



# MONTHLY WATER INVENTORY REPORT FOR OHIO

February 2015

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

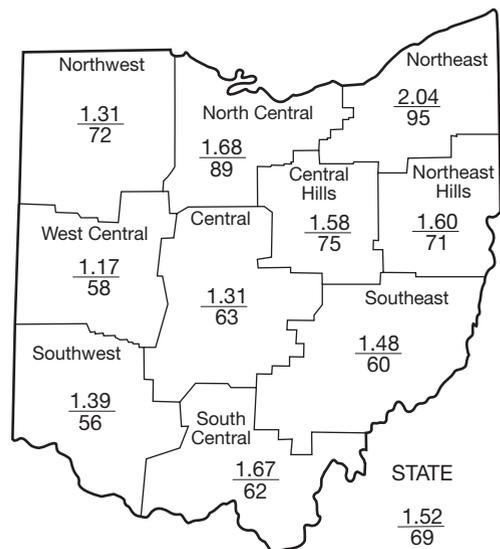
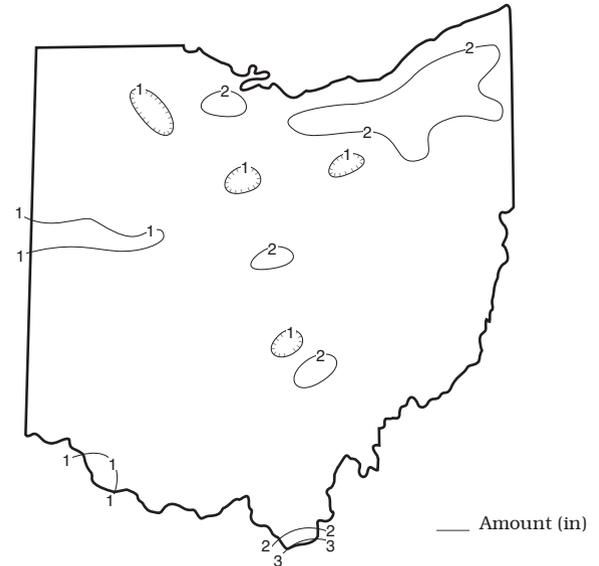
**PRECIPITATION** during February was below normal throughout the state with only a few locations in northern Ohio, mainly in northeastern areas, having above normal precipitation. The state average was 1.52 inches, 0.68 inch below normal. Regional averages ranged from 2.04 inches, 0.10 inch below normal, for the Northeast Region to 1.17 inches, 0.86 inch below normal, for the West Central Region. Chardon (Geauga County) reported the greatest amount of February precipitation, 2.79 inches (Note: Huntington Airport, West Virginia, located south of Lawrence County, reported 3.27 inches). Hoytville (Wood County) reported the least amount, 0.58 inch.

Precipitation during February fell as both rain and snow, though most of it fell as snow due to prevailing below normal temperatures for much of the month. Total snow amounts for most areas of the state were above normal. Chardon (Geauga County) reported a near-record 53.6 inches of snow for the month. For the snow season thus far, Chardon has received 112.4 inches of snow, about 30 inches above normal. The wettest period for many areas of the state was during the first five days of February. Most of the precipitation during this period fell as snow in northern Ohio, and as rain in southern Ohio. Much of northern Ohio received more than 1 foot of snow during this period. Total precipitation (liquid, melted) ranged from more than 1 inch in northern Ohio to less than 0.5 inch in southern Ohio. After some light rain showers on February 8-9, the majority of the precipitation that fell during the remainder of the month was snow. From February 11-23, snow was reported on several days, but daily amounts were generally light. The northern half of the state received 2-6 inches of snow on February 14 while southern Ohio received 3-6 inches on February 16. Some areas in extreme south-central Ohio reported more than 1 foot. Extreme south-central Ohio received more heavy snow on February 18 with up to 6 inches reported. Snow on February 21 was widespread with most of the state reporting 3-10 inches. An exception was in extreme south-central areas of the state where most of the precipitation fell as rain. The remainder of the month was rather dry statewide with just some light snow showers. At the end of February, a significant amount of snow remained on the ground throughout much of the state.

