RIVER AND WEATHER CONDITIONS

Prepared for Waterways Association Meeting 03/8/2017
National Weather Service Forecast Office, Pittsburgh PA
For the latest river and weather forecasts--http://www.weather.gov/pittsburgh

WEATHER RECAP

February 2017 was on track for the warmest February on record with much warmer than normal temperatures. February varied from wetter than normal to drier than normal depending on location. The average temperature was 9.5 degrees above Normal. Snow cover was very minimal for February. There were as many 60 degrees days this winter as days with 1 inch or more of snow on the ground.

OUTLOOK

Rest of Week: Turning colder with a chance of snow Thursday/Friday. Another chance of snow Saturday/Sunday
Week of Mar 13:. Rain early week then turning colder. Warming up by end of week with rain, then colder weekend, Precipitation about 1.0 inch early week then another 1.00 late week.
Week of Mar 20: Rain early week, Then colder by mid week with rain again for weekend. About 1.50 inches of rain.
Outlook for rest of March: Continued large swings in temperatures. With rain every 3 or 4 days
Outlook April: Above normal precipitation and Above normal temperatures.
Outlook May: Normal precipitation and Above normal temperatures.

HIGH WATER POTENTIAL

High water potential is above normal. Soils are moist and 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 of March should average between 3 and 4 inches which is above normal.

Location	*Feb 2017 Precipitation*	*Departure (Inches)*	*Feb Snowfall*	*Seasonal Snowfall*
Pittsburgh	1.46	-0.93	6.7 (-3.6)	22.3(-10.5)

Location	*Feb Average Temperature*	*Departure Degrees*	*Extreme High*	*Extreme Low*
Pittsburgh	40.6	+9.5	76 Feb 24	13 Feb 4

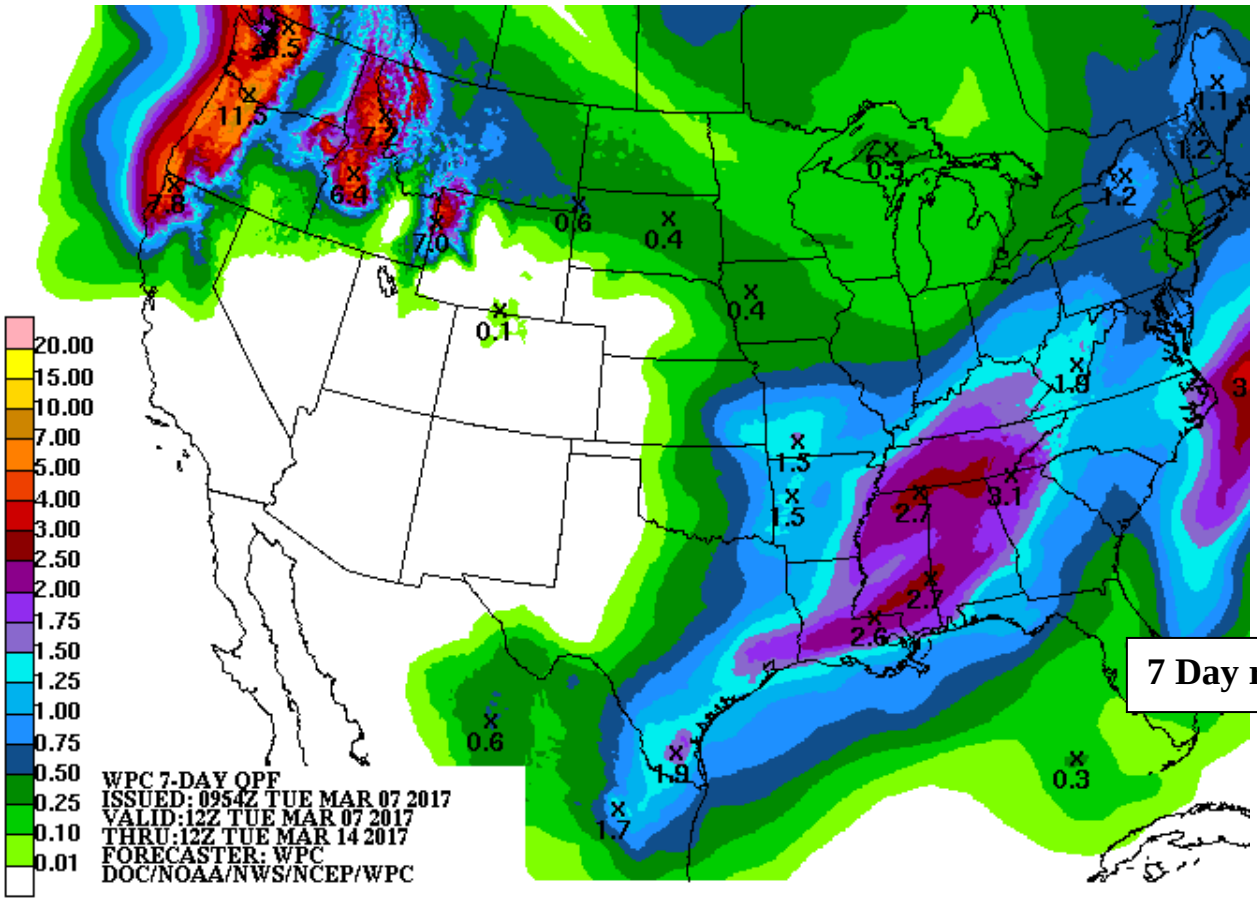
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average monthly precipitation	2.7	2.39	2.95	3.11	3.95	4.3	3.83	3.48	3.11	2.29	3.23	2.85	38.19
Average High Temperature	35.7	39.3	49.2	61.7	70.8	79.1	82.5	81.4	74.3	62.6	51.2	39.4	60.7
Average Low Temperature	21.1	23	30	40.2	49.3	58.4	62.8	61.5	54	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	Saturday
						
