MONTHLY WATER INVENTORY REPORT FOR OHIO

May 2008

http://www.dnr.state.oh.us/tabid/4191/Default.aspx
Compiled By Scott C. Kirk
Hydrologist
Water Inventory Unit

PRECIPITATION during May was above normal throughout most of the state, but below normal in the Northeast Hills Region, extreme northwestern Ohio and a few other scattered locations. The state average was 4.53 inches, 0.62 inch above normal. Regional averages ranged from 5.96 inches, 1.48 inches above normal, for the Southwest Region to 3.64 inches, 0.15 inch above normal, for the Northwest Region. Cheviot (Hamilton County) reported the greatest amount of May precipitation, 7.93 inches. Other stations reporting more than 7 inches of precipitation for the month were Fernbank, Miamitown (both in Hamilton County) and Woodsfield (Monroe County). Grand Rapids (Wood County) and Napoleon (Henry County) reported the least amount, 2.33 inches.

Precipitation during May fell as showers and thunderstorms, generally falling during the first 20 days of the month. Most of the state received rain during May 2-3 with 1-2 inches reported in northern Ohio and 0.50-1.0 inch elsewhere. May 7-20 was a wet period across the state with rain falling nearly every day at some locations. Showers and thunderstorms on May 7-8 were widespread with most areas of the state receiving 0.50-1.0 inch of rain. Another 0.50-1.0 inch fell across most of Ohio during May 11-12. Rain on May 15 was greatest in the southern half of Ohio with 1-2 inches reported, tapering to less than 0.25 inch across northern Ohio. Minor flooding resulted from this precipitation in some areas of southern Ohio. Showers and thunderstorms during May 19-20 were confined to southern Ohio where an additional 1-2 inches of rain fell. The next 10 days were rather dry with only some widely scattered showers in southern Ohio on May 27. Showers and thunderstorms returned to Ohio late on May 30 and crossed the state during May 31. The greatest amount of rain fell in the northwestern quarter of the state where 1-3 inches was reported. During these storms high winds and three tornadoes in northwestern Ohio caused extensive damage to several homes and property, mainly in Hancock, Paulding, Putnam, Seneca and Van Wert counties. Little or no rain fell in most of southern Ohio from this system.

Precipitation for the 2008 calendar year is above normal statewide. The state average is 20.80 inches, 5.31 inches above normal. Regional averages range from 24.16 inches, 6.44 inches above normal, for the Southwest Region to 18.63 inches, 5.23 inches above normal, for the Northwest Region.

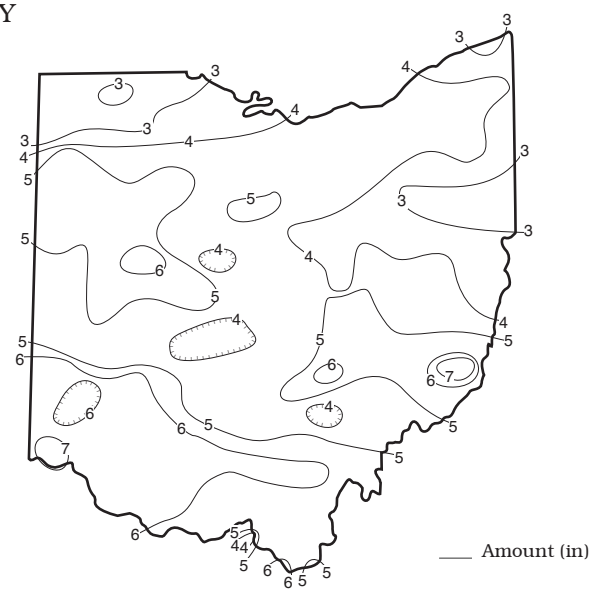
Precipitation for the 2008 water year is also above normal for the entire state. The state average is 32.06 inches, 8.36 inches above normal.

