



MONTHLY WATER INVENTORY REPORT FOR OHIO

May 2002

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

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PRECIPITATION during May was above normal statewide except for scattered areas in northwestern Ohio where it was below normal. The average for the state as a whole was 5.16 inches, 1.25 inches above normal. Regional averages ranged from 6.74 inches, 2.26 inches above normal, for the Southwest Region to 3.80 inches, 0.31 inch above normal, for the Northwest Region. This was the 7th wettest May during the past 107 years of record for the Northeast Region and the 8th wettest for the Southwest Region. Cheviot (Hamilton County) reported the greatest amount of May precipitation, 9.43 inches; Wilmington and the Wilmington National Weather Service Office (Clinton County) reported 9.19 and 9.03 inches, respectively. Wauseon (Fulton County) reported the least amount, 2.67 inches.

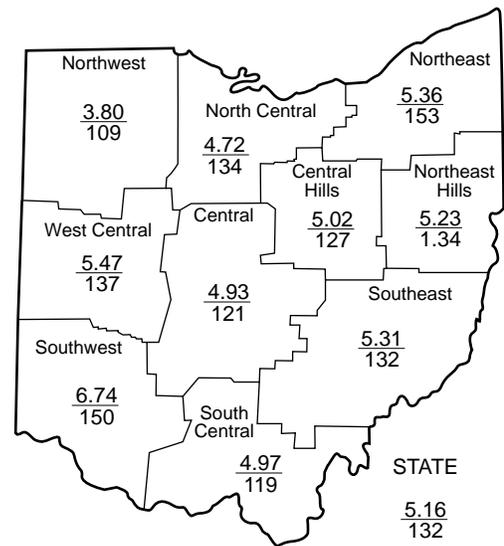
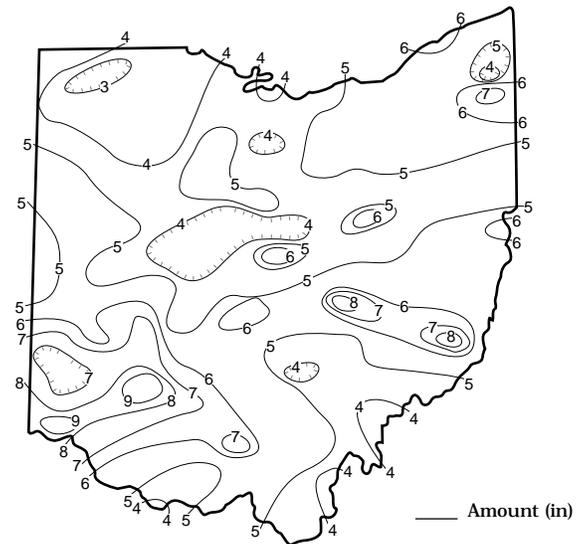
Precipitation fell during every week of May. Showers and thunderstorms crossed the state on several days throughout the month. Localized heavy downpours were common in many areas. These rains fell on soils that were wet from April's above normal rainfall totals. Minor flooding occurred throughout various parts of the state on several days. Widespread rain during May 1-2 brought generally 0.25-0.50 inch amounts to most of the state while some areas, mostly in north-central, central and southwestern Ohio, received more than 1 inch. Showers and thunderstorms during May 6-8 fell across the southwestern two-thirds of the state, where the greatest amounts fell in southwestern and south-central Ohio. Storm totals of 1-3 inches in southern Ohio resulted in numerous reports of small stream and urban flooding. The most significant storm of the month occurred during May 12-13. Showers and thunderstorms brought generally 1-2 inches of rain throughout most of the state with as much as 3 inches occurring at scattered locations, most notably in western Ohio. Small stream and urban flooding occurred in many areas of the state and was most noteworthy across the western half of Ohio. Conditions were generally much drier during the next 2 weeks, however there were still several days with measurable precipitation. The northwestern two-thirds of Ohio received scattered showers and thunderstorms which arrived late on May 27 and continued on and off through May 31. Some of these storms produced heavy rains, with amounts of 2-3 inches reported in isolated areas of central and southwestern Ohio. This resulted in flash flooding of small streams and urban areas.

