



MONTHLY WATER INVENTORY REPORT FOR OHIO

January 2008

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

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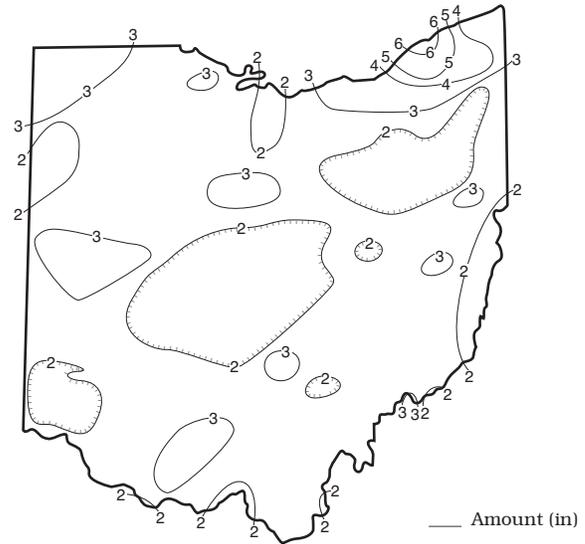
PRECIPITATION during January was below normal across much of the state, but generally above normal in northern and western Ohio. The state average was 2.33 inches, 0.24 inch below normal. Regional averages ranged from 3.04 inches, 0.52 inch above normal, for the Northeast Region to 1.73 inches, 0.82 inch below normal, for the Central Region. Painesville (Lake County) reported the greatest amount of January precipitation, 6.83 inches. Portsmouth (Scioto County) reported the least amount, 1.05 inches.

Precipitation during January fell as both rain and snow. Snow totals were generally above normal across northeastern Ohio and below normal elsewhere. Precipitation fell at the beginning of the month and was greatest across northeastern Ohio where 0.50-1.0 inch was reported. Less than 0.25 inch fell across the remainder of the state. Most of this precipitation fell as snow with 8-12 inches reported in northeastern Ohio, but only 1-3 inches reported elsewhere. The most widespread precipitation for the month occurred during January 8-10 when showers and thunderstorms, some with high winds and heavy rain, moved across the state. Most areas of the state received between 1 and 2 inches of rain with some areas in northwestern Ohio receiving around 2.5 inches. The combination of rain and melting snow resulted in some minor flooding in the northern half of the state. Precipitation fell during several days the remainder of the month, but daily amounts were small. The one exception was on January 29 when showers and thunderstorms crossed southeastern Ohio bringing 0.25-1.0 inch of rain across the area.

Precipitation for the 2008 water year is above normal statewide. The average for the state as a whole is 13.60 inches, 2.82 inches above normal. Regional averages range from 15.88 inches, 4.13 inches above normal, for the Northeast Region to 12.45 inches, 2.82 inches above normal, for the Northwest Region.

Precipitation for the 2008 calendar year is off to a good start in most areas of the state as far as water supplies are concerned. With continued near-normal precipitation during the next few months, replenishment to Ohio's water supplies should be adequate.

PRECIPITATION JANUARY

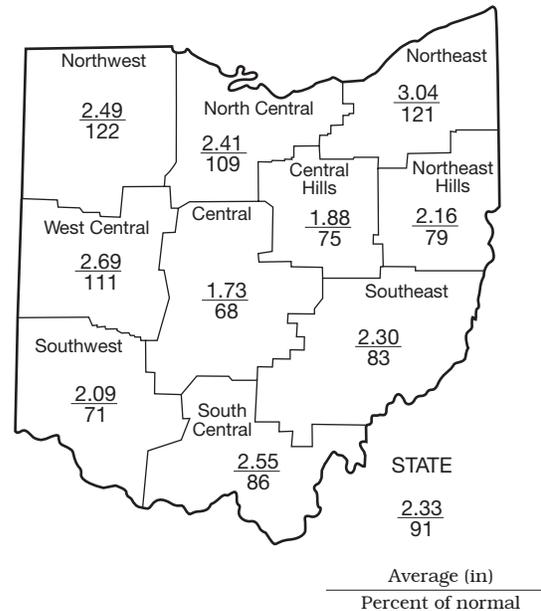


PRECIPITATION

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	+0.45	+3.03	+9.34	+5.14	+13.93	+3.7
North Central	+0.20	+2.37	+7.83	+5.05	+15.67	+4.2
Northeast	+0.52	+3.65	+7.08	+3.19	+15.88	+3.8
West Central	+0.27	+2.32	+4.84	+4.23	+14.26	+1.4
Central	-0.82	+0.83	+3.80	+2.02	+10.57	+1.3
Central Hills	-0.64	+1.08	+4.52	+3.14	+9.76	+2.1
Northeast Hills	-0.56	+1.53	+4.20	+2.99	+8.74	+2.0
Southwest	-0.84	+0.84	+1.87	-2.43	+5.09	+1.4
South Central	-0.43	+2.91	+1.80	-3.87	-0.78	+1.6
Southeast	-0.48	+1.96	+1.81	-2.07	+1.05	+2.0
State	-0.24	+2.05	+4.70	+1.72	+9.39	

