MONTHLY WATER INVENTORY REPORT FOR OHIO

August 2012

http://www.ohiodnr.gov/tabid/4191/Default.aspx

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PRECIPITATION during August was below normal across much of the state, but above normal in northwestern Ohio and in scattered areas of eastern Ohio. The average for the state was 2.92 inches, 0.66 inch below normal. Regional averages ranged from 5.20 inches, 1.89 inches above normal, for the Northwest Region to 1.65 inches, 2.19 inches below normal, for the South Central Region. This was the eighth wettest August on record for the Northwest Region. Conversely, this was the seventh driest August on record for the South Central Region and eighth driest for the Southwest Region. Ottawa (Putnam County) reported the greatest amount of August precipitation, 8.28 inches. Gallipolis Lock and Dam (Gallia County) reported the least amount, a scant 0.22 inch.

Precipitation during August fell in the form of showers and thunderstorms and varied greatly across the state. Locally heavy rainfall was reported at several locations during the month. August started off dry, but that changed on August 4 and 5 as showers and thunderstorms moved across Ohio. The greatest amount of rain fell in the northern half of the state where more than 3 inches was reported at some locations. Precipitation was widespread during August 9-11 with most locations receiving between 0.5 inch and 1.5 inches of rain. Showers and storms on August 14 were most numerous across northern Ohio with as much as 1 inch reported at some locations. The next two weeks of the month were rather dry across most of the state, but a few storms crossed Ohio during August 20-22. Showers and thunderstorms returned to the state on August 27, but were most numerous across northern Ohio.

Precipitation for the 2012 water year is above normal throughout much of the state, but below normal in the West Central, Northeast Hills and South Central regions. The state average is 36.67 inches, 0.80 inch above normal. Regional averages range from 38.98 inches, 0.26 inch above normal, for the Southwest Region to 34.46 inches, 0.78 inch below normal, for the West Central Region.

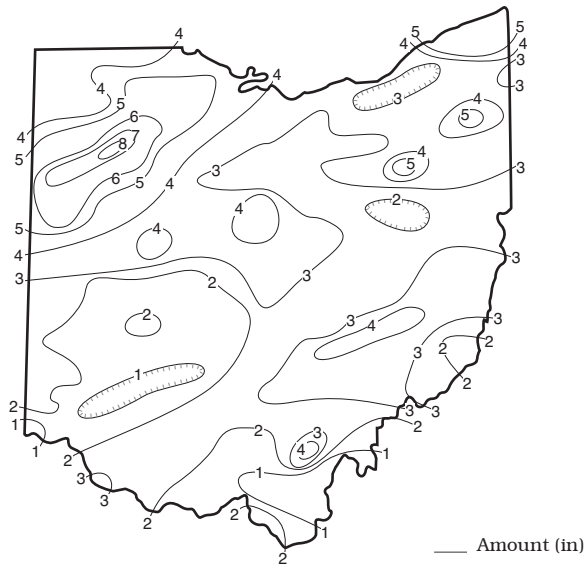
Precipitation for the 2012 calendar year is below normal statewide. The state average is 22.39 inches, 4.85 inches below normal. Regional averages range from 24.58 inches, 4.18 inches below normal, for the Southeast Region to 19.88 inches, 7.02 inches below normal, for the West Central Region.

