



MONTHLY WATER INVENTORY REPORT FOR OHIO

February 2016

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<http://water.ohiodnr.gov/water-use-planning/water-inventory-levels>

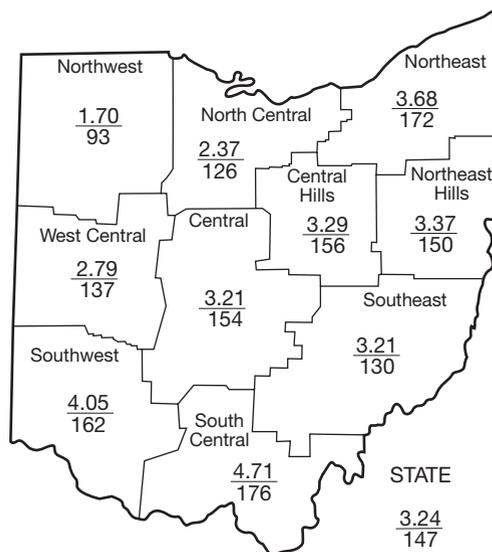
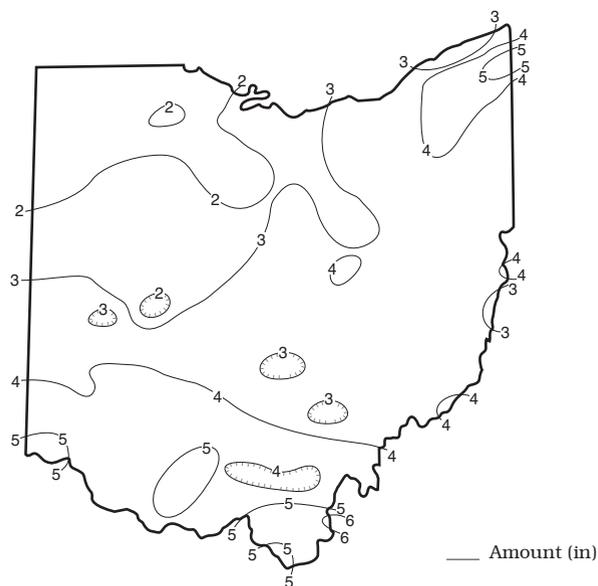
PRECIPITATION during February was above normal throughout most of Ohio with only the Northwest Region having slightly below normal precipitation. The state average was 3.24 inches, 1.04 inches above normal. Regional averages ranged from 4.71 inches, 2.03 inches above normal, for the South Central Region to 1.70 inches, 0.13 inch below normal, for the Northwest Region. Gallipolis Locks and Dam (Gallia County) reported the greatest amount of February precipitation, 6.99 inches. Van Wert (Van Wert County) reported the least amount, 1.05 inches.

Precipitation during February fell as rain and snow. Total snow amounts were near to above normal across most of the state. Chardon (Geauga County), located in the northeast Ohio snowbelt, received 33 inches of snow, about 13 inches above normal. Rain was widespread during the first three days of the month with more than 1 inch reported in southern Ohio and around 0.5 inch in northern Ohio. There was measurable precipitation during several days from February 8-17 across much of the state, although amounts on most days were rather light. The most significant precipitation during this period fell during February 8-10 and February 15-16. The precipitation on February 8 began as rain and ended as snow on February 10. Precipitation during February 15-16 started as snow, and then transitioned to a rain-snow mix before changing back to snow. Precipitation amounts during this ten day period were generally greater than 1 inch in the eastern half of the state and less than 0.5 inch in western Ohio. However, there were areas in northwestern Ohio that received less than 0.10 inch of precipitation during this period. Showers and a few thunderstorms on February 20 were confined to the southern third of the state where more than 1 inch fell at some locations. Widespread rain during February 24-25 amounted to around 0.5 to 1.5 inches across most of the state with the least amount falling in northwestern Ohio. Light showers fell during February 29 across the state.

Precipitation for the 2016 water year is above normal across much of Ohio, but below normal in the northwestern, east-central and south-eastern areas of the state. The state average is 13.75 inches, 0.36 inch above normal. Regional averages range from 16.99 inches, 2.40 inches above normal, for the Southwest Region to 10.64 inches, 1.08 inches below normal, for the Northwest Region.

Precipitation for the first two months of the 2016 calendar year is below normal across most of the state with only the Northeast and South Central regions having above normal precipitation. The state average is 4.60 inches, 0.16 inch below normal. Regional averages range from 5.85 inches, 0.25 inch above normal, for the South Central Region to 3.23 inches, 0.64 inch below normal, for the Northwest Region.

