MONTHLY WATER INVENTORY REPORT FOR OHIO

September 2006

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

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PRECIPITATION during September was above normal throughout most of the state with only a few locations, especially in north-central Ohio, having below normal precipitation. The state average was 4.74 inches, 1.79 inches above normal. For the state as a whole, this month tied as the 12th wettest September during the past 124 years. Regional averages ranged from 8.10 inches, 5.15 inches above normal, for the South Central Region to 3.15 inches, 0.15 inch above normal, for the North Central Region. For the period of record, this was the wettest September for the South Central Region, the 5th wettest for the Central Region, the 8th wettest for the Southeast Region, the 12th wettest for the Southwest Region and the 17th wettest for both the Northeast and Northeast Hills regions. Racine Locks and Dam (Meigs County) reported the greatest amount of September precipitation, 10.69 inches. Grand Rapids (Wood County) reported the least amount, 1.13 inches.

The first 11 days of September were the driest of the month. Scattered showers fell on a few days during this period, but most locations reported less than 0.50 inch of rain; heavier downpours brought around 1 inch to areas in southeastern and northwestern Ohio. Showers and thunderstorms during September 12-13 were heaviest in southern Ohio where amounts of 2-3 inches of rain were common with some areas receiving more than 4 inches. Amounts decreased to the north to around 1 inch. Minor small stream and urban flooding was reported across areas of southern Ohio from the excessive rainfall. After a few dry days, showers returned to the state September 18 with most of the state receiving 0.25-0.50 inch of rain; areas in northeastern Ohio received between 1 and 2 inches from this system. Rain during September 22-23 was greatest in the southern half of the state with amounts of 1-2 inches reported, decreasing to less than 0.25 inch in northeastern Ohio. Rain was widespread during September 27-30. Most of the state reported 0.5-1.0 inch of rain during this period, but heavier downpours produced 1-2 inches across areas of northeastern Ohio.

Precipitation for the 2006 calendar year is above normal statewide. The average for the state as a whole is 33.14 inches, 3.33 inches above normal. Regional averages range from 36.73 inches, 7.45 inches above normal, for the Northeast Region to 29.93 inches, 3.24 inches above normal, for the Northwest Region.

Precipitation for the 2006 water year (October 1, 2005-September 30, 2006) was also above normal statewide. The average for the state as a whole was 41.32 inches, 3.30 inches above normal. Regional averages range from 44.97 inches, 6.46 inches above normal, for the Northeast Region to 37.42 inches, 3.14 inches above normal, for the Northwest Region (see Precipitation table, departure from normal, past 12 months column). This was the 7th wettest water

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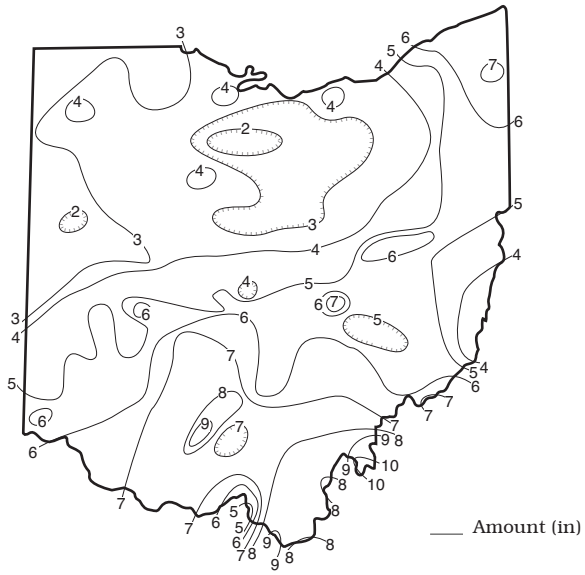
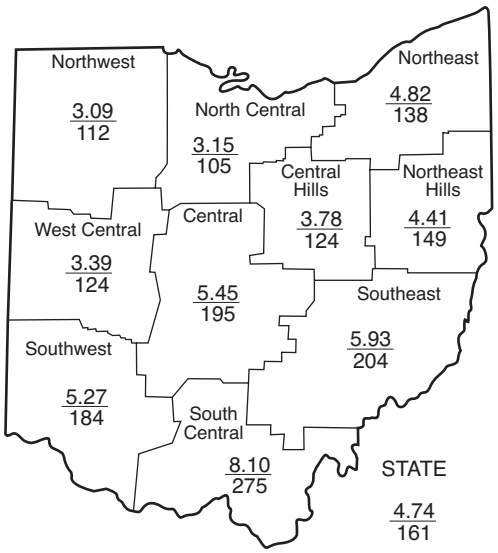
PRECIPITATION

