



MONTHLY WATER INVENTORY REPORT FOR OHIO

February 1998

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Hydrologist
Water Inventory Unit

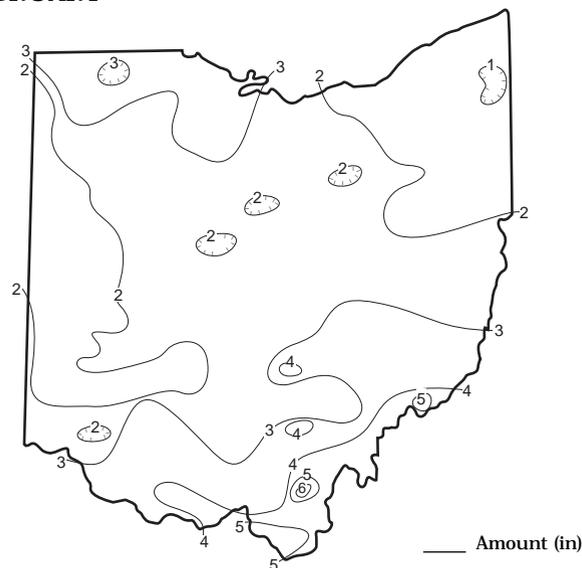
PRECIPITATION during February was above normal in most areas of the state, but below normal in portions of northeastern, west-central and southwestern Ohio. The state average was 2.52 inches, 0.28 inch above normal. Regional averages ranged from 4.00 inches, 1.22 inches above normal, for the South Central Region to 1.56 inches, 0.61 inch below normal, for the Northeast Region. Patriot (Gallia County) reported the greatest amount of precipitation for the month, 6.00 inches. Mosquito Creek Dam (Trumbull County) reported the least amount, only 0.88 inch.

Most of the precipitation during February fell as rain. Very little snow was reported in most areas of the state as temperatures continued to average well above normal. Exceptions were observed in the southern one-third of Ohio as heavy snow fell across the area on February 4-5. Chardon (Geauga County) reported only a trace amount of snow for the month, the least amount ever recorded there for a February. Precipitation fell during every week of the month. A storm with a rain and snow mix crossed the state during February 4-5. Very little precipitation fell across northern Ohio during this storm, but central and southern areas of the state received from 0.5 inch to a little more than 1.5 inches of precipitation. Precipitation fell in the form of snow across the southern one-third of the state. The heaviest snow was reported in extreme southwestern portions of the state. Perintown (Clermont County) reported 18.6 inches of snow and West Union (Adams County) reported 18.3 inches. Scattered showers were common during February 11-13 with amounts of up to 0.5 inch falling at most locations. The wettest period for many areas of the state was February 16-20 when some precipitation fell almost every day. The heaviest storms in this period crossed the state during February 17-18 with nearly every area receiving at least 0.5 to 1 inch of rain. Some areas in northwestern, north-central and central Ohio received more, ranging from 1 to 2.5 inches. Scattered showers continued to fall on and off during the last week of the month. Amounts were generally light, but some locations in the northeastern and southeastern areas of the state received more than 0.5 inch of rain.

Precipitation for the 1998 calendar year is above normal throughout most of the state with only the Southwest Region having slightly below normal precipitation. The state average is 6.01 inches, 1.01 inches above normal. Regional averages range from 8.11 inches, 1.96 inches above normal, for the South Central Region to 5.08 inches, 0.30 inch above normal, for the West Central Region.

Precipitation for the 1998 water year is slightly above normal in the northwestern, north-central, south-central and southeastern areas of the state, but slightly below normal in southwestern, western, central and northeastern Ohio. The state average is 12.36 inches, 0.21 inch below normal. Regional averages range from 14.63 inches, 0.51 inch above normal, for the South Central Region to 10.69 inches, 1.46 inches below normal, for the West Central Region.

