

RIVER AND WEATHER CONDITIONS

Prepared for Waterways Association Meeting 11/13/2013
 National Weather Service Forecast Office, Pittsburgh PA
 For the latest river and weather forecasts--<http://www.weather.gov/pittsburgh>

WEATHER RECAP

October temperatures were above normal and precipitation close to normal for most of the Hydrologic Service Area. Rainfall over the upper Allegheny River was nearly to 150% of normal. All of Northern West Virginia, Southeast Ohio and Southwest Pennsylvania received only 50 to 80 percent of normal rainfall for the month.

| Location | Oct 2013 Precipitation | Departure (Inches) | Oct Snowfall | Seasonal Snowfall |
|------------|---------------------------|-----------------------|--------------|----------------------|
| Pittsburgh | 2.35 | +0.06 | 0.1 (-0.3) | 2.5 (+2.0) |

| Location | Oct Average Temperature | Departure degrees | Extreme High | Extreme Low |
|------------|----------------------------|----------------------|--------------|-------------|
| Pittsburgh | 56.3 | +3.6 | 84(Oct 6) | 28(Oct 28) |

RIVER CONDITIONS RECAP



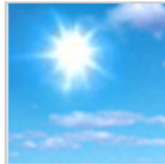
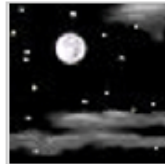



No flooding occurred in the Hydrologic Service Area during October 2013. Localized rainfall amounts of 4 to 5 inches of rain occurred in parts of the upper Allegheny basin during the month around the Parker area. That rainfall was limited in area and only resulted in around a 2 foot rise on the Allegheny River.

HIGH WATER POTENTIAL

Flows on the Allegheny are 250% of normal, the Monongahela 190%, and the Ohio 180% of normal. A minimum of 2.00-2.25 inches basin wide rainfall in 6 to 12 hours is needed to bring rivers to bank full. High water potential is near normal over the next 90 days.

Below normal precipitation and near to below normal temperatures are expected through much of the remainder of November. Several cold outbreaks will occur with some of the precipitation falling as snow. Precipitation over the next 2 weeks will range between 0.50 and 1.50 inches.

WEATHER FORECAST

| WEDNESDAY | WEDNESDAY NIGHT | THURSDAY | THURSDAY NIGHT | FRIDAY | FRIDAY NIGHT | SATURDAY |
|---|---|---|---|--|---|---|
|  |  |  |  |  |  |  |
| Partly Sunny High: 36 °F | Mostly Clear Low: 25 °F | Sunny High: 47 °F | Mostly Clear Low: 31 °F | Mostly Sunny High: 51 °F | Mostly Cloudy Low: 35 °F | Partly Sunny High: 54 °F |

8-14 Day Outlook... Above normal temperatures and normal precipitation.

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

Nov-Dec-Jan Outlook... Above normal temperatures and normal precipitation

Jan-Feb-Mar Outlook... Below normal temperatures and normal precipitation

Mar-Apr-May Outlook... Normal temperatures and normal precipitation

Average Yearly rainfall Pittsburgh: 38.19 inches **So far in 2013:** 31.44 inches (Departure -1.49)

Totals for: 2012: 41.74 inches; 2011: 44.24 inches; 2010: 37.85 inches

Average Yearly snowfall Pittsburgh: 41.9 inches **So far in 2013-2014:** 2.5 inches