PRECIPITATION FEBRUARY



PRECIPITATION

Region	DEPARTURE FROM NORMAL (IN.) Base period 1961-2010					Palmer Drought Severity Index*
	This Month	Past				
		3 Mos.	6 Mos.	12 Mos.	24 Mos.	
Northwest	-0.13	+0.37	-2.12	+6.40	+3.01	+0.6
North Central	+0.49	+0.58	-0.26	+2.49	+2.05	+1.9
Northeast	+1.54	+1.31	+0.19	+1.93	+8.18	+0.9
West Central	+0.76	+1.91	+0.50	+7.10	+5.46	+0.6
Central	+1.12	+1.25	+0.26	+3.03	+0.87	-0.3
Central Hills	+1.18	+1.24	+0.82	+1.66	+3.58	-0.1
Northeast Hills	+1.13	+0.41	-0.46	+1.19	+4.89	-1.2
Southwest	+1.55	+1.80	+0.97	+6.75	+3.65	+1.7
South Central	+2.03	+2.65	+1.73	+7.35	+2.74	+0.2
Southeast	+0.75	+0.55	+0.77	+3.42	+0.46	-1.3
State	+1.04	+1.20	+0.23	+4.12	+3.47	

*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	2,343	131	94	79	110
Great Miami River at Hamilton	3,630	6,796	140	137	120	146
Huron River at Milan	371	367	71	87	80	130
Killbuck Creek at Killbuck	464	606	89	83	77	100
Little Beaver Creek near East Liverpool	496	886	119	101	89	109
Maumee River at Waterville	6,330	4,017	51	75	62	141
Muskingum River at McConnelsville	7,422	10,400	82	71	63	94
Scioto River near Prospect	567	717	91	105	90	156
Scioto River at Higby	5,131	9,422	122	115	102	127
Stillwater River at Pleasant Hill	503	851	136	141	114	144

STREAMFLOW during February varied across the state. Generally, flows were above normal in western, southwestern, south-central and northeastern Ohio and below normal in northwestern, north-central, central and southeastern areas. Streamflow during February increased seasonally from the January flows across much of Ohio, but was less in the northwest and north-central areas of the state.

Flows at the beginning of the month were below normal throughout most of Ohio. Low flows for February occurred at the beginning of the month in southwestern areas of the state. Flows increased during the first week of the month, then declined during the next two weeks. Low flows for the remainder of Ohio occurred during this time, generally around

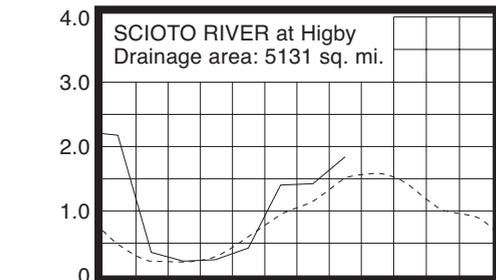
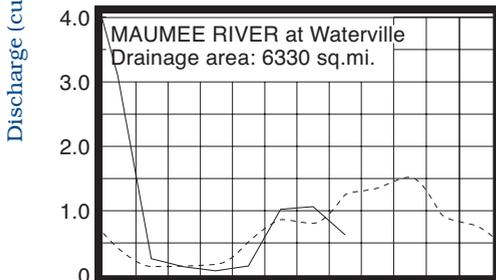
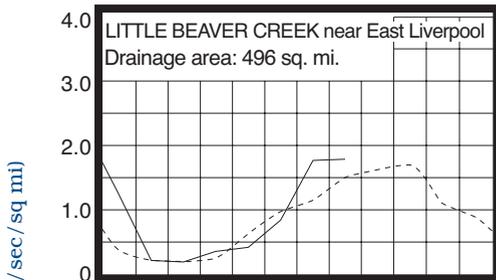
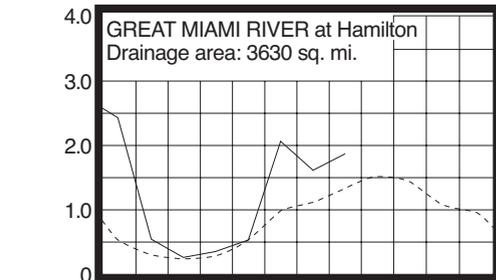
February 14-15 in eastern areas of the state and between February 19 and 23 across the remainder of Ohio. Flows increased during the last week of the month following widespread precipitation. Drainage basins throughout the state had their greatest flows for the month on either February 25 or 26. Minor flooding was observed in some basins in northeastern Ohio. At the end of the month, streamflow was above normal across nearly the entire state.

