MONTHLY WATER INVENTORY REPORT FOR OHIO

May 2007

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

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PRECIPITATION during May was markedly below normal statewide. The state average was 1.60 inches, 2.31 inches below normal. This ranks May 2007 as the 3rd driest May during the past 125 years of records (following 0.81 inch in 1934 and 1.25 inches in 1939). Regional averages ranged from 2.20 inches, 1.70 inches below normal, for the Northeast Hills Region to 0.67 inch, 3.49 inches below normal, for the South Central Region. Precipitation in 7 of Ohio's 10 climatic regions ranked in the top 10 driest May's of record including 2nd driest for both the South Central and Southeast regions. Grand Rapids (Wood County) reported the greatest amount of May precipitation, 3.79 inches. West Union (Adams County) reported the least amount, 0.29 inch. Much of the southern one-third of Ohio and other scattered locations around the state reported less than 1 inch of precipitation for the month.

Precipitation during May fell as scattered showers and thunderstorms. Some locations in southern Ohio had only one or two days with more than 0.25 inch of rain. Showers and thunderstorms during the first week of the month were greatest in northern Ohio where generally 0.50-1.0 inch of rain fell while only light amounts fell in southern Ohio. Showers and thunderstorms during May 9 and 10 in northwestern Ohio brought 0.25-0.50 inch of rain, with isolated areas receiving as much as 1.5 inches; the rest of the state received little or no rain. The most significant rain occurred during May 15-17 with amounts of 0.5 inch common across much of the state. A band of heavier rain fell from southwestern to northeastern Ohio, with as much as 1.5 inches reported. A few of the storms during this period were severe with wind damage, including a small tornado that touched down in Clark County uprooting trees and causing minimal structural damage to a few buildings. Widely scattered showers fell during the last week of the month, mainly across the northern two-thirds of Ohio. Agricultural crops have been adversely impacted by the below normal precipitation, especially in the southern half of the state. The Ohio Agricultural Statistics Service reports that near the end of May, soil moisture was rated as being short or very short in 73 percent of the state and adequate in 27 percent of the state.

Precipitation for the 2007 water year is above normal throughout most of the state, but below normal in the South Central Region. The average for the state as a whole is 27.11 inches, 3.41 inches above normal. Regional averages range from 30.40 inches, 7.47 inches above normal, for the West Central Region to 23.96 inches, 1.91 inches below normal, for the South Central Region.

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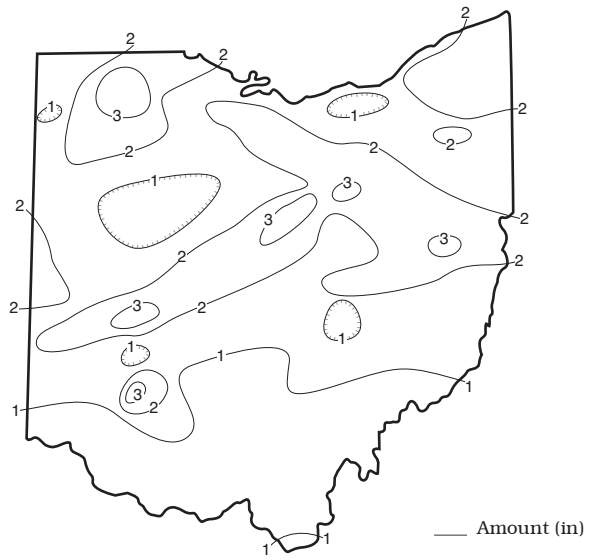
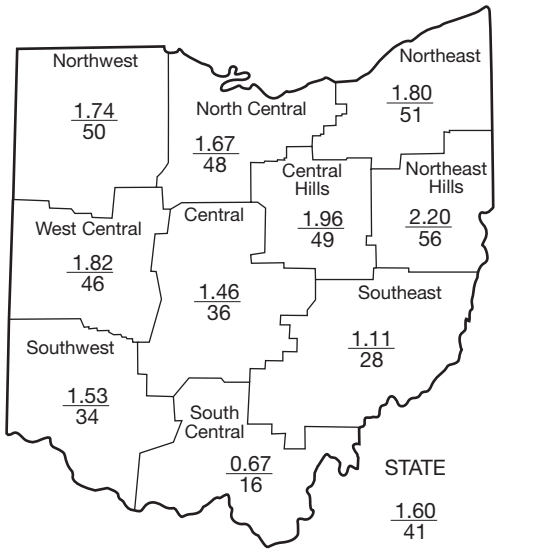
PRECIPITATION