Region	DEPARTURE FROM NORMAL (IN.) Base period 1951-2000					Palmer Drought Severity Index*
	This Month	Past 3 Mos.	Past 6 Mos.	Past 12 Mos.	Past 24 Mos.	
Northwest	+0.33	+2.80	+3.00	+3.14	+4.99	+1.1
North Central	+0.15	+0.82	+4.07	+3.25	+10.54	+0.5
Northeast	+1.33	+5.42	+7.93	+6.46	+12.44	+4.6
West Central	+0.66	+2.75	+4.05	+4.49	+13.87	+2.5
Central	+2.66	+3.33	+3.30	+4.15	+10.43	+1.5
Central Hills	+0.72	+2.38	+3.13	+2.03	+7.70	+0.6
Northeast Hills	+1.45	+2.18	+4.26	+4.12	+8.29	+1.3
Southwest	+2.40	+3.16	+3.67	+2.36	+4.68	+2.0
South Central	+5.15	+4.61	+2.80	+0.84	-0.33	+1.0
Southeast	+3.02	+3.22	+2.40	+2.18	+6.37	+0.9
State	+1.79	+3.07	+3.86	+3.30	+7.90	

*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

PRECIPITATION SEPTEMBER





MEAN STREAM DISCHARGE

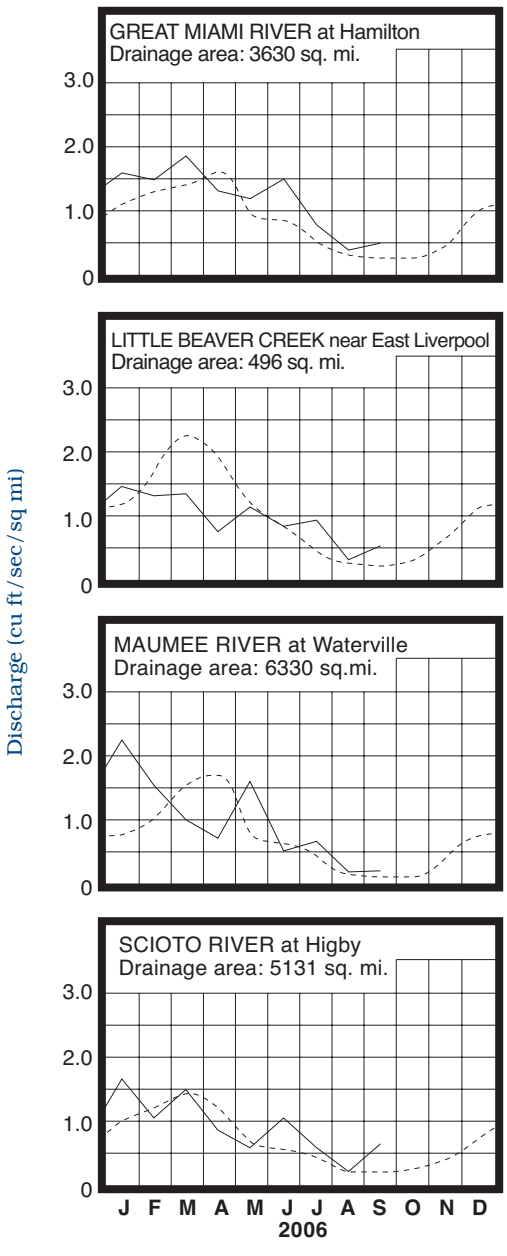
River and Location	Drainage Area (Sq. Mi.)	Mean Discharge (CFS) This Month	% of Normal	% of Normal Past 3 Mos.	% of Normal Past 6 Mos.	% of Normal Past 12 Mos.
Grand River near Painesville	685	1,047	598	528	184	139
Great Miami River at Hamilton	3,630	1,808	186	108	104	112
Huron River at Milan	371	60	131	88	118	113
Killbuck Creek at Killbuck	464	125	112	216	125	103
Little Beaver Creek near East Liverpool	496	263	231	122	81	77
Maumee River at Waterville	6,330	1,259	163	99	87	101
Muskingum River at McConnelsville	7,422	2,817	115	252	142	82
Scioto River near Prospect	567	115	378	134	98	115
Scioto River at Higby	5,131	3,322	249	96	73	83
Stillwater River at Pleasant Hill	503	76	125	59	98	111

STREAMFLOW during September was above normal statewide. Flows were high enough to be considered excessive in many basins, especially across central, northeastern and southwestern Ohio. Streamflow during September was greater than the flows recorded during August across much of the state.

