MONTHLY WATER INVENTORY REPORT FOR OHIO

July 2008

http://www.dnr.state.oh.us/tabid/4191/Default.aspx
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PRECIPITATION during July was generally below normal in northwestern, southwestern, central and east-central Ohio and above normal in west-central, northeastern and southeastern Ohio. The state average was 3.70 inches, 0.38 inch below normal. Regional averages ranged from 5.25 inches, 1.41 inches above normal, for the Northeast Region to 2.60 inches, 1.55 inches below normal for the Central Region. Mosquito Creek Lake (Trumbull County) reported the greatest amount of July precipitation, 7.42 inches. Wilmington (Clinton County) reported the least amount, 1.39 inches.

Precipitation during July fell in a typical summer pattern as scattered showers and thunderstorms, some with locally heavy downpours. The first half of the month was wetter than the second half throughout Ohio. Most of the state received precipitation during July 2-4, with rain amounts between 0.5-1.5 inches falling across much of the state; some areas in northwestern Ohio received more than 3 inches of rain during this period. Storms during July 8-9 were most numerous across the northeastern two-thirds of the state where 0.50-1.0 inch of rain fell with amounts of up to 3 inches reported at some locations. Storms during July 12-13 were most numerous across west-central and southwestern Ohio where as much as 4 inches of rain fell at some locations. Areas in central and northeastern Ohio received 0.25-1.0 inch of rain from these storms while little or no rain fell across portions of northwestern and southeastern Ohio. During July 20-22 showers spread across southern Ohio where amounts of 0.50-1.0 inch of rain fell, ranging up to as much as 2 inches at some locations. The last 9 days of the month were much drier across most of the state with only a few widely scattered showers. Less than 0.50 inch of rain was reported at most locations during this period, with many places receiving no rain. An exception was in northeastern Ohio where greater amounts fell on July 26 and July 30.

Precipitation for the 2008 calendar year is above normal statewide. The average for the state is 30.83 inches, 7.41 inches above normal. Regional averages range from 33.36 inches, 7.65 inches above normal, for the Southwest Region to 27.67 inches, 6.93 inches above normal, for the Northwest Region.

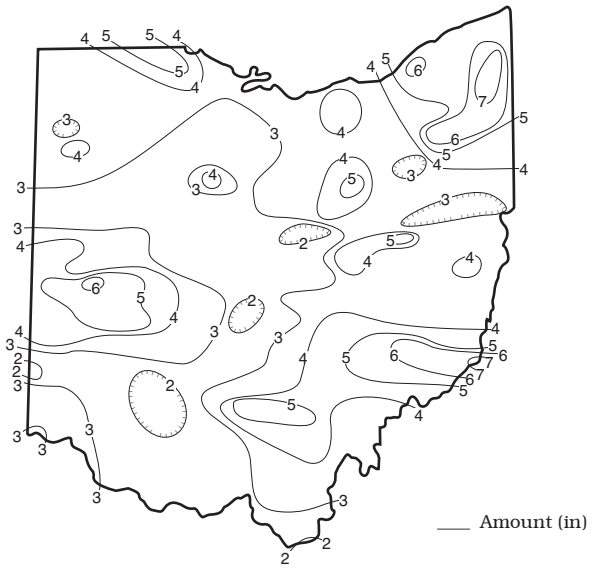
Precipitation for the 2008 water year is above normal throughout Ohio. The average for the state is 42.09 inches, 10.46 inches above normal. Regional averages range from 46.19 inches, 11.62 inches above normal, for the Southwest Region to 37.63 inches, 9.30 inches above normal, for the Northwest Region.

