



MONTHLY WATER INVENTORY REPORT FOR OHIO

May 2009

<http://www.dnr.state.oh.us/tabid/4191/Default.aspx>

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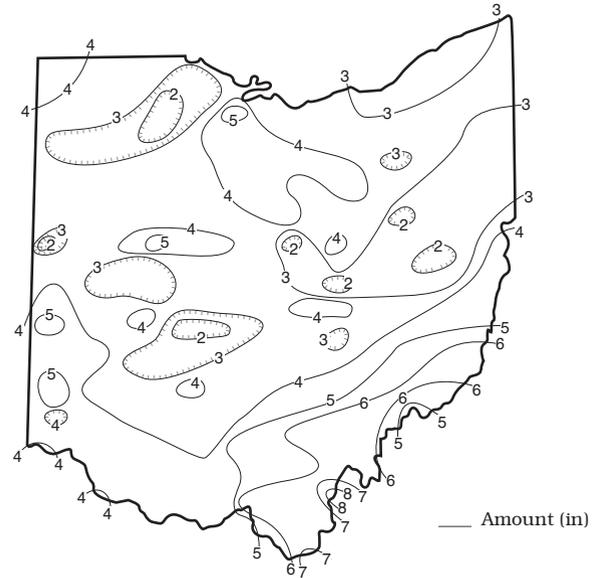
PRECIPITATION during May was below normal throughout much of the state, but above normal in southeastern and north-central Ohio and a few other scattered locations. The state average was 3.75 inches, 0.16 inch below normal. Regional averages ranged from 5.82 inches, 1.66 inches above normal, for the South Central Region to 2.77 inches, 1.13 inches below normal, for the Northeast Hills Region. Gallipolis (Gallia County) reported the greatest amount of May precipitation, 8.34 inches. Hoytville (Wood County) reported the least amount, 1.50 inches.

Precipitation during May fell as showers and thunderstorms. Most of Ohio received 0.25-0.75 inch of rain on the first day of May with amounts of up to 1.5 inches falling across the central third of the state. Showers and thunderstorms during May 3-4 brought 0.50-1.0 inch of rain across extreme southeastern Ohio, while the remainder of the state was dry. Precipitation during May 6-8 was also greatest across southeastern Ohio where generally 1-2 inches of rain fell. The next precipitation fell during May 13-16 and was greatest across western and extreme southeastern Ohio, where another 1-2 inches of rain was reported. The following week was dry statewide, allowing a busy week of agricultural planting and other field activities. During the last week of the month scattered showers and thunderstorms, some with locally heavy rain, moved through the state. The greatest amount of rain during this period fell across the northern one-third and southern one-third of the state where 1-2 inches were reported. Isolated areas in northern Ohio reported more than 4 inches of rain as heavy downpours caused some localized flooding, impacting mainly low-lying areas across the region.

Precipitation for the 2009 water year is above normal in the northern one-third of the state and much of southeastern Ohio, but below normal elsewhere. The average for the state is 23.60 inches, 0.10 inch below normal. Regional averages range from 26.63 inches, 2.73 inches above normal, for the Northeast Region to 20.83 inches, 2.49 inches below normal, for the Central Region.

Precipitation for the 2009 calendar year is above normal in the northern one-third of Ohio and below normal elsewhere. The average for the state is 14.61 inches, 0.88 inch below normal. Regional averages range from 16.90 inches, 0.56 inch below normal, for the South Central Region to 12.42 inches, 3.27 inches below normal, for the Northeast Hills Region.

