



MONTHLY WATER INVENTORY REPORT FOR OHIO

June 2005

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

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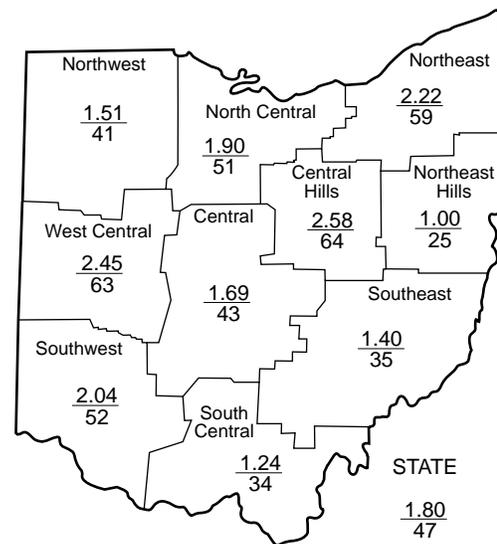
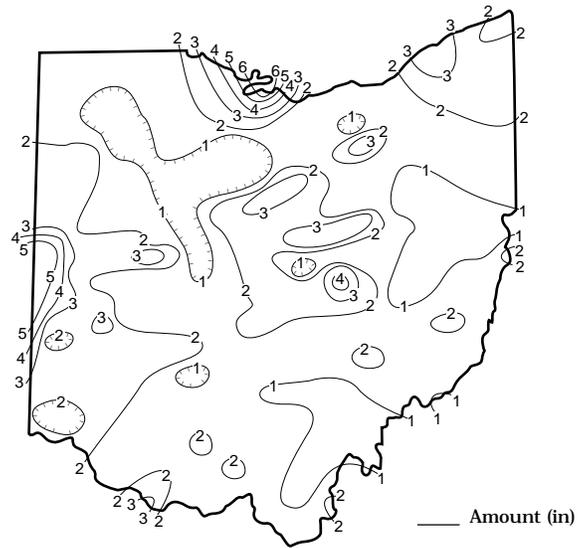
PRECIPITATION during June was noticeably below normal throughout most of the state except for a few areas in extreme western Ohio where it was above normal. The average for the state as a whole was 1.80 inches, 2.05 inches below normal. Regional averages ranged from 2.58 inches, 1.44 inches below normal, for the Central Hills Region to 1.00 inch, 2.98 inches below normal, for the Northeast Hills Region. For the state as a whole this was the 3rd driest June during the past 123 years. Regionally, this was the 3rd driest June for the Northeast Hills Region; the 4th for the South Central Region; the 5th for the Northwest and Southeast regions; the 7th for the North Central and Central regions; the 10th for the Northeast Region; and the 11th for the Southwest Region. Sandusky (Erie County) reported the greatest amount of June precipitation, 6.38 inches. Tiffin (Seneca County) reported the least amount, 0.52 inch.

Precipitation during June fell as scattered showers and thunderstorms. The first week of the month was rather dry across most of the state. The second week of June was much wetter for most of Ohio. Hit and miss storms were common during June 8-10. While most areas of the state received light precipitation, a few isolated locations, mainly in the northern half of the state, received between 1 and 3 inches from slow moving storms. Remnants from Tropical Storm Arlene moved across western Ohio during June 12-13, bringing generally 0.50-2.0 inch of rain to that part of the state. The next 11 days of the month were dry across the state, with most areas receiving little or no rain during this period. The most widespread precipitation of the month fell during the last week of June. Precipitation during this period was greatest throughout the southwestern two-thirds of the state, with generally 1-2 inches falling and as much as 2-4 inches of much-needed rain reported at some locations. The remainder of the state received 0.25-1.0 inch of rain. Some minor flooding was reported during this period from locally heavy downpours, especially in areas of central, west-central and southwestern Ohio.