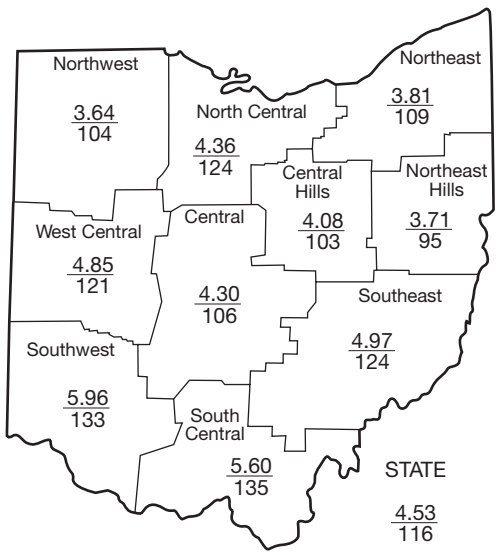
PRECIPITATION

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	+0.15	+1.43	+6.93	+11.52	+18.64	+3.5
North Central	+0.85	+2.57	+8.02	+12.75	+22.20	+4.6
Northeast	+0.30	+2.31	+8.36	+10.78	+21.42	+2.6
West Central	+0.85	+3.16	+8.21	+9.18	+20.98	+2.4
Central	+.023	+3.03	+6.31	+7.56	+17.38	+1.7
Central Hills	+0.12	+1.33	+5.32	+8.71	+15.34	+2.0
Northeast Hills	-0.19	+1.27	+5.52	+8.26	+14.50	+0.7
Southwest	+1.48	+5.27	+8.42	+7.27	+13.54	+3.1
South Central	+1.44	+3.85	+8.04	+6.36	+8.70	+2.5
Southeast	+0.95	+3.74	+7.36	+6.19	+9.46	+2.6
State	+0.62	+2.81	+7.25	+8.84	+16.18	

*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 MAY





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	822	159	145	154	135
Great Miami River at Hamilton	3,630	6,699	197	205	195	149
Huron River at Milan	371	451	205	220	221	212
Killbuck Creek at Killbuck	464	492	107	153	154	132
Little Beaver Creek near East Liverpool	496	349	60	137	151	127
Maumee River at Waterville	6,330	5,718	118	134	180	164
Muskingum River at McConnelsville	7,422	10,500	114	222	219	115
Scioto River near Prospect	567	836	224	196	213	175
Scioto River at Higby	5,131	7,141	169	191	171	134
Stillwater River at Pleasant Hill	503	754	194	204	208	152

Regional averages range from 36.99 inches, 10.41 inches above normal, for the Southwest Region to 28.59 inches, 7.60 inches above normal, for the Northwest Region.

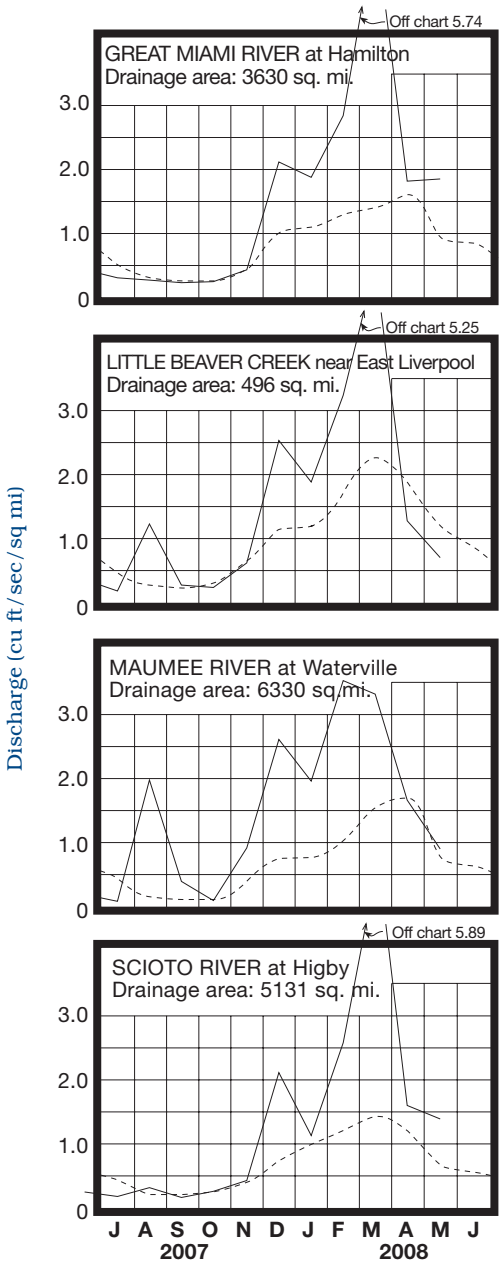
STREAMFLOW during May was above normal across most of the state, but below normal in many drainage basins in east-central and northwestern Ohio. Flows were high enough to be considered excessive in some basins, primarily those in southwestern and north-central Ohio. Flows across much of the state were seasonally less than the flows recorded during April; some exceptions were noted in areas where precipitation was much above normal.