PRECIPITATION MAY

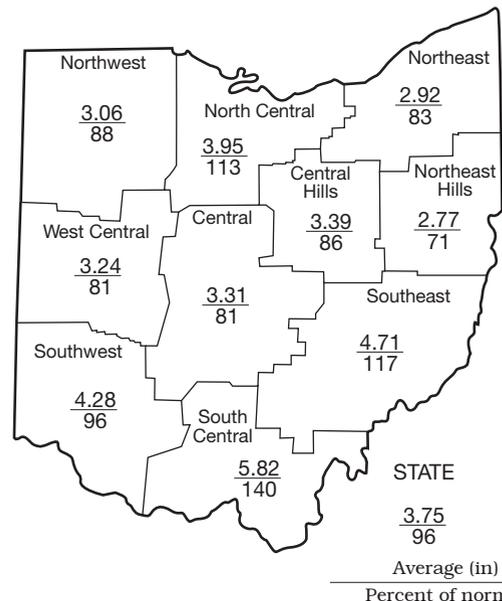


PRECIPITATION

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	-0.43	+2.30	+4.75	+4.76	+16.51	+2.5
North Central	+0.44	+1.46	+3.20	+4.35	+17.22	+2.2
Northeast	-0.59	-0.13	+2.12	+5.10	+15.85	+0.3
West Central	-0.76	-1.10	+0.36	-0.96	+8.22	-0.9
Central	-0.76	-2.16	-0.79	-1.19	+5.97	-1.5
Central Hills	-0.57	-0.91	+0.83	-1.43	+7.21	-1.1
Northeast Hills	-1.13	-2.81	-1.36	-3.16	+5.21	-1.5
Southwest	-0.20	-2.24	-1.72	-5.61	+1.90	-1.8
South Central	+1.66	+0.04	+1.22	-0.69	+5.51	-0.8
Southeast	+0.69	-0.45	+1.89	+0.94	+7.03	-0.8
State	-0.16	-0.60	+1.05	+0.20	+9.05	-0.8

*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



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	344	66	85	122	117
Great Miami River at Hamilton	3,630	6,322	186	84	87	97
Huron River at Milan	371	340	155	105	147	141
Killbuck Creek at Killbuck	464	293	64	66	74	71
Little Beaver Creek near East Liverpool	496	420	72	70	86	74
Maumee River at Waterville	6,330	5,921	123	135	138	122
Muskingum River at McConnelsville	7,422	7,934	86	99	115	73
Scioto River near Prospect	567	499	133	68	79	83
Scioto River at Higby	5,131	4,440	105	56	61	74
Stillwater River at Pleasant Hill	503	987	254	101	97	101

STREAMFLOW during May was above normal across western Ohio and below normal in eastern Ohio. Flows were high enough to be considered excessive in some basins in west-central and southwestern Ohio. Flows were seasonally lower in most basins throughout the state, but there were a few exceptions in those areas where the greatest rainfall occurred.

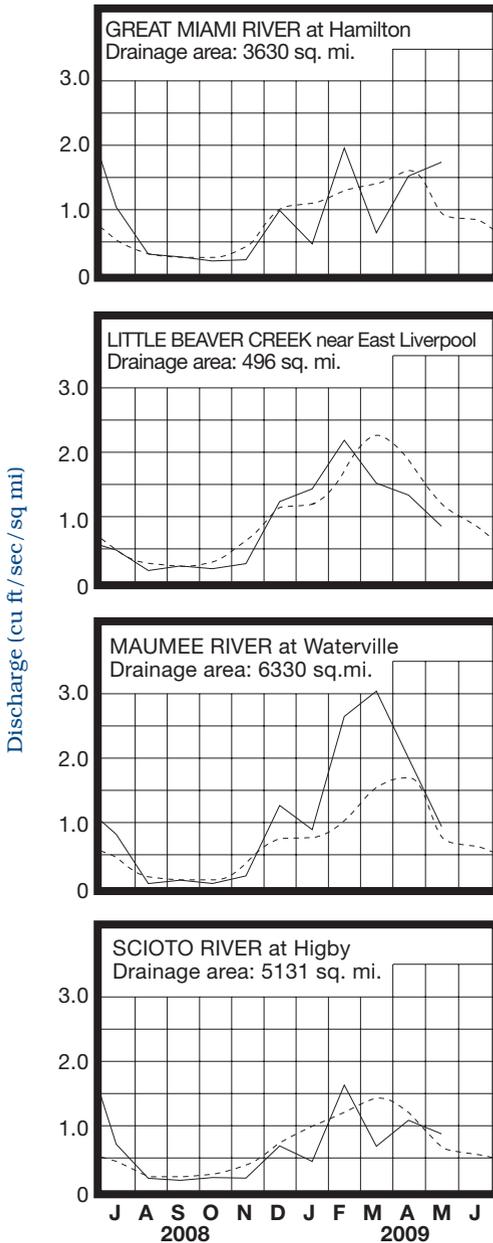
Flows at the beginning of the month were above normal across much of the state, but below normal in east-central and southeastern Ohio basins. Flows increased statewide during the first few days of the month in response to precipitation that fell at the end of April and beginning of May. Greatest flows for the month were recorded across most of the state during the first few days of the month.

Exceptions were noted in some basins across northwestern and north-central Ohio where greatest flows occurred later in the month following local thunderstorms. Except for some temporary increases noted following local precipitation, flows generally declined during the next 3 weeks. Lowest flows for the month occurred between May 24 and 27 nearly statewide. Streamflow increased during the last few days of the month following precipitation that fell during the last week of May. In spite of this increase, flows at the end of May were below normal across the state.