*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	1,778	118	139	127	109
Great Miami River at Hamilton	3,630	6,821	171	148	125	115
Huron River at Milan	371	623	145	185	209	152
Killbuck Creek at Killbuck	464	557	106	129	130	100
Little Beaver Creek near East Liverpool	496	930	158	138	140	107
Maumee River at Waterville	6,330	12,390	253	209	233	132
Muskingum River at McConnelsville	7,422	9,287	101	178	182	89
Scioto River near Prospect	567	1,109	221	200	196	134
Scioto River at Higby	5,131	5,793	91	119	105	97
Stillwater River at Pleasant Hill	503	1,131	252	189	156	127

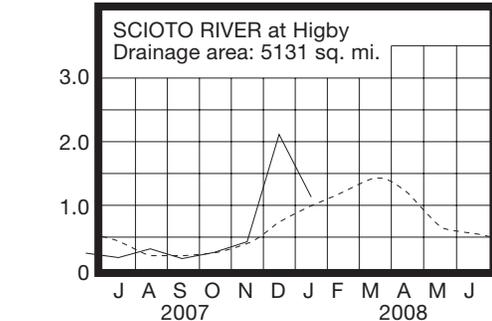
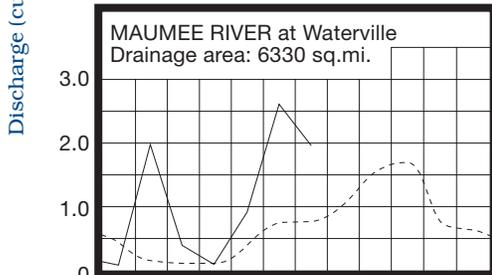
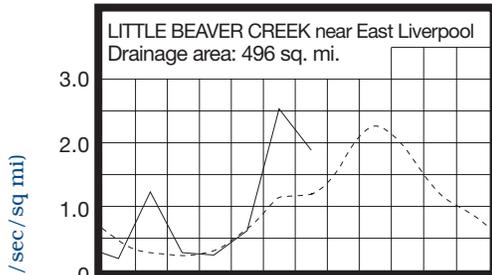
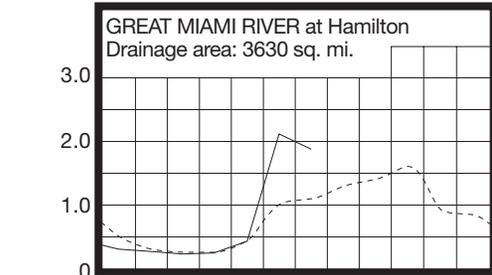
STREAMFLOW during January was above normal throughout most of the state, but slightly below normal in drainage basins in south-central Ohio. Flows during January were less than those observed during December across the state. Flows were high enough to be considered excessive in western Ohio.

Streamflow at the beginning of the month was generally above normal in northwestern and southeastern Ohio basins, and slightly below normal elsewhere. Flows declined during the first week of the month, then increased rapidly during the second week as widespread precipitation fell throughout the state. Greatest flows for the month occurred during January 9-10 in northern and western Ohio and between January 11 and 13 in central and southeastern Ohio. Flows declined from these peaks throughout the remainder of the month and were at their lowest monthly flow near the end of January. Flows at the end of the month remained above normal in northeastern Ohio basins, but dropped to below normal across the remainder of the state.

RESERVOIR STORAGE during January decreased slightly in the Mahoning River basin and increased slightly in the Scioto River basin. At the end of the month, reservoir storage was above normal in both basins.

Reservoir storage at the end of January in the Mahoning basin index reservoirs was 77 percent of rated capacity for water supply compared with 78 percent for last month and 79 percent for January 2007. Month-end storage in the Scioto basin index reservoirs was 91 percent of rated capacity for water supply compared with 89 percent for last month and 94 percent for January 2007. Surface water supplies remain adequate throughout the state.

