



MONTHLY WATER INVENTORY REPORT FOR OHIO

March 2010

<http://www.ohiodnr.gov/tabid/4191/Default.aspx>

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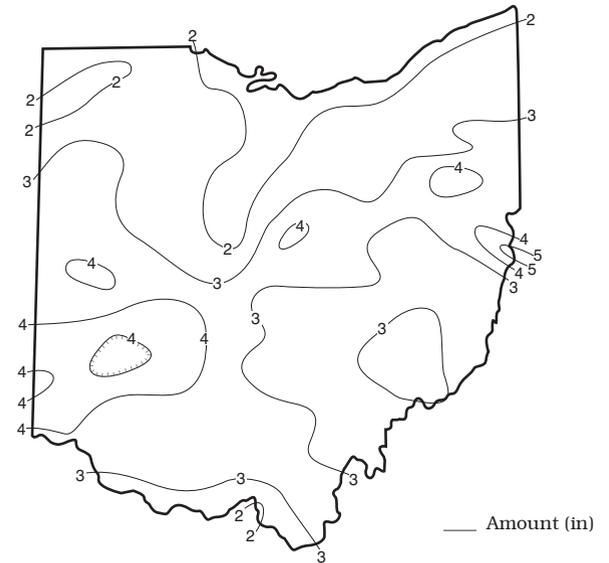
PRECIPITATION during March was below normal across much of the state, but above normal in the Southwest, West Central and Northeast Hills regions. The state average was 2.90 inches, 0.27 inch below normal. Regional averages ranged from 3.80 inches, 0.09 inch above normal, for the Southwest Region to 2.01 inches, 0.66 inch below normal, for the North Central Region. Steubenville (Jefferson County) reported the greatest amount of precipitation for the month, 5.00 inches. Wauseon (Fulton County) reported the least amount, 1.44 inches.

Most of the March precipitation fell as rain with only small amounts of snow reported. The first 9 days were rather dry across the state with just some scattered light rain and snow showers. Precipitation fell on most days during March 10-14. Most of the state received 0.5 to 1.0 inch of rain during this period, but areas in the southwestern third of Ohio reported more than 2 inches. The heaviest rains fell on March 12 and 13. Precipitation returned to the state on March 22 and fell on most days through March 29. Rain on March 22-23 was greatest across eastern Ohio where some areas reported between 1 and 2 inches. Most of the state received 0.25-0.50 inch of precipitation during March 25-26, but some areas in southwestern Ohio received more than 1 inch. Precipitation on these 2 days started as rain but ended as a period of snow. Most areas in the northern half of the state received a light accumulation of snow, but a few locations received as much as 3 inches. Much of the state received 0.50 inch or less of rain during March 28-29 with a few areas in northwestern Ohio reporting more than 1 inch.

Precipitation for the 2010 water year is below normal statewide. The state average is 15.23 inches, 0.98 inch below normal. Regional averages range from 16.41 inches, 1.73 inches below normal, for the Southwest Region to 12.21 inches, 2.20 inches below normal, for the North Central Region.

Precipitation for the 2010 calendar year is also below normal statewide. The state average is 6.89 inches, 1.11 inches below normal. Regional averages range from 8.17 inches, 0.66 inch below normal, for the Southeast Region to 4.80 inches, 1.73 inches below normal, for the Northwest Region.

