



MONTHLY WATER INVENTORY REPORT FOR OHIO

August 2006

<http://www.dnr.state.oh.us/water/pubs/newsltrs/mwirmain.htm>

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Water Inventory Unit

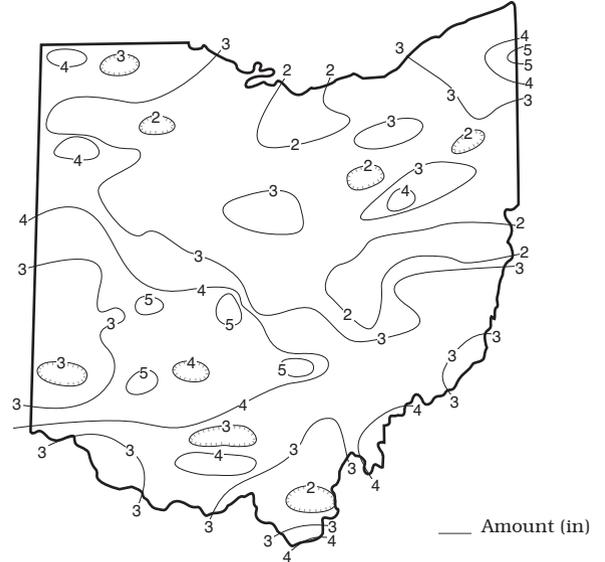
PRECIPITATION during August was below normal throughout most of the state but above normal in the Southwest and West Central regions. Scattered locations across Ohio also had above normal precipitation. The state average was 3.04 inches, 0.40 inch below normal. Regional averages ranged from 3.98 inches, 0.74 inch above normal, for the West Central Region to 2.23 inches, 1.29 inches below normal, for the Central Hills Region. Enterprise (Hocking County) reported the greatest amount of August precipitation, 5.40 inches. Steubenville (Jefferson County) reported the least amount, 1.33 inches.

The month started with showers and thunderstorms during August 3-4. Precipitation totals were generally less than 0.75 inch with heavier downpours producing up to 1.5 inches of rain at isolated locations. Widely scattered storms during August 6-7 produced 1-2 inches of rain at a few locations, but most areas across the state received little or no rain during this period. The next 18 days were rather dry, with precipitation totals under 0.50 inch reported across most of the state; a few locations received 0.5 to 1.5 inches from widely scattered storms, mainly during August 14 and 18. The greatest amount of precipitation for most areas fell during the last week of the month. Most areas received more than 1 inch of rain during August 27-29, with more than 3 inches falling in some areas, especially across western Ohio. Some of the storms on August 28 were locally severe with heavy rain, high winds and at least one confirmed tornado in Pickaway County.

Precipitation for the 2006 calendar year is above normal across most of the state, but below normal in the South Central and Southeast regions. The average for the state as a whole is 28.46 inches, 1.60 inches above normal. Regional averages range from 31.93 inches, 6.14 inches above normal, for the Northeast Region to 25.55 inches, 3.71 inches below normal, for the South Central Region.

Precipitation for the 2006 water year is also above normal across most of the state, but below normal in the South Central and Southeast regions. The average for the state as a whole is 36.64 inches, 1.57 inches above normal. Regional averages range from 40.17 inches, 5.15 inches above normal, for the Northeast Region to 33.43 inches, 4.24 inches below normal, for the South Central Region.