Precipitation for the 2002 water year is above normal statewide. The average for the state as a whole is 27.75 inches, 4.09 inches above normal. Regional averages range from 33.33 inches, 6.75 inches above normal, for the Southwest Region to 25.85 inches, 4.86 inches above normal, for the Northwest Region.

Precipitation for the 2002 calendar year is above normal statewide. The average for the state as a whole is 17.36 inches, 1.87 inches above normal. Regional averages range from 20.97 inches, 3.25 inches above normal, for the Southwest Region to 14.81 inches, 1.41 inches above normal, for the Northwest Region.

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PRECIPITATION MAY



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	+0.31	+0.94	+1.14	+4.53	+7.67	+1.8
North Central	+1.21	+2.01	+1.80	+3.23	+4.16	+1.7
Northeast	+1.85	+3.07	+2.48	+0.25	-2.22	+1.8
West Central	+1.47	+3.90	+3.42	+9.41	+8.94	+3.4
Central	+0.86	+1.68	+0.46	+1.18	+2.07	+1.1
Central Hills	+1.06	+2.67	+1.45	+0.84	-1.89	+1.5
Northeast Hills	+1.33	+2.09	+0.44	-0.89	-2.46	+0.1
Southwest	+2.26	+5.02	+3.93	+10.61	+6.66	+3.6
South Central	+0.81	+4.79	+2.55	+0.14	-0.37	+0.8
Southeast	+1.29	+3.08	+1.22	+1.09	-0.19	+0.7
State	+1.25	+2.94	+1.89	+3.04	+2.23	

*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

River and Location	Drainage Area (Sq. Mi.)	Mean Discharge (CFS)	% of Normal	% of Normal Past		
				3 Mos.	6 Mos.	12 Mos.
				This Month		
Grand River near Painesville	685	1,893	365	124	99	81
Great Miami River at Hamilton	3,630	9,947	292	171	152	149
Huron River at Milan	371	455	207	111	95	83
Killbuck Creek at Killbuck	464	612	133	96	81	71
Little Beaver Creek near East Liverpool	496	726	124	90	77	64
Maumee River at Waterville	6,330	9,257	192	115	115	116
Muskingum River at McConnelsville	7,422	15,325	166	152	132	74
Scioto River near Prospect	567	783	209	127	121	106
Scioto River at Higby	5,131	10,760	254	117	102	94
Stillwater River at Pleasant Hill	503	1,119	288	170	146	142

STREAMFLOW during May was above normal statewide. Flows were high enough to be considered excessive across most of Ohio. However, May flows were seasonally less than the April flows throughout nearly the entire state.

Flows at the beginning of May were below normal across most of the state, but above normal in southwestern Ohio. Flows during the first 12 days of the month were generally stable or declining, with some temporary increases noted following local precipitation, especially at the beginning of the month and around May 6-8. However, some localized flooding occurred in southern Ohio, including Ross and Highland counties, following storms on May 7. Flows increased rapidly in response to the widespread and locally heavy precipitation that began on May 12. Low flows for the month occurred in eastern and northwestern Ohio

