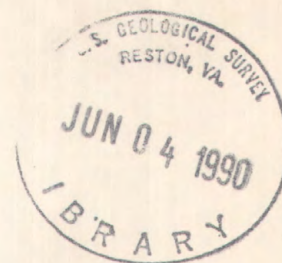
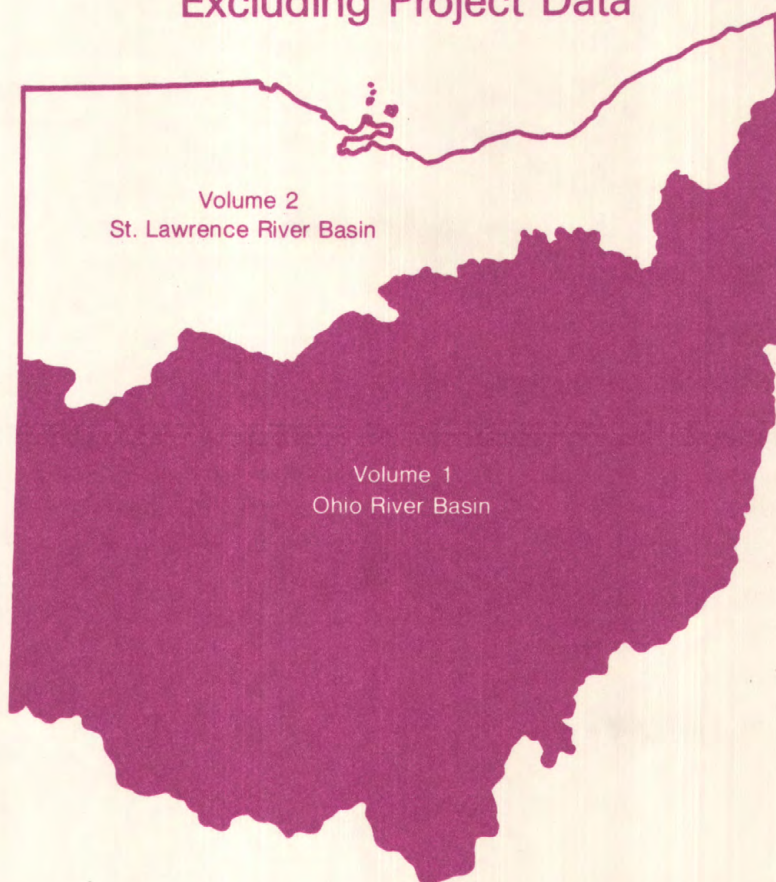


(200)
Ga 3
Ohio
1989, vol. 1



Water Resources Data Ohio Water Year 1989

Volume 1. Ohio River Basin
Excluding Project Data



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT OH-89-1
Prepared in cooperation with the State of Ohio
and with other agencies

CALENDAR FOR WATER YEAR 1989

1988

OCTOBER

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

NOVEMBER

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

DECEMBER

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

1989

JANUARY

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

FEBRUARY

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28				

MARCH

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

APRIL

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

MAY

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

JUNE

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

JULY

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

AUGUST

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

SEPTEMBER

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30



Water Resources Data Ohio Water Year 1989

Volume 1. Ohio River Basin Excluding Project Data

by H.L. Shindel, J.H. Klingler, J.P. Mangus, and L.E. Trimble



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT OH-89-1
Prepared in cooperation with the State of Ohio
and with other agencies

DEPARTMENT OF THE INTERIOR
MANUEL LUJAN, JR., SECRETARY

U.S. GEOLOGICAL SURVEY
Dallas L. Peck, Director

For information on the water program in Ohio write to:

District Chief
Water Resources Division
U.S. Geological Survey
975 West Third Avenue
Columbus, OH 43212-3192

1990

PREFACE

This volume of the annual hydrologic data report of Ohio is one of a series of annual reports that document hydrologic data gathered from the U.S. Geological Survey's surface- and ground-water data-collection networks in each State, Puerto Rico, and the Trust Territories. These records of streamflow, ground-water levels, and quality of water provides the hydrologic information needed by State, local, and Federal agencies, and the private sector for developing and managing our Nation's land and water resources. Hydrologic data for Ohio are contained in two volumes:

- Volume 1. Ohio River Basin
- Volume 2. St. Lawrence River Basin - Statewide Project Data

This report is the culmination of a concerted effort by dedicated personnel of the U.S. Geological Survey who collected, compiled, analyzed, verified, and organized the data, and who typed, edited, and assembled the report. In addition to the authors, who had primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to Geological Survey policy and established guidelines, the following individuals contributed significantly to the collection, processing, and tabulation of the data:

A.E. Arnett	C.A. Hawkins	J.W. Roberts
K.J. Breen	L.M. Hicks	A.C. Sedam
C.J. Childress	A.L. Jones	R.A. Sheets
A.W. Coen III	M.K. Katzenbach	J.M. Sherwood
W.L. Cunningham	G.F. Koltun	D.J. Shifflet
J.T. de Roche	D.F. MacFadden	B.M. Sroka
C.M. Eberle	J.A. McClure	R.V. Swisshelm
R.P. Frehs	D.N. Myers	C.C. Vince
S.R. Frum	V.E. Nichols	S.A. Vivian
S.W. Hatch	C.N. Owens	J.J. Welday

This report was prepared in cooperation with the State of Ohio and with other agencies under the general supervision of S.M. Hindall District Chief, Ohio.

REPORT DOCUMENTATION PAGE	1. REPORT NO. USGS/WRD/HD-90/252	2.	3. Recipient's Accession No.
4. Title and Subtitle WATER RESOURCES DATA--OHIO, 1989 VOLUME 1. OHIO RIVER BASIN			5. Report Date March 1990
7. Author(s) H.L. Shindel, J. H. Klingler, J. P. Mangus, and L. E. Trimble			6.
9. Performing Organization Name and Address U.S. Geological Survey, Water Resources Division 975 W. Third Avenue Columbus, Ohio 43212-3192			8. Performing Organization Rept. No. USGS-WDR-OH-89-1
12. Sponsoring Organization Name and Address U.S. Geological Survey, Water Resources Division 975 W. Third Avenue Columbus, Ohio 43212-3192			10. Project/Task/Work Unit No.
15. Supplementary Notes Prepared in cooperation with the State of Ohio and with other agencies.			11. Contract(C) or Grant(G) No. (C) (G)
16. Abstract (Limit: 200 words) Water-resources data for the 1989 water year for Ohio consist of records of stage, discharge, and water quality of streams; stage and contents of lakes and reservoirs; and water levels and water quality of ground-water wells. This report, in two volumes, contains records for water discharge at 141 gaging stations, stage and contents at 7 lakes and reservoirs; water quality at 36 gaging stations, 28 wells, and 59 partial-record sites; and water levels at 352 observation wells. Also included are data from miscellaneous sites. Additional water data were collected at various sites not involved in the systematic data-collection program and are published as miscellaneous measurements and analyses. These data represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in Ohio.			13. Type of Report & Period Covered Annual--10/01/89 to 09/30/89
14.			
17. Document Analysis a. Descriptors *Ohio, *Hydrologic data, *Surface water, *Ground water, *Water quality, Flow rates, Gaging stations, Lakes, Reservoirs, Chemical analyses, Sediments, Water temperature, Sampling sites, Water levels, Water analyses, Streamflow, Water wells.			
b. Identifiers/Open-Ended Terms			
c. COSATI Field/Group			
18. Availability Statement: No restriction on distribution. This report may be purchased from: National Technical Information Service, Springfield, VA 22161		19. Security Class (This Report) UNCLASSIFIED	21. No. of Pages 326
		20. Security Class (This Page) UNCLASSIFIED	22. Price

CONTENTS

V

	Page
Preface	III
List of gaging stations, in downstream order, for which records are published	VI
List of discontinued stations	VIII
List of ground water stations for which records are published	XII
Introduction	1
Cooperation	1
Summary of hydrologic conditions	3
Precipitation	3
Surface water	3
Streamflow	3
Water quality	3
Ground-water levels	6
Special networks and programs	10
Explanation of the records	10
Station identification numbers	10
Downstream order system	10
Latitude-longitude system	11
Records of stage and water discharge	11
Data collection and computation	11
Data presentation	12
Identifying estimated daily discharge	14
Accuracy of the records	14
Other records available	14
Records of surface-water quality	14
Classification of records	14
Arrangement of records	15
On-site measurements and sample collection	15
Water temperatures	15
Sediment	15
Laboratory measurements	16
Data presentation	16
Remark codes	17
Records of ground-water levels	17
Data collection and computation	17
Data presentation	17
Records of ground-water quality	18
Data collection and computation	18
Data presentation	18
Access to WATSTORE Data	18
Definition of terms	19
Publications on Techniques of Water-Resources Investigations	26
Station records, surface water	33
Station records, ground water	215
Index	310
Factors for converting inch-pound units to International System units (SI) .. Inside back cover	

ILLUSTRATIONS

Figure 1. Map of physiographic divisions and location of hydrologic index stations ..	2
2. Graph showing comparison of 1988 annual mean values of pH, dissolved oxygen, temperature, and specific conductance with the average of annual mean values for 1982-88 for three water-quality-monitor index stations in Ohio	4
3. Map of geographic distribution of principal aquifers in Ohio	7
4. Graph showing sample 1-year and 5-year hydrographs of a well completed in an unconfined unconsolidated aquifer	8
5. Graph showing sample 1-year and 5-year hydrographs of a well completed in a confined carbonate-rock aquifer	9
6. Diagram showing system for numbering wells and miscellaneous sites	11
7. Graphs showing runoff during 1988 water year compared with median runoff for period 1951-80 for four representative gaging stations	28
8. Maps showing location of data-collection stations	29

VI GAGING STATIONS, IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED

(Letter after station name designates type of data: (c) chemical, (d) discharge, (e) contents and (or) elevation, (HBM) hydrologic bench mark, (M) water-quality monitor, (m) micro-biological, (NASQAN) National stream-quality accounting network, (r) radio-chemical, (s) miscellaneous sediment measurements, (S) daily suspended-sediment data, (t) temperature.)

Station number	OHIO RIVER BASIN	Page
	Ohio River:	
	BEAVER RIVER BASIN	
03086500	Mahoning River (head of Beaver River) at Alliance (d).....	33
03090500	Mahoning River below Berlin Dam, near Berlin Center (d).....	34
03091500	Mahoning River at Pricetown (d).....	35
03092000	Kale Creek near Pricetown (d).....	36
03092090	West Branch Mahoning River near Ravenna (d).....	37
03092460	West Branch Mahoning River below M.J. Kirwan Dam, at Wayland (d).....	38
03093000	Eagle Creek at Phalanx Station (d).....	39
03094000	Mahoning River at Leavittsburg (d).....	40
03095500	Mosquito Creek below Mosquito Creek Dam, near Cortland (d).....	41
03097550	Mahoning River at Ohio Edison Power Plant at Niles (d).....	42
03098600	Mahoning River below West Avenue Bridge at Youngstown (d).....	43
03099500	Mahoning River at Lowellville (d).....	44
03099510	Mahoning River at OH-PA State line below Lowellville (cMt).....	45
	Shenango River:	
03102950	Pymatuning Creek at Kinsman (d).....	52
	LITTLE BEAVER CREEK BASIN	
	North Fork Little Beaver Creek:	
03099900	Little Beaver Creek near East Liverpool (d).....	53
	YELLOW CREEK BASIN	
03110000	Yellow Creek near Hammondsville (d).....	54
	SHORT CREEK BASIN	
03111500	Short Creek near Dillonvale (d).....	55
	WHEELING CREEK BASIN	
0311548	Wheeling Creek below Blaine (ds).....	56
	CAPTINA CREEK BASIN	
03114000	Captina Creek at Armstrongs Mills (d).....	60
	MUSKINGUM RIVER BASIN	
	Tuscarawas River (head of Muskingum River):	
03117000	Tuscarawas River at Massillon (d).....	61
03117100	Tuscarawas River at Navarre (Mt).....	62
03117500	Sandy Creek at Waynesburg (d).....	69
03118000	Middle Branch Nimishillen Creek (head of Nimishillen Creek) at Canton (d)...	70
03118500	Nimishillen Creek at North Industry (d).....	71
	Conotton Creek:	
03120500	McGuire Creek below Leesville Dam, near Leesville (d).....	72
03122500	Tuscarawas River below Dover Dam, near Dover (d).....	73
03124000	Sugar Creek below Beach City Dam, near Beach City (d).....	74
03124500	Sugar Creek at Strasburg (d).....	75
	Beaver Dam Creek:	
03126000	Stillwater Creek at Piedmont (d).....	76
03127000	Stillwater Creek at Tippecanoe (d).....	77
03127500	Stillwater Creek at Uhrichsville (d).....	78
	Clear Fork:	
03128500	Little Stillwater Creek below Tappan Dam, at Tappan (d).....	79
03129000	Tuscarawas River at Newcomerstown (d).....	80
03130000	Black Fork (head of Walhonding River) below Charles Mill Dam, near Mifflin (d)...	81
03131500	Black Fork at Loudonville (d).....	82
03133500	Clear Fork below Pleasant Hill Dam, near Perrysville (d).....	83
	Mohican River (continuation of Black Fork):	
03135000	Lake Fork below Mohicanville Dam, near Mohicanville (d).....	84
03136500	Kokosing River at Mount Vernon (d).....	85
03138500	Walhonding River (continuation of Mohican River) below Mohawk Dam, at Nellie (d).....	86
03139000	Killbuck Creek at Killbuck (d).....	87
03140000	Mill Creek near Coshocton (d).....	88
03140500	Muskingum River (continuation of Tuscarawas River) near Coshocton (d).....	89
	Wills Creek:	
03141500	Seneca Fork below Senecaville Dam, near Senecaville (d).....	90
903142000	Wills Creek at Cambridge (d).....	91
03142290	Salt Fork Lake near Cambridge (e).....	92
03143500	Wills Creek below Wills Creek Dam, at Wills Creek (d).....	93
03144000	Wakatomika Creek near Frazesburg (d).....	94
	Licking River	
03145000	South Fork Licking River (head of Licking River) near Hebron (d).....	95
03146500	Licking River near Newark (d).....	96
03147500	Licking River below Dillon Dam, near Dillon Falls (d).....	97
03150000	Muskingum River at McConnelsville (dcms)... (NASQAN)	98
	HOCKING RIVER BASIN	
03157000	Clear Creek near Rockbridge (d).....	105
03157500	Hocking River at Enterprise (d).....	106
03159510	Hocking River below Athens (dcs) ... (NASQAN)	107
	SHADE RIVER BASIN	
03159540	Shade River near Chester (d)	110
	LEADING CREEK BASIN	
03160007	Leading Creek below Carpenter	111
	RACCOON CREEK BASIN	
03201929	Zinns Run near Radcliff	112
03201947	Strongs Run near Ewington	113