Streamflow at the beginning of the month was below normal throughout most of the state. Flows increased during the first week in response to precipitation that fell early in May. Greatest flows for May in northeastern Ohio occurred during this time. Greatest flows across most of the remainder of the state occurred during May 11-13. Some basins in southern Ohio had their greatest flows for the month around May 16 following locally heavy rain that fell across that area of the state. Following these peaks, flows declined steadily through the end of the month, except for some temporary rises noted in southern Ohio following the May 19-20 precipitation and in a few basins on the last day of the month. Lowest flows for the month occurred during May 30-31 statewide. Flows at the end of May were below normal across most of the state, but remained above normal in southwestern and north-central Ohio.

RESERVOIR STORAGE during May increased in both the Mahoning and Scioto river basins. At the end of May, surface water storage in both basins was above normal.

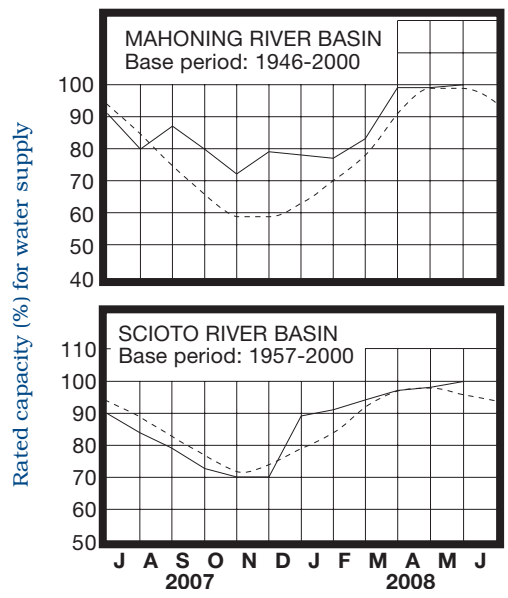
Reservoir storage at the end of May in the Mahoning basin index reservoirs was 100 percent of rated capacity for water supply compared with 99 percent for last month and 97 percent for May 2007. Month-end storage in the Scioto basin index reservoirs was 100 percent of rated capacity for water supply compared with 98 percent for last month and 97 percent for May 2007. Surface water supplies are in excellent shape throughout Ohio.

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

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	11.18	+2.04	-1.35	+0.89
Fa-1	Jasper Mill, Fayette Co.	Limestone	8.10	-1.03	-0.31	+0.19
Fr-10	Columbus, Franklin Co.	Gravel	42.56	-0.22	-0.19	+0.30
H-1	Harrison, Hamilton Co.	Gravel	21.13	-0.30	-0.82	+1.41
Hn-2a	Dola, Hardin Co.	Dolomite	5.99	+0.50	-0.05	+0.10
Po-1	Windham, Portage Co.	Sandstone	16.15	+3.11	-0.57	-1.01
Tu-1	Strasburg, Tuscarawas Co.	Gravel	11.71	-0.28	-1.99	+0.86

GROUND WATER levels during May declined statewide. The net declines were greater than usually observed for May across Ohio. Generally, ground water levels in most aquifers declined or were rather stable during the first half of the month, rose slightly during the middle of the month, and then declined through month's end.