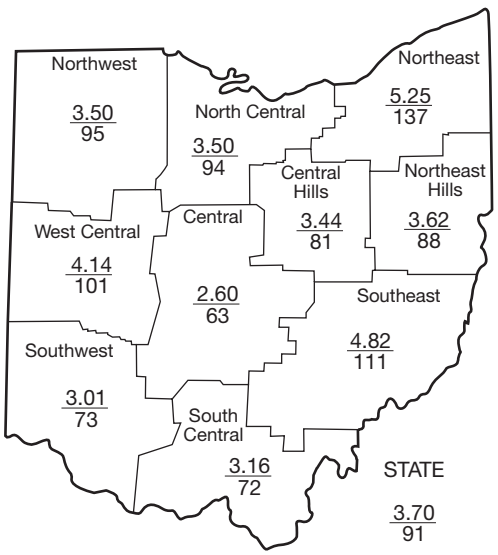
PRECIPITATION

Region	DEPARTURE FROM NORMAL (IN.) Base period 1951-2000					Palmer Drought Severity Index*
	This Month	Past 3 Mos.	Past 6 Mos.	Past 12 Mos.	Past 24 Mos.	
Northwest	-0.17	+1.85	+6.48	+15.84	+18.13	+2.8
North Central	-0.24	+2.82	+8.33	+16.16	+19.94	+3.4
Northeast	+1.41	+3.19	+8.66	+15.74	+18.49	+3.1
West Central	+0.03	+4.28	+9.74	+14.51	+21.48	+2.2
Central	-1.55	+3.20	+8.21	+12.01	+18.56	+1.5
Central Hills	-0.81	+1.37	+5.62	+10.14	+12.98	+1.3
Northeast Hills	-0.51	+1.04	+5.51	+9.71	+12.36	0.0
Southwest	-1.09	+2.69	+8.49	+10.36	+12.97	+1.2
South Central	-1.25	+3.00	+6.93	+8.73	+10.52	+1.2
Southeast	+0.47	+3.74	+8.49	+10.30	+11.94	+2.0
State	-0.38	+2.71	+7.65	+12.32	+15.69	