PRECIPITATION AUGUST

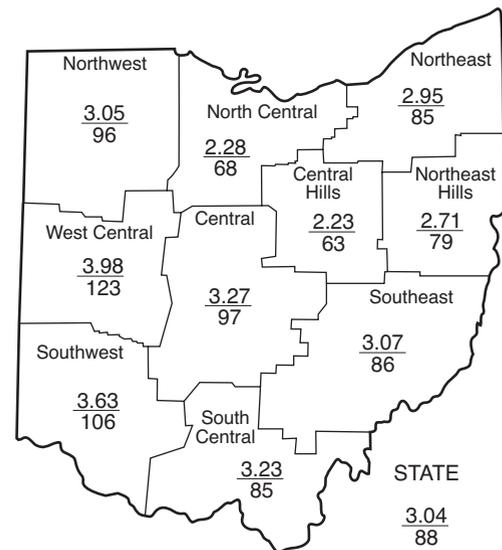


PRECIPITATION

Region	DEPARTURE FROM NORMAL (IN.) Base period 1951-2000					Palmer Drought Severity Index*
	This Month	Past				
		3 Mos.	6 Mos.	12 Mos.	24 Mos.	
Northwest	-0.14	+2.51	+2.68	+5.49	+4.44	+0.3
North Central	-1.07	+3.13	+2.54	+4.41	+9.41	-0.1
Northeast	-0.54	+5.72	+5.67	+5.51	+12.52	+3.7
West Central	+0.74	+3.59	+3.31	+6.58	+11.42	+2.1
Central	-0.10	+1.69	+0.52	+1.26	+7.30	-0.7
Central Hills	-1.29	+2.07	+1.41	+1.64	+7.36	-0.6
Northeast Hills	-0.72	+2.71	+2.09	+2.58	+11.18	-0.1
Southwest	+0.22	+2.22	+2.16	+0.24	+0.84	+0.1
South Central	-0.55	-0.81	-3.02	-5.50	-0.63	-2.8
Southeast	-0.51	-0.19	-1.59	-1.61	+10.42	-1.6
State	-0.40	+2.26	+1.58	+2.07	+7.44	

*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



Average (in)
Percent of normal

MEAN STREAM DISCHARGE

This Month

River and Location	Drainage Area (Sq. Mi.)	Mean Discharge (CFS)	% of Normal	% of Normal Past		
				3 Mos.	6 Mos.	12 Mos.
Grand River near Painesville	685	499	568	363	128	134
Great Miami River at Hamilton	3,630	1,414	122	119	103	114
Huron River at Milan	371	77	84	170	94	114
Killbuck Creek at Killbuck	464	235	167	217	112	104
Little Beaver Creek near East Liverpool	496	152	112	102	72	75
Maumee River at Waterville	6,330	1,192	122	81	77	102
Muskingum River at McConnelsville	7,422	2,606	90	212	121	82
Scioto River near Prospect	567	71	157	145	83	120
Scioto River at Higby	5,131	1,110	84	85	70	82
Stillwater River at Pleasant Hill	503	95	134	110	99	114

STREAMFLOW during August was above normal across most of the state, but below normal in north-central and southeastern Ohio. Flows were high enough to be considered excessive in some basins in northeastern Ohio. Flows during August declined seasonally from July flows statewide.

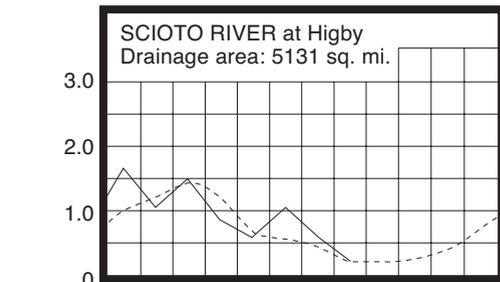
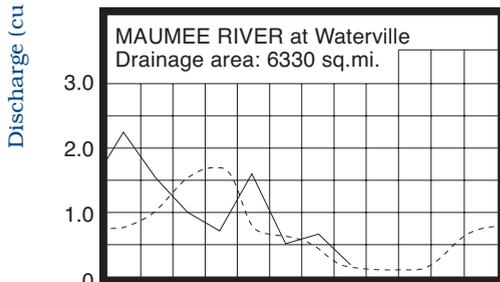
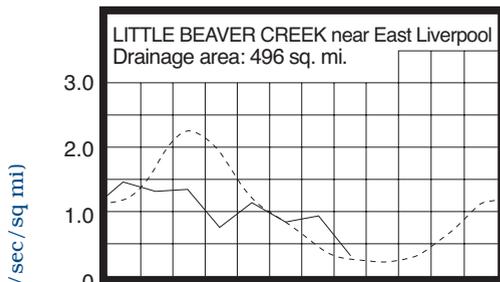
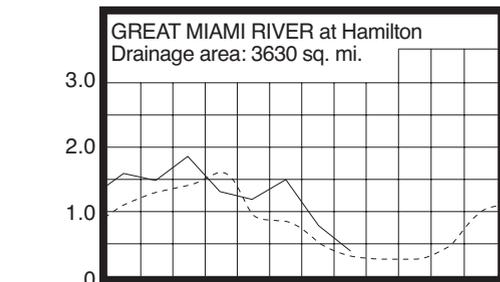
Flows at the beginning of the month were above normal statewide. Greatest flows for the month occurred at the beginning of August throughout the northeastern two-thirds of the state as streams were still responding to the precipitation that fell during the last week of July. Except for some temporary increases noted following local precipitation, streamflow steadily declined during the next three weeks. Lowest flows for the month occurred between August 25 and 28 across most of the state. Flows increased statewide

in response to the widespread precipitation that fell during August 26-29. Greatest flows for the month occurred on August 29 or 30 across the southwestern one-third of the state. Flows at the end of the month were above normal nearly statewide.