Region	DEPARTURE FROM NORMAL (IN.) Base period 1951-2000 This Month	Past 3 Mos.	Past 6 Mos.	Past 12 Mos.	Past 24 Mos.	Palmer Drought Severity Index*
Northwest	-1.75	-1.13	+2.93	+6.74	+8.61	-0.1
North Central	-1.84	-0.84	+3.85	+9.65	+12.82	+0.1
Northeast	-1.71	-1.53	+1.95	+10.66	+11.77	-0.3
West Central	-2.18	+0.97	+5.68	+11.80	+14.17	+0.4
Central	-2.61	-0.64	+2.42	+9.95	+9.15	-1.4
Central Hills	-2.00	-1.16	+0.57	+6.37	+6.34	-1.2
Northeast Hills	-1.70	-0.47	-0.09	+6.31	+5.38	-2.0
Southwest	-2.95	-3.17	+0.31	+6.26	+3.21	-2.1
South Central	-3.49	-5.04	-5.41	+2.36	-4.16	-2.7
Southeast	-2.91	-2.22	-1.82	+3.62	+0.09	-2.4
State	-2.31	-1.51	-1.04	+7.37	+6.74	

*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

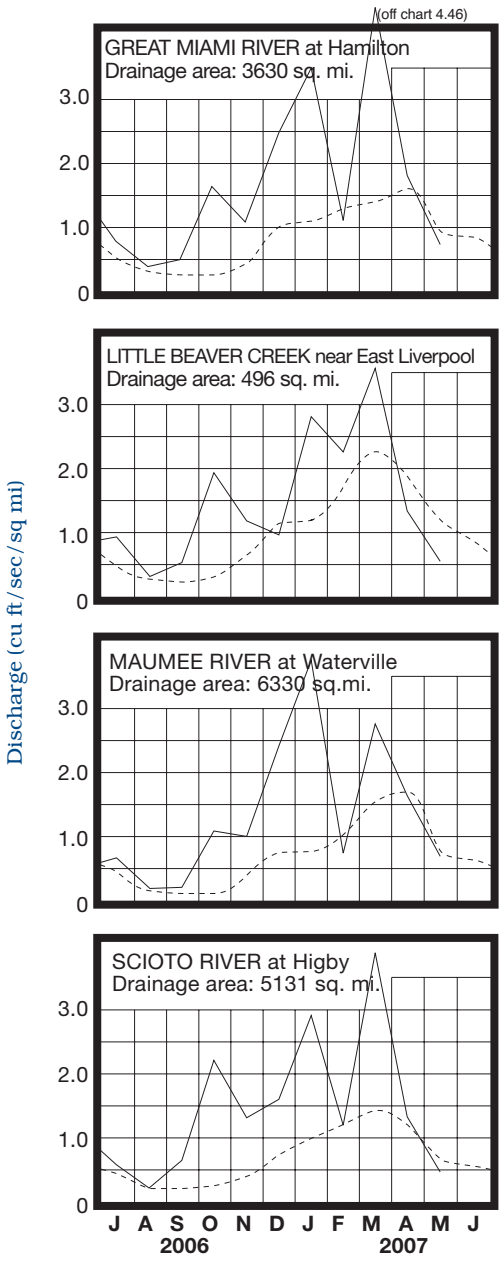
This Month

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	411	30	177	288	180
Great Miami River at Hamilton	3,630	2,647	78	152	171	164
Huron River at Milan	371	373	170	142	163	170
Killbuck Creek at Killbuck	464	383	83	109	116	135
Little Beaver Creek near East Liverpool	496	275	47	103	116	123
Maumee River at Waterville	6,330	4,360	90	116	157	146
Muskingum River at McConnelsville	7,422	6,389	69	165	175	120
Scioto River near Prospect	567	216	58	163	182	182
Scioto River at Higby	5,131	2,431	57	122	133	144
Stillwater River at Pleasant Hill	503	217	56	178	186	163