PRECIPITATION MARCH

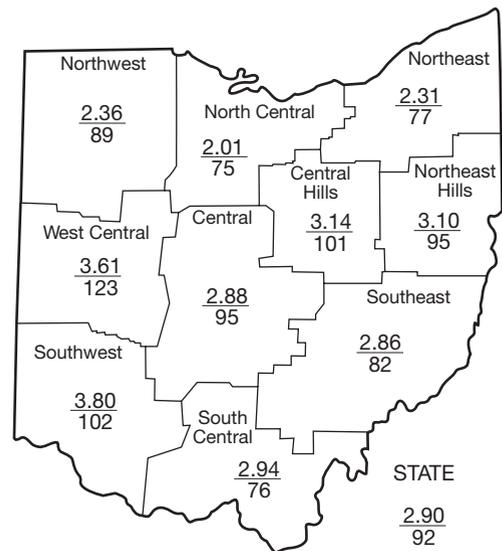


PRECIPITATION

Region	This Month	DEPARTURE FROM NORMAL (IN.) Base period 1951-2000				Palmer Drought Severity Index*
		Past				
		3 Mos.	6 Mos.	12 Mos.	24 Mos.	
Northwest	-0.29	-1.73	-0.67	-3.12	+1.42	-1.4
North Central	-0.66	-1.68	-2.20	-4.17	-0.70	-1.0
Northeast	-0.68	-0.36	-0.71	-1.32	+3.54	+0.3
West Central	+0.68	-0.70	-0.13	-1.39	-3.15	-0.6
Central	-0.16	-1.07	-0.26	+0.13	-1.62	-0.6
Central Hills	+0.04	-0.41	-0.16	-0.94	-3.65	-0.7
Northeast Hills	-0.18	-0.30	-1.10	-3.22	-6.31	-0.5
Southwest	+0.09	-2.12	-1.73	-0.27	-5.11	-0.3
South Central	-0.95	-2.05	-1.80	+2.37	+0.17	-0.2
Southeast	-0.62	-0.66	-1.01	-1.29	-1.42	-0.6
State	-0.27	-1.11	-0.98	-1.33	-1.71	

*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	2,452	146	107	89	82
Great Miami River at Hamilton	3,630	12,170	238	117	108	99
Huron River at Milan	371	851	142	66	57	59
Killbuck Creek at Killbuck	464	1,264	141	97	90	76
Little Beaver Creek near East Liverpool	496	1,677	150	139	110	90
Maumee River at Waterville	6,330	13,660	140	72	72	79
Muskingum River at McConnelsville	7,422	18,910	121	125	119	67
Scioto River near Prospect	567	1,497	164	90	80	72
Scioto River at Higby	5,131	14,230	157	100	100	84
Stillwater River at Pleasant Hill	503	1,980	276	124	101	99

STREAMFLOW during March was above normal throughout the state. Flows in the southern two-thirds of the state were high enough to be considered excessive. Flows during March were noticeably greater than February's flows. Preliminary data indicates that the Stillwater River at Pleasant Hill gauging station recorded its 5th greatest flow for March for its period of record and the Great Miami River at Hamilton recorded its 6th greatest March flow.

Flows at the beginning of the month were below normal statewide. Most drainage basins in the state recorded their lowest flows for March during the first few days of the month. Drainage basins in northeastern Ohio reached their lowest flows around March 21. Generally, flows increased during the first

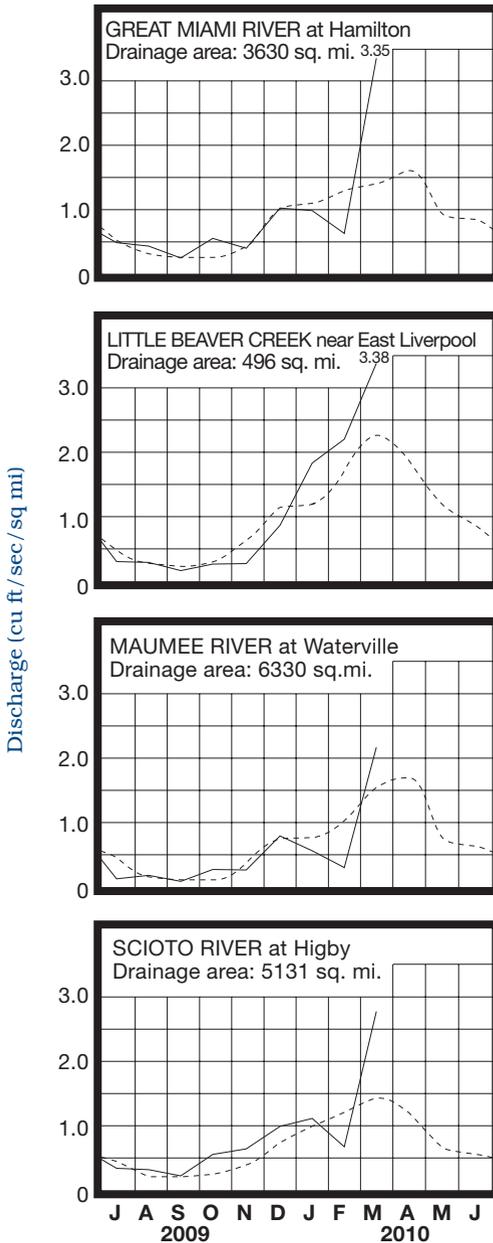
half of the month, responding to runoff from melting snow and ice, and widespread precipitation that fell March 10-14. Greatest flows for the month occurred between March 12 and 15 throughout most of the state. Minor flooding occurred across mainly northern Ohio and along the Ohio River. Following these peaks, flows declined during the next week, but increased again during the last week of the month in response to precipitation that fell March 22-29. Again, some flooding was reported, but was generally confined to low-lying areas near rivers and streams. Flows peaked and began to decline during the last 2 days of the month, but remained above normal statewide.