Mostly Sunny and Breezy	Partly Cloudy	Partly Sunny then Slight Chance Rain	Chance Rain/Snow then Snow Likely	Chance Snow Showers	Mostly Cloudy	Partly Sunny then Chance Snow
High: 56 °F	Low: 34 °F	High: 49 °F	Low: 31 °F	High: 37 °F	Low: 18 °F	High: 31 °F

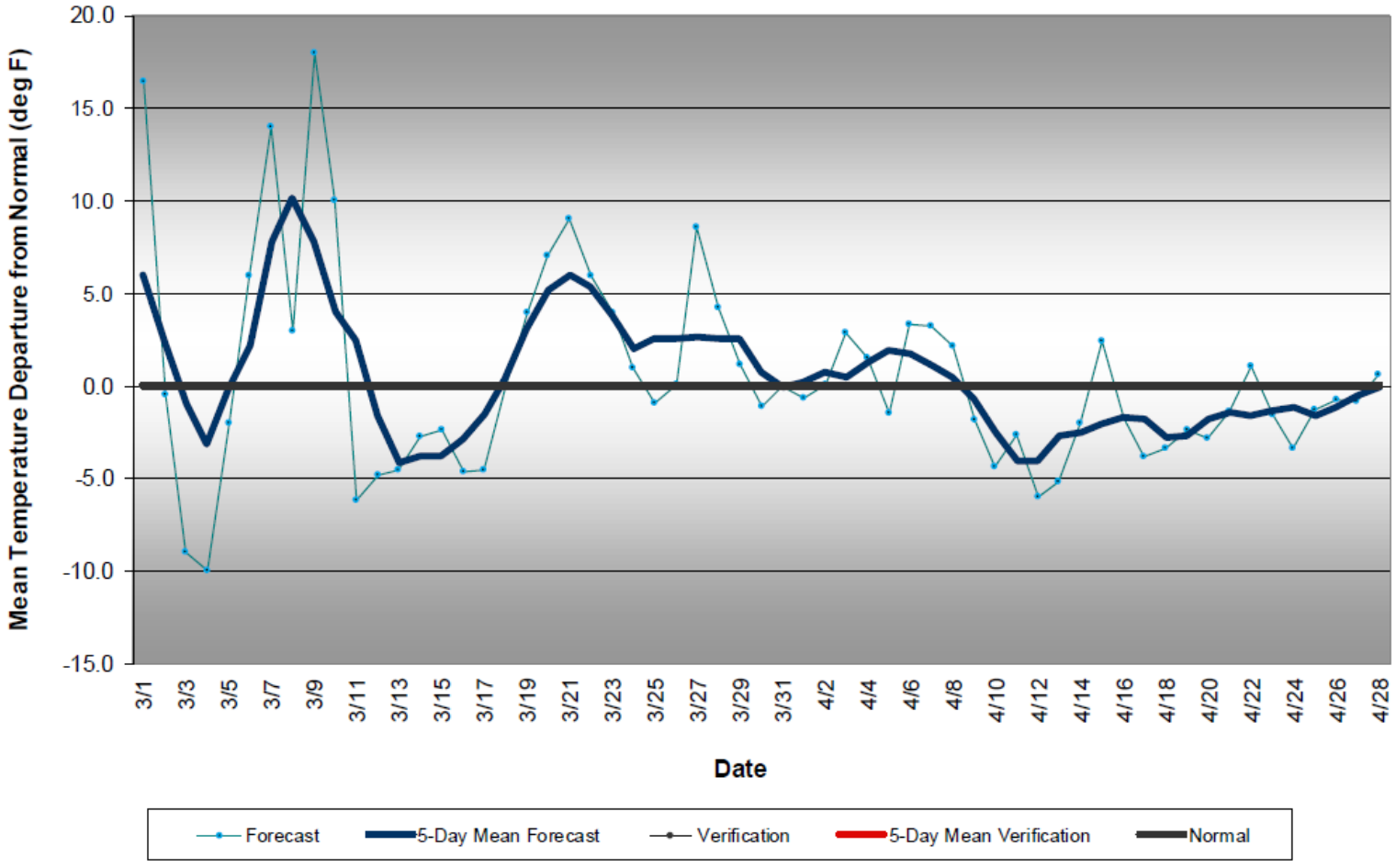
8-14 Day Outlook…Frequent rain storms. Swings in temperatures, with frequent storm systems bringing rain followed by snow.
30 Day Outlook... Frequent storm systems with large swings in temperatures and above normal precipitation.
Apr-May-Jun Outlook…Warmer and wetter than normal April, Warmer and Normal Rainfall for May.
Jul-Aug-Sep Outlook… Warmer than normal temperatures. About average rainfall. Tropical season below normal.
Oct-Nov-Dec Outlook… Above Normal temperatures and normal precipitation.

Average Yearly rainfall Pittsburgh: 38.19 inches **So far in 2017:**6.48 (+0.87)
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**: 15.9(-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