RESERVOIR STORAGE for water supply during May decreased in the Mahoning River basin and increased in the Scioto River basin. At the end of May, storage was normal in the Mahoning River basin and above normal in the Scioto River basin.

Reservoir storage at the end of May in the Mahoning basin index reservoirs was 99 percent of rated capacity for water supply compared with 103 percent for last month and 100 percent for May 2008. Month-end storage in the Scioto basin index reservoirs was 97 percent of rated capacity for water supply, compared with 94 percent for last month and 100 percent for May 2008. At the end of May, surface water supplies are at favorable levels throughout the state.

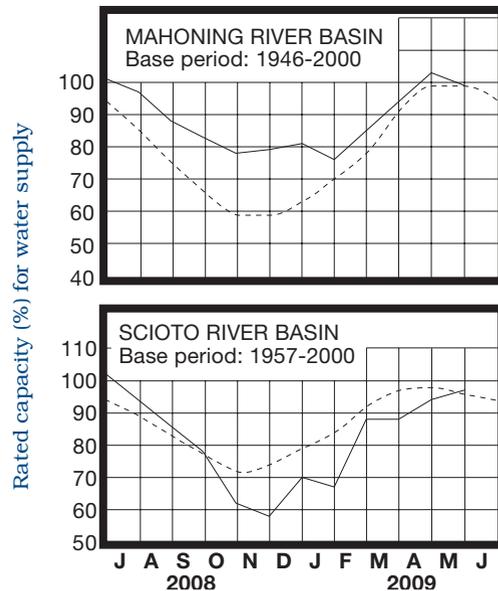
MEAN STREAM DISCHARGE



Base period for all streams: 1971-2000

Normal - - - - Current ———

RESERVOIR STORAGE FOR WATER SUPPLY



GROUND-WATER LEVELS

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

GROUND WATER levels during May rose in nearly all aquifers across Ohio. Net changes during May from last month's levels were greater than usually observed in aquifers throughout the state. Generally, most of the improvement in ground water levels occurred during the first half of May as levels declined during the second half in most aquifers throughout Ohio.

Ground water levels remain below normal across much of the state, but above normal in some consolidated aquifers in eastern Ohio. In addition, levels in nearly all aquifers throughout the state are lower than they were a year ago. Even with these below normal levels, ground water supplies remain adequate across the state. With near-normal precipitation and other climatic conditions during the next month, some improvement to ground water supplies is still possible; however, little net recharge can usually be expected during the summer months. The Ohio Agricultural Statistics Service reports that near the end of May, topsoil moisture was rated as being short in 9 percent of the state, adequate in 70 percent of the state, and surplus in 21 percent of the state.

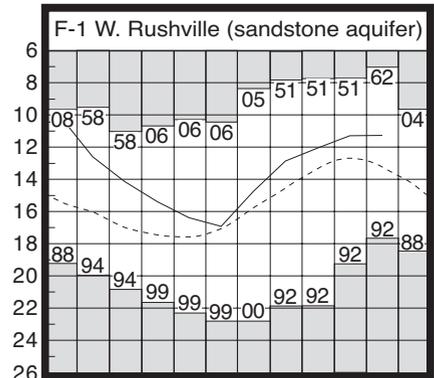
LAKE ERIE level rose during May. The mean level was 572.37 feet (IGLD-1985), 0.11 foot higher than last month's mean level and 0.49 foot above normal. This month's mean level is 0.32 foot higher than May 2008 level and 3.17 feet above Low Water Datum.

The U.S. Army Corps of Engineers (USACE) reports that precipitation in the Lake Erie basin during May averaged 2.82 inches, 0.54 inch below normal. For the entire Great Lakes basin, May precipitation averaged 2.80 inches, 0.22 inch below normal. For calendar year 2009 through May, the Lake Erie basin has averaged 16.24 inches, 2.45 inches above normal, while the entire Great Lakes basin has averaged 12.12 inches, 0.44 inch above normal.