Precipitation for the 2005 calendar year is above normal throughout most of the state except in northwestern and southwestern Ohio where it is below normal. The average for the state as a whole is 20.35 inches, 1.01 inches above normal. Regional averages range from 22.85 inches, 2.47 inches above normal, for the Southeast Region to 15.31 inches, 1.76 inches below normal, for the Northwest Region.

Precipitation for the 2005 water year has fallen below normal in areas in northwestern and south-central Ohio, but remains above normal elsewhere. The average for the state as a whole is 30.02 inches, 2.47 inches above normal. Regional averages range from 32.82 inches, 4.16 inches above normal, for the Southeast Region to 23.47 inches, 1.19 inches below normal, for the Northwest Region.

PRECIPITATION JUNE



PRECIPITATION

Region	DEPARTURE FROM NORMAL (IN.) Base period 1951-2000					Palmer Drought Severity Index*
	This Month	Past				
		3 Mos.	6 Mos.	12 Mos.	24 Mos.	
Northwest	-2.16	-4.28	-1.76	+0.80	+7.00	-2.8
North Central	-1.84	-1.64	+0.84	+2.36	+13.39	-1.9
Northeast	-1.57	-0.68	+2.05	+5.17	+17.94	-0.5
West Central	-1.44	-2.10	+3.87	+3.92	+19.68	-0.4
Central	-2.22	-2.77	+2.67	+5.37	+18.90	-0.6
Central Hills	-1.44	-1.74	+1.92	+6.52	+20.31	-0.1
Northeast Hills	-2.98	-2.19	+0.93	+10.44	+27.61	+0.1
Southwest	-1.85	-3.70	-0.46	+0.22	+7.99	-1.1
South Central	-2.37	-3.01	-2.38	+3.55	+12.89	-2.0
Southeast	-2.62	-2.18	+2.47	+12.98	+27.26	+0.7
State	-2.05	-2.43	+1.01	+5.13	+17.25	

*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	This Month		
				% of Normal Past		
				3 Mos.	6 Mos.	12 Mos.
Grand River near Painesville	685	268	102	132	152	143
Great Miami River at Hamilton	3,630	1,840	59	86	157	128
Huron River at Milan	371	46	22	122	193	186
Killbuck Creek at Killbuck	464	219	66	105	143	130
Little Beaver Creek near East Liverpool	496	205	48	104	132	172
Maumee River at Waterville	6,330	1,182	30	60	118	117
Muskingum River at McConnsville	7,422	3,441	58	144	211	149
Scioto River near Prospect	567	120	39	86	169	142
Scioto River at Higby	5,131	2,155	61	107	177	158
Stillwater River at Pleasant Hill	503	224	59	94	177	133

STREAMFLOW during June was below normal across most of the state. Flows were low enough to be considered deficient in several basins in Ohio. June flows were seasonally less than the flows recorded during May throughout the state.