Precipitation for the 2015 water year is below normal throughout most of Ohio. The state average is 11.49 inches, 1.90 inches below normal. Regional averages range from 14.22 inches, 0.10 inch below normal, for the Northeast Region to 8.77 inches, 2.95 inches below normal, for the Northwest Region.

(continued on back)

## PRECIPITATION FEBRUARY



Average (in)  
Percent of normal

## 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	-0.52	-1.82	-1.10	-3.33	-0.12	-0.2
North Central	-0.20	-0.83	-1.28	-0.30	+6.94	+2.1
Northeast	-0.10	-0.07	-0.99	+6.25	+12.00	+1.8
West Central	-0.86	-1.30	-4.07	-1.64	+0.40	-1.4
Central	-0.78	-0.95	-4.28	-2.13	+1.40	-1.5
Central Hills	-0.53	-0.79	-4.02	+1.99	+6.12	-0.5
Northeast Hills	-0.64	-1.17	-4.07	+3.70	+4.70	-0.5
Southwest	-1.11	-0.86	-2.98	-3.10	-0.82	-1.2
South Central	-1.01	-1.76	-2.83	-4.61	-3.48	-2.2
Southeast	-0.98	-0.79	-3.44	-3.20	+0.26	-1.7
State	-0.68	-1.05	-2.92	-0.64	+2.69	

\*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	796	45	79	83	109
Great Miami River at Hamilton	3,630	2,298	47	61	57	99
Huron River at Milan	371	196	38	46	44	113
Killbuck Creek at Killbuck	464	436	64	61	61	111
Little Beaver Creek near East Liverpool	496	981	132	100	86	105
Maumee River at Waterville	6,330	2,286	29	39	47	93
Muskingum River at McConnelsville	7,422	6,786	54	56	55	94
Scioto River near Prospect	567	309	60	31	27	81
Scioto River at Higby	5,131	2,892	37	45	52	90
Stillwater River at Pleasant Hill	503	351	56	54	48	79

**STREAMFLOW** during February was below normal statewide except for a few basins in extreme east-central Ohio where it was above normal. Flows were low enough to be considered deficient in some northern, southwestern and southeastern Ohio basins. February's flows were less than the January flows throughout most of the state, but were greater in some basins in central and east-central Ohio.

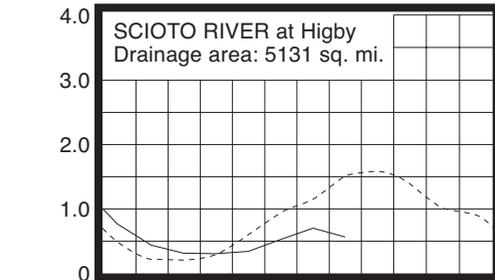
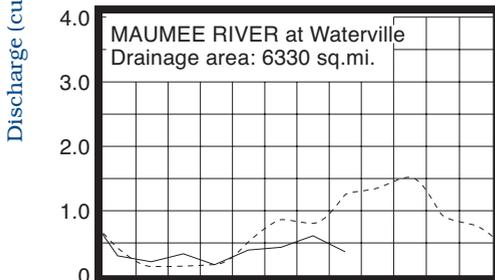
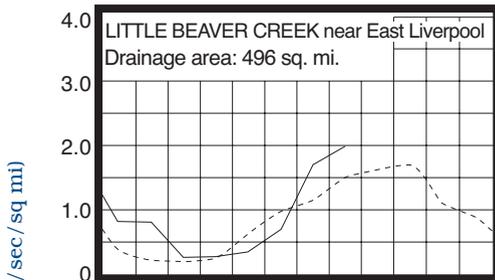
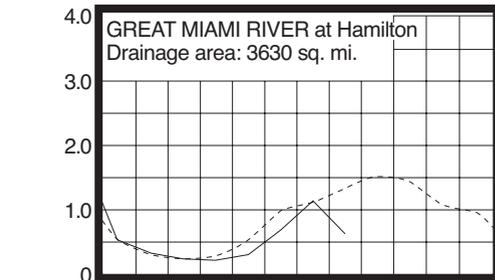
Streamflow at the beginning of the month was below normal statewide. Drainage basins in northeastern Ohio had their lowest flows for February on the first day of the month. Flows increased following widespread precipitation during February 1-4. Drainage basins throughout the state had their greatest flows for the month during February 9-11. After

these peaks, flows generally decreased through the end of the month. A few drainage basins in areas of northwestern, central and southeastern Ohio had their lowest flows around February 23, but many basins in the state had their lowest flows for February at the end of the month. Streamflow at the end of February was below normal statewide.