STREAMFLOW during May was below normal throughout most of the state. Flows in some streams were low enough to be considered deficient. May flows were considerably lower than the flows recorded during April statewide.

Streamflow at the beginning of May was above normal in most areas of the state. Generally, flows declined throughout the month with some temporary increases noted following local precipitation. Most drainage basins recorded their greatest flows for May at the start of the month. Lowest flows for the month occurred during the last week of the month, generally between May 25 and 27 in southern Ohio, and at the end of the month in northern Ohio. At the end of May, flows were noticeably below normal throughout the state.

MEAN STREAM DISCHARGE

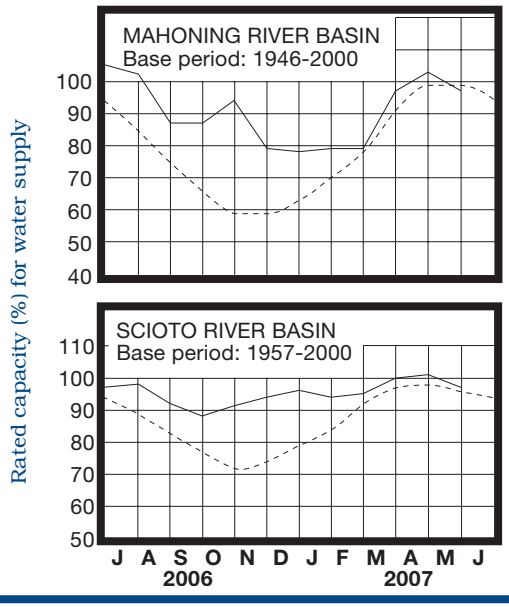


Base period for all streams: 1971-2000

RESERVOIR STORAGE during May decreased in both the Mahoning and Scioto river basins. Storage fell to below normal in the Mahoning basin index reservoirs for the first time since April 2006. Storage in the Scioto basin index reservoirs remained slightly above normal.

Reservoir storage at the end of May in the Mahoning basin index reservoirs was 97 percent of rated capacity for water supply, compared with 103 percent for last month and 104 percent for May 2006. Month-end storage in the Scioto basin index reservoirs was 97 percent of rated capacity for water supply, compared with 101 percent for last month and 99 percent for May 2006. In spite of the below normal precipitation received during May, surface-water supplies remain adequate throughout the state.

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	Change in feet from: Year Ago
F-1	W. Rushville, Fairfield Co.	Sandstone	12.07	+1.15	-2.19	-0.15
Fa-1	Jasper Mill, Fayette Co.	Limestone	8.29	-1.22	-0.40	+0.17
Fr-10	Columbus, Franklin Co.	Gravel	42.86	-0.52	-0.92	+0.48
H-1	Harrison, Hamilton Co.	Gravel	22.54	-1.71	-0.96	-1.35
Hn-2a	Dola, Hardin Co.	Dolomite	6.10	+0.39	-0.30	0.00
Po-1	Windham, Portage Co.	Sandstone	15.14	+4.12	-0.68	+3.34
Tu-1	Strasburg, Tuscarawas Co.	Gravel	12.57	-1.14	-0.96	+0.87

GROUND WATER levels during May declined statewide. In most aquifers, the net declines were greater than usually observed for May. Generally, ground water levels declined throughout most of the month, except for rises noted in some consolidated aquifers during the first week of the month from delayed recharge.