GAGING STATIONS, IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED.--Continued VII

Station number	OHIO RIVER BASIN--Continued	Page
SCIOTO RIVER BASIN		
03219500	Scioto River near Prospect (d).....	114
03219590	Bokes Creek near Warrensburg (d).....	115
03220000	Mill Creek near Bellpoint (d).....	116
03221000	Scioto River below O'Shaughnessy Dam near Dublin (d).....	117
03223000	Olentangy River at Claridon (d).....	118
03225500	Olentangy River near Delaware (d).....	119
03227200	Scioto River at Broad Street, Columbus (d)	120
03227500	Scioto River at Columbus (d).....	121
03228300	Bog Walnut Creek at Sunbury (d).....	122
03228500	Big Walnut Creek at Central College (d).....	123
03228800	Alum Creek at Africa (d).....	124
03229000	Alum Creek at Columbus (d).....	125
03229500	Big Walnut Creek at Rees (d).....	126
03230500	Big Darby Creek at Darbyville (d).....	127
03230900	Deer Creek near Pancoastburg (d).....	128
03231000	Deer Creek at Williamsport (d).....	129
03231500	Scioto River at Chillicothe (dM).....	130
03232470	Paint Creek below Paint Creek Dam, near Bainbridge (d).....	138
03232500	Rocky Fork near Barrets Mills (d).....	139
03234000	Paint Creek near Bourneville (d).....	140
03234300	Paint Creek at Chillicothe (dM).....	141
03234500	Scioto River at Higby (dcmMts) ... (NASQAN)	149
	Reservoirs in Scioto River basin (e).....	158
UPPER TWIN CREEK BASIN		
03237280	Upper Twin Creek at McGaw (dcmMsr) ... (HBM)	159
OHIO BRUSH CREEK BASIN		
03237500	Ohio Brush Creek near West Union (d).....	168
WHITEOAK CREEK BASIN		
03238500	Whiteoak Creek near Georgetown (d).....	169
LITTLE MIAMI RIVER BASIN		
03240000	Little Miami River near Oldtown (d).....	170
03241500	Massies Creek at Wilberforce (d).....	171
03245500	Little Miami River at Milford (dcmTS) ... (NASQAN)	172
03247050	East Fork Little Miami River near Batavia (d).....	179
03247500	East Fork Little Miami River at Perintown (d).....	180
MILL CREEK BASIN		
03255500	Mill Creek at Reading (d).....	181
03259000	Mill Creek at Carthage (d).....	182
GREAT MIAMI RIVER BASIN		
	Great Miami River:	
03260325	North Fork Great Miami Rivers near Indian Lake (d).....	183
03260450	South Fork Great Miami River near Huntsville (d).....	184
03260502	Great Miami River below Indian Lake in Russels Point (d).....	185
03260700	Bokengehalas Creek near DeGraff (d).....	186
03261500	Great Miami River at Sidney (d).....	187
03261950	Loramie Creek near Newport (d).....	188
03262000	Loramie Creek at Lockington (d).....	189
03262700	Great Miami River at Troy (d).....	190
03263000	Great Miami River at Taylorsville (d).....	191
	Stillwater River:	
03264000	Greenville Creek near Bradford (d).....	192
03265000	Stillwater River at Pleasant Hill (d).....	193
03266000	Stillwater River at Englewood (d).....	194
03267000	Mad River near Urbana (d).....	195
03267900	Mad River (at St. Paris Pike) at Eagle City (d).....	196
03269500	Mad River near Springfield (d).....	197
03270000	Mad River near Dayton (d).....	198
03270500	Great Miami River at Dayton (d).....	199
03271000	Wolf Creek at Dayton (d).....	200
03271500	Great Miami River at Miamisburg (d).....	201
03271510	Great Miami River near Linden Avenue at Miamisburg (M)	202
03271800	Twin Creek near Ingomar (d).....	209
03272000	Twin Creek near Germantown (d).....	210
	Fourmile Creek:	
03272700	Sevenmile Creek at Camden (d).....	211
03274000	Great Miami River at Hamilton (d).....	212
03274600	Great Miami River at New Baltimore (cmTS) ... (NASQAN)	213

DISCONTINUED STATIONS

The following continuous-record streamflow, water quality, or stage stations in Ohio have been discontinued. Daily streamflow, water quality, and stage records were collected and published for the period of record shown for each station. Abbreviations used for characteristics measured are as follows: COND, specific conductance; DIS, discharge; DO, dissolved oxygen; G HT, gage height; PH, pH; and TEMP, temperature. Short term project stations of one or two years not included.

Station number	Station name	Characteristic measured	Period of record
03087000	BEECH CREEK NR BOLTON	TEMP	1943-51
03088000	DEER CREEK AT LIMAVILLE	DIS	1941-51
03088500	MAHONING RIVER NR DEERFIELD	DIS	1923-31
03089000	WILLOW CREEK NR DEERFIELD	DIS	1941-43
03089500	MILL CREEK NR BERLIN CENTER	DIS	1941-71
03092500	W B MAHONING R NR NEWTON FALLS	DIS	1926-81
03093500	DUCK CREEK AT LEAVITTSBURG	DIS	1941-48
03093800	MAHONING R AB DUCK C AT LEAVITTSBURG	TEMP	1968-51
		COND	1968-82
		DO	1968-82
		PH	1968-82
03094500	MAHONING RIVER AT WARREN	TEMP	1946-48
		DIS	1924-35
03096000	MOSQUITO CREEK AT NILES	DIS	1929-51
03096500	MEANDER CREEK AT OHLESTOWN	DIS	1926-29
03097500	MEANDER CREEK AT MINERAL RIDGE	DIS	1929 51
03098000	MAHONING RIVER AT YOUNGSTOWN	TEMP	1952-53
		DIS	1921-82
03098500	MILL CREEK AT YOUNGSTOWN	DIS	1943-71
03099500	MAHONING RIVER AT LOWELLVILLE	TEMP	1953-61
		COND	1963-67
		DO	1963-66
		PH	1963-67
03109000	LISBON CREEK AT LISBON	DIS	1946-62
03109326	STATELINE CREEK NR NEGLEY	DIS	1977-78
		TEMP	1977-78
		COND	1977-78
		DO	1977-78
		PH	1977-78
03109600	OHIO RIVER AT EAST LIVERPOOL	TEMP	1963-64
03110500	YELLOW CREEK AT HAMMONDSVILLE	DIS	1915-35
03110700	OHIO RIVER AT STRATTON	TEMP	1961-70
		COND	1964-70
03110983	CONSOL RUN NR BLOOMINGDALE	DIS	1978-81
		SED	1979-81
03115400	LITTLE MUSKINGUM R AT BLOOMFIELD	DIS	1958-81
03115500	LITTLE MUSKINGUM R AT FAY	DIS	1915-35
03116000	TUSCARAWAS RIVER AT CLINTON	DIS	1926-78
03116200	CHIPPEWA CREEK AT EASTON	DIS	1960-81
03116500	TUSCARAWAS R AT CRYSTAL SPRINGS	DIS	1921-29
03117100	TUSCARAWAS R AT NAVARRE	TEMP	1968-84
		COND	1968-84
		DO	1968-84
		PH	1968-84
03119000	SANDY CREEK AT SANDYVILLE	DIS	1923-47
03121500	INDIAN F BL ATWOOD DAM NR NEW CUMBERLAND	DIS	1960-75
03123000	SUGAR C AB BEACH CITY DAM AT BEACH CITY	DIS	1945-75
03125000	HOME C NR NEW PHILADELPHIA	DIS	1936-79
03127970	CLEAR FORK TRIB NR HANOVER	DIS	1978-81
03130500	TOUBY RUN AT MANSFIELD	DIS	1946-78
03131000	ROCKY FORK NR MANSFIELD	DIS	1925-32
03132000	CLEAR FORK AT BUTLER	DIS	1945-75
03132500	CLEAR FORK AT NEWVILLE	DIS	1934-39
03134000	JEROME FORK AT JEROMEVILLE	DIS	1925-49
03135500	LAKE FORK NR LOUDONVILLE	DIS	1931-39
03136000	MOHICAN RIVER AT GREER	DIS	1921-82
03136400	N B KOKOSING R NR FREDERICKTOWN	DIS	1973-78
03137000	KOKOSING RIVER AT MILLWOOD	DIS	1921-35
03139500	KILLBUCK CREEK AT LAYLAND	DIS	1923-30
03142295	SALT FORK BL SALT F DAM NR CAMBRIDGE	DIS	1970-81
03142500	WILLS CREEK AT BIRDS RUN	DIS	1928-39
03144400	SAND FORK NR WAKATOMIKA	DIS	1978-82
		SED	1978-81
03144450	OPOSSUM RUN TR NR WAKATOMIKA	DIS	1978-82
03144500	MUSKINGUM RIVER AT DRESDEN	DIS	1921-84
03145500	RACCOON C AT GRANVILLE	DIS	1939-48
03146000	NORTH FORK LICKING R AT UTICA	TEMP	1970-73
		DIS	1939-48
			1969-82
03147000	LICKING R AT TOBOSO	DIS	1902
			1904-06
			1921-61

