

RIVER AND WEATHER CONDITIONS

Prepared for Waterways Association Meeting 01/10/2018
National Weather Service Forecast Office, Pittsburgh PA

For the latest river and weather forecasts--<http://www.weather.gov/pittsburgh>

WEATHER RECAP

The month of December averaged slightly below normal with the help of two cold periods; the first, around the second week of the month, and the second and more notable cold period, after Christmas. Precipitation was also below average, with the most notable event on the 23rd, which did result in some minor rises on Area Rivers around the 25th. Snow averaged above normal for the month, in line with projections from September.

RIVER ICE

As a result of the cold months of November and December, ice rapidly formed on all of the major rivers by the first week of January. River ice has a strong correlation with ice formation on the Great Lakes. As of today, Lake Erie is at 85% coverage, which is much higher than normal for early Jan. Ice formation is projected to stall, with some thaw expected as temperatures rise above freezing during the day and below freezing at night. Warmth on Thursday will be short-lived as we cool down for the weekend. Much uncertainty lies in the system for the weekend, but could result in some river rises and ice movement. Rain on Friday is expected to be 1.00 to 1.25 inch.

OUTLOOK

Week of Jan 8th: Rapid warm-up expected by Thursday. Temperatures may approach 60 degrees. Will need to watch ice movement due to warmth and expected rainfall. System late week results in change back to snow with wintry mix possible. Cold end to the weekend. Rainfall ~1.00inches

Outlook for week of Jan 15: Cold for the first half of the week, but not to the extremes of the last 2 weeks. Warming toward the end of the week. Precipitation under 0.50 inch

Outlook for week of Jan 22: Temperatures will trend closer to above average with above average precipitation.

Outlook for February: Closer to normal temperatures and above average precipitation.

Outlook for March: Closer to normal temperatures and above average precipitation.

Outlook for April: Climate studies show that after a warm Oct and a Cool Nov, the following April runs warmer than average.

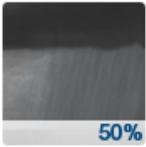
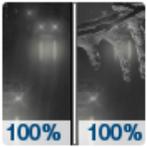
HIGH WATER POTENTIAL

Rain expected at the end of this week could lead to rises high enough (2-4 feet) to break out some of the ice on smaller rivers and streams and get it moving on the larger rivers. While the amount of rain and snowmelt alone should not support flooding, some isolated ice jams may pose local issues. For the remainder of the month, high water potential is near normal. A minimum of 1.50 inch basin wide rainfall in 6 to 12 hours is needed to bring rivers to bank full.

<i>Location</i>	<i>Dec 2017 Precipitation</i>	<i>Departure (Inches)</i>
<i>Pittsburgh</i>	1.77	-1.08

<i>Location</i>	<i>Dec Average Temperature</i>	<i>Departure Degrees</i>	<i>Extreme High</i>	<i>Extreme Low</i>
<i>Pittsburgh</i>	30.6	-1.8	59 on Dec 04	0 on Dec 31

	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

Wednesday	Wednesday Night	Thursday	Thursday Night	Friday	Friday Night	Saturday
						
30%	20%		50%	60%	100% 100%	70% 50%
Chance Light Rain	Slight Chance Light Rain then Mostly Cloudy	Partly Sunny	Chance Showers	Cloudy then Showers Likely	Rain then Wintry Mix	Wintry Mix Likely then Chance Snow
High: 47 °F	Low: 42 °F	High: 64 °F	Low: 47 °F	High: 53 °F	Low: 30 °F	High: 33 °F

8-14 Day Outlook... Temperatures slightly above average. Above normal precipitation.

30 Day Outlook... Near normal temperatures. Above normal precipitation.

Feb-Mar-Apr Outlook... Stormy with above normal precipitation.

Apr-May-Jun Outlook... Continued active pattern with above normal precipitation . Temperatures begin to trend above normal