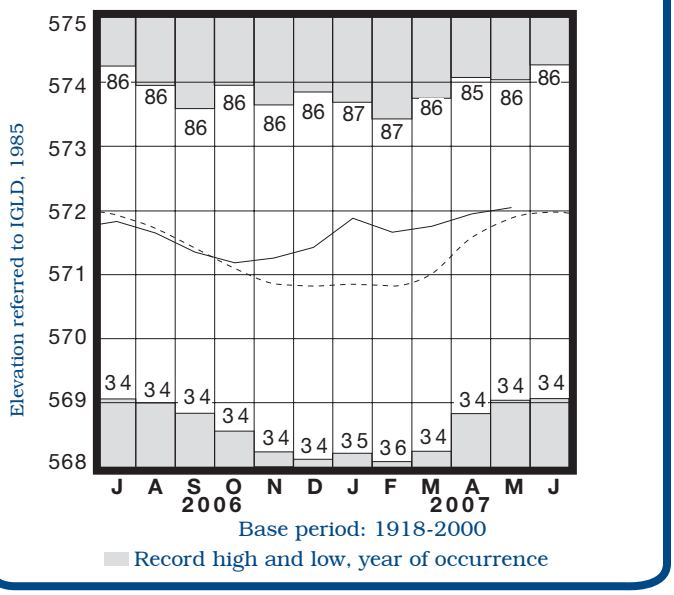
With the below normal precipitation in May, the 2007 ground water recharge season has come to an end. Little net recharge can typically be expected during the summer months. The 2007 recharge season was adequate for ground water supplies across the state. However, the below normal precipitation during the last month and a half greatly reduced the rate of recharge to the state's aquifers. The Palmer Drought Severity Index, calculated from data available near the end of May, indicates that about 40 percent of the state was experiencing unusually dry conditions, in sharp contrast to the unusually wet conditions in early spring. In spite of these dry conditions, ground water supplies remain favorable as we enter the summer high-use period. Ground water levels remain above normal in most consolidated aquifers; however, they are below normal in unconsolidated aquifers and some consolidated aquifers in southern Ohio. Observation well PO-1 (Portage County), representing the sandstone aquifers in eastern and northeastern Ohio, set a record high level for the month on the first day of May, then declined the remainder of the month. Current levels are higher than the May 2006 levels across most of the state, but are lower in some aquifers in the southern half of Ohio. With ample rainfall during the summer months, ground water supplies should remain in a favorable position.

LAKE ERIE level rose during May. The mean level was 572.05 feet (IGLD-1985), 0.10 foot higher than last month's mean level and 0.17 foot above normal. This month's mean level is 0.53 foot higher than the May 2006 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 was 1.84 inches, 1.44 inches below normal. For the entire Great Lakes basin, preliminary May precipitation averaged 2.08 inches, 0.84 inch below normal. For calendar year 2007 through May, the Lake Erie basin has averaged 12.91 inches, 0.83 inch below normal, while the entire Great Lakes basin has averaged 10.27 inches, 1.31 inches below normal.

In addition, the USACE reports that based on the current condition of the Great Lakes basin and anticipated weather patterns, the level of Lake Erie should decline to below normal during early summer and remain in that position for the foreseeable future. Deviations from the anticipated weather patterns could result in the level of Lake Erie ranging from near-normal to as much as 14 inches below the normal seasonal average.