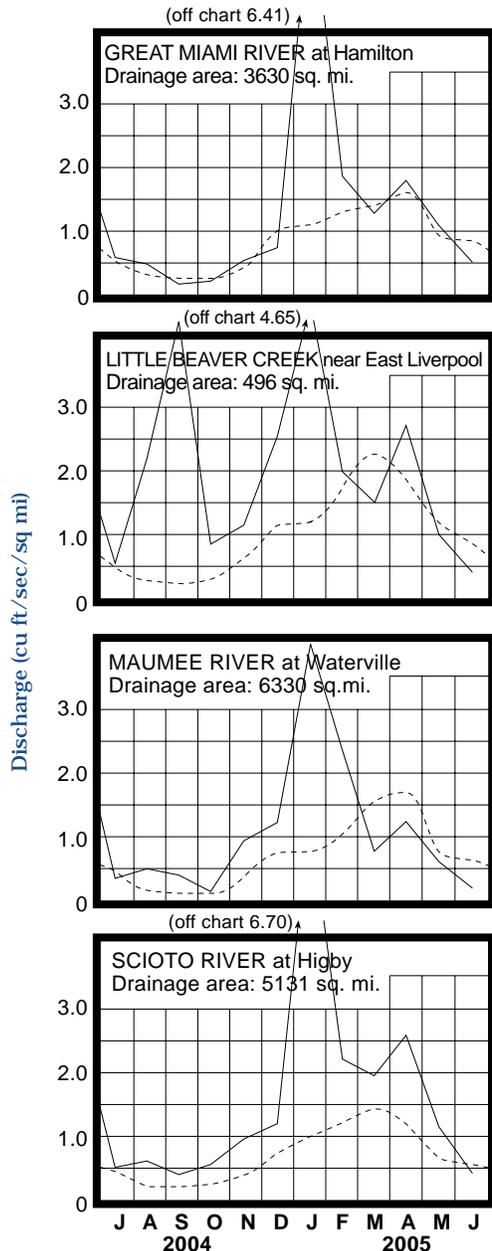
Streamflow at the beginning of June was below normal across most of the state. Greatest flows for the month generally occurred in northwestern and southeastern Ohio basins at the beginning of the month, across most of the remainder of the state during June 11-12, and in some central and west-central Ohio basins near the end of June. Flows declined during the first week of the month and then rose during the 2nd week in response to local precipitation. After peaking, flows again declined during

the next 12-14 days as dry weather prevailed, with the lowest flows for the month occurring during June 25-27 across most of the state. Flows increased from these lows the last few days of the month in response to widespread precipitation but remained below normal at the end of June across most of the state. Some minor flooding followed locally heavy rains.

RESERVOIR STORAGE during June decreased in both the Mahoning and Scioto river basins. Storage remains above normal in the Mahoning basin index reservoirs, but has fallen below normal for the first time in more than 2 years in the Scioto basin index reservoirs.

Reservoir storage at the end of June in the Mahoning basin index reservoirs was 95 percent of rated capacity for water supply, compared with 102 percent for last month and 100 percent for June 2004. Month-end storage in the Scioto basin index reservoirs was 92 percent of rated capacity for water supply, compared with 98 percent for both last month and June 2004.

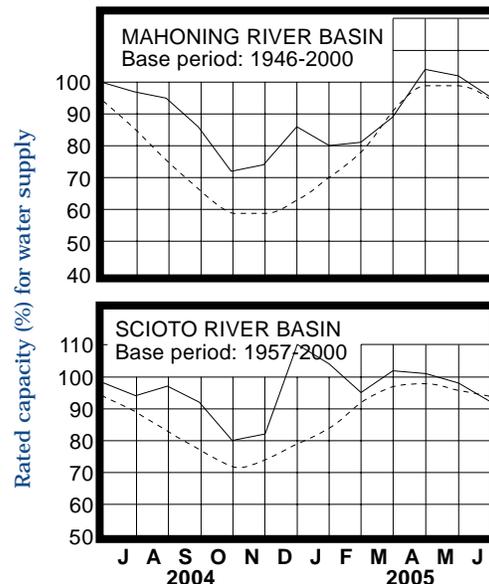
MEAN STREAM DISCHARGE



Base period for all streams: 1971-2000

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 June declined seasonally statewide. Ground water levels declined steadily throughout the month, except for some temporary rise noted in mainly unconsolidated aquifers following local precipitation. Statewide, net declines during June from the May levels were greater than usually observed.

Ground water supplies continue to remain adequate throughout the state. However, levels are below normal in most of the state's unconsolidated aquifers and in many consolidated aquifers of southwestern Ohio. Also, current levels are lower than they were during June 2004 nearly statewide. Rain during the last week of June helped improve soil moisture conditions, although little or no recharge can usually be expected during the next few months. The Ohio Agricultural Statistics Service reported that near the end of June soil moisture was rated as being short or very short in 47 percent of the state, adequate in 48 percent of the state and surplus in 5 percent of the state.