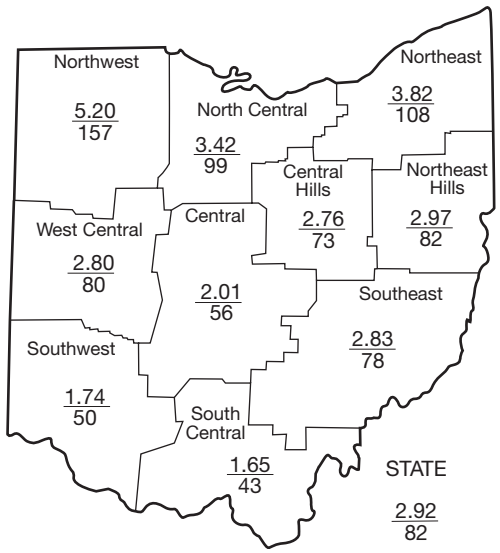
PRECIPITATION

Region	DEPARTURE FROM NORMAL (IN.) Base period 1961-2010					Palmer Drought Severity Index*
	This Month	Past 3 Mos.	Past 6 Mos.	Past 12 Mos.	Past 24 Mos.	
Northwest	+1.89	-1.26	-4.37	+6.17	+10.73	-3.8
North Central	-0.02	-2.71	-4.02	+6.12	+16.48	-3.0
Northeast	+0.27	-1.06	-4.09	+5.60	+18.61	-3.6
West Central	-0.69	-3.23	-6.98	+3.94	+9.31	-4.0
Central	-1.61	-3.94	-5.35	+3.10	+10.24	-3.5
Central Hills	-1.01	-3.58	-5.58	+2.83	+9.25	-3.4
Northeast Hills	-0.65	-2.17	-5.77	+0.62	+9.30	-4.6
Southwest	-1.74	-4.64	-7.26	+4.04	+9.57	-3.9
South Central	-2.19	-3.44	-4.17	+1.73	+11.42	-3.6
Southeast	-0.81	-2.89	-4.15	+2.56	+10.16	-3.0
State	-0.66	-2.90	-5.19	+3.64	+11.48	

*Above +4 = Extreme Moist Spell
3.0 To 3.9 = Very Moist Spell
2.0 To 2.9 = Unusual Moist Spell
1.0 To 1.9 = Moist Spell
0.5 To 0.9 = Incipient Moist Spell
0.4 To-0.4 = Near Normal
-0.5 To -0.9 = Incipient Drought
-1.0 To -1.9 = Mild Drought
-2.0 To -2.9 = Moderate Drought
-3.0 To -3.9 = Severe Drought
Below -4.0 = Extreme Drought

PRECIPITATION AUGUST





MEAN STREAM DISCHARGE

River and Location	Drainage Area (Sq. Mi.)	Mean Discharge (CFS)	% of Normal	% of Normal Past		
				3 Mos.	6 Mos.	12 Mos.
		This Month				
Grand River near Painesville	685	46	52	12	44	111
Great Miami River at Hamilton	3,630	641	58	32	50	133
Huron River at Milan	371	13	30	17	45	136
Killbuck Creek at Killbuck	464	48	34	26	51	109
Little Beaver Creek near East Liverpool	496	72	65	25	46	80
Maumee River at Waterville	6,330	845	100	14	38	122
Muskingum River at McConnelsville	7,422	1,109	50	26	53	95
Scioto River near Prospect	567	36	73	12	56	170
Scioto River at Higby	5,131	682	61	26	54	120
Stillwater River at Pleasant Hill	503	53	73	13	32	96

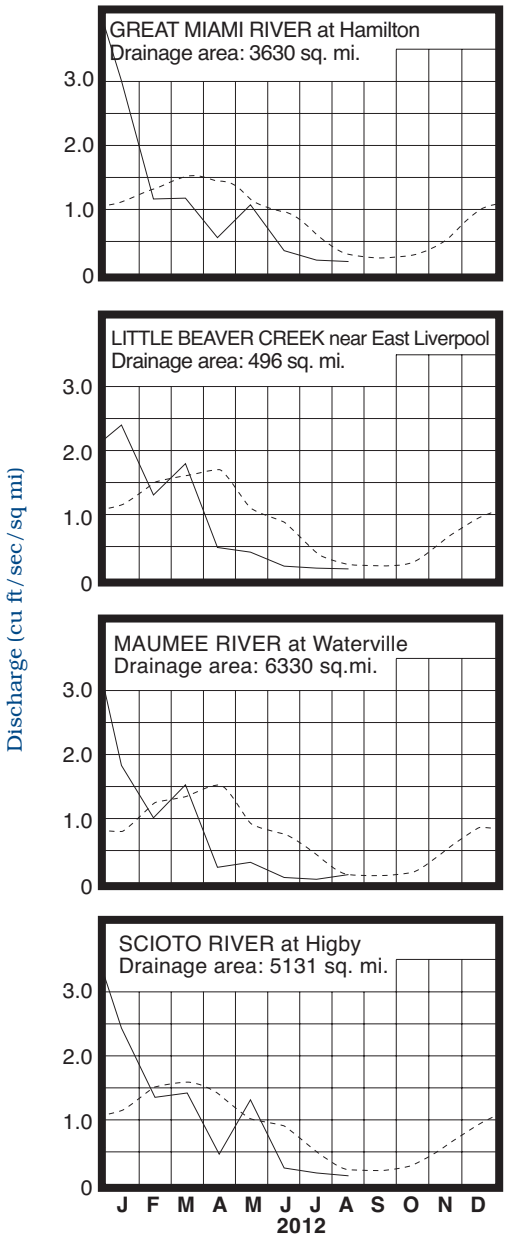
STREAMFLOW during August was below normal throughout most of the state. Flows were low enough to be considered deficient across much of Ohio. Generally, August flows were less than the July flows in the southeastern half of Ohio and greater than the July flows in the northwestern half of the state.