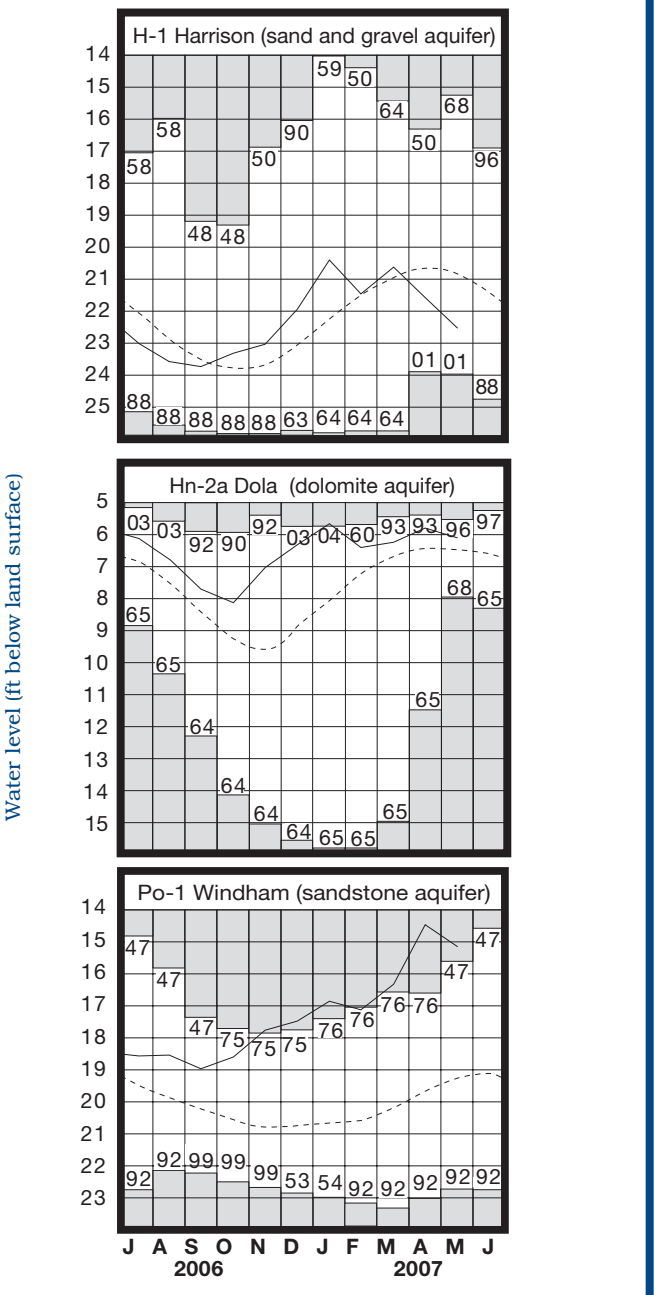
LAKE ERIE LEVELS



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 ———

(Precipitation continued from front)

Precipitation for the 2007 calendar year is generally above normal in the northern two-thirds and below normal in the southern one-third of Ohio. The average for the state as a whole is 15.99 inches, 0.50 inch above normal. Regional averages range from 19.02 inches, 3.95 inches above normal, for the West Central Region to 13.02 inches, 4.44 inches below normal, for the South Central Region.

SUMMARY

Precipitation was markedly below normal throughout Ohio with the state average of 1.60 inches ranking as the 3rd driest May during the past 125 years. Streamflow was below normal statewide and was low enough to be considered deficient in some streams. Reservoir storage decreased in both the Mahoning and Scioto river basins. Storage decreased to below normal in the Mahoning basin index reservoirs, but remained slightly above normal in the Scioto basin index reservoirs. Ground water levels declined throughout the state. Lake Erie level rose 0.10 foot and was 0.17 foot above the long-term May average.

NOTES AND COMMENTS

Division Of Water Has New Leadership

The Ohio Department of Natural Resources (ODNR) Director Sean D. Logan recently announced the appointment of Deborah Hoffman as Chief of the Division of Water. As Chief of the Division of Water, she will administer programs related to ground and surface water resources, dam safety, floodplain management, and canal operations for the Miami & Erie and Ohio & Erie canals.

Prior to becoming Chief, Deborah worked for the City of Columbus in the City Attorney's Office and the Development Department. She served as the Building Services Division Administrator from 2001 to 2005. She then moved to the downtown office as Columbus' downtown development coordinator. She has a background in law, obtaining her degree from Capital University in Columbus after graduating from Denison University in Granville.

Deborah and her family reside in Columbus. She enjoys reading books, watching movies and gardening.

The entire Division of Water staff welcomes Deborah to her new position. We all look forward to working with her.

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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