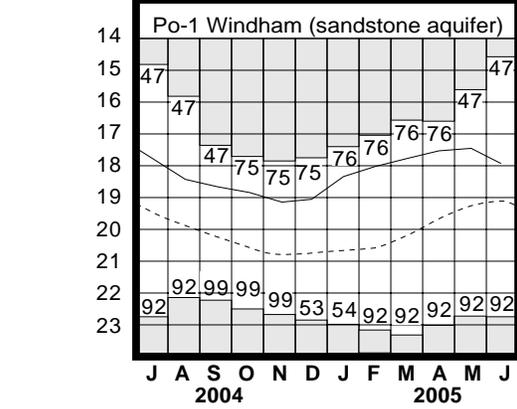
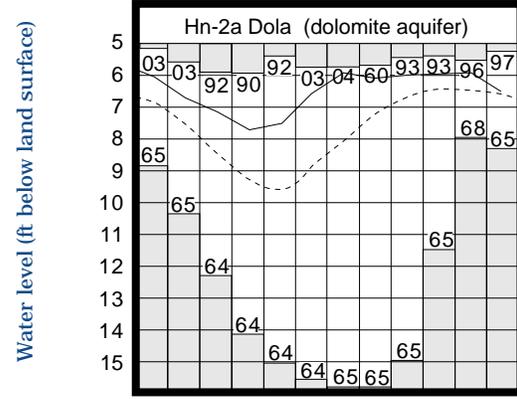
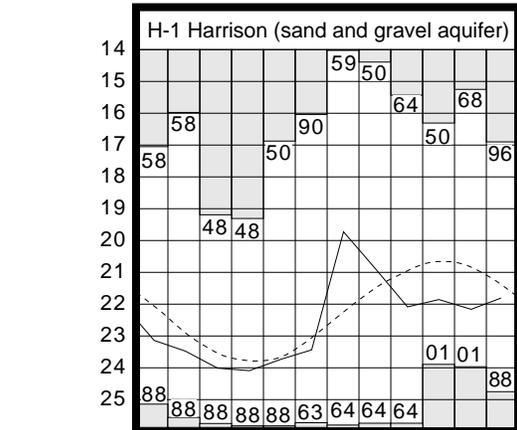
LAKE ERIE level declined during June. The mean level was 571.92 feet (IGLD-1985), 0.29 foot lower than last month's mean level and 0.06 foot below normal. This month's mean level is 0.16 foot lower than the June 2004 level and 2.72 feet above Low Water Datum.

The U.S. Army Corps of Engineers (USACE) reports that precipitation in the Lake Erie basin during June averaged 1.79 inches, which is 1.66 inches below normal. For the entire Great Lakes basin, June precipitation averaged 2.62 inches, which is 0.58 inch below normal. For calendar year 2005 through June, the Lake Erie basin has averaged 14.82 inches, 2.37 inches below normal, while the entire Great Lakes basin has averaged 12.44 inches, also 2.37 inches below normal.

Due in part to the above normal temperatures, precipitation and snow melt during January, it appears the level of Lake Erie has peaked somewhat early this year and begun its seasonal decline. 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 as much as 5 inches below normal for the foreseeable future. Deviations from the anticipated weather patterns could result in the level of Lake Erie ranging from as high as 5 inches above to as much as 12 inches below the normal seasonal average.