RESERVOIR STORAGE during August decreased in both the Mahoning and Scioto river basin. Storage continues to be above normal in both basins.

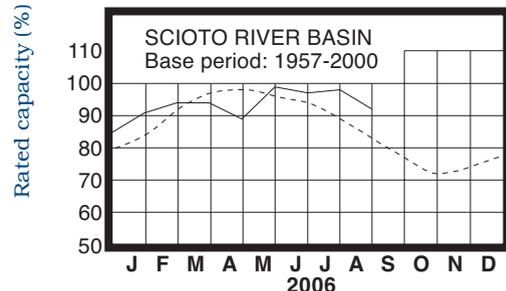
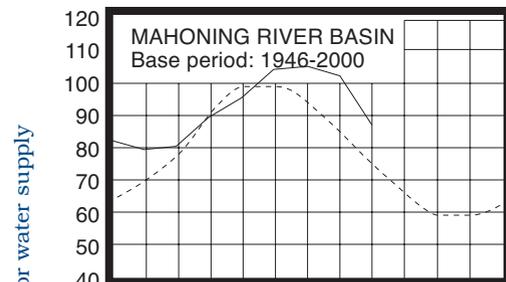
Reservoir storage at the end of August in the Mahoning basin index reservoirs was 87 percent of rated capacity for water supply, compared with 102 percent for last month and 95 percent for August 2005. Month-end storage in the Scioto basin index reservoirs was 92 percent of rated capacity for water supply, compared with 98 percent for last month and 97 percent for August 2005. Surface water supplies have been adequate across the state during the entire summer high-use period and remain in a favorable position as the end of the water year approaches.

MEAN STREAM DISCHARGE



Base period for all streams: 1971-2000

RESERVOIR STORAGE FOR WATER SUPPLY



Normal - - - - Current ———

GROUND-WATER LEVELS

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

GROUND WATER levels during August declined in most aquifers throughout the state. Net declines during the month were generally greater than usually observed. In most aquifers, water levels declined steadily until the last week of the month. Many aquifers showed some improvement during the last week of August following widespread precipitation.

Ground water levels are above normal across much of the state, but continue to be below normal in the southwestern quarter of Ohio. Also, current levels are higher than the August 2005 levels throughout most of Ohio. The above normal precipitation during the past several months across much of the state has been positive for ground water supplies, especially in northern Ohio. However, some aquifers in southern Ohio have not fared as well due to the below normal precipitation that areas in southern Ohio have received. In spite of this, ground water supplies remain adequate statewide. With near-normal precipitation and other climatic conditions during the upcoming recharge season, ground water supplies should remain adequate throughout the state. The Ohio Agricultural Statistics Service reports that soil moisture near the end of August was short or very short in 19 percent of the state, adequate in 72 percent of the state, and surplus in 9 percent of the state.

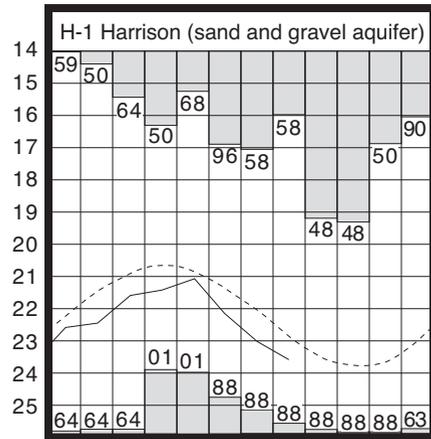
LAKE ERIE level declined during August. The mean level was 571.65 feet (IGLD-1985), 0.17 foot lower than last month's mean level and 0.07 foot below normal. This month's mean level is 0.29 foot higher than the August 2005 level and 2.45 feet above Low Water Datum.

The U.S. Army Corps of Engineers (USACE) reports that precipitation in the Lake Erie basin during August was 2.63 inches, 0.56 inch below normal. For the entire Great Lakes basin, August precipitation averaged 2.28 inches, 0.87 inch below normal. For calendar year 2006 through August, the Lake Erie basin has averaged 26.65 inches, 2.95 inches above normal, while the entire Great Lakes basin has averaged 21.79 inches, 0.69 inch above normal.