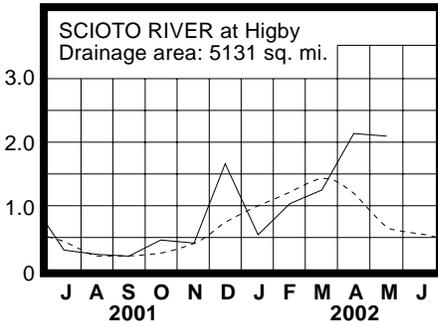
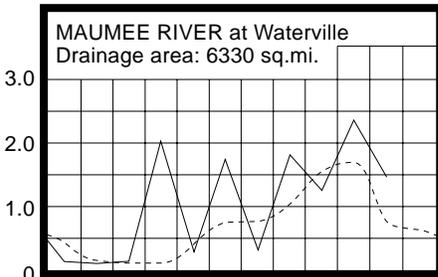
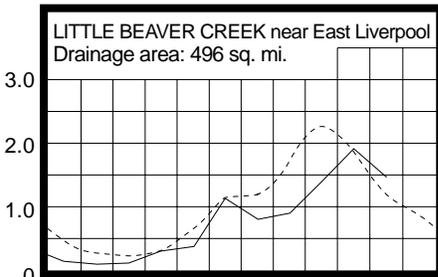
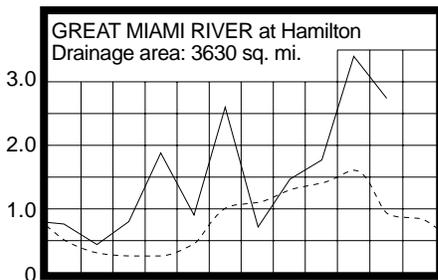
just prior to the arrival of this storm system. Greatest flows for the month occurred statewide just after the passage of this storm system, generally on May 14. Small stream and urban flooding was reported across many areas of the state, but was most widespread in western Ohio. Flows decreased from these peaks until near the end of the month. Low flows for the month occurred around May 25 in northeastern Ohio and around May 27-28 in the southwestern quarter of the state. These low flows occurred prior to the return of showers and thunderstorms that prevailed near the end of the month. Some of the rains were heavy enough to cause flash flooding of small streams and urban areas in the southern half of the state. Flows were still increasing statewide at month's end as a result of the precipitation that occurred late in the month. Flows at the end of May were above normal throughout most of the state, with only some basins in northeastern Ohio below normal.

RESERVOIR STORAGE for water supply during May decreased slightly in both the Mahoning and Scioto river basins. Storage at the end of May was above normal in both basins.

Reservoir storage at the end of the month in the Mahoning basin index reservoirs was 102 percent of rated capacity for water supply compared with 103 percent for last month and 95 percent for May 2001. Month-end storage in the Scioto basin index reservoirs was 101 percent of rated capacity for water supply compared with the same for last month and 101 percent for May 2001. Surface water supplies are adequate throughout the state.

MEAN STREAM DISCHARGE

Discharge (cu ft/sec/sq mi)

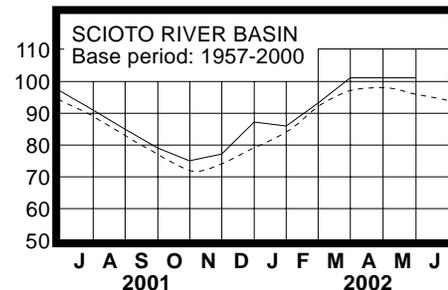
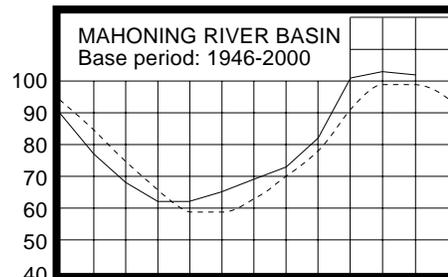


Base period for all streams: 1971-2000

Normal - - - - Current ———

RESERVOIR STORAGE FOR WATER SUPPLY

Rated capacity (%) for water supply



GROUND-WATER LEVELS

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

GROUND WATER levels during May rose in most aquifers throughout the state. A few exceptions were noted in consolidated aquifers in northwest Ohio where ground water levels were stable or declined slightly, reflecting the near normal precipitation that region received during May. Positive net changes from the April levels were greater than those usually observed for May across most of the state.