RESERVOIR STORAGE for water supply increased in both the Mahoning and Scioto river basins. Storage increased to above normal in both basins.

Reservoir storage at the end of March in the Mahoning basin index reservoirs was 98 percent of rated capacity for water supply compared with 77 percent for last month and 94 percent for March 2009. Storage at the end of the month in the Scioto basin index reservoirs was 101 percent of rated capacity for water supply compared with 89 percent for last month and 88 percent for March 2009.

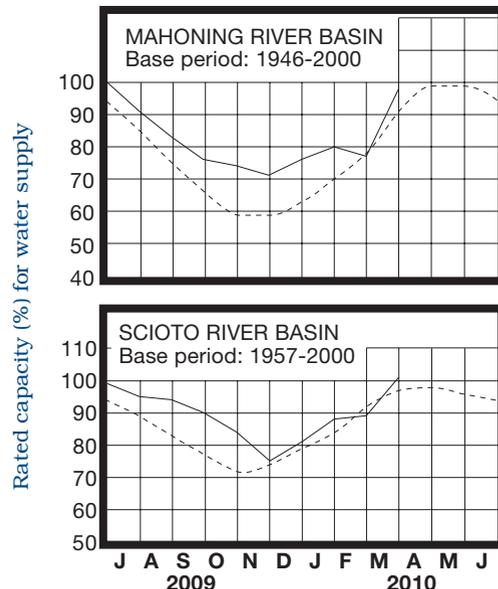
Surface water supplies are in excellent condition throughout Ohio. Above normal streamflow during March was beneficial to reservoirs across the state. Most water supply reservoirs are at or near capacity while most recreational reservoirs are already at summer pool.

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 March rose throughout the state. Net changes from last month's levels ranged from nearly average to greater than that usually observed. Generally, ground water levels rose steadily throughout most of the month.

Ground water supplies are adequate throughout Ohio. However, levels remain below normal across most of the state with the exception of some consolidated aquifers in eastern Ohio where levels remain above normal. Also, current levels are higher than they were at this time last year in southern Ohio, but lower in northern Ohio aquifers.

The 2010 recharge season will soon come to an end. Although conditions were favorable during March for recharge, the overall recharge season has been less favorable. The combination of below normal precipitation across most of the state during the last 5 months and frozen soils during much of the winter season reduced the rate of recharge to the state's aquifers. However, current conditions are favorable and with near-normal precipitation and other climatic conditions, there is the opportunity for additional recharge during the next month or two. The Ohio Agricultural Statistics Service reports that near the end of March, soil moisture was rated as being short in 2 percent of the state, adequate in 60 percent of the state and surplus in 38 percent of the state.

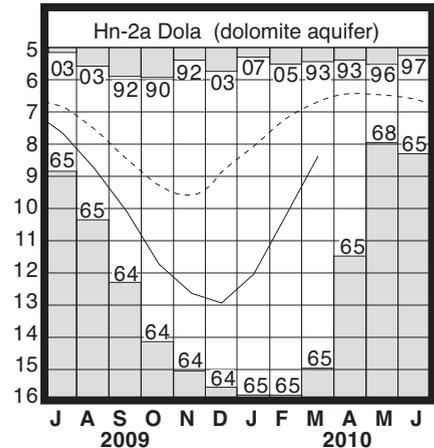
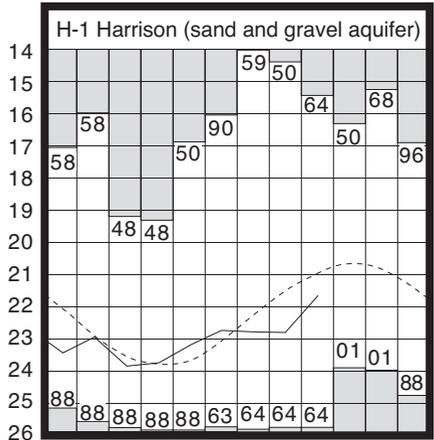
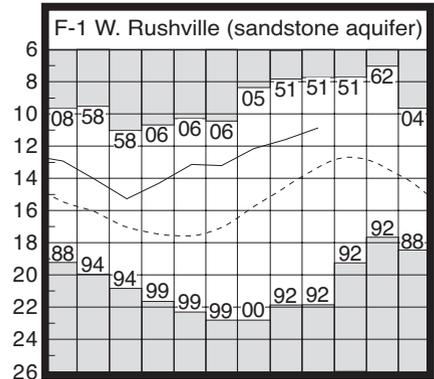
LAKE ERIE level rose during March. The mean level was 570.80 feet (IGLD-1985), 0.20 foot higher than last month's mean level and 0.30 foot below normal. This month's mean level is 1.09 feet lower than the March 2009 level and 1.60 feet above Low Water Datum.