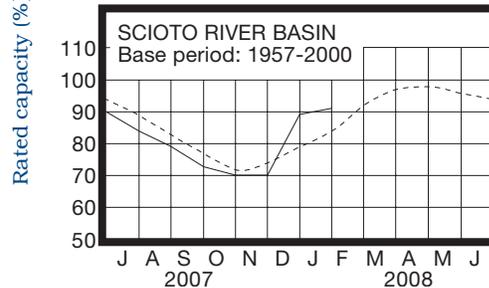
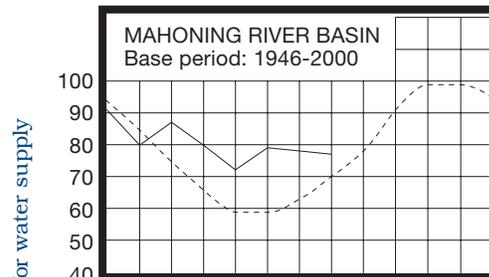
MEAN STREAM DISCHARGE



Base period for all streams: 1971-2000

Normal - - - - Current ———

RESERVOIR STORAGE FOR WATER SUPPLY



GROUND WATER levels during January rose seasonally throughout the state. Net rises from December's levels in most aquifers were greater than usually observed. Levels in consolidated aquifers rose during the first half of the month, still responding to the above normal December precipitation and early January precipitation. Levels were rather stable during the second half of January, but were beginning to decline at month's end. Ground water levels in unconsolidated aquifers declined the first few days of the month, rose following the precipitation that fell on January 8-10, and then declined again during the remainder of the month.

Ground water supplies are adequate throughout Ohio. Precipitation during the first 4 months of the 2008 water year has been beneficial for ground water storage. Ground water levels throughout northern Ohio are above normal, however, levels remain below normal in unconsolidated aquifers and some consolidated aquifers in southern Ohio. Also, current levels statewide are lower than they were at this time last year. Conditions are favorable for additional recharge to ground water supplies and with near-normal precipitation during the next few months, ground water supplies should continue to improve throughout the state.

LAKE ERIE level rose during January. The mean level was 570.67 feet (IGLD-1985), 0.07 foot higher than last month's mean level and 0.20 foot below normal. This month's mean level is 1.21 feet lower than the January 2007 level and 1.47 feet above Low Water Datum.

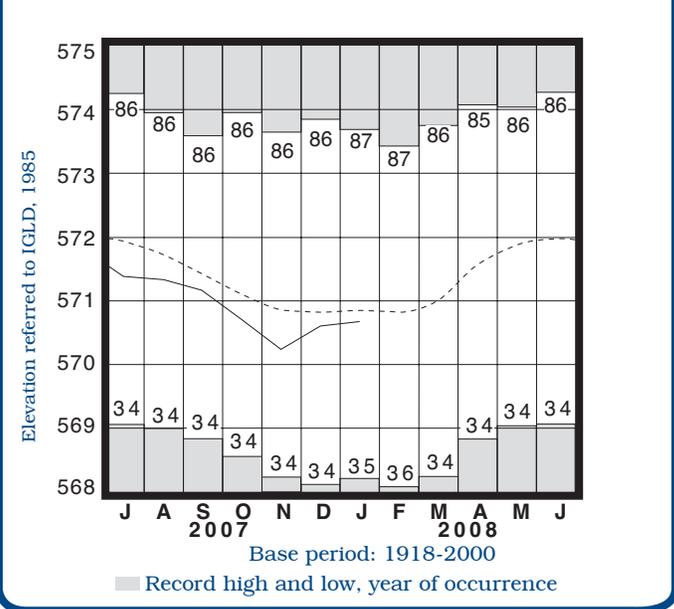
The U.S. Army Corps of Engineers (USACE) reports that precipitation during January in the Lake Erie basin averaged 2.79 inches, 0.32 inch above normal. For the entire Great Lakes basin, January precipitation averaged 2.68 inches, 0.47 inch above normal. In addition, the USACE reports that based on the current condition of the Great Lakes basin and anticipated weather patterns, the level of Lake Erie should remain below normal 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 19 inches below the normal seasonal average.