DISCONTINUED STATIONS--Continued

IX

Station number	Station name	Characteristic measured	Period of record
03148000	MUSKINGUM R AT ZANESVILLE	DIS	1939-55
03149200	MUSKINGUM R AT PHILO	TEMP	1965-74
		COND	1965-74
		DO	1965-74
		PH	1965-74
03149500	SALT C NR CHANDLERSVILLE	DIS	1935-47
03150250	MEIGS CREEK NR BEVERLY	DIS	1972-75
03150300	MUSKINGUM R NR BEVERLY	TEMP	1963-70
		COND	1964-70
03155900	N B HUNTERS RUN NR HOOKER	SED	1956-62
03156000	HUNTERS RN AT LANCASTER	DIS	1956-80
03156400	HOCKING RN AT LANCASTER	DIS	1956-74
03156500	HOCKING RN NR LANCASTER	DIS	1923-32
03158000	CLEAR FORK NR LOGAN	DIS	1942-47
03159500	HOCKING RIVER AT ATHENS	DIS	1915-76
		TEMP	1954-65
		G HT	1976-77
		COND	1964-65
		SED	1956-65
03159540	SHADE R NR CHESTER	DIS	1965-84
03201600	SANDY R AB BIG FOUR HOLLOW C NR LAKE HOPE	TEMP	1971-78
		COND	1971-78
		PH	1971-78
		DIS	1970-81
03201630	E F BIG FOUR HOLLOW C NR LAKE HOPE	DIS	1978-79
03201660	BIG FOUR HOLLOW C BL E F NR LAKE HOPE	DIS	1978-81
03201700	BIG FOUR HOLLOW C NR LAKE HOPE	TEMP	1971-83
		COND	1971-83
		PH	1971-83
		DIS	1970-83
		SED	1978-83
03201720	HULL HOLLOW C NR LAKE HOPE	DIS	1978-81
03201800	SANDY RUN NR LAKE HOPE	DIS	1957-78
		TEMP	1970-78
		COND	1970-78
		DO	1970-78
03202000	RACCOON CREEK AT ADAMSVILLE	DIS	1915-35
			1938-85
		TEMP	1967-84
		COND	1967-84
		DO	1967-84
		PH	1967-84
		SED	1969-74
			1985
		PH	1970-78
03205500	SYMMES C AT GETAWAY	DIS	1938-47
03217500	SCIOTO R AT LARUE	DIS	1926-35
			1938-51
03218000	L SCIOTO R AB MARION	DIS	1938-71
03218500	L SCIOTO R AT STP NR MARION	DIS	1926-35
			1938-39
03219000	L SCIOTO R NR MARION	DIS	1923-25
			1939
03219600	EAGON R NR WARRENSBURG	DIS	1949-62
03222500	OLENTANGY R NR NEW WINCHESTER	DIS	1946-49
03223500	WHETSTONE C NR SHAWTOWN	DIS	1946-55
03224000	SHAW C AT SHAWTOWN	DIS	1946-55
03224500	WHETSTONE C NR ASHLEY	DIS	1954-74
		COND	1964-68
03226000	OLENTANGY R AT DELAWARE	DIS	1921-23
03226500	OLENTANGY R AT STRATFORD	DIS	1934-35
			1938-58
03226800	OLENTANGY R NR WORTHINGTON	DIS	1955-84
		TEMP	1955-68
		SED	1978-81
03226865	RUSH RUN AT WORTHINGTON	DIS	1978-81
		SED	1978-81
03226870	LINWORTH RD C AT COLUMBUS	DIS	1978-81
		SED	1978-81
03226872	UNNAMED TR TO OLENTANGY R AT 315 EXPWY	DIS	1979-81
03226875	BETHEL ROAD C AT COLUMBUS	DIS	1978-81
		SED	1978-81
03226885	OLENTANGY R AT HENDERSON RD AT COL	DIS	1978-81
		SED	1978-81
03228000	SCIOTO BIG RUN AT BRIGGSDALE	DIS	1946-58
03228750	ALUM CR AT KILBOURNE	DIS	1973-82
03228805	ALUM CR AT AFRICA	TEMP	1965-70
		COND	1965-70

DISCONTINUED STATIONS--Continued

Station number	Station name	Characteristic measured	Period of record
03229600	SCIOTO RIVER BL SHADEVILLE	TEMP	1965-80
		COND	1965-80
		DO	1965-80
		PH	1971-80
03230000	SCIOTO RIVER NR CIRCLEVILLE	DIS	1939-56
03230700	SCIOTO RIVER AT CIRCLEVILLE	DIS	1973-79
03230800	DEER C AT MT STERLING	DIS	1966-81
03232000	PAINT C NR GREENFIELD	DIS	1926-35
			1939-56
			1966-81
		TEMP	1974-78
03232300	RATTLESNAKE C AT CENTERFIELD	DIS	1971-81
		TEMP	1974-78
03235000	SALT C AT TARLTON	DIS	1946-61
03235500	TAR HOLLOW C AT TAR HOLLOW STATE PARK	DIS	1946-78
03235995	SALT C NR LONDONDERRY	TEMP	1973-74
03236000	SALT C NR LONDONDERRY	DIS	1938-50
03236500	L SALT C NR JACKSON	DIS	1925-32
03237100	SCIOTO RIVER AT LUCASVILLE	TEMP	1956-74
		COND	1965-74
03239000	L MIAMI R NR SELMA	DIS	1952-58
		TEMP	1952-58
		SED	1952-58
03239500	N F L MIAMI R NR PITCHIN	DIS	1952-58
		TEMP	1952-58
		SED	1952-58
03240500	N F MASSIE C AT CEDARVILLE	DIS	1954-68
		TEMP	1954-68
		SED	1954-68
03241000	S F MASSIE C NR CEDARVILLE	DIS	1954-68
		TEMP	1954-68
		SED	1954-58
03242000	L MIAMI R AT SPRING VALLEY	DIS	1925-35
			1939-51
			1968-79
03242050	L MIAMI R NR SPRING VALLEY	DIS	1968-83
		TEMP	1968-80
		COND	1968-80
		DO	1968-80
		PH	1968-80
03242150	CAESAR C NR XENIA	DIS	1900
			1968-83
03242200	ANDERSON F NR NEW BURLINGTON	DIS	1968-83
03242300	CAESAR C AT HARVEYSBURG	DIS	1960-75
		TEMP	1970-75
		COND	1970-75
03242350	CAESAR C NR WELLMAN	DIS	1965-74
03242500	L MIAMI R NR FORT ANCIENT	DIS	1939-51
03243000	TODD FORK NR WILMINGTON	DIS	1923
			1942-44
03243500	COWAN C NR WILMINGTON	DIS	1942-50
03244000	TODD FORK NR ROACHESTER	DIS	1952-74
		TEMP	1952-58
		SED	1952-58
03245300	L MIAMI R AT MIAMIVILLE	TEMP	1970-75
		COND	1970-75
		DO	1970-75
		PH	1970-75
03245500	L MIAMI R AT MILFORD	TEMP	1975-84
		COND	1975-84
		DO	1975-84
		PH	1975-84
		SED	1978-84
03246000	E F L MIAMI R NR DODSONVILLE	DIS	1947-48
03246200	E F L MIAMI R NR MARATHON	DIS	1968-83
03246400	E F L MIAMI R NR WILLIAMSBURG	TEMP	1970-75
		COND	1970-75
03246500	E F L MIAMI R AT WILLIAMSBURG	DIS	1949-53
			1960-74
03247000	E F L MIAMI R NR BANTAM	DIS	1948-53
03247400	SHAYLER RUN NR PERINTOWN	DIS	1968-73
03248000	L MIAMI R AT PLAINVILLE	DIS	1965-71
03256000	W F MILL C AT MT HEALTHY	DIS	1949-53
03257000	W F MILL C NR GREENHILLS	DIS	1945-53
03257500	W F MILL C AT WOODLAWN	DIS	1952-83
03258000	W F MILL C AT LOCKLAND	DIS	1938-57
03260800	STONY C NR DEGRAFF	DIS	1957-75
03261000	G MIAMI R AT QUINCY	DIS	1946-49
03262500	G MIAMI R AT PIQUA	DIS	1914-17

DISCONTINUED STATIONS--Continued

XI

Station number	Station name	Characteristic measured	Period of record
03262745	G MIAMI R AT TIPP CITY	TEMP	1978-80
		COND	1978-80
		DO	1978-80
		PH	1978-80
03263500	GREENVILLE C NR GREENVILLE	DIS	1929-31
03264500	STILLWATER R AT COVINGTON	DIS	1930-35
03267500	MAD R AT TREMONT CITY	DIS	1931-33
			1965-74
03267600	CHAPMAN C AT TREMONT CITY	DIS	1967-69
03267700	MOORE RUN NR EAGLE CITY	DIS	1965-72
03267800	MAD RIVER AT EAGLE CITY	DIS	1965-71
		TEMP	1965-69
		SED	1965-69
03267950	BUCK C NR NEW MOOREFIELD	DIS	1967-76
		TEMP	1971
		COND	1971
03267960	E F BUCK C NR NEW MOOREFIELD	DIS	1967-76
03268000	BUCK C AT NEW MOOREFIELD	DIS	1942-58
		TEMP	1970-75
		COND	1970-76
03268500	BEAVER C NR SPRINGFIELD	DIS	1942-58
			1972-76
03269000	BUCK C AT SPRINGFIELD	DIS	1914-21
			1924-49
			1973-74
03270800	WOLF C AT TROTWOOD	DIS	1962-84
03271075	G MIAMI R NR STEWART ST AT DAYTON	TEMP	1978-80
		COND	1978-80
		DO	1978-80
		PH	1978-80
03271600	G MIAMI R NR MIAMISBURG	TEMP	1964-78
		COND	1964-78
		DO	1964-78
		PH	1964-78
03272410	G MIAMI R AT ROCKDALE	TEMP	1978-80
		COND	1978-80
		DO	1978-80
		PH	1978-80
03272800	SEVENMILE C AT COLLINSVILLE	DIS	1960-62
03273000	SEVENMILE C AT SEVENMILE	DIS	1914-20
03273500	FOURMILE C NR HAMILTON	DIS	1937-60
03274500	G MIAMI R AT VENICE	DIS	1915-27
			1932-33
03274600	G MIAMI R AT NEW BALTIMORE	TEMP	1966
			1968-82
		COND	1966
			1969-82
		DO	1968-82
		PH	1975-82
03276600	G MIAMI R AT ELIZABETHTOWN	TEMP	1956-74
		COND	1964-74

GROUND-WATER STATIONS FOR WHICH RECORDS ARE PUBLISHED

(Letter after station location designates type of data: (c) chemical, (l) water level.)

Well number	Local number	Location	Page
ASHLAND COUNTY			
405303082170700	AS-2	Ashland (l)	215
405425082173000	AS-3	Jerome Fork (l)	216
ATHENS COUNTY			
392004082071600	AT-2A	Athens (l)	217
392009082072200	AT-5	Athens (l)	218
AUGLAIZE COUNTY			
403233083574500	AU-3	Southwest of New Hampshire (l)	219
BELMONT COUNTY			
400118081082200	B-3	Mount Olivett (l)	220
BUTLER COUNTY			
391805084261800	BU-9	Northwest of Sharonville (l)	221
393202084241500	BU-15	Middletown (l)	221
391904084371800	BU-12	East of Ross (l)	222
392017084345200	BU-7	Fairfield (l)	223
392021084340300	BU-56	Fairfield (l)	224
392048084311400	BU-8	East of Hamilton (l)	225
392445084333000	BU-36	Hamilton (c)	226
392515084322000	BU-5	North of Hamilton (l)	227
392939084231700	BU-3	Middletown (l)	228
393103084240900	BU-2	Middletown (l)	229
CARROLL COUNTY			
403709081052800	C-1	North of Carrollton (l)	230
CHAMPAIGN COUNTY			
400638083453900	CH-3	Urbana (l)	231
CLARK COUNTY			
395639084012200	CL-9	New Carlisle (l)	232
395840083495200	CL-7	Northwest of Springfield (l)	233
COSHOCTON COUNTY			
401256081525100	CS-3	North of Conesville (l)	234
401735081523800	CS-2	Coshocton (l)	235
DARKE COUNTY			
400514084345700	D-2	East of Greenville (l)	236
DELAWARE COUNTY			
402126083040400	DL-3	Delaware (l)	237
FAIRFIELD COUNTY			
393450082403600	F-7	Southeast of Amanda (l)	238
394257082362900	F-6	Lancaster (l)	239
394544082271000	F-1	West Rushville (l)	240
395053082361900	F-5	Baltimore (l)	241
FAYETTE COUNTY			
393153083322000	FA-1	West of Washington Court House (l)	242
FRANKLIN COUNTY			
394956083002700	FR-18	South of Shadeville (l)	243
395118082573300	FR-3	Southwest of Rees (l)	244
395157083003500	FR-109	Columbus (l)	245
400101083021800	FR-10	Columbus (l)	246

Well number	Local number	Location	Page
GALLIA COUNTY			
383638082103300	G-2	East of Crown City (1)	247
GREENE COUNTY			
394330083531400	GR-11	Near Wilberforce (1)	248
394411083561300	GR-1	North of Xenia (1)	249
394425083551100	GR-10	North of Xenia (1)	250
HAMILTON COUNTY			
391039084291500	H-11	Cincinnati (1)	251
391101084172100	H-3	Southeast of Miami (1)	252
391201084281600	H-10	Cincinnati (1)	253
391214084470100	H-1	Southeast of Harrison (1)	254
391324084272500	H-9	Cincinnati (1)	255
391341084275300	H-8	Wyoming (1)	256
391442084262900	H-7	Evendale (1)	257
391608084254400	H-6	Glendale (1)	258
391733084392400	H-2	South of Ross (1)	259
391748084393800	H-19	Southwest of Venice (c)	260
391817084393300	H-4	Southwest of Ross (1)	261
HARDIN COUNTY			
404218083503700	HN-1	Alger (1)	262
HOCKING COUNTY			
393200082235300	HK-1	Logan (1)	263
KNOX COUNTY			
402344082300700	K-1	Mt. Vernon (1)	264
MADISON COUNTY			
395301083272200	M-2	London (1)	265
395352083292100	M-5	Northwest of London (1)	266
395357083304400	M-4	Northwest of London (1)	267
395740083255700	M-3	North of London (1)	268
MAHONING COUNTY			
410042080453800	MA-1	Canfield (1)	269
MARION COUNTY			
403413083170500	MN-4	Southeast of New Bloomington (1)	270
403443083230400	MN-1	LaRue (1)	271
403601083110400	MN-2	West of Marion (1)	272
MEDINA COUNTY			
410120081431800	MD-3	Wadsworth (1)	273
MERCER COUNTY			
402833084375200	MR-2	Coldwater (1)	274
MIAMI COUNTY			
395848084085500	MI-3	Northeast of Tipp City (1)	275
400308084112900	MI-44	Troy (c)	276
MONTGOMERY COUNTY			
393757084173600	MT-928	Miamisburg (c)	277
394012084151700	MT-55	West Carrollton (1)	278
394025084162800	MT-49	West Carrollton (1)	279
394425084113200	MT-3	Dayton (1)	280
394533084113800	MT-6	Dayton (1)	281
MUSKINGUM COUNTY			
395804081593200	MU-1A	Zanesville (1)	282