*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 JULY





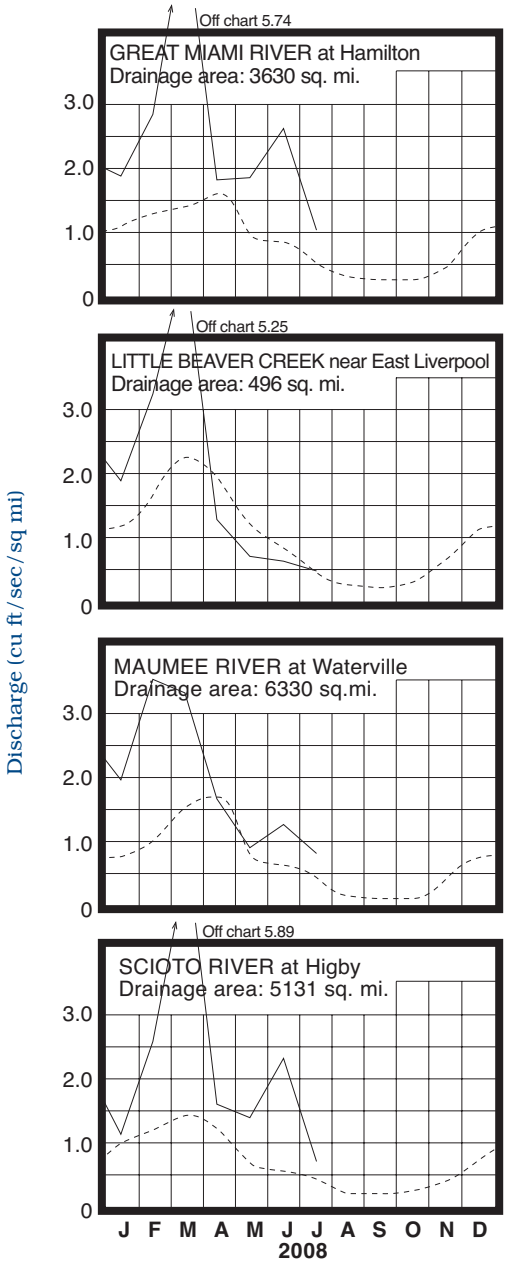
MEAN STREAM DISCHARGE

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	767	385	111	152	142
Great Miami River at Hamilton	3,630	3,785	202	180	204	172
Huron River at Milan	371	283	264	146	219	223
Killbuck Creek at Killbuck	464	350	179	93	145	138
Little Beaver Creek near East Liverpool	496	239	103	62	133	131
Maumee River at Waterville	6,330	5,205	188	128	160	181
Muskingum River at McConnelsville	7,422	7,806	159	189	220	126
Scioto River near Prospect	567	350	220	170	205	197
Scioto River at Higby	5,131	3,666	134	147	182	155
Stillwater River at Pleasant Hill	503	495	306	194	207	181

STREAMFLOW during July was above normal throughout most of the state. Flows in some drainage basins in the northern one-third of the state and also in the southwestern and southeastern areas of Ohio were high enough to be considered excessive. Flows for the month declined seasonally from those flows recorded during June across most of the state.

Flows at the beginning of July were above normal statewide. Greatest flows for the month generally occurred at the beginning of the month across eastern Ohio, during July 9-10 in northern Ohio and on July 14 across western and southwestern Ohio. Flows declined during the second half of the month, with only some temporary increases noted following local precipitation. Lowest flows for the month occurred on July 30 or 31 across most of Ohio. Flows at the end of July were below normal across nearly the entire state.

MEAN STREAM DISCHARGE

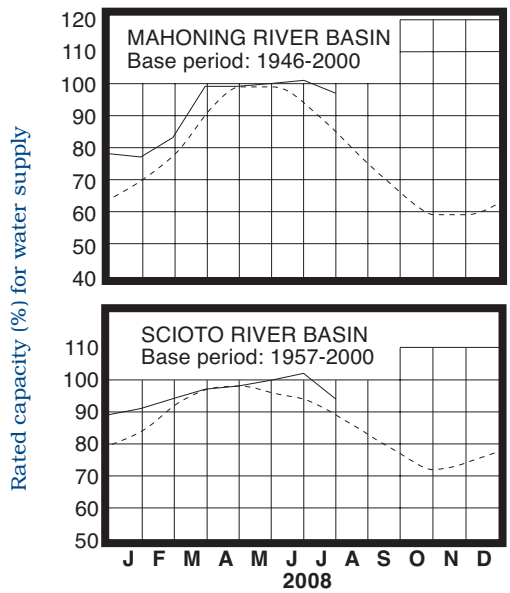


Base period for all streams: 1971-2000

RESERVOIR STORAGE during July decreased in both the Mahoning and Scioto river basins. At the end of July, surface water storage in both basins remained above normal.

Reservoir storage at the end of July in the Mahoning basin index reservoirs was 97 percent of rated capacity for water supply compared with 101 percent for last month and 80 percent for July 2007. Month-end storage in the Scioto basin index reservoirs was 94 percent of rated capacity for water supply compared with 102 percent for last month and 84 percent for July 2007. Surface water supplies continue to be in excellent condition during the summer high-use period.

RESERVOIR STORAGE FOR WATER SUPPLY



Normal – – – – Current ———

GROUND WATER levels during July declined seasonally in most aquifers. Exceptions were noted in a few consolidated aquifers where levels were slightly higher due to delayed recharge from the above normal June precipitation. Levels in most consolidated aquifers were rather stable or rose slightly during the first half of July, then declined during the second half of the month as drier conditions prevailed. Levels in most unconsolidated aquifers steadily declined throughout the month with temporary increases noted following precipitation during the first half of the month.

Ground water supplies continue to be in good condition throughout the state. Ground water levels are above normal in most consolidated aquifers across Ohio, but are slightly below normal in unconsolidated aquifers statewide. A new record-high July level was reached in index observation well F-1 (Fairfield County), representing sandstone aquifers in eastern and southeastern Ohio. Current levels are higher than they were at this time last year, ranging up to more than 5 feet higher than the July 2007 levels. Although the drier conditions that existed across most of the state during the second half of July allowed soils in Ohio to dry considerably, with near-normal precipitation during the next few months, ground water supplies should remain in good condition. The Ohio Agricultural Statistics Service reports that near the end of July, soil moisture was rated as being short or very short in 39 percent of the state, adequate in 58 percent of the state and surplus in 3 percent of the state.