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

Reservoir storage at the end of February in the Mahoning basin index reservoirs was 83 percent of rated capacity for water supply compared with 74 percent for last month and 73 percent for February 2015. Month-end storage in the Scioto basin index reservoirs was 95 percent of rated capacity for water supply compared with 93 percent for last month and 88 percent for February 2015.

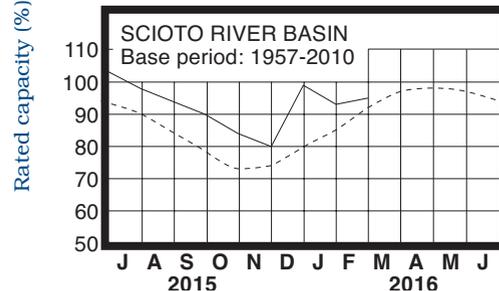
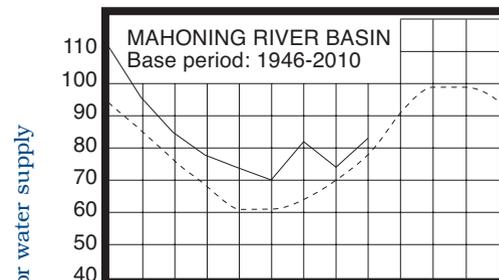
Note: In the Reservoir Storage For Water Supply chart on page 2 of the January 2016 issue of this report, the graph line for rated capacity for water supply ended at December instead of January. A revised January edition with the correct time period is available on-line and this month's report and chart reflects the correct time period.

MEAN STREAM DISCHARGE



Base period for all streams: 1981-2010

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	13.07	+1.33	+1.02	+1.66
Fa-1	Jasper Mill, Fayette Co.	Limestone	8.23	-0.73	-0.03	+1.02
Fr-10	Columbus, Franklin Co.	Gravel	41.86	+1.59	+0.18	+0.67
H-1	Harrison, Hamilton Co.	Gravel	21.91	-0.21	-0.16	+1.39
Hn-2a	Dola, Hardin Co.	Dolomite	7.43	+0.56	+0.31	+0.87
Po-124	Freedom, Portage Co.	Sandstone	77.58	-0.81	-0.09	-0.65
Tu-1	Strasburg, Tuscarawas Co.	Gravel	14.62	-2.06	-0.07	-1.11

GROUND WATER levels during February showed mixed responses. Generally, ground water levels were rather stable or rose slightly during the first week of the month, declined during the next two weeks and then rose during the last week of February. Positive net changes in most aquifers throughout the state were less than usually observed and in some aquifers, slight declines were noted.

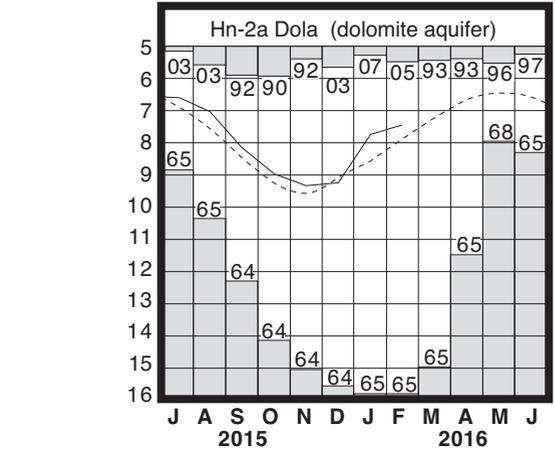
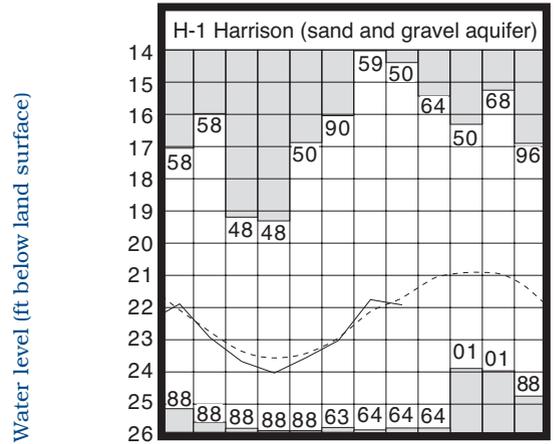
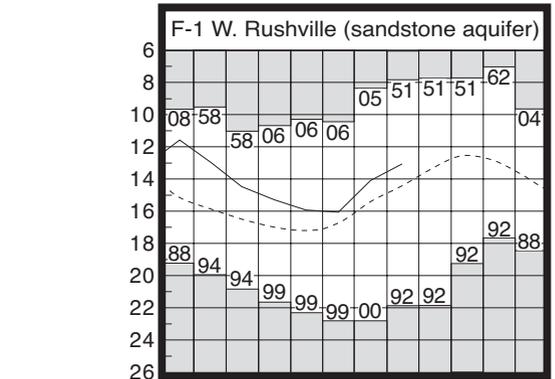
Ground water storage is in a favorable position throughout Ohio. Ground water levels continue to remain above those levels of a year ago across most of the state. However, ground water levels are currently below normal across much of Ohio. Widespread precipitation during the last week of February was beneficial as soil moisture was replenished and most aquifers saw improvement in water levels toward the end of the month. Adequate precipitation during the remainder of the current recharge season will be needed to continue this improvement and maintain ground water storage in a favorable position.