Well number	Local number	Location	Page
PICKAWAY COUNTY			
393327082571600	PK-7	South of Circleville (1)	283
393402082572500	PK-4	South of Circleville (1)	284
393638082572300	PK-6	Northwest of Circleville (1)	285
393438083072200	PK-8	Williamsport (1)	286
394742083094800	PK-9	Near Orient (1)	287
PIKE COUNTY			
390359083015100	PI-2	West of Piketon (1)	288
PORTAGE COUNTY			
411401081025000	PO-1	Windham (1)	289
PREBLE COUNTY			
394438084335900	PR-2	East of Eaton (1)	290
RICHLAND COUNTY			
404625082305100	R-4	Mansfield (1)	291
ROSS COUNTY			
391341083172200	RO-7	West of Bainbridge (1)	292
391913082580500	RO-8	Chillicothe (1)	293
SHELBY COUNTY			
401712084103500	SH-4	Sidney (1)	294
STARK COUNTY			
404939081203800	ST-5A	Canton (1)	295
405211081253500	ST-27	North Canton (1)	296
TRUMBULL COUNTY			
411604080505600	T-3	Near Warren (1)	297
TUSCARAWAS COUNTY			
403207081293800	TU-3	Dover (1)	298
403557081313600	TU-4	Strasburg (1)	299
403653081321800	TU-1	North of Strasburg (1)	300
403823081324200	TU-5	Near Strasburg (1)	301
UNION COUNTY			
401826083255200	U-4	Southeast of Raymond (1)	302
VINTON COUNTY			
391452082282900	V-1	McArthur (1)	303
WARREN COUNTY			
392712084191700	W-5	East of Monroe (1)	304
WASHINGTON COUNTY			
392553081281600	WA-2	Marietta (1)	305
WAYNE COUNTY			
404655081553200	WN-3	Near Wooster (1)	306
404802081583100	WN-2A	Near Wooster (1)	307
405745081510200	WN-7	Near Sterling (1)	308
405805081462300	WN-6	Rittman (1)	309

VOLUME 2: ST. LAWRENCE RIVER BASIN
STATEWIDE PROJECT DATA

INTRODUCTION

The Water Resources Division of the U.S. Geological Survey, in cooperation with State agencies, obtains a large amount of data pertaining to the water resources in Ohio each water year. These data, accumulated during many years, constitute a valuable data base for developing an improved understanding of the water resources of the State. To make these data readily available to the interested parties outside the Geological Survey, the data are published annually in this report series entitled "Water Resources Data--Ohio."

This report (in two volumes) includes records on both surface and ground water in the State. Specifically, it contains: (1) Discharge records for 141 streamflow-gaging stations, 55 miscellaneous sites; (2) stage and content records for 7 streams, lakes, and reservoirs; (3) water-quality data for 36 streamflow-gaging stations, 28 wells, and 59 partial-record sites; and (4) water levels for 352 observation wells. Locations of lake- and streamflow-gaging stations, water-quality stations, and observation wells for which data are presented in this volume are shown in figure 8.

This series of annual reports for Ohio began with the 1961 water year with a report that contained only data relating to the quantities of surface water. For the 1964 water year, a similar report was introduced that contained only data relating to water quality. Beginning with the 1975 water year, the report was changed to present, in two to three volumes, data on quantities of surface water, quality of surface and ground water, and ground-water levels.

Prior to introduction of this series and for several years concurrent with it, water-resources data for Ohio were published in a series of U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage and on lake or reservoir contents and stage, through September 1960, were published annually under the title "Surface-Water Supply of the United States, Parts 3 and 4." For the 1961 through 1970 water years, the data were published in two 5-year reports. Data on the chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title "Quality of Surface Waters of the United States," and ground-water levels for the 1935 through 1974 water years were published under the title "Ground-Water Levels in the United States." The above-mentioned Water-Supply Papers may be consulted in the libraries of the principal cities of the United States, and may be purchased from the Books and Open-File Reports Section, U.S. Geological Survey, Box 24525, Federal Center, Denver, CO 80225.

Publications similar to this report are published annually by the Geological Survey for all States. These official Survey reports have an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report OH-89-2." For archiving and general distribution, the reports for 1971-74 water years are also identified as water-data reports. These water-data reports can be purchased in paper copy or in microfiche from the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

Additional information for ordering specific reports, including current prices, may be obtained by writing the District Chief at the address given on the back of title page or by telephoning (614) 469-5553.

COOPERATION

The U.S. Geological Survey and agencies of the State of Ohio have had cooperative agreements for the collection of water-resource records since 1898. Organizations that assist in collecting data in this report are: Ohio Department of Natural Resources, J. J. Sommer, Director; Ohio Environmental Protection Agency, R. L. Shank, Director; Ohio Department of Transportation, B. B. Hurst, Director; Miami Conservancy District, J. L. Rozelle, General Manager and Chief Engineer; City of Columbus Department of Public Service, J. R. Doult, Administrator; City of Canton Water Department, J. D. Williams, Superintendent; Ross County, J. L. Kennard, Commissioner; Seneca County Soil and Water District, N. Daniel, Board Chairman; University of Toledo, R. Gallagher, City of Fremont, W. Curtis, City Engineer; Lucas County, E. J. Ciecka, Administrator; F. G. Schutte, Sanitary Engineer; Sandusky County, K. W. Kerik, Health Commissioner; City of Akron, K. Kostura, City of Lima, A. Godsey, City Sanitary Engineer; Eastgate Development and Transportation Agency, J. Wells, Environment Project Manager; University of Cincinnati, J. Maynard, Department Head; Office Surface Mining, P. B. Schultz, Contracting Office; G. W. Westerbeck, Office of Environmental Management, U.S. Air Force, Air Force Logistics Command; Toledo Metropolitan Area Council of Governments, K. Erickson, Director of Regional Planning; and Warren Dick, Ohio State University, Ohio Agricultural Research and Development Center; Funds or services were provided by the U.S. Army Corps of Engineers in collecting records for 72 hydrologic-data stations in this report. The Miami Conservancy District, U.S. Army Corps of Engineers, and Ohio Department Natural Resources aided in collecting records.

WATER RESOURCES DATA FOR OHIO, 1989

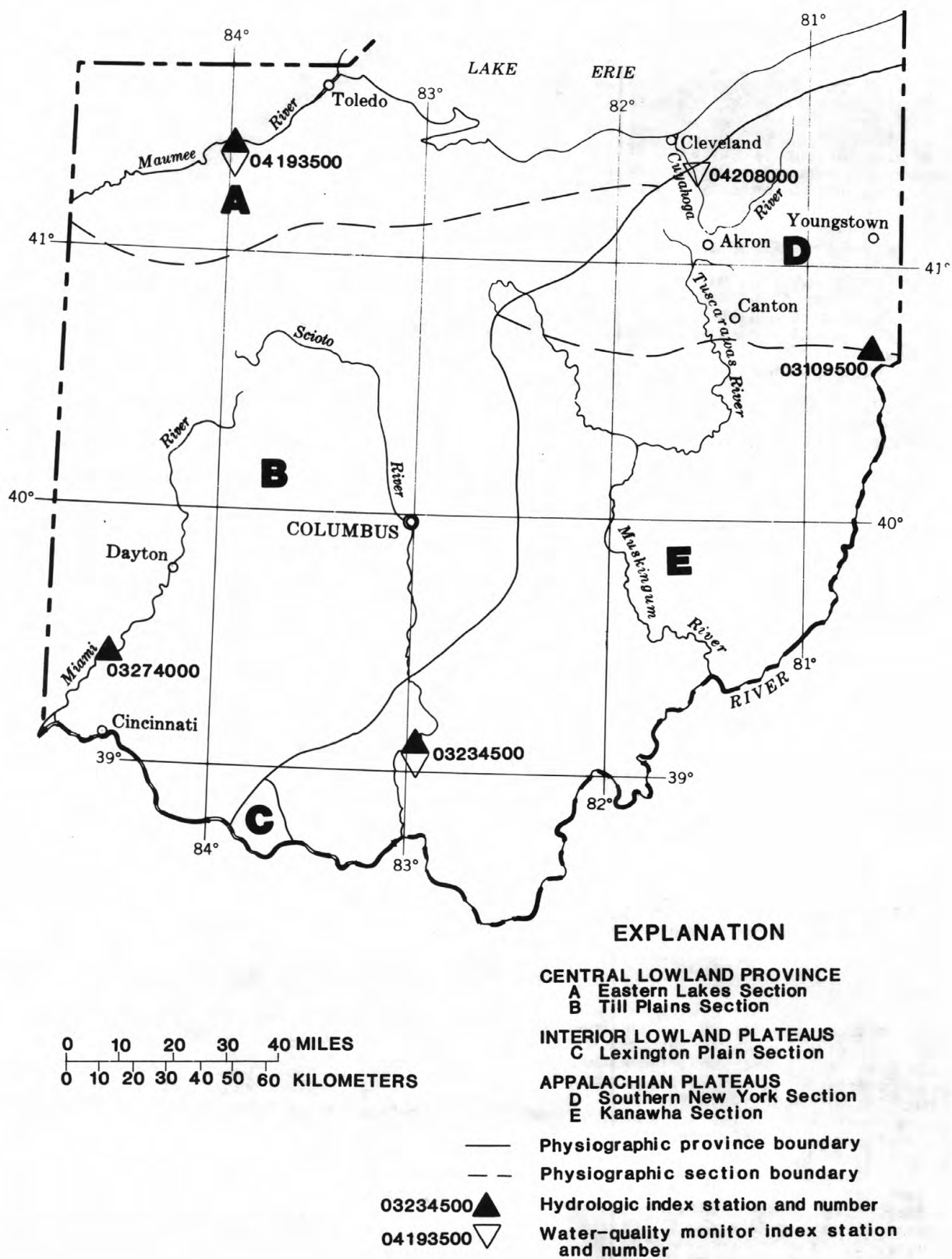


Figure 1.--Physiographic divisions and location of Hydrologic Index Stations.

SUMMARY OF HYDROLOGIC CONDITIONS

Ohio is located in three physiographic provinces, each with its own distinctive hydrologic characteristics. The topography of the Till Plains section of the Central Lowlands physiographic province (fig. 1) consists of gently rolling ground moraine with bands of terminal moraine and outwash-filled valleys. Glaciation altered the courses of most streams in this area. The Eastern Lake Plains section (fig. 1) consists of wide expanses of level or nearly level land interrupted only by the sporadic sandy ridges that are the last visible remnants of glacial-lake beaches. Much of the area was swamp prior to development, and marshes are still present along Lake Erie near Toledo. The Lexington Plains section of the Interior Low Plateau province (fig. 1) is characterized by rolling terrain with isolated large hills and ridges. The "barbed" drainage pattern formed when small streams were captured as their headwaters cut back into the hills over time. Streams have carved the Kanawha section of the Appalachian Plateaus province (fig. 1) into an intricate series of hollows and steep-sided ridges. Only the large streams in the section have any appreciable flood plain. In the southern New York section (fig. 1), successive waves of glaciation have subdued the relief, buried many preglacial valleys, and rerouted many streams.

Precipitation

The average annual precipitation in Ohio is about 38 inches. The rainfall decreases from around 42 inches on the southern border to about 32 inches in the northwest. An area of greater precipitation (up to 44 inches) in northeastern Ohio results from air masses that pick up moisture and heat from Lake Erie and subsequently release precipitation over a range of hills stretching northeastward from Cleveland.

Monthly precipitation typically is greatest from May through July and least in October, December, and February. Of the approximate 38 inches of average annual precipitation, about 10 inches runs off immediately, 2 inches is retained at or near the surface and evaporates and transpires, and 26 inches enters the ground. Of the 26 inches that enters the ground, 20 inches is retained in the unsaturated zone and is later lost by evapotranspiration. The remaining 6 inches reaches the water table. Of this 6 inches, 2 inches eventually discharges to streams, and the rest is lost by evapotranspiration and consumptive use. Average runoff ranges from about 15 to 18 inches along the southern border to about 8 to 12 inches along most of the northern border, except in the northeast where runoff reaches 20 inches. The pattern of streamflow differs from the pattern of precipitation because of the contributions of snowmelt to streamflow in the early spring and the reduction in flows by evapotranspiration from June through September.