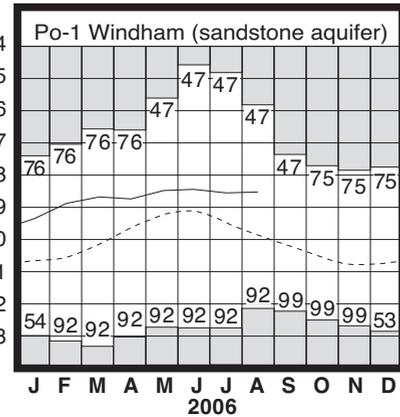
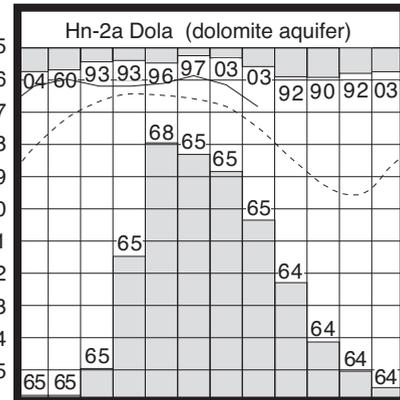
In addition, the USACE reports that based on the current condition of the Great Lakes basin and anticipated weather conditions, the level of Lake Erie should range from near-normal to as much as 6 inches below normal for the foreseeable future. Deviations from the anticipated weather patterns could result in the level of Lake Erie ranging from about 5 inches above to as much as 15 inches below the normal seasonal average.

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	13.87	+2.17	-1.02	+2.44
Fa-1	Jasper Mill, Fayette Co.	Limestone	9.07	-0.75	-0.59	+0.88
Fr-10	Columbus, Franklin Co.	Gravel	45.11	-1.31	-0.69	-0.78
H-1	Harrison, Hamilton Co.	Gravel	23.59	-0.72	-0.55	+0.24
Hn-2a	Dola, Hardin Co.	Dolomite	6.81	+0.68	-0.67	+1.04
Po-1	Windham, Portage Co.	Sandstone	18.52	+1.35	+0.03	+0.23
Tu-1	Strasburg, Tuscarawas Co.	Gravel	13.35	+0.06	-1.10	+1.41

GROUND-WATER LEVELS



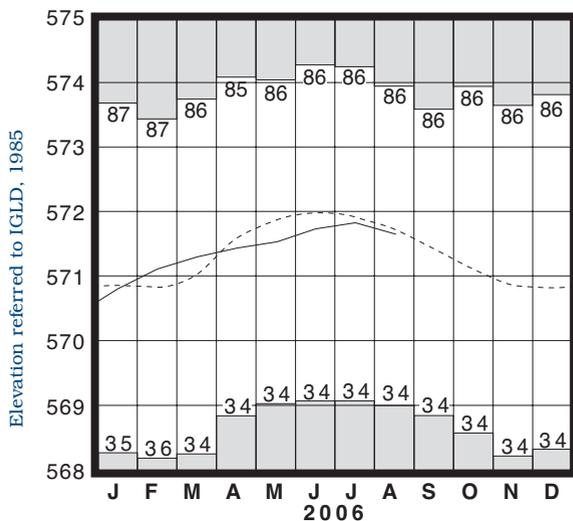
Water level (ft below land surface)



Base periods: H-1, 1951-2000. Hn-2a, 1955-2000.

Po-1, 1947-2000 Record high and low, year of occurrence

LAKE ERIE LEVELS



Base period: 1918-2000

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 the Southwest and West Central regions, as well as a few other isolated areas. Streamflow was above normal throughout much of the state, but below normal in north-central and southeastern Ohio. Reservoir storage decreased in the Mahoning and Scioto river basins, but remained above normal in both basins. Ground water levels declined seasonally across most of the state. Lake Erie level declined 0.17 foot and was 0.07 foot below the long-term August average.

NOTES AND COMMENTS

New Water Well Log Search Capabilities Now Available

The Water Resources Section of the Ohio Department of Natural Resources, Division of Water, has developed a new procedure for searching the water well record database. Added to the existing search are an exact address search, a customized data search (which allows searches on one or more of 15 data fields), and three different locational searches using latitude/longitude or state plane coordinates. The well log images are also viewable.

The new customized search allows for searching by four counties and townships, owner's name, address range, total depth, well yield, driller's name, and aquifer type to name a few. The locational searches include a 2000-foot, .5-mile, 1-mile or 2-mile radius searches, a user specified rectangular search, or a 4-point user specified polygon search.

Data from the results of a search can be downloaded as a comma-separated file that can easily be exported into a spreadsheet. The well log images can also be downloaded. To access the water well log search page go to <http://www.dnr.state.oh.us/water/maptechs/wellogs/appNEW/>. If you have any questions about this new procedure or need further information about the water well record database, please contact Jim Raab at: jim.raab@dnr.state.oh.us or phone (614) 265-6747.

ACKNOWLEDGMENTS

This report has been compiled from Division of Water 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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