Flows were below normal throughout Ohio at the beginning of August. Flows began to rise across most of the state following the August 4-5 precipitation. Most areas of Ohio recorded their greatest flows for the month during the second week of August as precipitation was widespread during this period. Flows decreased from these peaks during the remainder of the month throughout most of the state and were at their lowest flow at or near the end of August. Some flows increased temporarily in northern Ohio following precipitation that fell on August 27. Flows at the end of the month were below normal statewide.

RESERVOIR STORAGE for water supply during August declined in both the Mahoning and Scioto river basins. Storage is below normal in both basins.

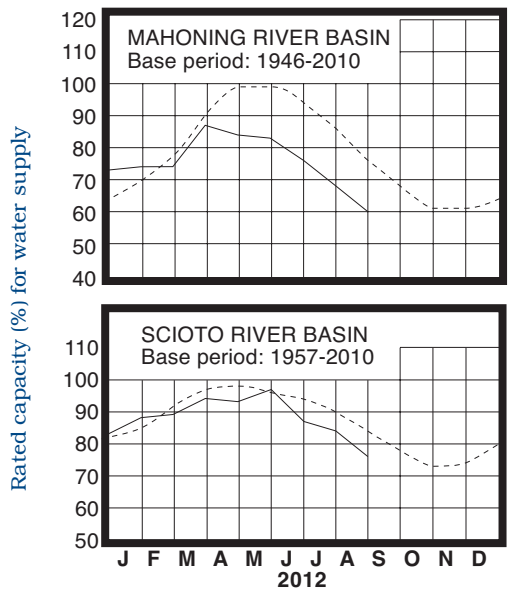
Reservoir storage at the end of August in the Mahoning basin index reservoirs was 60 percent of rated capacity for water supply compared with 68 percent for last month and 80 percent for August 2011. Month-end storage in the Scioto basin index reservoirs was 76 percent of rated capacity for water supply compared with 84 percent for last month and 94 percent for August 2011.

MEAN STREAM DISCHARGE



Base period for all streams: 1981-2010

RESERVOIR STORAGE FOR WATER SUPPLY



Normal – – – – Current ———

GROUND-WATER LEVELS

Based on daily lowest level in feet below land-surface datum

Index Well	Location	Aquifer	Mean This Month	Departure From Normal	Change in feet from:	
					Last Month	Year Ago
F-1	W. Rushville, Fairfield Co.	Sandstone	15.92	-0.10	-0.76	-2.04
Fa-1	Jasper Mill, Fayette Co.	Limestone	10.74	-2.26	-1.10	-1.70
Fr-10	Columbus, Franklin Co.	Gravel	44.60	-0.40	-0.52	-1.01
H-1	Harrison, Hamilton Co.	Gravel	24.27	-1.52	-0.51	-0.92
Hn-2a	Dola, Hardin Co.	Dolomite	8.82	-1.26	-0.91	-1.65
Po-124	Freedom, Portage Co.	Sandstone	76.64	+0.09	-0.54	+0.13
Tu-1	Strasburg, Tuscarawas Co.	Gravel	15.64	-2.14	-0.48	-1.40

GROUND WATER levels during August declined in all aquifers throughout the state. Ground water levels in most aquifers declined steadily throughout the month. Generally, net declines during August were about what is normally expected for this time of year in most aquifers.