Surface Water

Streamflow

Streamflow-data-collection stations are distributed irregularly throughout the State, and tend to be concentrated on the main river systems. The stations sample a wide variety of conditions. The drainage areas range from 12 to 7,420 square miles, and cover a wide diversity of land uses, topographic conditions, and other physical conditions. Streamflow ranges from natural to highly regulated.

At the beginning of the 1989 water year, streamflow was normal¹ throughout the State, having recovered from widespread drought conditions during the summer of 1988. Streamflow remained normal in October except in southwestern Ohio, where it was deficient, and in northwestern Ohio, where it was excessive. Streamflow increased throughout the State in November because of above-average precipitation, and remained normal to excessive through February for much of the State. In March, below-average precipitation caused streamflow to fall into the deficient range in northern Ohio. Streamflow remained normal elsewhere. Serious flooding occurred (damages estimated to exceed \$20 million) in late May in parts of western and northeastern Ohio; above-average precipitation prevailed throughout much of Ohio through June, and streamflow was either excessive or normal statewide for the remainder of the year.

Water Quality

Surface-water quality conditions and concerns differ throughout Ohio according to land use, geology, soil, and topography. Northwestern Ohio has flat, glaciated plains with heavy soils. Land use is predominantly rural and agricultural, and water quality concerns center on issues related to agricultural practices. Southwestern Ohio has unglaciated, irregular plains. Land-use and water-quality concerns are similar to those in the northwestern part of the State. In the unglaciated, western Allegheny Plateau of southeastern Ohio, the landscape is characterized by hilly terrain dissected by steep, narrow valleys. Land is predominantly forested, but some cropland and pasture also are present. Mining and timber are the principal industries. Water-quality problems generally center on excessive acid and sediment loading from past coal-mining activities. Land use in the lake plains of northeastern Ohio is primarily urban and industrial, with some rural areas in woodlands, pasture, and orchard crops. In this area of the State, water-quality concerns center on problems such as municipal and industrial wastes and urban nonpoint sources of pollution.

¹ Normal is defined as flow between the 25th and 75th percentiles as measured during the base period water year 1951 through 1980

WATER RESOURCES DATA FOR OHIO, 1989

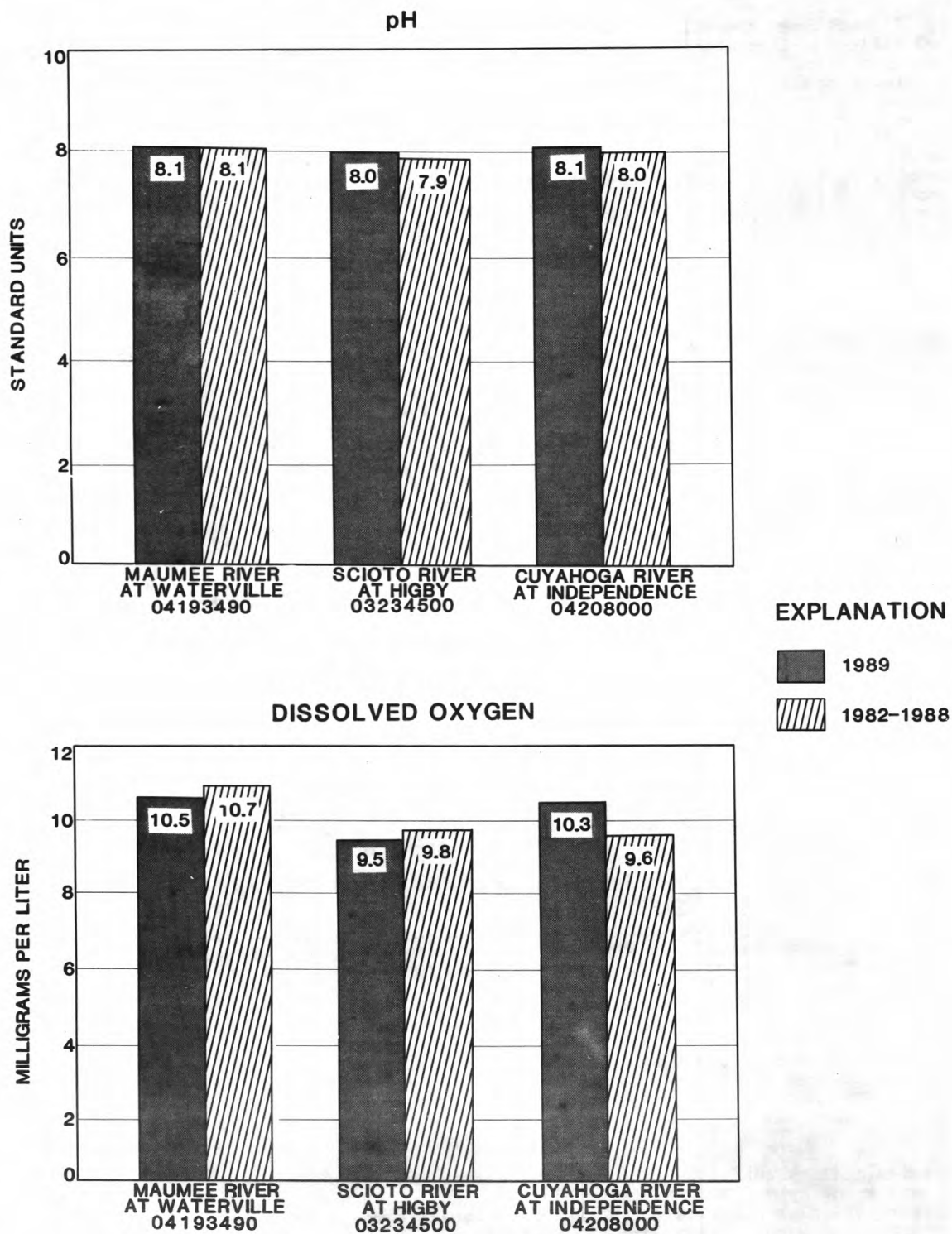


Figure 2.—Comparison of 1989 mean values of pH, dissolved oxygen, temperature, and specific conductance with the average of annual mean values for 1982-88 for three water-quality-monitor index stations in Ohio.

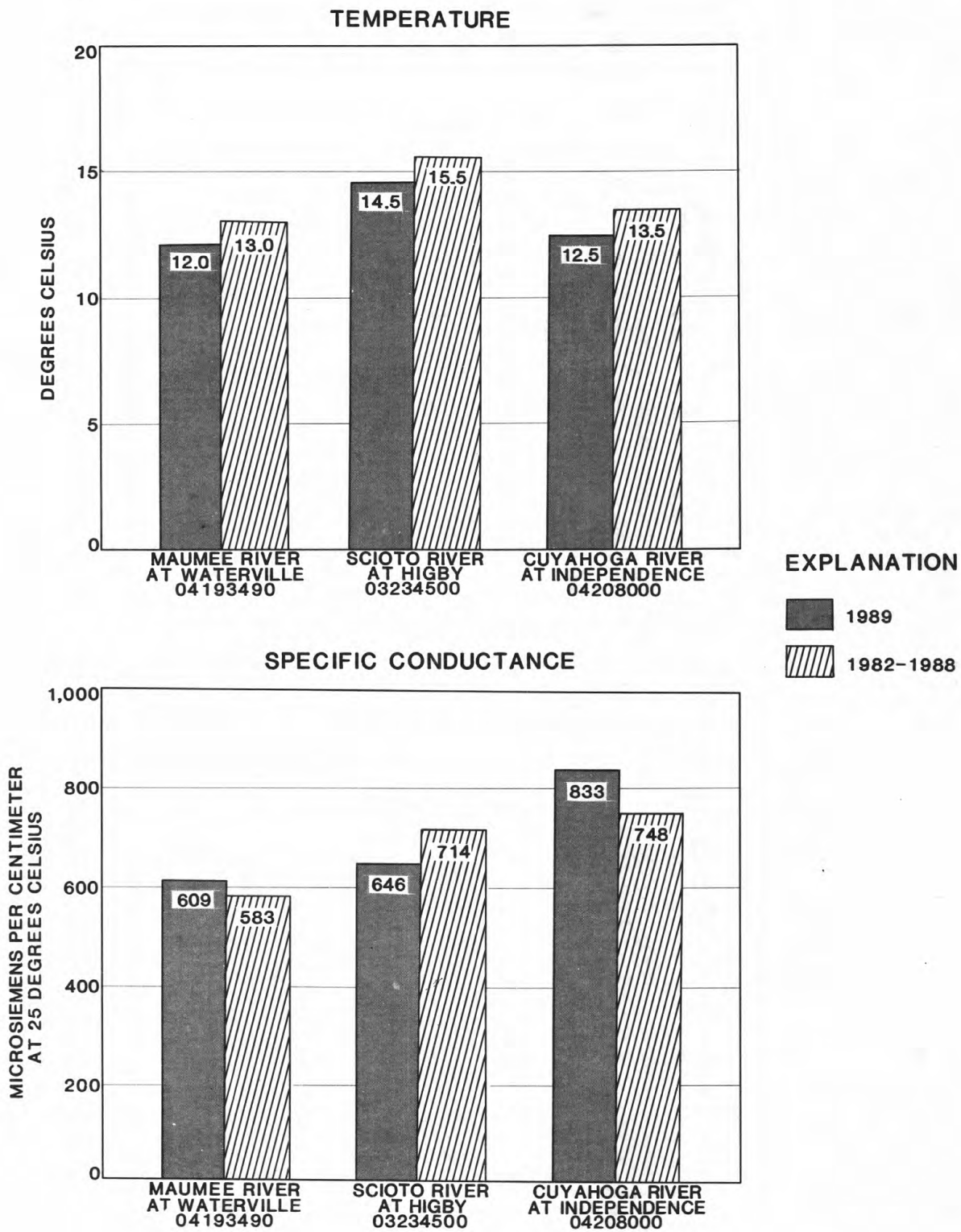


Figure 2.—Comparison of 1989 mean values of pH, dissolved oxygen, temperature, and specific conductance with the average of annual mean values for 1982-88 for three water-quality-monitor index stations in Ohio—Continued.

On a short-term basis, water-quality data are collected in conjunction with local or regional studies. On a long-term basis, water-quality data in Ohio are collected from 10 fixed stations, nine NASQAN (National Stream Quality Accounting Network) stations, which are located in nine major river basins, and one Hydrologic Benchmark station, which is located in a small, relatively pristine basin. Samples are collected either monthly, bimonthly, or quarterly and are analyzed for major anions and cations, trace metals, nutrients, suspended sediment, and selected physical properties. At three of these stations (fig. 1), water-quality monitors continuously measure temperature, dissolved-oxygen concentrations, pH, and specific conductance. Comparisons are shown in figure 2.

Ground Water

Ground water serves the needs of 42 percent of Ohio's population. An estimated 740 million gallons per day (Mgal/d) of ground water is withdrawn for domestic, industrial, and agricultural purposes. Many people in Ohio depend on ground water as the only practical source of supply.

Ohio's unconsolidated aquifers are composed of either coarse- or fine-grained sediments. Both types are composed mainly of materials of glacial origin. The coarse-grained unconsolidated aquifers generally consist of highly permeable sand and gravel; much of the sand and gravel is alluvium derived from glaciofluvial outwash along the courses of some modern streams; thus, these aquifers sometimes are referred to as "watercourse" aquifers. Coarse-grained unconsolidated aquifers in the northwestern corner of the State (fig. 3) underlie glacial till, are locally under artesian pressure, and are highly productive. Extensive kame-terrace deposits of water-bearing gravel and sand are important ground water sources in northeastern Ohio. The fine-grained unconsolidated aquifers are similar to the coarse-grained unconsolidated aquifers in form and origin but are less permeable because of higher percentages of mixed fine sand, silt, and clay. Included in the fine-grained unconsolidated aquifers are tills that contain thin or localized stratified lenses of sand and gravel.

The principal source of water supply for much of the unglaciated upland area of southeastern Ohio is from bedrock aquifers composed of shaly sandstone and thin limestone aquifers. These strata which range from Mississippian to Permian in age, are dominated by low-yielding shales and shaly sandstones that include numerous coal-bearing strata. In some places, small water supplies are available in fractured coal beds. Several sandstone aquifers in northeastern Ohio are of regional extent and are important ground-water sources for individual and small public supplies. These include the Berea and Black Hand Sandstones of Mississippian age and several sandstone members of the Pottsville and Allegheny Formations of Pennsylvanian age. The Lake Erie coastline of northeastern Ohio is underlain by shale of Devonian and Mississippian age (fig. 3) that yields only small amounts of water to wells. Silurian-age limestone and dolomite and Devonian limestone comprise the carbonate aquifer system (fig. 3) of much of western Ohio. Glacial cover is uneven and consists of valley fill and terminal moraine in some places. The northeastern part of western Ohio contains an area of high-yielding wells that tap a preferentially weathered zone, which developed when carbonate section was periodically exposed as land mass during the Paleozoic Era. The southwestern corner of Ohio near Cincinnati is underlain by shale and a thin limestone aquifer of Ordovician age. Away from the watercourse (coarse unconsolidated) aquifers that traverse the area, the rocks that form the uplands have only very small ground-water yields.