**RESERVOIR STORAGE** for water supply during February decreased in the Mahoning River basin and increased in the Scioto River basin. At the end of the month storage in both basins was below normal.

Reservoir storage at the end of February in the Mahoning basin index reservoirs was 73 percent of rated capacity for water supply compared with 76 percent for last month and 81 percent for February 2014. Month-end storage in the Scioto basin index reservoirs was 88 percent of rated capacity for water supply compared with 85 percent for last month and 96 percent for February 2014.

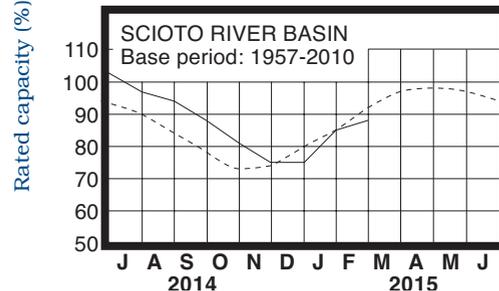
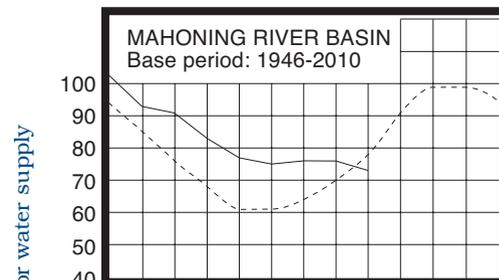
### MEAN STREAM DISCHARGE



Base period for all streams: 1981-2010

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 February showed mixed responses across the state. Most aquifers experienced net improvement in ground water storage during February when compared with January. In most aquifers, net changes during February from last month's levels were near what is usually observed.

Ground water storage continues to be below normal throughout most of the state. Also, current ground water levels are lower than they were a year ago in most aquifers, but are slightly higher in a few aquifers in eastern Ohio. The 2015 recharge season has not been particularly favorable thus far for replenishing the state's ground water supplies. Recent below normal precipitation and frozen soils throughout much of February has inhibited recharge rates. However, ground water supplies are adequate throughout the state. Additionally, with several inches of snow remaining on the ground at the end of February, conditions still favor continued improvement in ground water storage during the remainder of the recharge period. Near-normal precipitation and other climatic conditions, however, will be needed for continued improvement in ground water storage.

**LAKE ERIE** level declined during February. The mean level was 570.96 feet (IGLD-1985), 0.43 foot below last month's mean level and 0.13 foot above normal. This month's level is 0.29 foot above the February 2014 level and 1.76 feet above Low Water Datum.

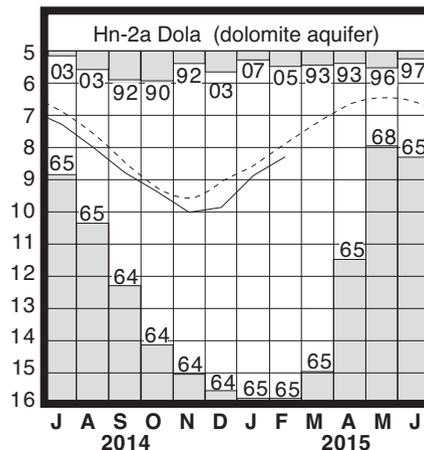
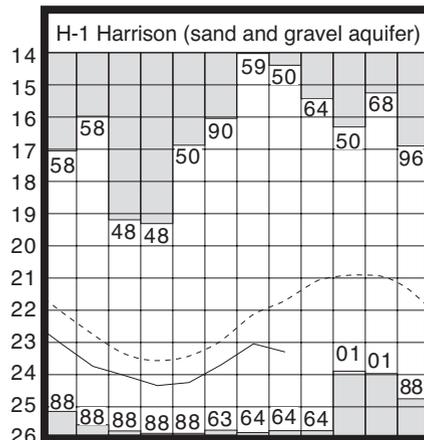
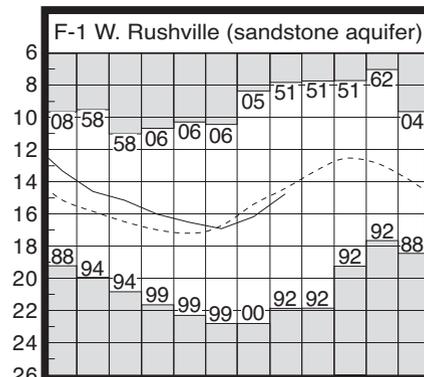
The U.S. Army Corps of Engineers (USACE) reports that precipitation in the Lake Erie basin during February averaged 1.15 inches, 0.94 inch below normal. For the entire Great Lakes basin, February precipitation averaged 0.89 inch, 0.89 inch below normal.