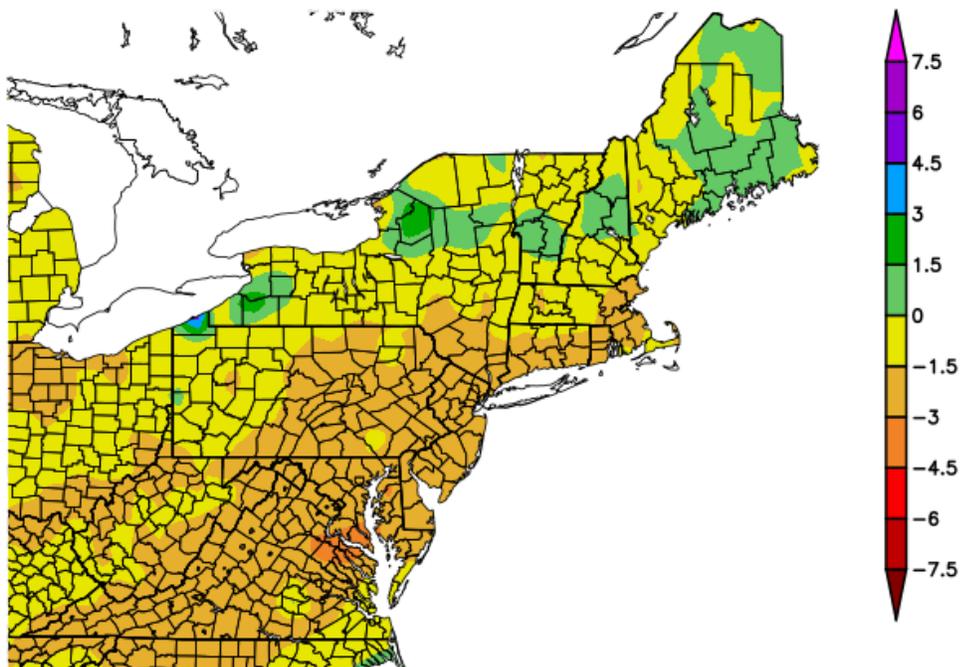
Average Yearly rainfall Pittsburgh: 38.19 inches **In 2017:** 42.15(+3.96) **So Far in 2018:** 0.24 (-0.46)

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

Average Yearly snowfall Pittsburgh: 41.9 inches. **So far for 2017-18:** 13.4(2.9); 2016-17 Season: 32.0(-9.2), 2015-16: 29.6 inches (-12.3) 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

Departure from Normal Precipitation (in)

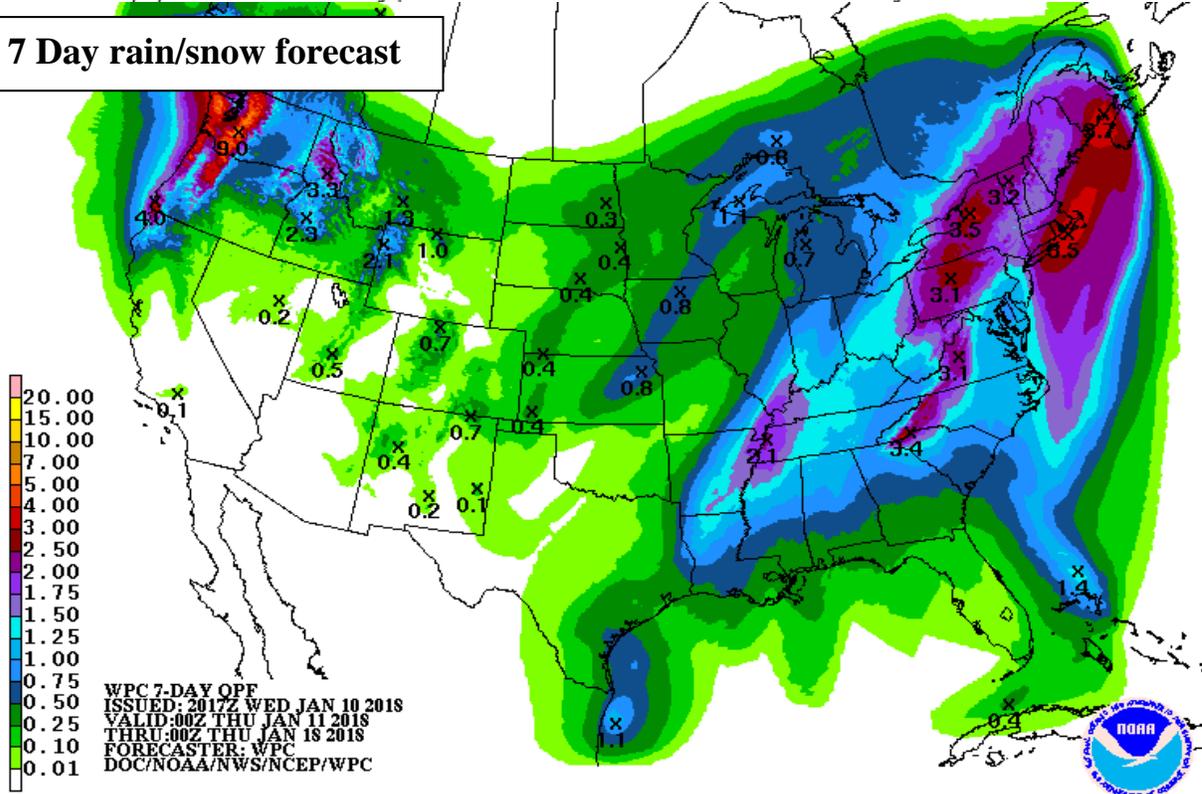
12/1/2017 – 12/31/2017



Generated 1/6/2018 at HPRCC using provisional data.