2012-13 57 inches

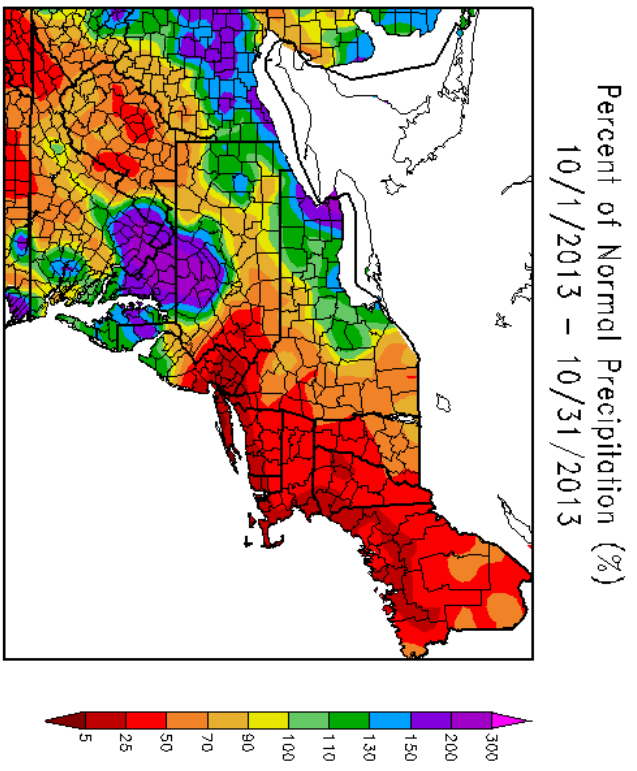
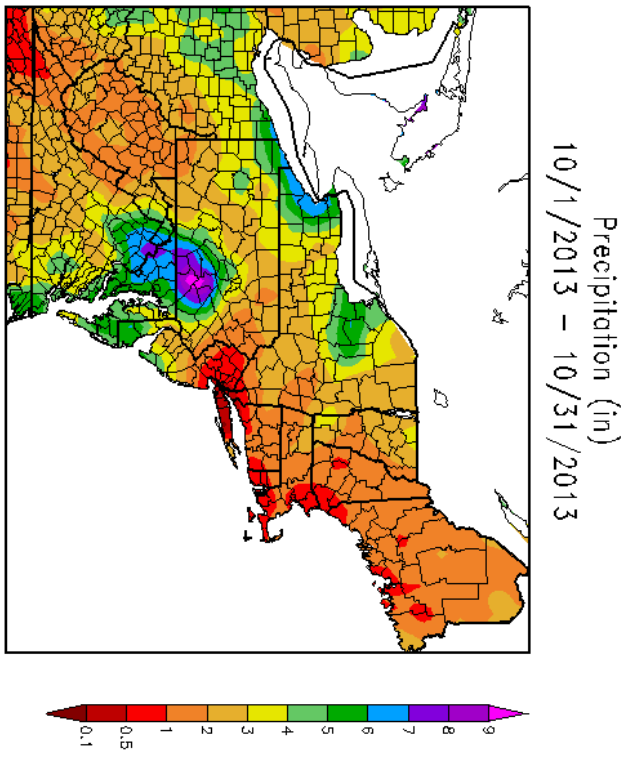
2011-12: 37 inches

2010-11: 57 inches

2009-2010: 77 inches

COE Flood Storage Used

| RESERVOIR | FLOOD STORAGE CAPACITY USED |
|-------------------|-----------------------------|
| Allegheny | 0% |
| Tionesta | 1% |
| Union City | 10% |
| Woodcock | 0% |
| East Branch | 0% |
| Mahoning | 2% |
| Crooked Creek | 3% |
| Conemaugh | 2% |
| Loyalhanna | 4% |
| Stonewall Jackson | 0% |
| Tygart | 0% |
| Yough | 0% |
| Michael J. Kinwan | 8% |
| Berlin | 5% |
| Lake Milton | 0% |
| Mosquito | 4% |
| Shenango | 0% |



WEATHER HISTORY:

28 years ago (Nov 4-5, 1985) Election Day Flood on the Monongahela River. The remnants of Hurricane Juan brought widespread 5 to 7 inches of rain, with as high as 9 inches most falling over the Cheat and Monongahela. This was the flood of record on the Monongahela. During the flood, over 30 barges broke loose with many becoming stuck in the gates at Maxwell Locks and Dam and sinking in the locks and approaches. The river was closed to commerce for several months.. Lake Lynn Dam was erroneously reported to have burst, causing evacuations. Point Marion crested at 40 feet, 14 above flood stage. Monongahela River at Maxwell crested at 44.4 feet which was 12.4 feet above flood stage.

TROPICAL OUTLOOK: Minimal threat for the remainder of the 2013 hurricane season.