At the beginning of September, streamflow was above normal throughout most of Ohio. Greatest flows for the month occurred on September 1 in basins in northwestern Ohio. Generally, flows declined during the first 11 days of the month and were at their lowest for September on the 11th across much of the state. Flows rose in response to precipitation that occurred during September 12 and 13. Greatest flows for the month were noted across the central third and southwestern Ohio during September 13-15. Flows declined following these peaks, then rose near the end of the month following precipitation that fell during the last week of September. Greatest monthly flows across the eastern third of Ohio occurred near the end of September. At the end of the month streamflow was above normal across most of the state.

Streamflow during the 2006 water year was above normal in most areas of the state, but below normal in eastern and southeastern Ohio (see Mean Stream Discharge table, percent of normal, past 12 month column). Flows during the first 5 months of the water year were above normal throughout most of the state with only some eastern and southeastern Ohio basins being below normal during December and February. During March and April, streamflow was below normal across most of the state. Flows were above normal throughout most of Ohio during the last 5 months of the water year, but were below normal in many eastern and southeastern Ohio basins during May and again in August. Major flooding occurred in areas of northern Ohio during June and July. The Grand River near Painesville during July established new records for mean monthly flow for July, highest daily mean flow and maximum peak flow. President Bush declared nine counties in northern Ohio a federal disaster area due to the flooding that occurred during June and July.

MEAN STREAM DISCHARGE



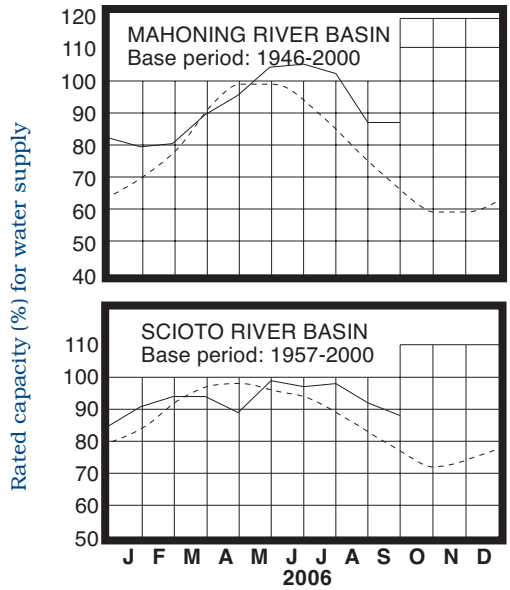
Base period for all streams: 1971-2000

RESERVOIR STORAGE during September increased slightly in the Mahoning River basin and decreased in the Scioto River basin. Storage remained above normal in both basins.

Reservoir storage at the end of September in the Mahoning basin index reservoirs was 87 percent of rated capacity for water supply, compared with the same for last month and 78 percent for September 2005. Month-end storage in the Scioto basin index reservoirs was 88 percent of rated capacity for water supply, compared with 92 percent for last month and 82 percent for September 2005.

Surface water supplies were adequate during the 2006 water year. Storage in both the Mahoning and Scioto river basins was above normal throughout most of the year, falling to below normal during only April and May. Surface water supplies are in good shape as the 2007 water year begins.

RESERVOIR STORAGE FOR WATER SUPPLY



Normal – – – – Current ———

GROUND WATER levels during September declined seasonally across most of the state. Net declines during September were less than usually observed in most aquifers.

The 2006 water year was generally favorable for ground water supplies. Ground water storage at the beginning of the water year was below normal in unconsolidated aquifers across the state and some consolidated aquifers in southern Ohio. Although cumulative precipitation during the first 7 months of the water year was below normal throughout much of the state, the 2006 recharge season was adequate statewide and ground water supplies were in good condition as the summer high-use period approached. Precipitation during the late spring and summer months was abundant in many areas of the state. The ample rainfall reduced demand and ground water supplies remained adequate throughout the summer period. By the end of the water year, ground water supplies remained in good condition throughout the state. The above normal precipitation during the water year had a positive impact on ground water supplies as reflected by current levels being higher than they were a year ago in most aquifers. However, the 2006 water year ended as it began with ground water storage at below normal levels in unconsolidated aquifers across the state and some consolidate aquifers in southern Ohio. The outlook does appear to be favorable for the upcoming recharge period. Above normal rainfall during September was a benefit to ground water supplies and soil moisture statewide. The Ohio Agricultural Statistics Service reports that soil moisture near the end of September was short in 3 percent of the state, adequate in 73 percent of the state and surplus in 24 percent of the state.