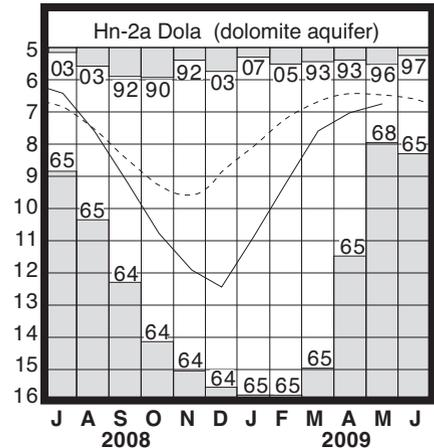
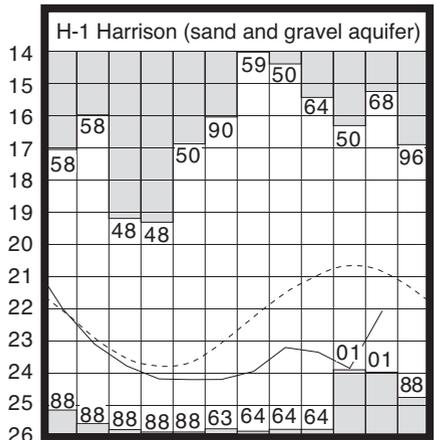
In addition, the USACE reports that based on the current condition of the Great Lakes basin and anticipated weather conditions, the level of Lake Erie should remain above normal for the foreseeable future. Deviations from the anticipated weather patterns could result in the level of Lake Erie ranging from as much as 10 inches above to around 7 inches below the normal seasonal level.

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	11.27	+1.95	+0.01	-0.09
Fa-1	Jasper Mill, Fayette Co.	Limestone	8.43	-1.36	+0.48	-0.33
Fr-10	Columbus, Franklin Co.	Gravel	43.64	-1.30	+0.07	-1.08
H-1	Harrison, Hamilton Co.	Gravel	22.07	-1.24	+0.77	-0.94
Hn-2a	Dola, Hardin Co.	Dolomite	6.75	-0.26	+0.27	-0.76
Po-124	Freedom, Portage Co.	Sandstone	75.94	+1.68	+0.09	-0.20
Tu-1	Strasburg, Tuscarawas Co.	Gravel	13.48	-2.05	-0.18	-1.77

GROUND-WATER LEVELS



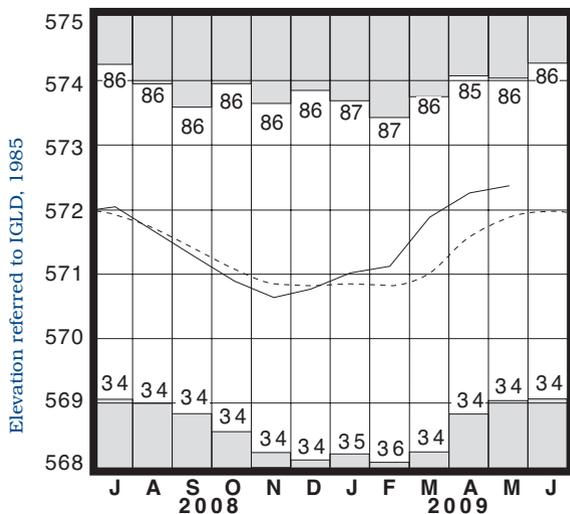
Water level (ft below land surface)



Base periods: F-1, 1947-2000 H-1, 1951-2000.

Hn-2a, 1955-2000 ■ 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 May was below normal throughout much of the state, but above normal in southeastern and north-central Ohio. Streamflow was above normal in western Ohio and below normal in eastern Ohio. Reservoir storage decreased in the Mahoning River basin and increased in the Scioto River basin. Reservoir storage was normal in the Mahoning River basin and above normal in the Scioto River basin. Ground water levels rose across most of the state, but remained below normal throughout much of Ohio. Lake Erie level rose 0.11 foot and was 0.49 foot above the long-term May average.

NOTES AND COMMENTS

Editorial

The purpose of this report is to disseminate current hydrologic data in a timely and brief format. Observation points have been selected which are considered to be sufficiently representative of hydrologic conditions in the state to permit an evaluation of the current water-supply situation. These key observation stations offer the best available data on the basis of accuracy and length of record, minimal artificial effects on data, and availability of records. Data from these stations are collected by various agencies at the end of each month and processed immediately. Because of the time limitations involved, all data presented in this report must be considered preliminary and may be subject to revision before publication in regular form by the agencies involved. The remarks in this report include the writer's opinion of the cause and significance of the phenomena reported. The author is indebted to the various agencies and individuals who make this data available.

More complete and detailed information regarding water resources can be obtained by contacting the Division of Water or visiting our website at: <http://www.dnr.state.oh.us/tabid/3252/Default.aspx>. Comments and suggestions regarding this report are always welcome.

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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