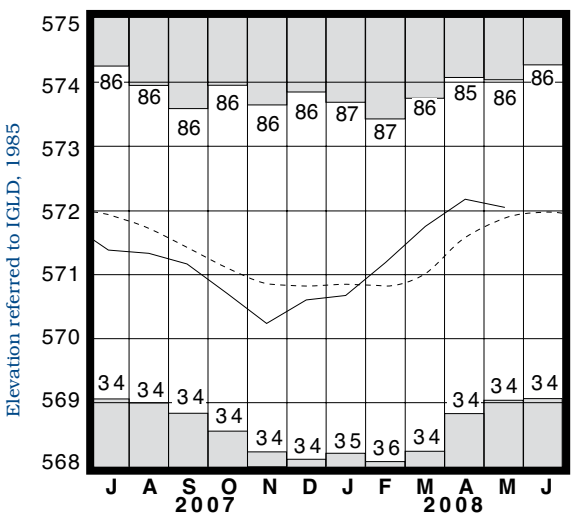
Ground water supplies are favorable as the summer high-use period approaches. Abundant precipitation during the 2008 recharge season has been beneficial for ground water supplies, helping levels rebound from the below normal conditions that prevailed during the summer and fall of 2007. As a result, current levels are above the May 2007 levels across most of the state. However, the 2008 recharge season appears to have come to an end and levels have fallen to slightly below normal in unconsolidated aquifers, but remain above normal in most consolidated aquifers. Although little net recharge can typically be expected during the summer months, near-normal precipitation during this period would help reduce the overall demand and keep the state's ground water supplies in a favorable position. The Ohio Agricultural Statistics Service reports that near the end of May, soil moisture was rated as being short in 6 percent of the state, adequate in 81 percent of the state and surplus in 13 percent of the state.

LAKE ERIE level declined during May. The mean level was 572.05 feet (IGLD-1985), 0.13 foot lower than last month's mean level and 0.17 foot above normal. This month's mean level is the same as the May 2007 level and 2.85 feet above Low Water Datum.

The U.S. Army Corps of Engineers (USACE) reports that precipitation in the Lake Erie basin during May averaged 3.14 inches, 0.14 inch below normal. For the entire Great Lakes basin, May precipitation averaged 2.95 inches, which is normal. For calendar year 2008 through May, the Lake Erie basin has averaged 17.06 inches of precipitation, 3.32 inches above normal, while the entire Great Lakes basin has averaged 13.45 inches, 1.84 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 of Lake Erie should fall to below normal during late spring or early summer and remain there for the foreseeable future. Deviations from the anticipated weather patterns could result in the level of Lake Erie ranging from 5 inches above normal to as much as 13 inches below the normal seasonal average.