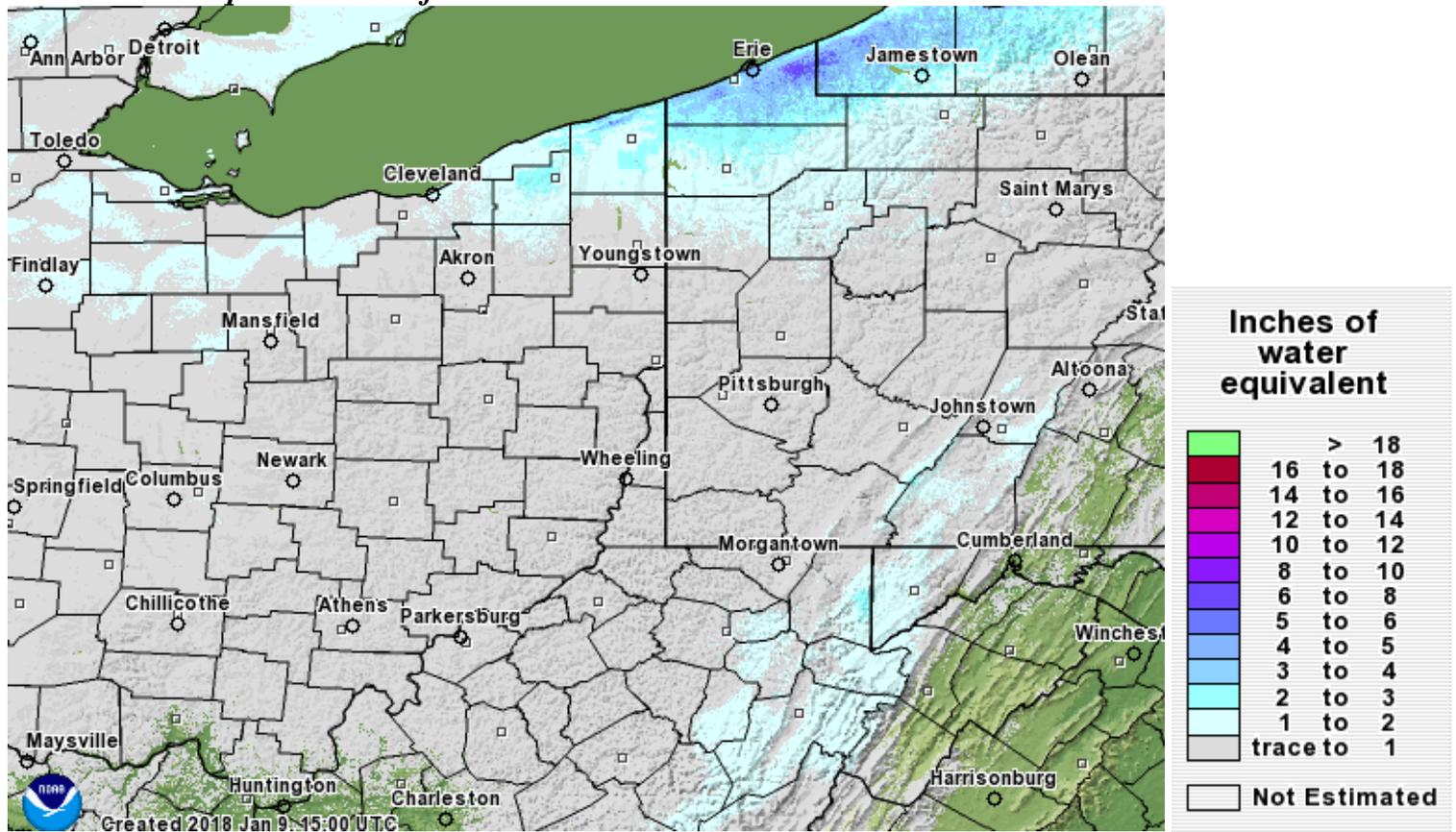
NOAA Regional Climate Centers

7 Day rain/snow forecast



WPC 7-DAY OPF
ISSUED: 2017Z WED JAN 10 2018
VALID:00Z THU JAN 11 2018
THRU:00Z THU JAN 18 2018
FORECASTER: WPC
DOC/NOAA/NWS/NCEP/WPC

Snow Water Equivalent as of Jan 9th.



Snow Report

Basin	Snow Depth (inches)	Water Content (inches)
Upper Ally.	11.0	1.7
Lower Ally.	5.3	0.7
Upper Mon.	5.5	1.0
Lower Mon.	6.7	1.0
Beaver	5.7	0.8
Ohio	3.5	0.5

Lake Erie Long Term Average Ice Concentration Compared to Current Year

