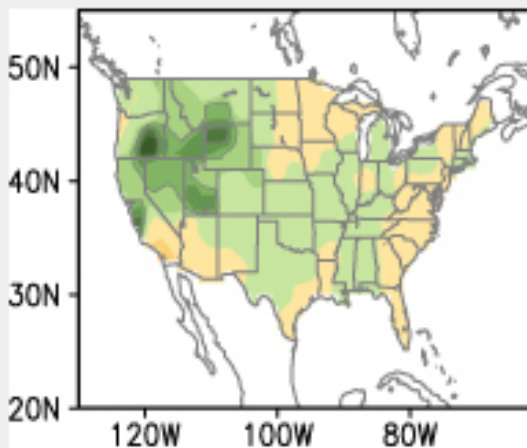
Anomalous SST during El Niño



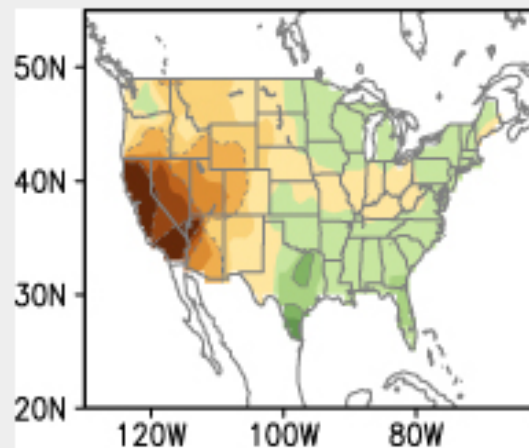
Anomalous SST during El Niño Modoki



USA, rainfall during El Niño



USA, rainfall during El Niño Modoki



SUMMARY

Freezing temperatures Early May in France/UK damaging wine crop. 2017 French wines will be more expensive.

Extremely wet April weather in California ended the 7 year Perma-drought. Limited field work has led to shortages of lettuce and broccoli. Supply should return to normal by end of May.

Increase wild fire threat in California due to current increased vegetation as fuel when dry season starts

More severe weather likely this spring/summer.

Summer overall drier than normal, but may be more slow moving “Flash Flooding Thunderstorms” this summer. Summer more front loaded, with temperatures averaging as much as 3 degrees above normal in the first half, then normal weather in August.

CHANGE: Hurricane season average number of storms , but formation favors western Atlantic which may effect East Coast.

If Modoki El Nino forms/remains through the end of the year. Winter 2017-18 snowy than normal similar to 2009-2010 with East Coast Storms