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 as much as 14 inches above to 3 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	14.73	-0.33	+1.46	-2.76
Fa-1	Jasper Mill, Fayette Co.	Limestone	9.25	-1.75	+0.42	-0.30
Fr-10	Columbus, Franklin Co.	Gravel	42.53	+0.92	+0.45	-0.04
H-1	Harrison, Hamilton Co.	Gravel	23.30	-1.60	-0.26	-1.07
Hn-2a	Dola, Hardin Co.	Dolomite	8.30	-0.31	+0.58	-0.50
Po-124	Freedom, Portage Co.	Sandstone	76.93	-0.16	+0.10	+0.04
Tu-1	Strasburg, Tuscarawas Co.	Gravel	13.51	-0.95	+0.32	+0.15

## GROUND-WATER LEVELS

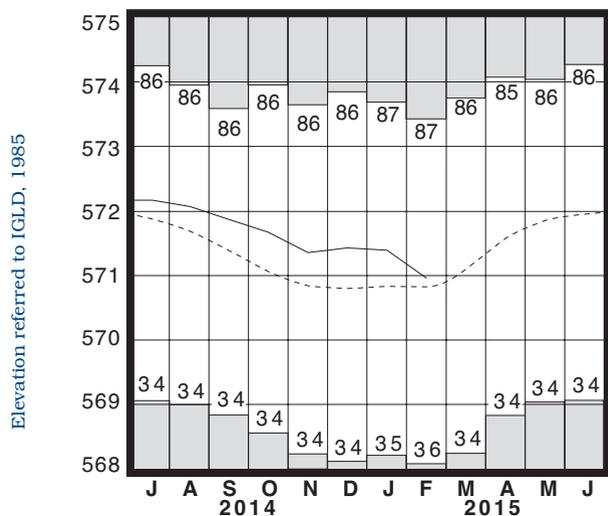
Water level (ft below land surface)



Base periods: F-1, 1947-2010; H-1 1951-2010.

Hn-2a, 1955-2010 ■ Record high and low, year of occurrence

## LAKE ERIE LEVELS



Base period: 1918-2010

■ Record high and low, year of occurrence

Normal - - - - Current ———

(Precipitation continued from front)

Precipitation for the 2015 calendar year is below normal across much of the state, but above normal in northeastern areas of Ohio. The average for the state is 4.14 inches, 0.62 inch below normal. Regional averages range from 5.42 inches, 0.72 inch above normal, for the Northeast Region to 3.27 inches, 0.60 inch below normal, for the Northwest Region.

## SUMMARY

Precipitation during February was below normal throughout most of the state. Streamflow was below normal across most of Ohio and low enough to be considered deficient in several areas of the state. Reservoir storage decreased in the Mahoning River basin and increased in the Scioto River basin. Reservoir storage was below normal at the end of February. Ground water levels rose in most aquifers throughout the state, but storage remained below normal across most of Ohio. Lake Erie level declined 0.43 foot and was 0.13 foot above the long-term February average.

## NOTES AND COMMENTS

### Severe Weather Awareness Week

Governor John Kasich and Lieutenant Governor Mary Taylor have designated the week of March 1-7 2015 as Ohio's Spring Severe Weather Awareness Week. This safety campaign coincides with NOAA's National Severe Weather Preparedness 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 1-7 to think about what course of action they would take in the event if severe weather was to affect 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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