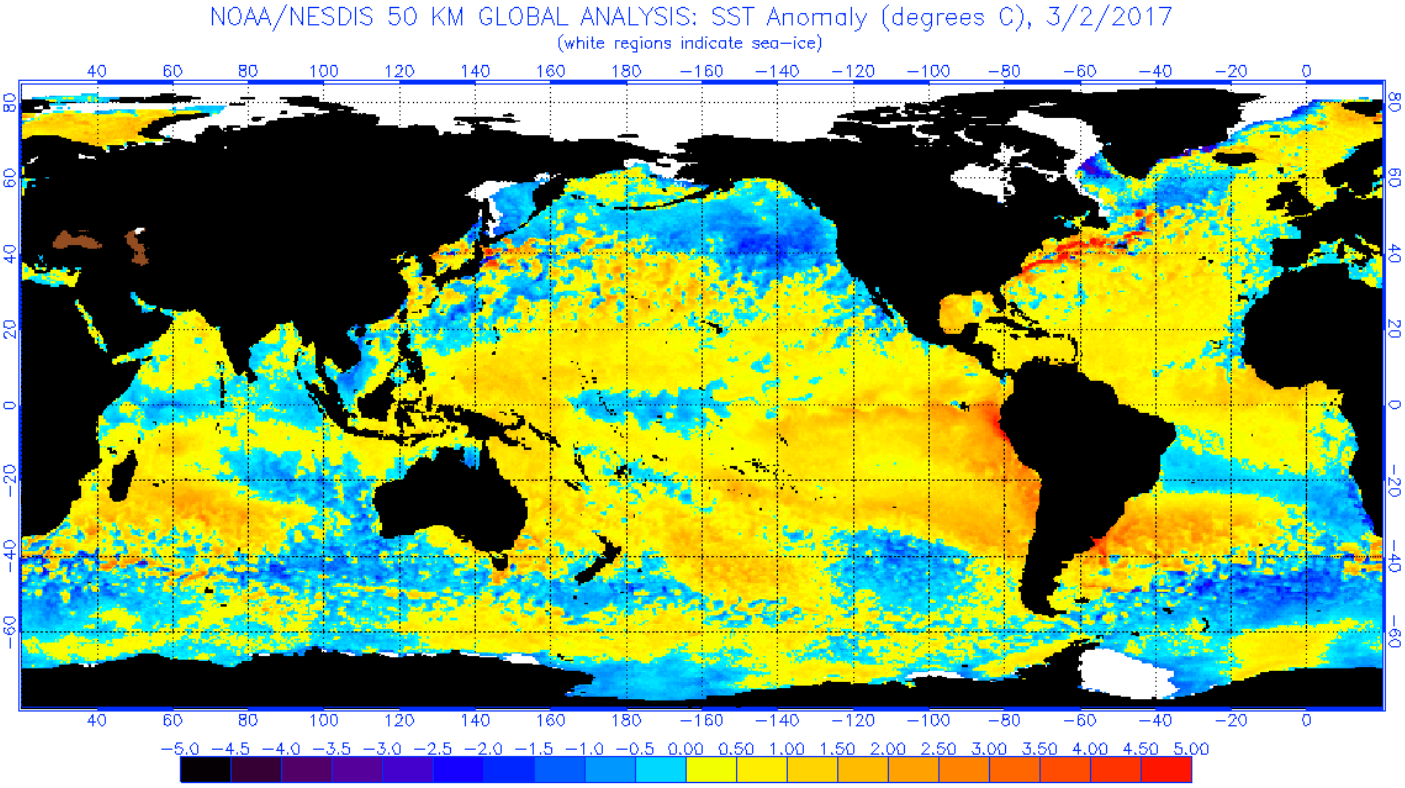


7 Day rain forecast

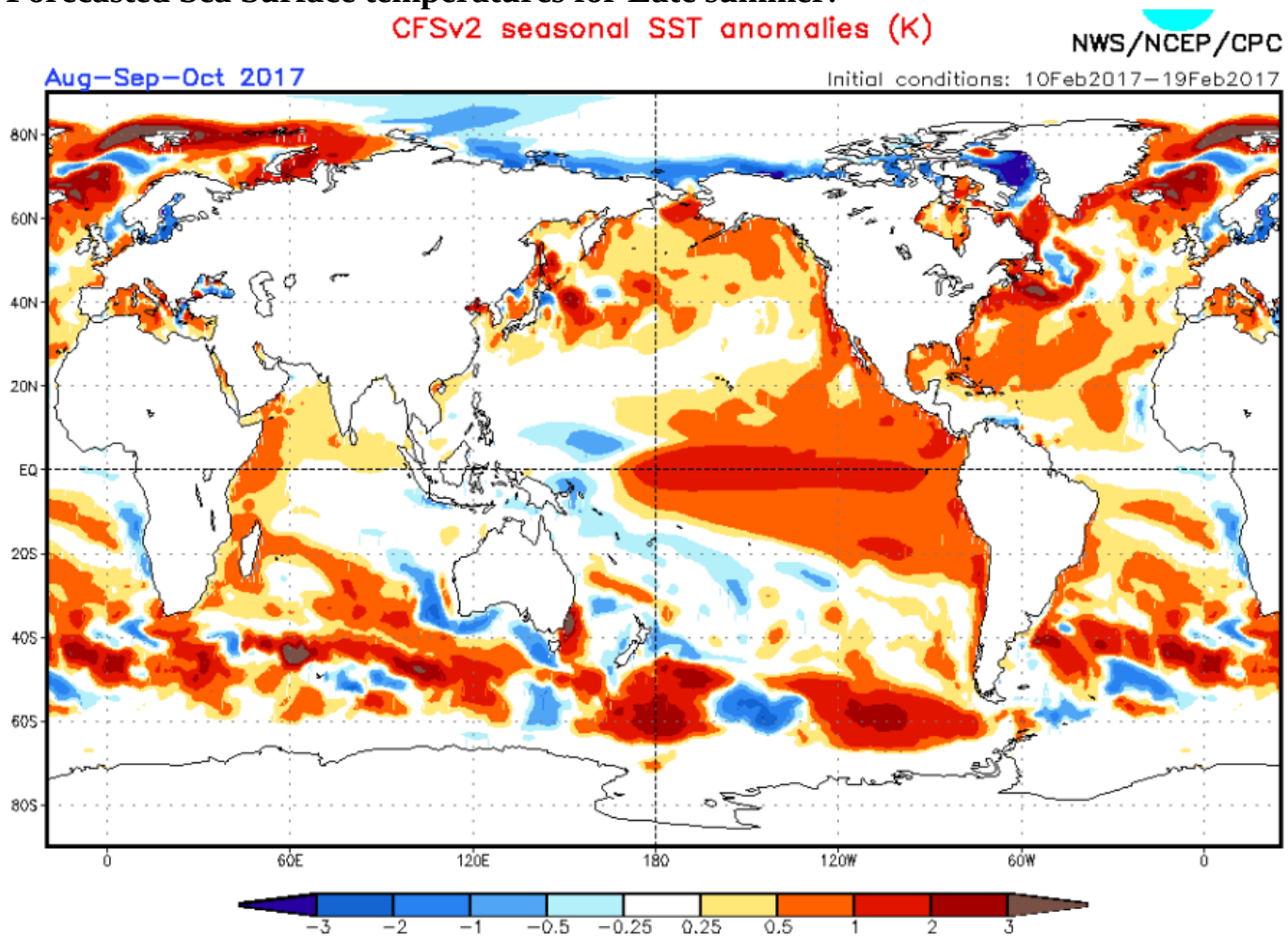
Western Pennsylvania Temperature Forecast
March - April 2017



Current Sea Surface temperatures:

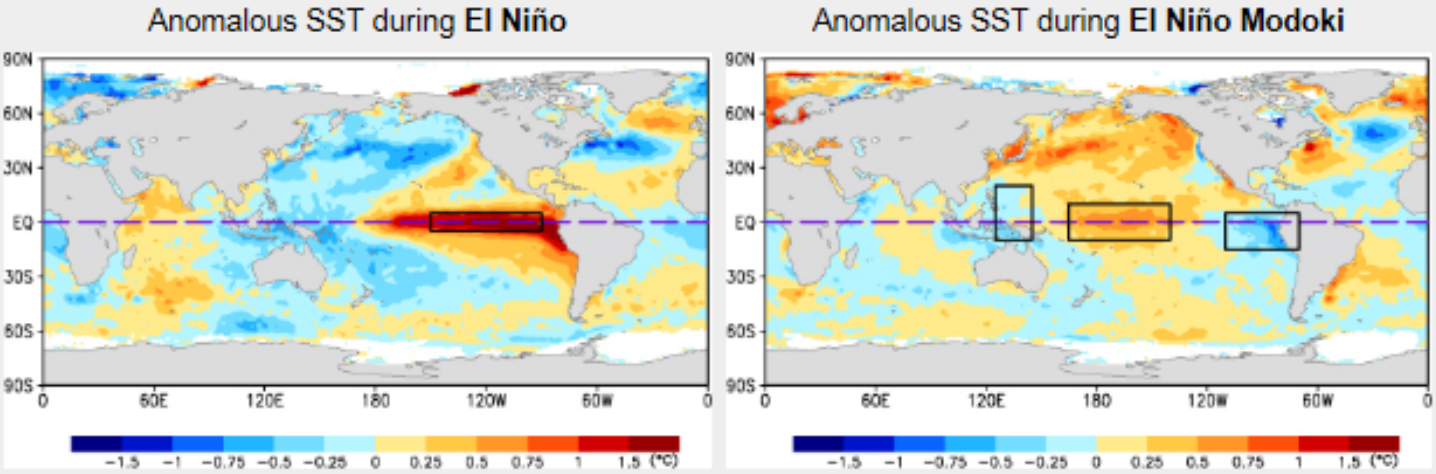


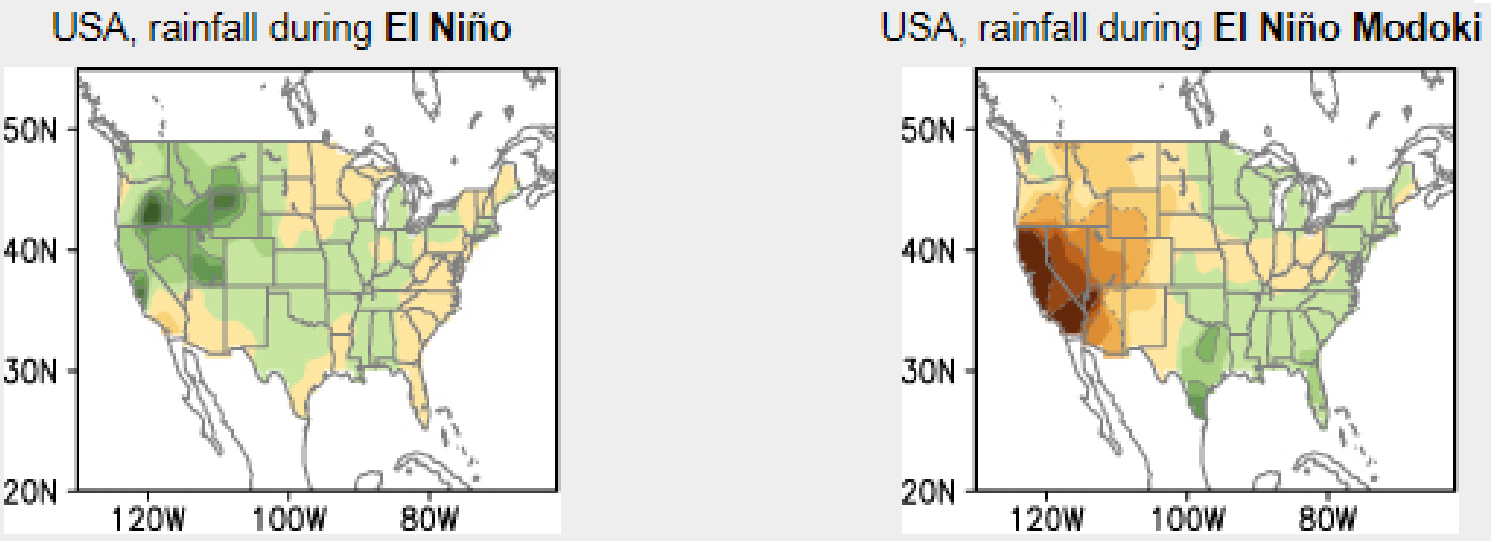
Forecasted Sea Surface temperatures for Late summer:



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.





SUMMARY

Cold short lived period in middle March with Snow still possible. April warmer than normal, with above normal rainfall. Month of May expected to be warmer than normal with and near normal rainfall.

More severe weather likely this spring/summer.

May be more slow moving "Flash Flooding Thunderstorms" this summer .

Summer temperatures above normal, with temperatures averaging as much as 3 degrees above normal .

Hurricane season below average number of storms , but formation favors western Atlantic

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