LAKE ERIE level rose during February. The mean level was 571.75 feet (IGLD-1985), 0.13 foot above last month's mean level and 0.92 foot above normal. This month's level is 0.79 foot above the February 2015 level and 2.55 feet above Low Water Datum.

The U.S. Army Corps of Engineers (USACE) reports that precipitation in the Lake Erie basin during February averaged 2.09 inches, which is normal. Precipitation in the entire Great Lakes basin during the month was 1.76 inches, 0.01 inch below normal.

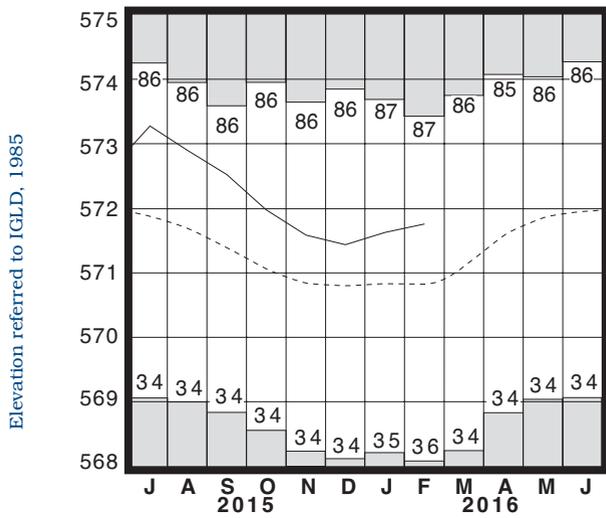
In addition, the USACE reports that based on the current condition of the Great Lakes basin and anticipated weather patterns, the level of Lake Erie should remain above normal for the foreseeable future. Deviations from the anticipated weather patterns could result in the level of Lake Erie ranging from 2 inches above to as much as 20 inches above the normal seasonal average.

GROUND-WATER LEVELS



Base periods: F-1, 1947-2010; H-1 1951-2010.
Hn-2a, 1955-2010

LAKE ERIE LEVELS



Base period: 1918-2010

■ Record high and low, year of occurrence

Normal - - - - Current ———

SUMMARY

Precipitation during February was above normal throughout most of Ohio with only the Northwest Region having slightly below normal precipitation. Streamflow varied across the state, being above normal in western, southwestern, south-central and northeastern Ohio and below normal in northwestern, north-central, central and southeastern Ohio. Reservoir storage increased and was above normal. Ground water levels showed mixed responses and were below normal across much of the state. Lake Erie level rose 0.13 foot and was 0.92 foot above the long-term February average.

NOTES AND COMMENTS

Severe Weather Awareness Week

Governor John Kasich has proclaimed the week of March 20-26, 2016 as Ohio's Spring Severe Weather Awareness Week. The goal is to better educate people about the hazards of severe weather and to encourage people to have a plan in the event severe weather should occur. Each year the Ohio Committee for Severe Weather Awareness (OCSWA) sponsors two awareness weeks to draw attention to the need to prepare for severe weather. The OCSWA consists of representatives from the National Weather Service, American Red Cross, Emergency Management Association of Ohio, Ohio Citizens Corps, State Fire Marshal's Office, Ohio Emergency Management Agency, Ohio Departments of Aging, Education, Health, Insurance, Natural Resources and Transportation, Ohio Mental Health and Addiction Services, WBNS-10TV, WCMH-NBC 4 and the Ohio Insurance Institute. Communities and individuals should use the week of March 20-26 to think about what course of action they would take if severe weather threatened them and their property.

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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