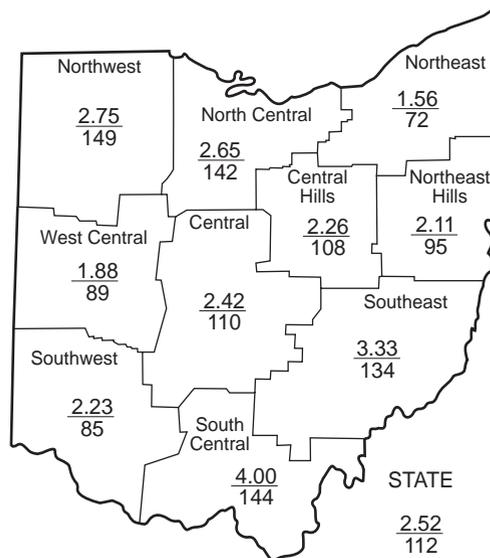
PRECIPITATION FEBRUARY



PRECIPITATION

Region	DEPARTURE FROM NORMAL (IN.)					Palmer Drought Severity Index*
	This Month	Past				
		3 Mos.	6 Mos.	12 Mos.	24 Mos.	
Northwest	+0.91	+1.36	+1.63	+6.17	+9.98	+4.0
North Central	+0.78	+2.29	+1.47	+5.34	+13.61	+3.4
Northeast	-0.61	+0.81	-0.32	+0.90	+13.37	+1.6
West Central	-0.23	-0.15	-2.90	-1.58	+7.29	+0.5
Central	+0.21	-0.17	-2.27	+1.91	+8.68	+1.8
Central Hills	+0.17	+0.02	-1.75	+0.32	+8.60	+1.6
Northeast Hills	-0.12	+0.25	-0.32	+0.14	+7.38	+1.3
Southwest	-0.39	-0.64	-3.85	-0.53	+13.24	+0.1
South Central	+1.22	+1.33	-0.85	+3.91	+10.38	+1.9
Southeast	+0.84	+1.12	+0.18	+5.22	+11.49	+3.1
State	+0.28	+0.63	-0.90	+2.18	+10.41	

*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	945	48	99	82	100
Great Miami River at Hamilton	3,630	3,714	76	84	69	100
Huron River at Milan	371	727	156	179	180	163
Killbuck Creek at Killbuck	464	464	66	73	68	98
Little Beaver Creek near East Liverpool	496	576	69	123	119	108
Maumee River at Waterville	6,330	10,987	156	179	161	154
Muskingum River at McConnelsville	7,422	10,210	84	106	94	106
Scioto River near Prospect	567	712	106	128	102	109
Scioto River at Higby	5,131	7,775	103	115	116	131
Stillwater River at Pleasant Hill	503	331	59	69	53	97

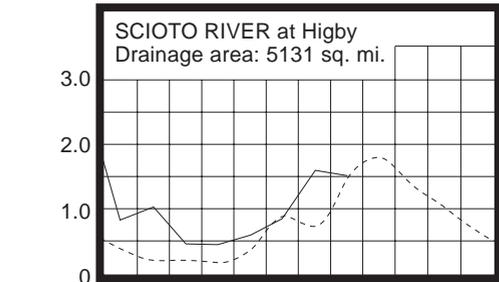
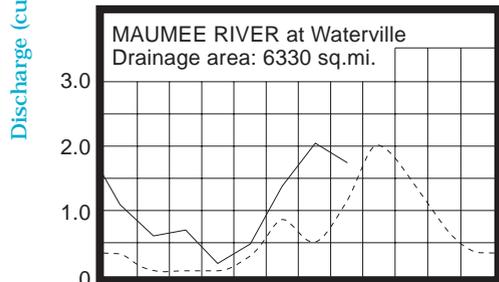
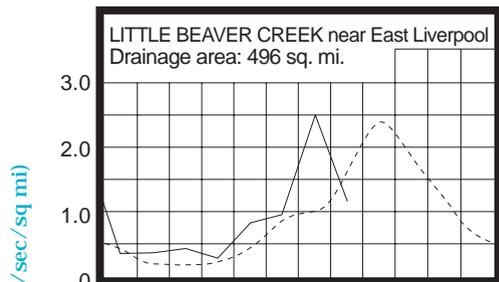
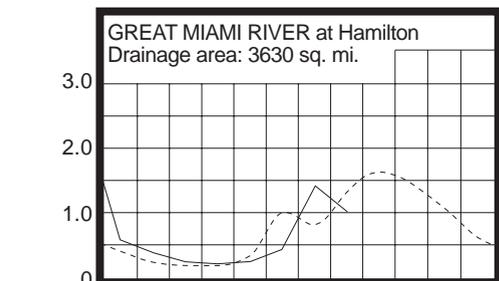
STREAMFLOW during February was above normal in the central, north-central and northwestern areas of the state, but below normal in eastern and southwestern Ohio. Flows in north-central Ohio were high enough to be considered excessive. February flows were less than those recorded for January.

Flows at the beginning of the month were below normal statewide. Lowest flows for the month generally occurred during February 4-5 in the southern half of the state and during February 10-11 in the northern half. Flows increased after the middle of the month following several days of precipitation. The greatest flows for February occurred during February 18-20 following the month's heaviest storms. Flows declined the last week of February following these peaks and were below normal throughout the state at the end of the month.