Ground-Water Levels

Most of the ground-water observation wells in Ohio tap unconsolidated sand and gravel aquifers in buried valleys of watercourse systems associated with the State's principal streams. Figure 4 shows sample 1-year and 5-year hydrographs of a well completed in an unconfined unconsolidated sand-and-gravel aquifer. The observation-well network also includes some bedrock wells in areas where consolidated aquifers are important water supplies, such as the carbonate-rock region of northwestern Ohio and various sandstone units of eastern Ohio. Figure 5 shows sample 1-year and 5-year hydrographs of a well completed in a confined carbonate-rock aquifer. The yearly low for most wells occurs during the winter months, especially in cold, dry years, or near the end of the growing season. Highs for the year usually occur from March through June, which is the peak of the recharge season. The yearly water-level fluctuation due to climatic conditions in water-table and confined-aquifer wells is commonly 3 to 5 ft.

Ground water levels at the beginning of the 1989 water year were below normal² throughout the State because of drought conditions during the summer of 1988. Water levels stabilized or continued to decline in October, and some record lows were established during this time. Generally, water levels stabilized during the months of November and December, rose in places in response to heavy precipitation during November, but remained below normal for the period. Water levels tended to increase during January, February, and March, but remained below normal statewide for the most part. Noticeable increases to normal or above normal levels occurred in April and May in response to above-average precipitation. Seasonal declines prevailed throughout the remainder of the water year, but ground-water levels generally remained above or near normal.

¹ For ground-water levels, "normal" is defined as being between the 25th and 75th percentiles of the range of values recorded during the reference period 1960-75.

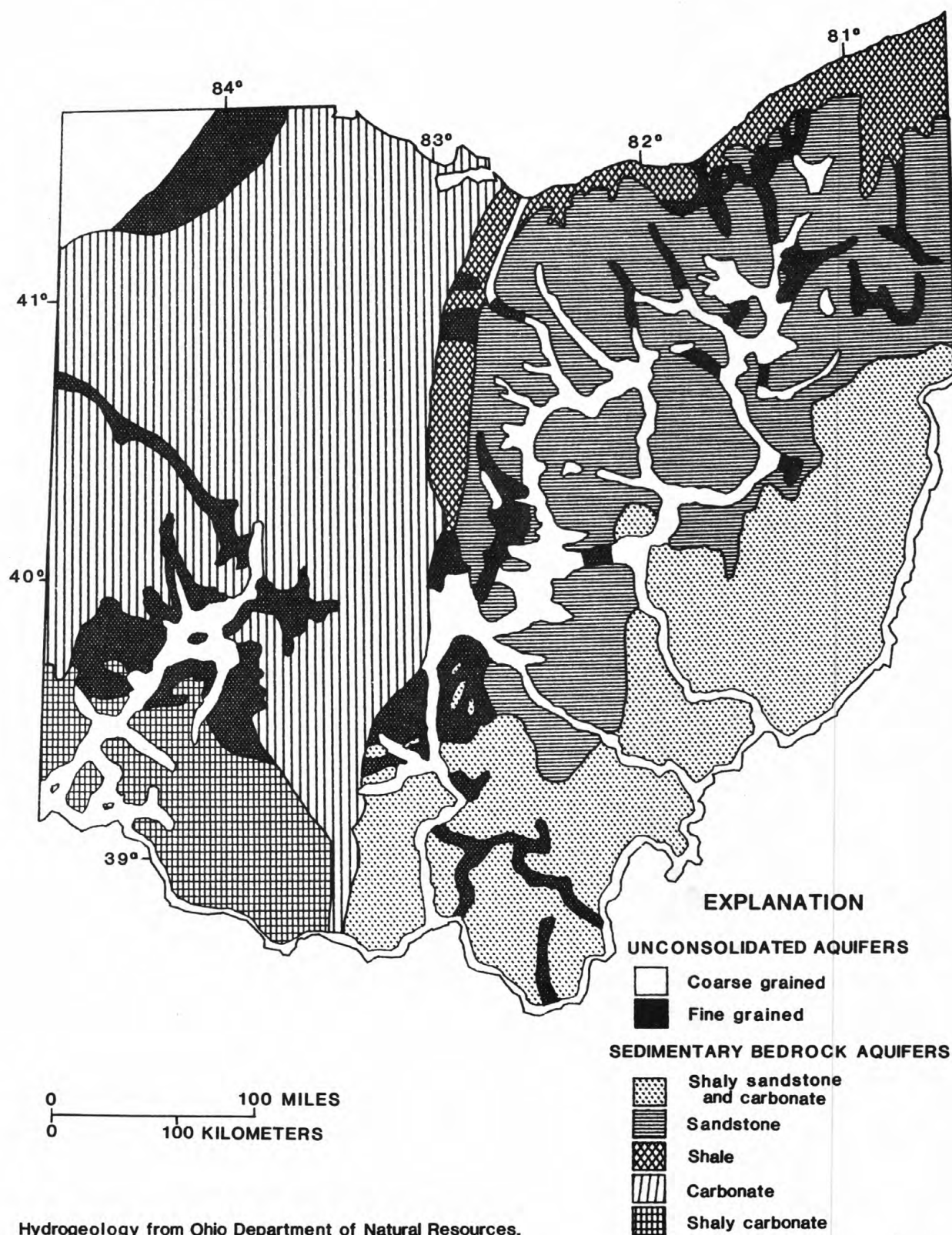


Figure 3.—Geographic distribution of principal aquifers in Ohio.

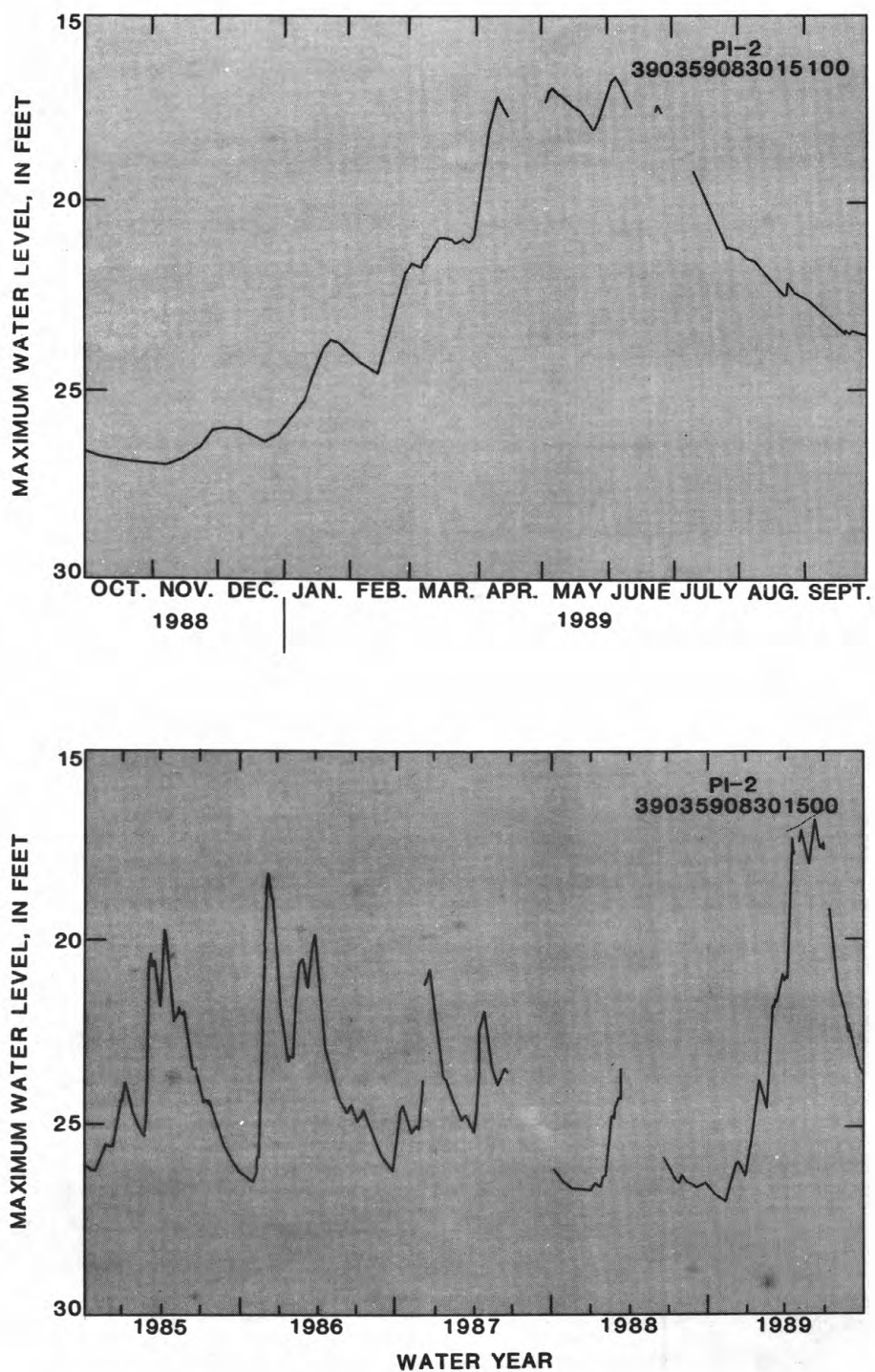


Figure 4.--Sample 1-year and 5-year hydrographs of a well completed in an unconfined unconsolidated aquifer.

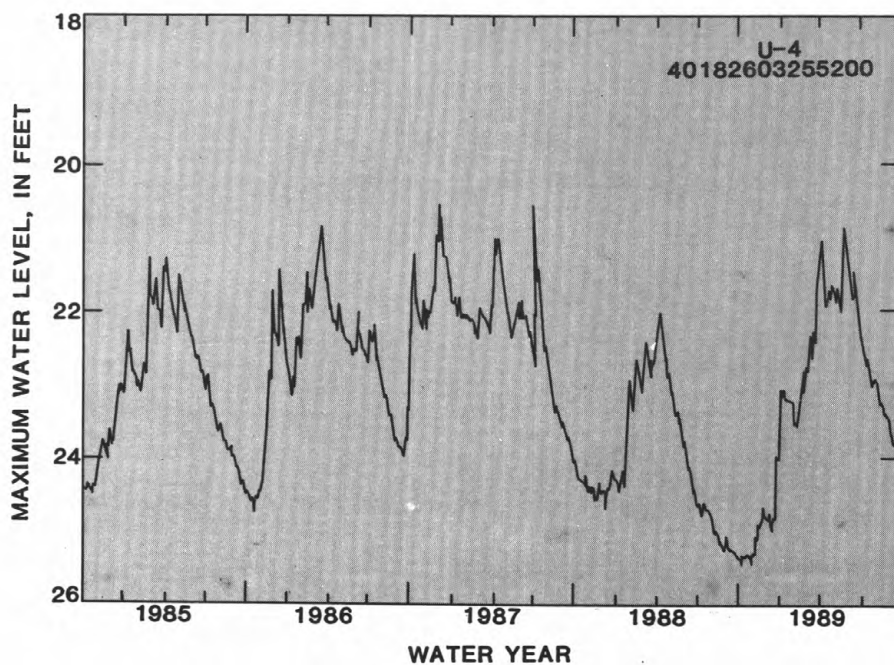
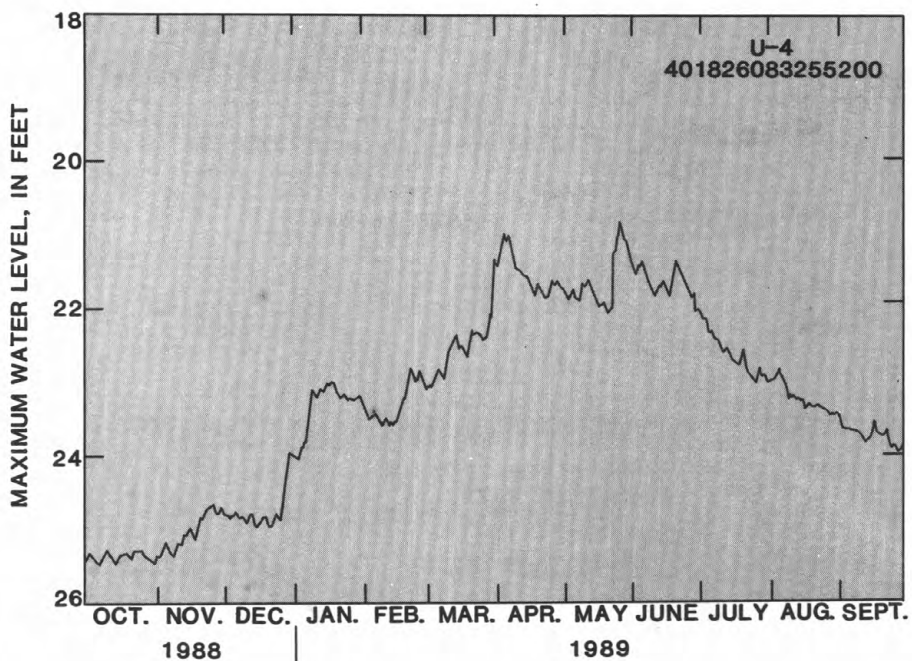


Figure 5.—Sample 1-year and 5-year hydrographs of a well completed in a confined carbonate-rock aquifer.