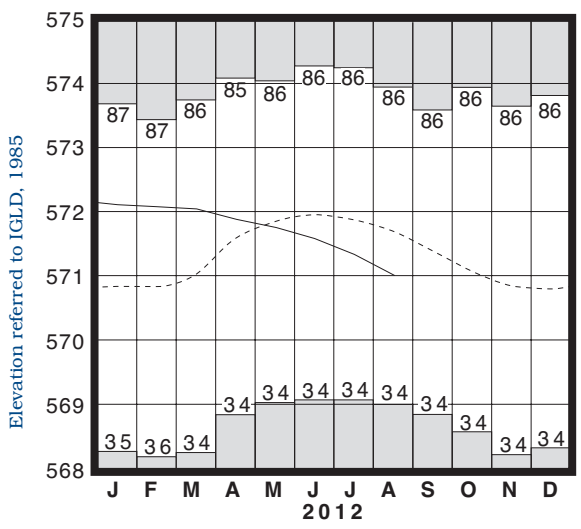
Ground water storage is at below normal seasonal levels in most areas of Ohio. Current levels range from slightly above normal to more than 2 feet below normal across the state. Current ground water levels are also lower than the August 2011 levels throughout nearly all of Ohio. However, even though ground water levels are below normal and lower than last year, ground water storage appears to be adequate throughout the state. Ground water levels are expected to continue to decline during the next two or three months. With near-normal precipitation and other climatic conditions during this period, ground water supplies should remain adequate throughout the state. However, the next few months are typically the driest time of the year and the time when ground water storage is at its lowest level; hence, water supply managers with ground water sources should monitor their respective situations closely. The Ohio Agricultural Statistics Service reports that at the end of August, soil moisture was rated as being short or very short in 77 percent of the state and adequate in 23 percent of the state.

LAKE ERIE level declined during August. The mean level was 571.00 feet (IGLD-1985), 0.33 foot lower than last month's mean level and 0.69 foot below normal. This month's mean level is 1.11 feet lower than the August 2011 level and 1.80 feet above Low Water Datum.

The U.S. Army Corps of Engineers (USACE) reports that precipitation in the Lake Erie basin during August averaged 3.03 inches, 0.19 inch below normal. For the entire Great Lakes basin, August precipitation averaged 2.51 inches, 0.62 inch below normal. For calendar year 2012 through August, the Lake Erie basin has averaged 19.39 inches, 4.52 inches below normal, while the entire Great Lakes basin has averaged 19.31 inches, 1.89 inches below normal.

In addition, the USACE reports that based on the current condition of the Great Lakes basin and anticipated weather conditions, the level of Lake Erie should remain below normal for the foreseeable future. Deviations from the anticipated weather patterns could result in the level of Lake Erie ranging from about 4 inches above to as much as 17 inches below the normal seasonal average.