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

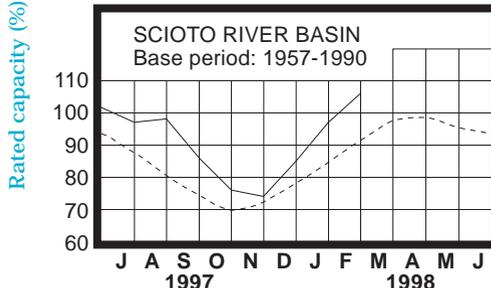
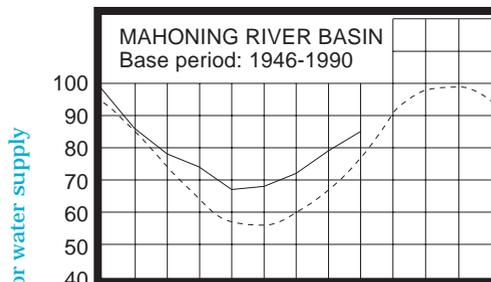
Reservoir storage at the end of February in the Mahoning basin index reservoirs was 85 percent of rated capacity for water supply compared with 79 percent for last month and 88 percent for February 1997. Month-end storage in the Scioto basin index reservoirs was 106 percent of rated capacity for water supply compared with 97 percent for last month and 106 percent for February 1997. Surface-water supplies continue to remain in good condition throughout the state.

MEAN STREAM DISCHARGE



Base period for all streams: 1961-1990

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 February rose in nearly all aquifers across the state. Net changes in February from January's levels were less than usually expected in most aquifers. Levels in some consolidated aquifers gradually rose throughout the month, but levels in most aquifers were stable or declined slightly through the middle of the month and then rose during the second half of the month responding to recharge from precipitation.

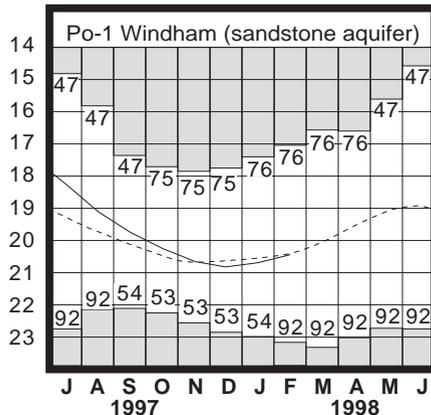
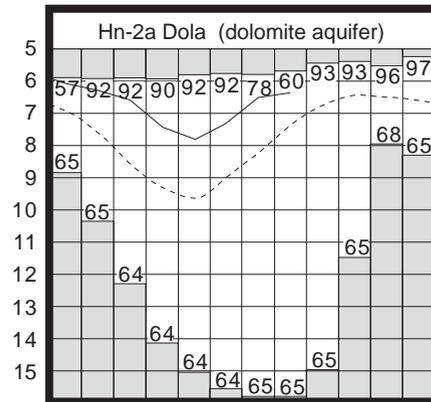
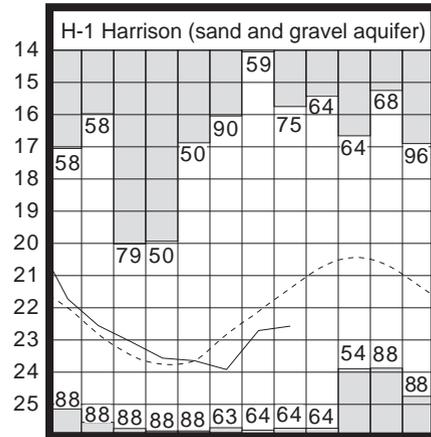
Ground water levels are generally above normal in central and northwestern Ohio and below normal elsewhere. Current levels are slightly higher than last year's levels in some consolidated aquifers, but noticeably lower than last year's levels in many unconsolidated aquifers. Recharge to ground-water supplies finally got a good jump-start during January, but slowed down considerably during February. Although ground-water supplies remain adequate statewide, additional recharge during the next few months is needed to maintain that favorable position. Near-normal precipitation and other climatic conditions during this period are needed to sustain the recharge through the late spring months.

LAKE ERIE level rose during February. The mean level was 573.10 feet (IGLD-1985), 0.13 foot above last month's mean level and 2.50 feet above normal. This month's level is 0.40 foot higher than the February 1997 level and 3.90 feet above Low Water Datum.