GROUND-WATER LEVELS

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

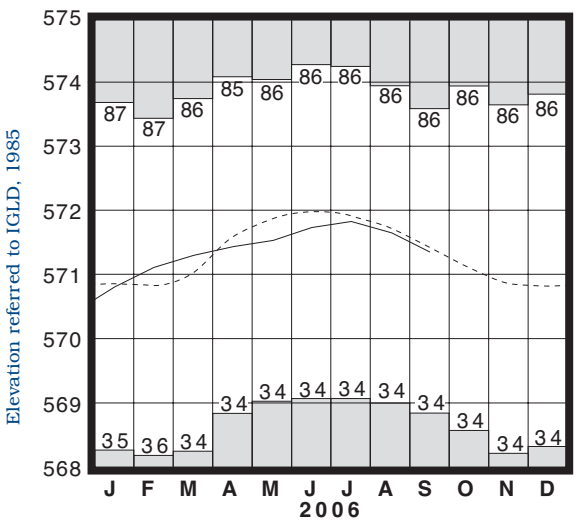
Index Well	Location	Aquifer	Mean This Month	Departure From Normal	Change in feet from:	
					Last Month	Year Ago
F-1	W. Rushville, Fairfield Co.	Sandstone	14.23	+2.73	-0.36	+2.51
Fa-1	Jasper Mill, Fayette Co.	Limestone	9.08	-0.31	-0.01	+1.84
Fr-10	Columbus, Franklin Co.	Gravel	45.42	-1.13	-0.31	-0.64
H-1	Harrison, Hamilton Co.	Gravel	23.72	-0.22	-0.13	+0.23
Hn-2a	Dola, Hardin Co.	Dolomite	7.72	+0.68	-0.91	+0.95
Po-1	Windham, Portage Co.	Sandstone	18.94	+1.27	-0.42	+0.13
Tu-1	Strasburg, Tuscarawas Co.	Gravel	14.09	-0.29	-0.74	+0.27

LAKE ERIE level declined during September. The mean level was 571.36 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 0.23 foot higher than the September 2005 level and 2.16 feet above Low Water Datum.

The U.S. Army Corps of Engineers (USACE) reports that precipitation in the Lake Erie basin during September was 4.12 inches, 1.17 inches above normal. For the entire Great Lakes basin, September precipitation averaged 3.66 inches, 0.25 inch above normal. For calendar year 2006 through September, the Lake Erie basin has averaged 30.97 inches, 4.12 inches above normal, while the entire Great Lakes basin has averaged 25.45 inches, 0.95 inch above normal.

Lake Erie level was below normal during the first 4 months of the 2006 water year. Levels rebounded to above normal during February and March and then declined to below normal during the last 6 months of the water year. 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 6 inches below normal for the foreseeable future. Deviations from the anticipated weather patterns could result in the level of Lake Erie ranging from about 4 inches above to as much as 15 inches below the normal seasonal average.

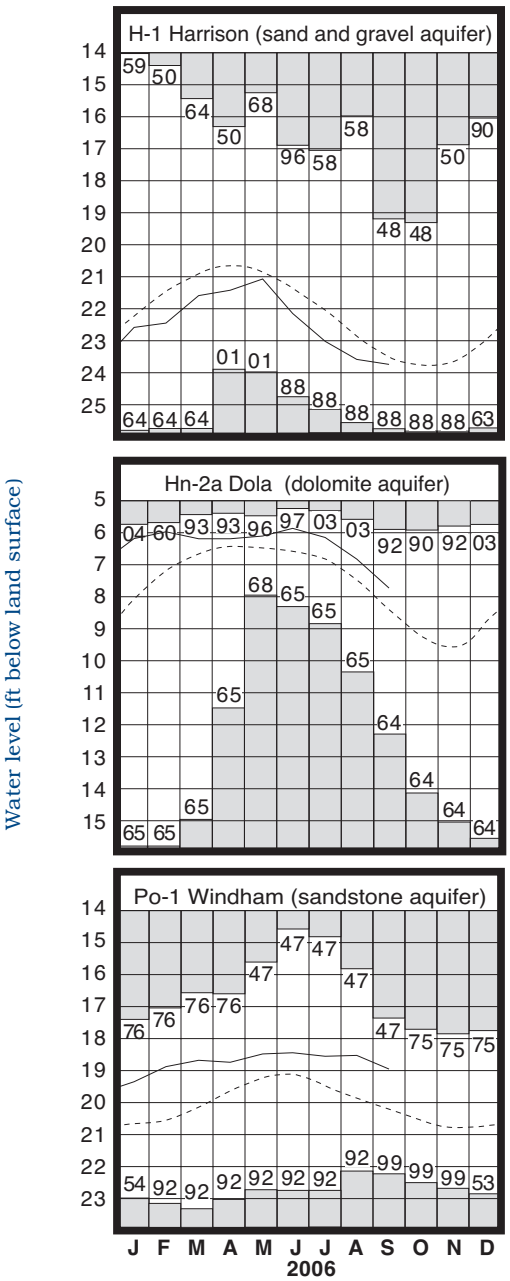
LAKE ERIE LEVELS



Base period: 1918-2000

Record high and low, year of occurrence

GROUND-WATER LEVELS



Base periods: H-1, 1951-2000. Hn-2a, 1955-2000. Po-1, 1947-2000

Record high and low, year of occurrence

Normal – – – – Current ———

(Precipitation continued from front)