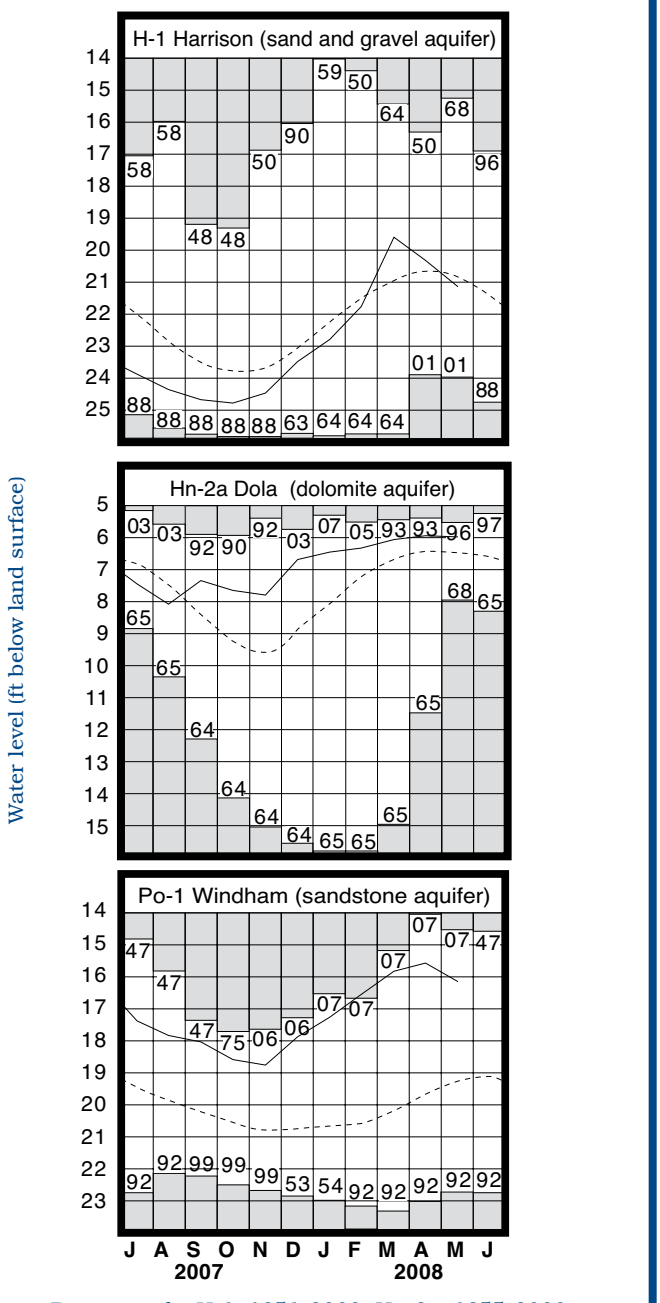
LAKE ERIE LEVELS



Base period: 1918-2000

Record high and low, year of occurrence

GROUND-WATER LEVELS



Base periods: H-1, 1951-2000. Hn-2a, 1955-2000. Po-1, 1947-2000

Record high and low, year of occurrence

Normal – – – – Current ———

SUMMARY

Precipitation during May was above normal throughout most of the state, but below normal in the Northeast Hills Region, extreme northwestern Ohio and a few other scattered locations. Streamflow was above normal across most of the state, but below normal in basins in east-central and northwestern Ohio. Reservoir storage increased and was above normal in both the Mahoning and Scioto river basins. Ground water levels declined statewide. Lake Erie level declined 0.13 foot and was 0.17 foot above the long-term May average.

NOTES AND COMMENTS

2008 Ohio Statewide Floodplain Management Conference

On August 27-28, 2008, the Ohio Department of Natural Resources (ODNR), Federal Emergency Management Agency (FEMA), and the Ohio Floodplain Management Association (OFMA) will be coordinating the 2008 Ohio Statewide Floodplain Management Conference. The conference will be held at The Columbus, A Renaissance Hotel in Columbus, Ohio. Concurrent conference sessions will address various aspects of floodplain management, including: post-flood damage assessment and recovery, mitigation, engineering, and regulations.

The Ohio Statewide Floodplain Management Conference is an annual training event that focuses on various elements of floodplain management, such as regulations, insurance, mapping, engineering, and natural benefits. The conference is intended to develop and expand the capabilities of floodplain management professionals throughout Ohio. Conference sessions are designed to provide local floodplain managers with information and skills necessary to implement effective floodplain management programs within their respective communities.

The conference offers continuing education credits toward Certified Floodplain Manager (CFM) certification through the Association of State Floodplain Managers (ASFPM). Continuing education credits will be also awarded through the Ohio Board of Building Standards (BBS). The Certified Floodplain Manager (CFM) examination will be given one day prior to the conference on August 26th from 1:00 p.m. to 4:00 p.m. at the Ohio Department of Natural Resources. The registration deadline for the CFM examination through the ASFPM is August 11, 2008. For more information, visit www.floods.org.

All conference information will be posted at http://www.dnr.state.oh.us/tabid/17934/Default.aspx. If you have any questions regarding the 2008 Ohio Statewide Floodplain Management Conference, please contact Alicia Silverio at 614-265-1006 or alicia.silverio@dnr.state.oh.us.

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.

Division of Water
2045 Morse Road
Columbus, Ohio 43229-6693