SPECIAL NETWORKS AND PROGRAM

Hydrologic Bench-Mark Network is a network of 57 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by human activity.

National Stream Quality Accounting Network (NASQAN) is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in general or regional water-quality planning and management. The approximately 500 sites in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the U.S. Water Resources Council. The objectives of NASQAN are (1) to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting such that the data may be used for; (2) description of the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs; (3) detection of changes or trends with time in the pattern of occurrence of water-quality characteristics; and (4) providing a nationally consistent data base useful for water-quality assessment and hydrologic research.

Radiochemical program is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

Tritium network is a network of stations which has been established to provide baseline information on the occurrence of tritium in the Nation's surface waters. In addition to the surface-water stations in the network, tritium data are also obtained at a number of precipitation stations. The purpose of the precipitation stations is to provide an estimate sufficient for hydrologic studies of the tritium input to the United States.

EXPLANATION OF THE RECORDS

The records in this report are for the 1987 water year that began October 1, 1986 and ended September 30, 1987. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and content data for lakes and reservoirs, water-quality data for surface and ground water, and ground-water-level data. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

Station Identification Numbers

Each data station, whether streamsite or wellsite, is assigned a unique identification number. This number is unique in that it applies specifically to a given station and to no other. The number usually is assigned when a station is first established and is retained for that station indefinitely. The systems used by the U.S. Geological Survey to assign identification numbers for surface-water stations and for ground-water well sites differ, but both are based on geographic locations. The "downstream order" system is used for regular surface-water stations and the "latitude-longitude" system is used for wells and, in Ohio, for surface-water stations where only miscellaneous measurements are made.

Downstream Order System

Since October 1, 1950, the order of listing hydrologic-station records in Survey reports is in a downstream direction along the main stream. All stations on a tributary entering upstream from a main-stream station are listed before that station. A station on a tributary that enters between two main-stream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary with respect to the stream to which it is immediately tributary is indicated by an indention in a "List of Stations" in the front of the report. Each indention represents one rank. This downstream order and system of indention show which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

The station-identification number is assigned according to downstream order. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete eight-digit number for each station such as 04041000, which appears just to the left of the station name, includes the two-digit part number "04" plus the six-digit downstream order number "041000". The part number designates the major river basin; for example, part "03" is the Ohio River Basin, and part "04" is the St. Lawrence River Basin.

² For ground-water levels, "normal" is defined as being between the 25th and 75th percentiles of the range of values recorded during the reference period 1960-75.

Latitude-Longitude System

The identification numbers for wells and miscellaneous surface-water sites are assigned according to the grid system of latitude and longitude. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude, the next seven digits denote degrees, minutes, and seconds of longitude, and the last two digits (assigned sequentially) identify the wells or other sites within a 1-second grid. In the rare instance where the initial determination of latitude and longitude are found to be in error, the station will retain its initial identification number; however, its true latitude and longitude will be listed in the LOCATION paragraph of the station description. (See figure 6.)

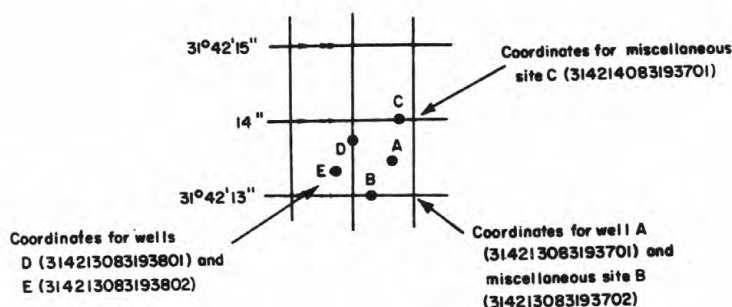


Figure 6 -- System for numbering wells and miscellaneous sites (latitude and longitude)

Records of Stage and Water Discharge

Records of stage and water discharge may be complete or partial. Complete records of discharge are those obtained using a continuous stage-recording device through which either instantaneous or mean daily discharge may be computed for any time, or any period of time, during the period of record. Complete records of lake or reservoir contents, similarly, are those for which stage or content may be computed or estimated with reasonable accuracy for any time or period of time. They may be obtained using a continuous stage-recording device, but need not be. Because mean daily discharges and end-of-day contents commonly are published for such stations, they are referred to as "daily stations."

By contrast, partial records are obtained through discrete measurements without using a continuous stage-recording device and pertain only to a few flow characteristics, or perhaps only one. The nature of a partial record is indicated by table titles such as "crest-stage partial records," or "low-flow partial records." Records of miscellaneous discharge measurements or of measurements from special studies, such as low-flow seepage studies, may be considered as partial records, but they are presented separately in this report. Location of all complete-record and crest-stage stations for which data are given in this volume are shown in figure 8.

Data Collection and Computation

The data obtained at a complete-record gaging station on a stream or canal consist of a continuous record of stage, individual measurements of discharge throughout a range of stages, and notations regarding factors that may affect the relationships between stage and discharge. These data, together with supplemental information such as weather records, are used to compute daily discharges. The data obtained at a complete-record gaging station on a lake or reservoir consists of a record of stage and of notations regarding factors that may affect the relationship between stage and lake content. These data are used with stage-area and stage-capacity curves or tables to compute water-surface areas and lake storage.

Continuous records of stage are obtained with analog recorders that trace continuous graphs of stage, or with digital recorders that punch stage values on paper tapes or store stage data on cassette tapes at selected time intervals. Measurements of discharge are made with current meters using methods adapted by the Geological Survey as a result of experience accumulated since 1880. These methods are described in standard textbooks, in Water-Supply Paper 2175, and in U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter A6.

In computing discharge records, results of individual measurements are plotted against the corresponding stages, and stage-discharge relation curves are then constructed. From these curves, rating tables indicating the approximate discharge for any stage within the range of the measurements are prepared. If it is necessary to define extremes of discharge outside the range of the current-meter measurements, the curves are extended using: (1) Logarithmic plotting; (2) velocity-area studies; (3) results of indirect measurements of peak discharge, such as slope-area or contracted-opening measurements, and computations of flow-over-dams or weirs; or (4) step-backwater techniques.

Daily mean discharges are computed by applying the daily mean stages (gage heights) to the stage-discharge curves or tables. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is determined by the shifting-control method, in which correction factors based on the individual discharge measurements and notes of the personnel making the measurements are applied to the gage heights before the discharges are determined from the curve or tables. This shifting-control method also is used if the stage-discharge relation is changed temporarily because of aquatic growth or debris on the control. For some stations, formation of ice in the winter may so obscure the stage-discharge relation that daily mean discharges must be estimated from other information such as temperature and precipitation records, notes of observations, and records for other stations in the same or nearby basins for comparable periods.

At some stream-gaging stations the stage-discharge relation is affected by the backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope method, in which the slope or fall in a reach of the stream is a factor in computing discharge. The slope or fall is obtained by means of an auxiliary gage set at some distance from the base gage. At some stations the stage-discharge relation is affected by changing stage; at these stations the rate of change in stage is used as a factor in computing discharge.

In computing records of lake or reservoir contents, it is necessary to have available from surveys, curves, or tables defining the relationship of stage and contents. The application of stage to the stage-contents curves or tables give the contents from which daily, monthly, or yearly changes are then determined. If the stage-contents relationship changes because of deposition of sediment in a lake or reservoir, periodic resurveys may be necessary to redefine the relationship. Even when this is done, the contents computed may become increasingly in error as time since the last survey increases. Discharges over lake or reservoir spillways are computed from stage-discharge relationships much as other stream discharges are computed.

For some gaging stations there are periods when no gage-height record is obtained, or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated from the recorded range in stage, previous or following record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise, daily contents may be estimated from operator's logs, previous or following record, inflow-outflow studies, and other information.

Data Presentation

The records published for each gaging station consist of two parts--the manuscript or station description and the data table for the current water year. The manuscript provides, under various headings, descriptive information, such as station location; period of record; average discharge; historical extremes; record accuracy; and other remarks pertinent to station operation and regulation. The following information, as appropriate, is provided with each continuous record of discharge or lake content. Comments to follow clarify information presented under the various headings of the station description.

LOCATION.--Information on locations is obtained from the most accurate maps available. The location of the gage with respect to the cultural and physical features in the vicinity and with respect to the reference place mentioned in the station name is given. River mileages, given for only a few stations, were determined by methods given in "River Mileage Measurement," Bulletin 14, Revision of October 1968, prepared by the Water Resources Council or were provided by the U.S. Army Corps of Engineers.

DRAINAGE AREA.--Drainage areas are measured using the most accurate maps available. Because the type maps available varies from one drainage basin to another, the accuracy of the drainage areas likewise varies. Drainage areas are updated as better maps become available.

PERIOD OF RECORD.--This indicates the period for which there are published records for the station or for an equivalent station. An equivalent station is one that was in operation at a time that the present station was not, and whose location was such that records from it can reasonably be considered equivalent with records from the present station.

REVISED RECORDS.--Published records, because of new information, occasionally are found to be incorrect, and revisions are printed in later reports. Listed under this heading are all the reports in which revisions have been published for the station and the water years to which the revisions apply. If a revision did not include daily, monthly, or annual figures of discharge, that fact is noted after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only the peak discharges were revised. If the drainage area has been revised, the report in which the most recently revised figure was first published is given.

GAGE.--The type of gage in current use, the datum of the current gage referred to National Geodetic Vertical Datum of 1929 (see glossary), and a condensed history of the types, locations, and datums of previous gages are given under this heading.

REMARKS.--All periods of estimated daily-discharge record will either be identified by date in this paragraph of the station description for water-discharge stations or flagged in the daily-discharge table. (See next section, "Identifying Estimated Daily Discharge.") If a remarks statement is used to identify estimated record, the paragraph will begin with this information presented as the first entry. The paragraph is also used to present information relative to the accuracy of the records, to special methods of computation, to conditions that affect natural flow at the station and, possibly, to other pertinent items. For reservoir stations, information is given on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir.

COOPERATION.--Records provided by a cooperating organization or obtained for the Geological Survey by a cooperating organization are identified here.

AVERAGE DISCHARGE.--The discharge value given is the arithmetic mean of the water-year mean discharges. It is computed only for stations having at least 5 water years of complete record, and only water years of complete record are included in the computation. It is not computed for stations where diversions, storage, or other water-use practices cause the value to be meaningless. If water developments significantly altering flow at the station are put into use after the station has been in operation for a period of years, a new average is computed as soon as 5 water years of record have accumulated following the development.

EXTREMES FOR PERIOD OF RECORD.--Extremes may include maximum and minimum stages and maximum and minimum discharges or contents. Unless otherwise qualified, the maximum discharge or content is the instantaneous maximum corresponding to the highest stage that occurred. The highest stage may have been obtained from a graphic or digital recorder, a crest-stage gage, or by direct observation of a nonrecording gage. If the maximum stage did not occur on the same day as the maximum discharge or content, it is given separately. Similarly, the minimum is the instantaneous minimum discharge, unless otherwise qualified, and was determined and is reported in the same manner as the maximum.

EXTREMES OUTSIDE PERIOD OF RECORD.--Included here is information concerning major floods or unusually low flows that occurred outside the stated period of record. The information may or may not have been obtained by U.S. Geological Survey.

EXTREMES FOR CURRENT YEAR.--Extremes given here are similar to those for the period of record, except the peak discharge listing may include secondary peaks. For stations meeting certain criteria, all peak discharges and stages occurring during the water year and greater than a selected base discharge are presented under this heading. The peaks greater than the base discharge, including the highest one, are referred to as secondary peaks. Peak discharges are not published for canals, ditches, drains, or streams for which the peaks are subject to substantial control by man. The time of occurrence for peaks is expressed in 24-hour local standard time. For example, 12:30 a.m. is 0030, and 1:30 p.m. is 1330. The minimum for the current water year appears below the table of peak data.

REVISIONS.--If a critical error in published records is discovered, a revision is included in the first report following discovery of the error.