year of record for the Northeast Region. For the state, Chardon (Geauga County) reported the greatest amount of precipitation for the 2006 water year, 57.85 inches. LaGrange (Lorain County) reported the least amount, 32.19 inches. An isohyetal map and regional averages with percentages of normal for the 2006 water year precipitation appear below.

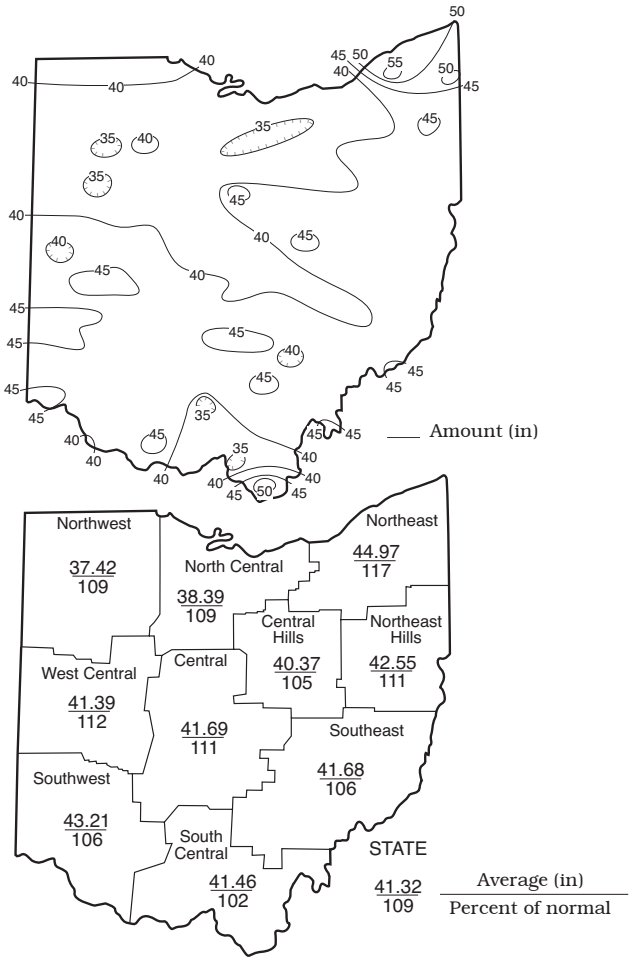
Precipitation during the first 2 months of the 2006 water year was above normal across most of the state, but below normal in south-central Ohio during November. December precipitation was below normal while January precipitation was above normal. February and March precipitation was below normal throughout most of the state, and in the northern half in April. It was the 11th driest February for the South Central Region and the 15th driest for the Southeast Region. The next 2 months were generally above normal in northern Ohio and below normal in southern Ohio. It was the 7th wettest May for the Northwest Region and the 9th wettest June for the North Central Region. Conversely, it was the 14th driest May for the South Central Region. July precipitation was above normal throughout most of the state and was the 10th wettest July during the past 124 years for the state as a whole. August precipitation was below normal across much of Ohio. September precipitation was above normal nearly statewide, helping to ease the drier conditions that had prevailed during much of the water year in the South Central and Southeast regions. Both surface and ground water supplies are in a favorable position as the 2007 water year begins.

SUMMARY

Precipitation during September was above normal across most of the state. Streamflow was above normal statewide and was high enough to be considered excessive in some basins. Reservoir storage increased slightly in the Mahoning River basin and decreased in the Scioto River basin. Reservoir storage remains above normal in both basins. Ground water levels declined seasonally statewide. Lake Erie level declined 0.29 foot and was 0.06 foot below the long-term September average.

Precipitation for the 2006 water year was above normal statewide. Streamflow was above normal across most of the state, but below normal in eastern and southeastern Ohio. Surface water supplies were above normal most of the water year. Ground water supplies were adequate statewide. Lake Erie level was below normal during most of the water year.

PRECIPITATION 2006 WATER YEAR



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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