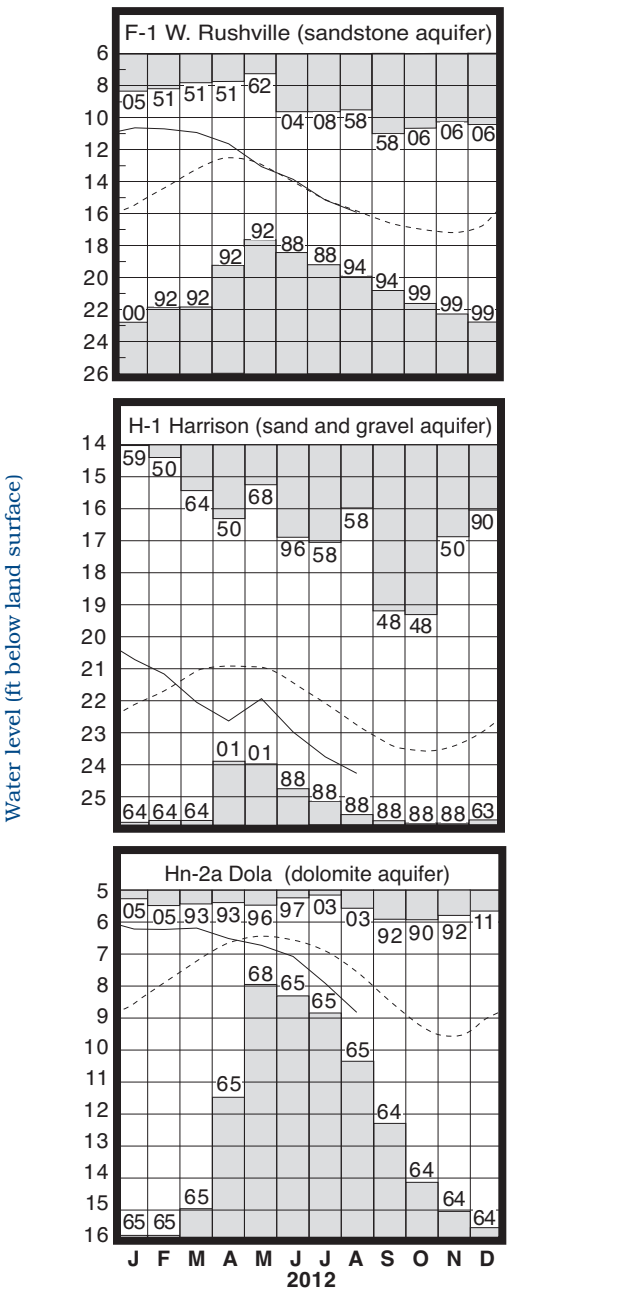
LAKE ERIE LEVELS



Base period: 1918-2010

Record high and low, year of occurrence

GROUND-WATER LEVELS



Base periods: F-1, 1947-2010; H-1 1951-2010.

Hn-2a, 1955-2010 Record high and low, year of occurrence

Normal – – – – Current ———

SUMMARY

Precipitation during August was below normal across most of the state, but above normal in northwestern Ohio. Streamflow was below normal throughout most of the state and low enough to be considered deficient across much of Ohio. Reservoir storage decreased and was below normal in both the Mahoning and Scioto river basins. Ground water levels declined seasonally statewide and were below normal throughout most of Ohio. Lake Erie level declined 0.33 foot and was 0.69 foot below the long-term August average.

NOTES AND COMMENTS

Water Resources Data For Ohio Available On-Line

The Water Resources Division of the U.S. Geological Survey (USGS) recently announced the availability of the following report:

Water Resources Data For The United States, Water Year 2011.

This report contains data from cooperative long-term surface water and ground water networks as well as data collected as part of special short-term projects. Beginning with the 2006 annual report, paper reports are no longer produced. The USGS annual Water Data Report is part of a national web-based product with a "Site Data Sheet" available for each individual station that can be viewed and/or downloaded. Site Data Sheets contain all surface-water, ground-water and/or water-quality data that were collected at a particular site in a given water year. Site Data Sheets for water year 2011 in Ohio have been completed and are available at: http://wdr.water.usgs.gov/wy2011/search.jsp. Connecting to this web site will take you directly to the Site Data Sheet search page. Site Data Sheets are indexed by USGS station number and physical location, which includes state, county and hydrologic unit. If you have any questions or comments, please contact James Mangus with the USGS at (614) 430-7727 or e-mail: jpmangus@usgs.gov. Water Resources Data-Ohio reports for water year 2002-2010 can also be accessed online at: http://wdr.water.usgs.gov/.

ACKNOWLEDGMENTS

This report has been compiled from Division data and from information supplied by the following:

Precipitation data:
U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service: The Miami Conservancy District: U.S. Army Corps of Engineers, Muskingum Area.

Streamflow and reservoir storage data:
U.S. Geological Survey, Water Resources Division.

Lake Erie level data:
U.S. Army Corps of Engineers, Detroit District.

Palmer Drought Severity Index:
U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service.

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