The U.S. Army Corps of Engineers (USACE) reports that precipitation in the Lake Erie basin during March averaged 1.59 inches, 1.14 inches below normal. For the entire Great Lakes basin, March precipitation averaged 0.82 inch, 1.34 inches below normal. For calendar year 2010 through March, the Lake Erie basin has averaged 4.85 inches of precipitation, 2.42 inches below normal, while the entire Great Lakes basin has averaged 2.77 inches, 3.36 inches below 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 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 12 inches below the normal seasonal average.

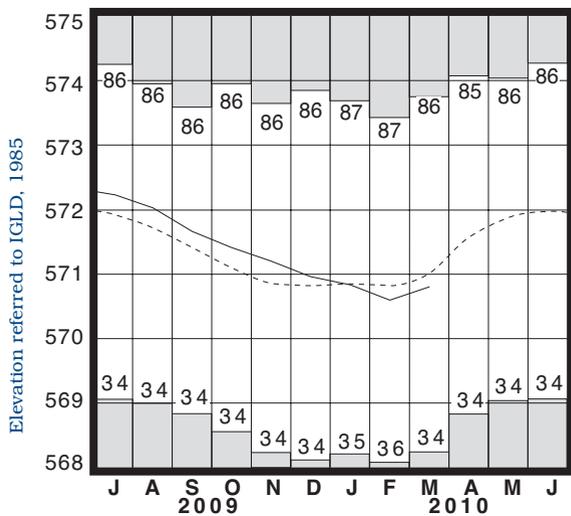
Index Well	Location	Aquifer	Mean This Month	Departure From Normal	Change in feet from:	
					Last Month	Year Ago
F-1	W. Rushville, Fairfield Co.	Sandstone	10.85	+2.47	+0.74	+1.25
Fa-1	Jasper Mill, Fayette Co.	Limestone	8.02	-1.10	+0.21	+1.46
Fr-10	Columbus, Franklin Co.	Gravel	43.64	-1.11	+0.57	+0.41
H-1	Harrison, Hamilton Co.	Gravel	21.65	-0.71	+1.15	+1.70
Hn-2a	Dola, Hardin Co.	Dolomite	8.39	-1.69	+1.86	-0.79
Po-124	Freedom, Portage Co.	Sandstone	76.42	+1.61	+0.14	-0.05
Tu-1	Strasburg, Tuscarawas Co.	Gravel	14.30	-2.63	+1.26	-0.85

GROUND-WATER LEVELS



Water level (ft below land surface)

LAKE ERIE LEVELS



Base period: 1918-2000

■ Record high and low, year of occurrence

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

Hn-2a, 1955-2000 ■ Record high and low, year of occurrence

Normal - - - - Current ———

SUMMARY

Precipitation during March was below normal across much of the state, but above normal in the Southwest, West Central and Northeast Hills regions. Streamflow was above normal statewide and high enough to be considered excessive in the southern two-thirds of Ohio. Reservoir storage for water supply increased in the Mahoning and Scioto river basins and was above normal in both basins. Ground water storage improved throughout the state, but levels remained below normal in most aquifers throughout Ohio. Lake Erie level rose during March and was 0.30 foot below the long-term March 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 Soil and Water Resources or visiting our website at: <http://www.dnr.state.oh.us/tabid/21817/Default.aspx>. Comments and suggestions regarding this report are always welcome.

ACKNOWLEDGMENTS

This report has been compiled from Division 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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