Following the noticeably above normal precipitation in many areas of Ohio during May, ground water storage has improved to above-normal seasonal levels in much of the western half of the state. However, ground water levels in much of eastern Ohio remain below normal. Levels range from just over 1 foot above normal to as much as 1.75 feet below normal. Current ground water levels are higher than the May 2001 levels statewide. In some aquifers, current levels are more than 3.5 feet above last year's levels. The Ohio Agricultural Statistics Service reports that at the end of May, soil moisture was rated as being adequate in 50 percent of the state and surplus in 50 percent of the state. Although beneficial for water supplies in the state, the above normal precipitation caused significant delays in the planting of agricultural crops.

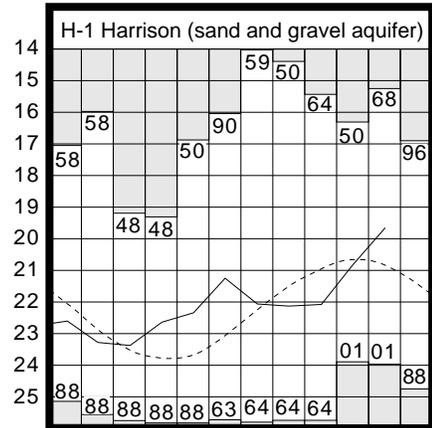
LAKE ERIE level rose during May. The mean level was 571.88 feet (IGLD-1985), which is normal and 0.32 foot higher than last month's mean level. This month's mean level is 0.85 foot higher than the May 2001 level and 2.68 feet above Low Water Datum.

The U.S. Army Corps of Engineers (USACE) reports that precipitation in the Lake Erie basin during May averaged 4.61 inches, which is 1.33 inches above normal. The entire Great Lakes basin averaged 3.75 inches, which is 0.80 inch above normal. For calendar year 2002 through May, the Lake Erie basin has averaged 17.30 inches of precipitation, 3.62 inches above normal and the entire Great Lakes basin has averaged 13.61 inches, which is 2.04 inches above normal.

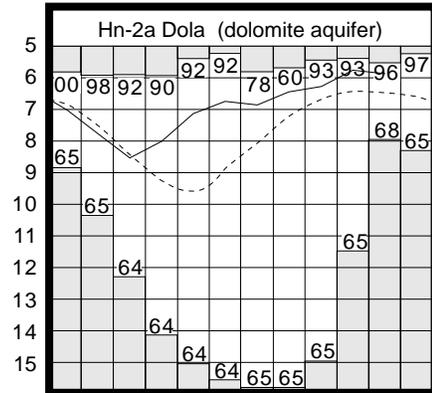
In addition, the USACE reports that based on the current condition of the Great Lakes basin and anticipated weather conditions, the level of Lake Erie should range from near normal to about 2 inches below the long-term seasonal average for the foreseeable future. Deviations from the anticipated weather patterns could result in the level of Lake Erie ranging from nearly 5 inches above normal 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	12.44	+0.78	+0.66	+1.49
Fa-1	Jasper Mill, Fayette Co.	Limestone	7.50	-0.43	+0.18	+0.35
Fr-10	Columbus, Franklin Co.	Gravel	44.09	-1.75	+0.25	+0.50
H-1	Harrison, Hamilton Co.	Gravel	19.65	+1.18	+1.17	+3.51
Hn-2a	Dola, Hardin Co.	Dolomite	5.87	+0.62	-0.11	+0.32
Po-1	Windham, Portage Co.	Sandstone	19.31	-0.05	+0.65	+0.68
Tu-1	Strasburg, Tuscarawas Co.	Gravel	13.04	-1.61	+0.95	+0.97

GROUND-WATER LEVELS



Water level (ft below land surface)



(Precipitation continued from front)

Precipitation during April-May was noticeably above normal throughout most of the state. For the state as a whole it was the 12th wettest April-May period during the past 120 years. For many regions it was among the wettest on record. It was the 4th wettest April-May for the Northeast Region; the 8th wettest for the West Central and Central Hills regions; and the 9th wettest for the Southwest and South Central regions.