LAKE ERIE level rose during July. The mean level was 572.04 feet (IGLD-1985), 0.08 foot higher than last month's mean level and 0.12 foot above normal. This month's mean level is 0.65 foot higher than the July 2007 level and 2.84 feet above Low Water Datum.

The U.S. Army Corps of Engineers (USACE) reports that precipitation in the Lake Erie basin during July averaged 3.66 inches, 0.34 inch above normal. For the entire Great Lakes basin, July precipitation averaged 3.85 inches, 0.71 inch above normal. For calendar year 2008 through July, the Lake Erie basin has averaged 25.19 inches of precipitation, 4.68 inches above normal, while the entire Great Lakes basin has averaged 21.84 inches, 3.89 inches above normal.

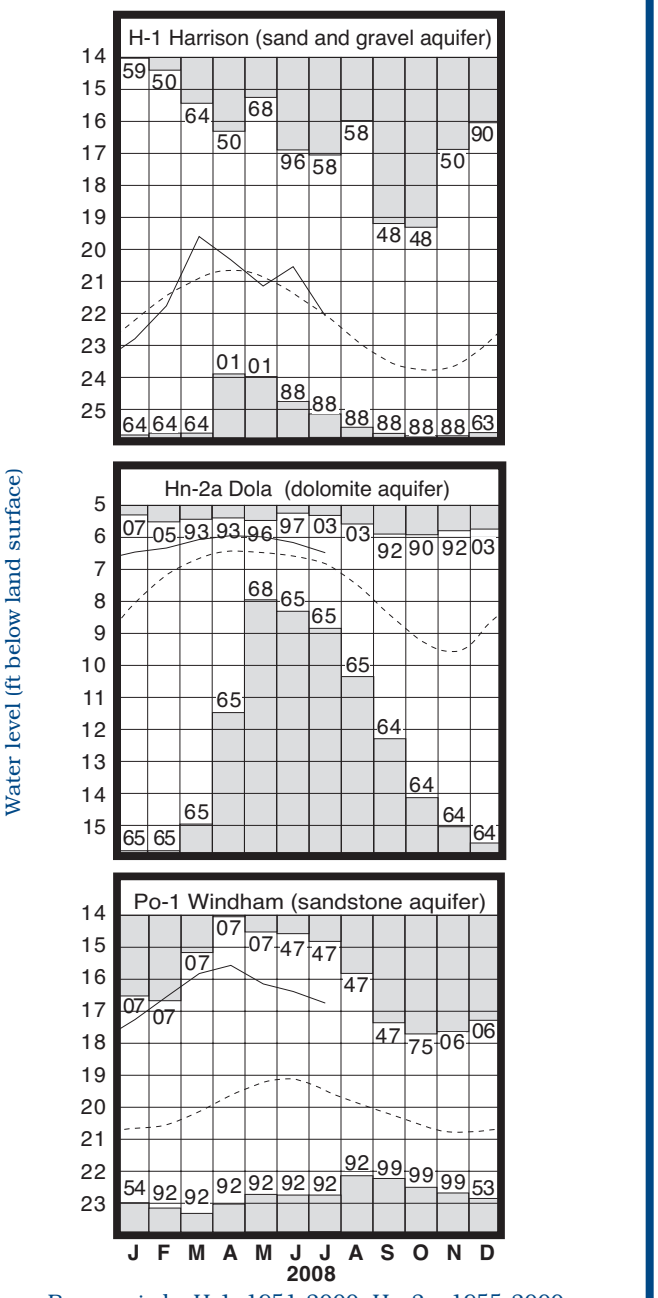
In addition, the USACE reports that based on the current condition of the Great Lakes basin and anticipated weather conditions, the level on Lake Erie should fall back to below normal by the end of summer, where it is predicted to remain for the foreseeable future. Deviations from the anticipated weather patterns could result in the level of Lake Erie ranging from around 7 inches above normal to as much as 13 inches below the normal seasonal levels.