GROUND-WATER LEVELS

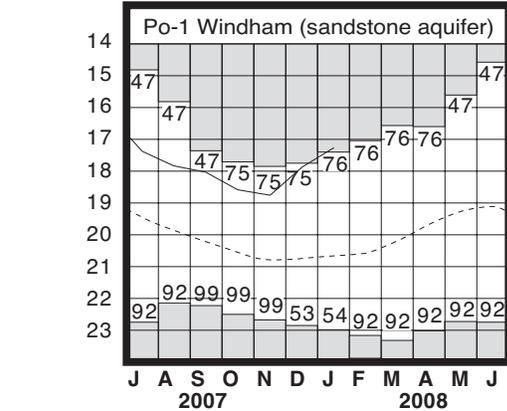
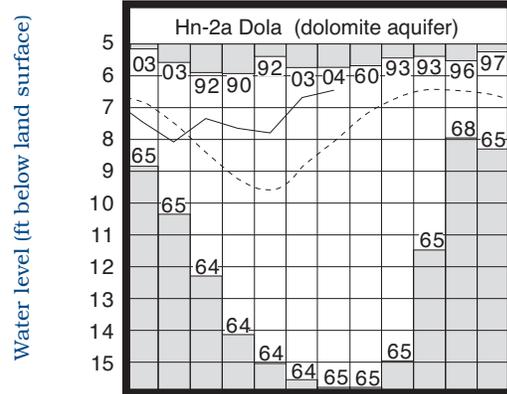
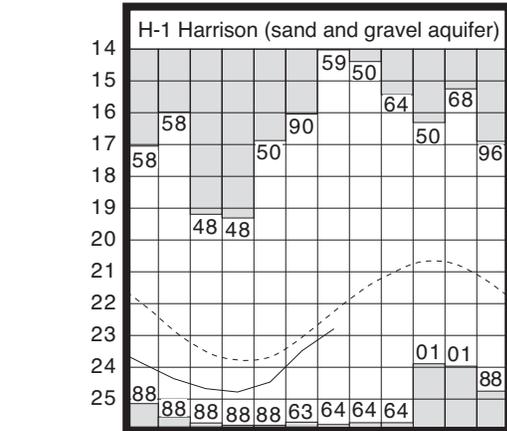
Based on daily lowest level in feet below land-surface datum

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	13.33	+2.46	+3.16	-3.22
Fa-1	Jasper Mill, Fayette Co.	Limestone	8.86	-1.34	+1.99	-1.58
Fr-10	Columbus, Franklin Co.	Gravel	44.51	-1.17	+0.45	-0.95
H-1	Harrison, Hamilton Co.	Gravel	22.80	-0.57	+0.78	-2.40
Hn-2a	Dola, Hardin Co.	Dolomite	6.45	+1.63	+0.32	-0.79
Po-1	Windham, Portage Co.	Sandstone	17.23	+3.44	+0.66	-0.38
Tu-1	Strasburg, Tuscarawas Co.	Gravel	12.95	+0.17	+0.60	-1.18

LAKE ERIE LEVELS



GROUND-WATER LEVELS



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

Normal - - - - Current - - - -

SUMMARY

Precipitation during January was below normal across much of the state, but generally above normal in northern and western Ohio. Streamflow was above normal throughout most of the state. Reservoir storage decreased slightly in the Mahoning River basin and increased slightly in the Scioto River basin. Storage remained above normal in both basins. Ground water levels rose seasonally statewide. Lake Erie mean level rose 0.07 foot and was 0.20 foot below the long-term January average.

NOTES AND COMMENTS

Ohio Observation Well Network

The Ohio Department of Natural Resources (ODNR), Division of Water, Water Resources Section is responsible for collecting, researching, interpreting and disseminating hydrologic and ground water resource information for the state of Ohio. An important component of this program is the Ohio Observation Well Network. The Ohio Observation Well Network characterizes Ohio's ground water resources through monitoring and evaluating both short-and long-term trends in ground water level fluctuations throughout the state's various aquifer systems.

Since the beginning of ground water level monitoring in Ohio in 1938, observation wells have been used to monitor an aquifer's response to changing climatic conditions and the impacts from man-induced activities. Monitoring and evaluating long-term trends in ground water levels enables water resource professionals to access the availability and annual replenishment of ground water supplies. The Ohio Observation Well Network is a tool that professionals use to determine the availability of ground water supplies, thus promoting the wise management and efficient use of this valuable resource. Currently, the Division of Water monitors 139 wells distributed across the state. Once information is gathered from the field for each observation well, it is reviewed and verified for accuracy. The data is then made available on-line through the Division of Water's web page. The web site allows the user to view and/or retrieve data from the Ohio Observation Well Network database. Several options are provided that offer a wide range of flexibility in viewing and/or retrieving current and historical data. Statistical and water quality data are also available through the web site. In addition to the 139 currently active observation wells, ground water level data from an additional 205 historic/inactive observation wells is available on-line through the division's web page. To visit this web site, go to the Division of Water's home page at: www.dnr.state.oh.us/water/ and click on "Observation Well Records."

The Ohio Observation Well Network is a successful example of both public and private and local, state, and federal partnerships. The U.S. Geological Survey (USGS) has been a cooperative partner with the ODNR since the establishment of the network. As part of that cooperative effort, 10 of the observation wells have been equipped with automated equipment, providing near-real time ground water level information that can be accessed through the division's web site. To view data from the 10 near-real time sites, go to the Division of Water, Water Inventory main page and click on "USGS Near real time data for select observation wells."

For more information about Ohio's Observation Well Network, contact the Division of Water at (614) 265-6739 or e-mail: dave.cashell@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.



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