SUMMARY

Precipitation during May was above normal across almost all areas of the state except in scattered areas of northwest Ohio. Streamflow was above normal statewide. Reservoir storage decreased slightly and was above normal in both the Mahoning and Scioto basins. Ground water levels rose across most of the state. Lake Erie level rose 0.32 foot and was at its long-term May average.

NOTES AND COMMENTS

New Office Of Coastal Management Created

The Ohio Department of Natural Resources (ODNR) has created a new Office of Coastal Management in an effort to better serve shoreline property owners and local governments along the Lake Erie coast. The new office will be based in Sandusky and will consolidate regulatory and permitting programs formerly administered separately by the Division of Water and the Division of Real Estate and Land Management. This new office will give coastal residents and local governments a single, unified office to contact regarding state regulatory and coastal grants programs. The new office will continue to administer the state's submerged lands lease program, issue coastal erosion zone and shore structure permits, and coordinate Ohio's coastal nonpoint pollution control program. With the input from coastal residents and state legislators, ODNR will continue to search for ways to improve its coastal management program through new legislation, state regulations or department policy. Other ODNR programs relating to Lake Erie and coastal resources, including those administered by the divisions of Wildlife, Watercraft and Geological Survey are also based in Sandusky, thus making it easier for these programs to more closely coordinate their efforts with the new office. However, these programs will remain separate from the Office of Coastal Management.

Floodplain Management in Ohio-Statewide Conference 2002

On August 28-29, 2002, the Ohio Department of Natural Resources (ODNR), Federal Emergency Management Agency, and the Ohio Floodplain Management Association will sponsor *Floodplain Management in Ohio - Statewide Conference 2002*. The conference will be held at the Ramada Plaza Hotel and Conference Center in Columbus, Ohio. Concurrent conference sessions will address a wide range of topics under Basic Floodplain Management, Advanced Floodplain Management, and Engineering/Technology in Floodplain Management. The Association of State Floodplain Manager's Certified Floodplain Manager Exam will also be offered in conjunction with the conference at the ODNR on Tuesday, August 27, 2002. For additional information, please contact ODNR at 614-265-6750 or email: alicia.silverio@dnr.state.oh.us.

Long-Time Division Employees Retire

Two long-time Division of Water employees retired on June 1, 2002. Jim Sanderson and Al Luczyk combined for 59 years of service to the Ohio Department of Natural Resources (ODNR) and the citizens of Ohio. Jim provided 37 years of service to the ODNR, Division of Water. Jim spent most of his career in the Dam Safety Program specializing in dam permitting and construction inspection. As a key member of the staff, he trained numerous dam safety inspectors in everything from construction inspection to hydrologic and hydraulic computer modeling. For the past nine years, Jim was the PC Coordinator for the Division and was instrumental in providing the high level of computer technology support that has allowed the Division to be a leader in GIS and database information systems. Jim's service-oriented manner and exceptional attention to detail served the Division very well over the past 37 years, and his knowledge and expertise will be missed.

Al Luczyk began his career at ODNR in June 1980 with the Division of Geological Survey. Later he served as a permit reviewer with the former Division of Oil and Gas, now housed in the Division of Mineral Resources. In August 1991, Al joined the Division of Water where he spent the last 11 years of his 22 years with ODNR. Al worked in the Water Inventory Unit where he managed the registration and annual data collection for the Water Withdrawal Facilities Registration program.

The entire Division of Water staff wishes Jim and Al the best in their retirement years.

Water Well Log Database Available to the Public

The Division of Water now has two computers available to the public that have access to the water well log database. Customers can do detailed searches on any fields in the database and obtain the images or the data for any of the well log records. These computers are available for use during normal business hours (8:00am-5:00pm) Monday through Friday.

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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