GROUND-WATER LEVELS

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

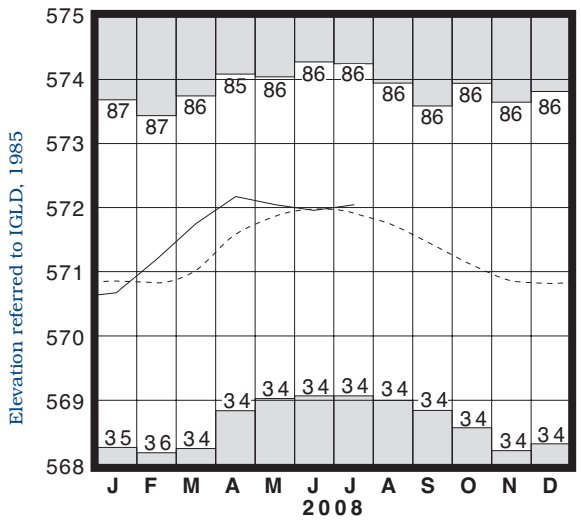
Index Well	Location	Aquifer	Mean This Month	Departure From Normal	Change in feet from:	
					Last Month	Year Ago
F-1	W. Rushville, Fairfield Co.	Sandstone	10.24	+5.18	+0.64	+5.21
Fa-1	Jasper Mill, Fayette Co.	Limestone	8.50	-0.68	-0.32	+0.76
Fr-10	Columbus, Franklin Co.	Gravel	43.44	-0.16	-0.28	+1.62
H-1	Harrison, Hamilton Co.	Gravel	22.08	-0.03	-1.54	+1.88
Hn-2a	Dola, Hardin Co.	Dolomite	6.49	+0.34	-0.32	+1.02
Po-1	Windham, Portage Co.	Sandstone	16.73	+2.76	-0.34	+0.66
Tu-1	Strasburg, Tuscarawas Co.	Gravel	13.40	-0.66	-0.34	+0.98

GROUND-WATER LEVELS



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 July was below normal in northwestern, southwestern, central and south-central Ohio, and above normal across much of west-central, northeastern and southeastern Ohio. Streamflow was above normal across most of the state and was high enough to be considered excessive in many basins. Reservoir storage decreased in both the Mahoning and Scioto river basins, but remained above normal in both basins. Ground water levels declined seasonally in most aquifers. Lake Erie level increased 0.08 foot and was 0.12 foot above the long-term July average.

NOTES AND COMMENTS

Ohio Water Withdrawal Facility Registration Program 2006

The Ohio Department of Natural Resources (ODNR) Division of Water has created a map showing water withdrawals from registered users in Ohio during 2006. Based upon reported water withdrawals from 2006, this map depicts the distribution and quantity of water withdrawals in Ohio. Graduated circles indicate the quantity of water withdrawn from a given location. The largest circles represent withdrawals exceeding 100 million gallons per day, and the smallest circles represent withdrawals of less than 1 million gallons of water per day. The map can be viewed or downloaded (as a pdf file) from the internet at http://www.dnr.state.oh.us/tabid/20446/Default.aspx.

Data for this map comes from the Water Withdrawal Facility Registration Program, which started in 1990. Section 1521.16 of the Ohio Revised Code requires any owner of a facility, or combination of facilities, with the capacity to withdraw water at a quantity greater than 100,000 gallons per day to register with the ODNR, Division of Water. Each year registrants report how much water was withdrawn at their facilities. There are currently 2225 registered facilities in the program.

For more information about water withdrawal in Ohio, contact 614-265-6739 or visit us on the web at www.dnr.state.oh.us/tabid/4265/Default.aspx

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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