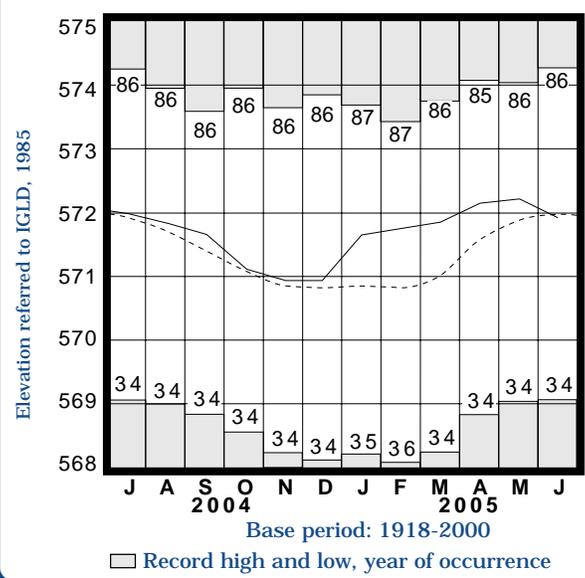
Index Well	Location	Aquifer	Mean This Month	Departure From Normal	Change in feet from:	
					Last Month	Year Ago
F-1	W. Rushville, Fairfield Co.	Sandstone	13.40	+0.83	-2.11	-3.16
Fa-1	Jasper Mill, Fayette Co.	Limestone	8.57	-1.17	-0.61	-0.57
Fr-10	Columbus, Franklin Co.	Gravel	43.08	-0.32	-0.74	+0.21
H-1	Harrison, Hamilton Co.	Gravel	22.81	-1.42	-0.66	-0.81
Hn-2a	Dola, Hardin Co.	Dolomite	6.51	+0.08	-0.60	-0.86
Po-1	Windham, Portage Co.	Sandstone	17.93	+1.18	-0.48	-0.75
Tu-1	Strasburg, Tuscarawas Co.	Gravel	13.35	-1.25	-1.18	-2.84

GROUND-WATER LEVELS



Base periods: H-1, 1951-2000. Hn-2a, 1955-2000.
Po-1, 1947-2000 □ Record high and low, year of occurrence

LAKE ERIE LEVELS



Normal - - - - Current ———

SUMMARY

Precipitation during June was noticeably below normal throughout most of the state except for a few areas in extreme western Ohio where rainfall was above normal. Streamflow was below normal across most of the state. Reservoir storage decreased in both the Mahoning and Scioto river basins. Storage remains above normal in the Mahoning basin index reservoirs, but dropped to below normal in the Scioto basin index reservoirs. Ground water levels declined statewide. Lake Erie level declined 0.29 foot and was 0.06 foot below the long-term June average.

NOTES AND COMMENTS

Revised Draft Agreements On Great Lakes Protection

The eight Great Lakes States governors and two Canadian premiers have released revised draft agreements to Annex 2001 Implementing Agreements. A 60-day public review period has been announced for comments on the revised draft agreements. The review period will run through August 29, 2005. Draft documents are available at the Department of Natural Resources (ODNR) website at: www.ohiodnr.com and the Council of Great Lakes Governors website at: www.cglg.org. Public meetings will be held in mid-August at several sites in Ohio to explain the revised draft agreements and to obtain public comments. Time, dates and locations of these meetings are available on the ODNR website. Comments may also be sent to Annex Comments, ODNR Division of Water, 2045 Morse Road, Building E., Columbus, OH 43229 or by e-mail to annexcomments@dnr.state.oh.us. The revised draft agreements were created to update and strengthen the way in which the Great Lakes and the waters of the Great Lakes basin are managed and protected. The revised draft agreements include many of the recommendations and concerns that were provided during the review process of the original draft in 2004.

New Web Site For Project WET, Project WILD and Project Learning Tree

Ohio educators using Project WET, Project WILD and Project Learning Tree materials in the classroom can now access a database with the WET, WILD and PLT activities correlated to the new state science standards. Project WET, Project WILD and Project Learning Tree are national environmental education programs recognized for their value in applying practical, hands-on activities to the study of water, wildlife and forest resources, as well as traditional subjects such as social studies, science and language arts. The database, part of the WET, WILD AND PLT-Correlations For All Three project, is available on the ODNR web site at: ohiodnr.com/education/correlations. The database is designed to help classroom teachers create lesson plans and projects that meet the Ohio K-12 Science Academic Content Standards. There are a limited number of hard copies of the Correlations guidebook that are available to those who do not have internet access. To receive a copy, or for additional information, please contact Valerie Childress at (614) 265-6757 or e-mail at: valerie.childress@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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