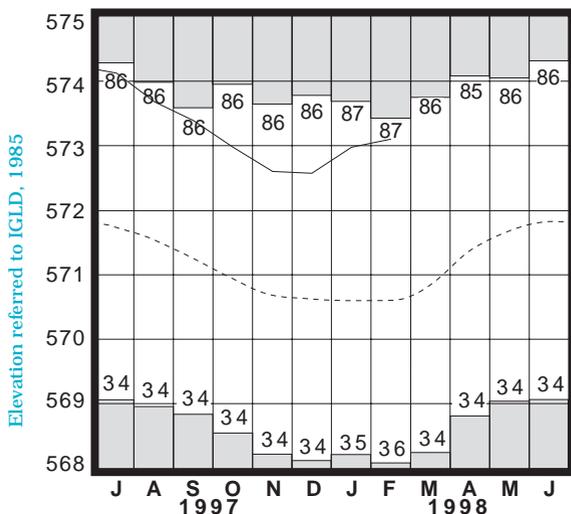
The U. S. Army Corps of Engineers reports that precipitation in the Lake Erie basin during February averaged 2.3 inches, 0.2 inch above normal. The entire Great Lakes basin averaged 1.4 inches of precipitation during February, 0.4 inch below normal. For calendar year 1998 so far, the Lake Erie basin has averaged 6.3 inches of precipitation, 1.8 inches above normal, and the entire Great Lakes basin has averaged 4.6 inches, 0.7 inch above normal.

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	14.11	+0.37	+1.53	+0.52
Fa-1	Jasper Mill, Fayette Co.	Limestone	7.11	-0.03	+0.13	+0.25
Fr-10	Columbus, Franklin Co.	Gravel	42.39	+0.70	+0.34	-0.65
H-1	Harrison, Hamilton Co.	Gravel	22.57	-1.17	+0.14	-1.79
Hn-2a	Dola, Hardin Co.	Dolomite	6.37	+0.97	+0.16	+0.29
Po-1	Windham, Portage Co.	Sandstone	20.45	-0.05	+0.25	-1.33
Tu-1	Strasburg, Tuscarawas Co.	Gravel	14.87	-2.73	+0.35	-2.31

GROUND-WATER LEVELS



LAKE ERIE LEVELS at Fairport



Base period: 1900-1991

■ Record high and low, year of occurrence

Base periods: H-1, 1951-1990. Hn-2a, 1955-1990.

■ Po-1, 1947-1990 ■ Record high and low, year of occurrence

SUMMARY

Precipitation was above normal in most areas of the state, but below normal in portions of northeastern, west-central and southwestern Ohio. Streamflow was above normal in central, north-central and northwestern Ohio, but below normal elsewhere. Reservoir storage increased and continues to remain above the normal seasonal levels. Ground water levels rose, but continue to remain below normal in eastern Ohio. Lake Erie level rose 0.13 foot and was 2.50 feet above the long-term February average.

NOTES AND COMMENTS SUBSCRIPTION RENEWAL REMINDER

Most subscribers to the "Monthly Water Inventory Report For Ohio" have recently received a subscription renewal notice. That letter must be returned to our office in order to continue receiving this report through the mail. This is a reminder that we must receive your response by April 1, 1998 or your name will be dropped from our mailing list.

Many responses to this request have already been returned. Several subscribers have indicated they will take advantage of the reports availability over the Internet. Please let us know if there are any problems or suggestions for any part of our web page. Our web page address is: <http://www.dnr.state.oh.us/odnr/water/>. Also, the Water Inventory Unit staff appreciates all the favorable comments that have been included with the renewal notice.

DROUGHT WORKSHOP

The National Drought Mitigation Center has organized a series of workshops in different regions around the country on how to prepare for drought. The workshops are being sponsored by the U. S. Bureau of Reclamation and the National Governors' Association. The workshop closest to Ohio will be held May 12-14, 1998 in Ft. Mitchell, Kentucky (Cincinnati area). The local host for the workshop is the Ohio River Basin Commission.

This three-day workshop will focus on early warning systems, vulnerability assessment, mitigation, and planning and preparedness. Other sessions will highlight how to involve stakeholders in advance planning, Internet resources, urban water conservation programs, and how various federal programs and resources can ease drought effects.

The objectives of the workshops are: to help people understand drought and the need for planning; to teach natural resource managers, water utility managers, emergency managers, planners and others how to develop drought contingency plans; and to help different levels of government coordinate drought-related programs. Participants will also have the opportunity to discuss their specific planning needs with experts and learn how others coped with recent droughts.

There is no registration fee for the workshop. Space is limited and registration at least two weeks in advance is suggested. For registration information contact the National Drought Mitigation Center, University of Nebraska-Lincoln, P. O. Box 830749, Lincoln, NE 68583-0749, phone: (402) 472-6707, fax: (402) 472-6614, e-mail: ndmc@enso.unl.edu, Internet: <http://enso.unl.edu/ndmc/>. You may also contact the Ohio River Basin Commission, c/o University of Kentucky, 403 Bradley Hall, Lexington, KY 40506-0058, phone: (606) 257-5141, fax: (606) 323-2882.

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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