Although rare, occasionally the records of a discontinued station gaging station may need revision. Because, for these stations, there would be no current or, possibly, future station manuscript published to document the revision in a "Revised Records" entry, users of data for these stations who obtained the data from previously published data reports may wish to contact the District office to determine if the published records were ever revised after the station was discontinued. Of course, if the data were obtained by computer retrieval, the data would be current and there would be no need to check because any published retrieval of data is always accompanied by revisions of the corresponding data in computer storage.

Manuscript information for lakes or reservoir stations differs from that for stream stations in the nature of the "Remarks" and in the inclusion of a skeleton stage-capacity table when daily contents are given.

The daily table for stream-gaging stations gives mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, the line headed "TOTAL" gives the sum of the daily figures. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges respectively, for the month. Discharge for the month is often expressed in cubic feet per square mile (line headed "CFSM"), or in inches (line headed "IN."), or in acre-feet (line headed "AC-FT"). Figures for cubic feet per second per square mile and runoff in inches are omitted if there is extensive regulation or diversion or if the drainage area includes large noncontributing areas. In the yearly summary below the monthly summary, the figures shown are the appropriate discharges for the calendar and water years. At some stations monthly and (or) yearly observed discharges are adjusted for reservoir storage or diversion, or diversions or reservoir contents are given. These figures are identified by symbol and corresponding footnote.

Data collected at partial-record stations follow the information for continuous record sites. Data for partial-record discharge stations are usually presented in two tables. The first is a table of annual maximum stage and discharge at crest-stage stations, and the second, when collected, is a table of discharge measurements at low-flow partial-record stations. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. These measurements are generally made in time of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Identifying Estimated Daily Discharge

Estimated daily-discharge values published in the water-discharge tables of annual State data reports are identified either by flagging individual daily values with the letter "e" and printing a table footnote, "e Estimated," or by listing the dates of the estimated record in the REMARKS paragraph of the station description.

Accuracy of the Records

The accuracy of streamflow records depends primarily on: (1) The stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements; and (2) the accuracy of measurements of stage, measurements of discharge, and interpretation of records.

The accuracy attributed to the records is indicated under "REMARKS." "Excellent" means that about 95 percent of the daily discharges are within 5 percent of the true; "good," within 10 percent; and "fair," within 15 percent. Records that do not meet the criteria mentioned are rated "poor." Different accuracies may be attributed to different parts of a given record.

Daily mean discharges in this report are given to the nearest hundredths of a cubic foot per second for values less than 1 ft³/s; to the nearest tenth between 1.0 and 10 ft³/s; to whole numbers between 10 and 1,000 ft³/s; and to three significant figures for more than 1,000 ft³/s. The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharges listed for partial-record stations and miscellaneous sites.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or other factors. For such stations, figures of cubic feet per second per square mile and of runoff, in inches, are not published unless satisfactory adjustments can be made for diversions, for changes in contents of reservoirs, or for other changes incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.

Other Records Available

Records of discharge, ground-water, reservoir contents, and water-quality not published by the Geological Survey are collected in Ohio at several sites by State and other Federal agencies. The National Water Data Exchange (NAWDEX), U.S. Geological Survey, Reston, VA 22092, maintains an index of these sites as well as an index of records of discharge collected by other agencies but not published by the Geological Survey. Information on records at specific sites can be obtained from that office upon request.

Information used in preparing the records in this publication, such as discharge-measurement notes, gage-height records, temperature measurements, and rating tables are on file in the Ohio District office. Also, most of the daily mean discharges are in computer-readable form and have been analyzed statistically. Information on availability of the unpublished information or on results of statistical analyses of the published records may be obtained from the District office.

Records of Surface-Water Quality

Records of surface-water quality ordinarily are obtained at or near stream-gaging stations because interpretation of records of surface-water quality nearly always requires corresponding discharge data. Records of surface-water quality in this report may involve a variety of types of data and measurement frequencies.

Classification of Records

Water-quality data for surface-water sites are grouped into one of three classifications. A continuing-record station is a site where data are collected on a regularly scheduled basis. Frequency may be once or more times daily, weekly, monthly, or quarterly. A partial-record station is a site where limited water-quality data are collected systematically over a period of years. Frequency of sampling is usually less than quarterly. A miscellaneous sampling site is a location other than a continuing or partial-record station, where random samples are collected to give better areal coverage to define water-quality conditions in the river basin.

A careful distinction needs to be made between "continuing records" as used in this report and "continuous recordings," which refers to a continuous graph or a series of discrete values punched at short intervals on a paper tape. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recording; however, because of cost, most data are obtained only monthly or less frequently. Locations of stations for which records on the quality of surface water appear in this volume are shown in figure 8.

Arrangement of Records

Water-quality records collected at a surface-water daily record station are published immediately following that record, regardless of the frequency of sample collection. Station number and name are the same for both records. Where a surface-water daily record station is not available or where the water quality differs significantly from that at a nearby surface-water station, the continuing water-quality record is published with its own station number and name in the regular downstream-order sequence. Water-quality data for partial-record stations and for miscellaneous sampling sites appear in separate tables following the table of discharge measurements at miscellaneous sites.

On-site Measurements and Sample Collection

In obtaining water-quality data, a major concern is that the data obtained represent the in situ quality of the water. To assure this, certain measurements, such as water temperature, pH, and dissolved oxygen, need to be made on site when the samples are taken. To assure that measurements made in the laboratory also represent the in situ water, carefully prescribed procedures need to be followed in collecting the samples, in treating the sample to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Procedures for on-site measurements and for collecting, treating, and shipping samples are given in publications on "Techniques of Water-Resources Investigations" (TWRI), Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4. All of these references are listed on p. 21-22 of this report. Also, detailed information on collecting, treating, and shipping samples may be obtained from the Geological Survey District office.

One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load. All samples obtained for the National Stream-Quality Accounting Network (see definitions) are obtained from at least several verticals. Whether samples are obtained from the centroid of flow or from several verticals depends on flow conditions and other factors that must be evaluated by the collector.

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. In the rare case where an apparent inconsistency exists between a reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum, minimum, and mean values for each constituent measured and are based upon hourly punches beginning at 0100 hours and ending at 2400 hours for each day of record. More detailed records (hourly values) may be obtained from the U.S. Geological Survey District Office, whose address is given on the back of the title page of this report.

Water Temperatures

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at time of discharge measurements for water-discharge stations. For stations where water temperatures are taken manually once or twice daily, the water temperatures are taken at about the same time each day. Large streams have a small daily temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where recording instruments are used, either mean temperatures or maximum and minimum temperatures for each day are published.

Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples usually are obtained at several verticals in the cross section, or a single sample may be obtained at a fixed point and a coefficient applied to determine the mean concentration in the cross section.

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharge for days of rapidly changing flow or concentration were computed by the subdivided-day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge values differ from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided-day method. For periods when no samples were collected, daily loads of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.

At other stations, suspended-sediment samples were collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observation, such data are useful in establishing seasonal relations between quality and streamflow and in predicting long-term sediment-discharge characteristics of the stream.

In addition to the records of the quantities of suspended sediment, records of periodic measurements of the particle-size distribution of the suspended sediment and bed material are included for some stations.

Laboratory Measurements

Sediment samples, samples for biochemical oxygen demand (BOD), and daily samples for specific conductance are analyzed locally. All other samples are analyzed in the Geological Survey laboratories in Arvada, CO. Methods used in analyzing sediment samples and computing sediment records are given in TWRI, Book 5, Chap. C1. Methods used by the Geological Survey laboratory are given in TWRI, Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4.

In March 1989 the National Water-Quality Laboratory discovered a bias in the turbidimetric method for sulfate analysis, indicating that values below 75 mg/L have a median positive bias of 2 mg/L above the true value for the period between 1982 and 1989. Sulfate values in this report have not been corrected for this bias.

Data Presentation

For continuing-record stations, information pertinent to the history of station operation is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, drainage area, period of record, type of data available, instrumentation, general remarks, cooperation, and extremes for parameters currently measured daily. Tables of chemical, physical, biological, radiochemical data, and so forth, obtained at a frequency less than daily, are presented first. Tables of "daily values" of specific conductance, pH, water temperature, dissolved oxygen, and suspended sediment then follow in sequence.

In the descriptive headings, if the location is identical to that of the discharge gaging station, neither the LOCATION nor the DRAINAGE AREA statements are repeated. The following information, as appropriate, is provided with each continuous-record station. Comments that follow clarify information presented under the various headings of the station description.

LOCATION.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

DRAINAGE AREA.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

PERIOD OF RECORD.--This indicates the periods for which there are published water-quality records for the station. The periods are shown separately for records of parameters measured daily or continuously and those measured less than daily. For those measured daily or continuously, periods of record are given for the parameters individually.

INSTRUMENTATION.--Information on instrumentation is given only if a water-quality monitor, temperature record, sediment pumping sampler, or other sampling device is in operation at a station.

REMARKS.--Remarks provide added information pertinent to the collection, analysis, or computation of the record.

COOPERATION.--Records provided by a cooperating organization or obtained for the Geological Survey by a cooperating organization are identified here.

EXTREMES.--Maximums and minimums are given only for parameters measured daily or more frequently. None are given for parameters measured weekly or less frequently, because the true maximums and minimums may not have been sampled. Extremes, when given, are for both the period of record and for the current water year.

REVISIONS.--If errors in published water-quality records are discovered after publication, appropriate updates are made to the Water-Quality File in the U.S. Geological Survey's computerized data system, WATSTORE, and subsequently by monthly transfer of update transactions to the U.S. Environmental Protection Agency's STORET system. Because the usual volume of updates makes it impractical to document individual changes in the State data-report series or elsewhere, potential users of U.S. Geological Survey water-quality data are encouraged to obtain all required data from the appropriate computer file to insure the most recent updates.

Remark Codes

The following remarks codes may appear with the water-quality data in this report:

PRINTED OUTPUT	REMARK
E	Estimated value
>	Actual value is known to be greater than the value shown
<	Actual value is known to be less than the value shown
K	Results based on colony count outside the acceptable range (non-ideal colony count)
L	Biological organism count less than 0.5 percent (organisms may be observed rather than counted)
D	Biological organism count equal to or greater than 15 percent (dominant)
&	Biological organism estimated as dominant

Records of Ground-Water Levels

Water-level data from a network of observation wells (as well as project wells) are given in this report. The network well data are intended to provide a sampling and historical record of water-level changes in the Nation's most important aquifers. Locations of the observation wells in this network in Ohio are shown in figure 8. Water-level data for specific projects are reported under those projects.

Data Collection and Computation

Measurements of water levels are made in many types of wells under varying conditions, but the methods of measurement are standardized to the extent possible. The equipment and measuring techniques used at each observation well ensure that measurements at each well are of consistent accuracy and reliability.

Tables of water-level data are presented by counties arranged in alphabetical order. The prime identification number for a given well is a 15-digit number that is based on latitude and longitude. The secondary identification number is the local well number, which is provided for local needs.

Water-level measurements in this report are given in feet with reference to land-surface datum (LSD). Land-surface datum is a datum plane that is approximately at land surface at each well. If known, the altitude of the land-surface datum above National Geodetic Vertical Datum of 1929 is given in each well description. The height of the measuring point (MP) above or below land-surface datum is given in each well description.

Water levels are reported to as many significant figures as can be justified by the local conditions. For example, in a measurement of a depth to water of several hundred feet, the error of determining the absolute value of the total depth to water may be a few tenths of a foot, whereas the error in determining the net change of water level between successive measurements may be only a hundredth or a few hundredths of a foot. For lesser depths to water, the accuracy is greater. Accordingly, most measurements are reported to a hundredth of a foot, but some are given to a tenth of a foot or larger units.

Data Presentation

Each well record consists of two parts, the station description and the data table of water levels observed during the water year. The description of the well is presented first through use of descriptive headings preceding the tabular data. The comments to follow clarify information presented under the various headings.

LOCATION.--This paragraph follows the well-identification number and reports the latitude and longitude (given in degrees, minutes, and seconds); a landline location designation; the hydrologic-unit number; the distance and direction from a geographic point of reference; and the owner's name.

AQUIFER.--This entry describes the aquifer by age and composition.

WELL CHARACTERISTICS.--This entry describes the well in terms of depth, diameter, casing depth and (or) screened interval, method of construction, use, and additional information such as casing breaks, collapsed screen, and other changes since construction.

DATUM.--This entry describes both the measuring point and the land-surface altitude at the well. The measuring point is described physically (such as top of collar, notch in top of casing, plug in pump base, and so on), and in relation to land surface (such as 1.3 ft above land-surface datum). The altitude of the land-surface datum (LSD) is described in feet above (or below) National Geodetic Vertical Datum of 1929 (NGVD of 1929); it is reported with a precision depending on the method of determination.

REMARKS.--This entry describes factors that may influence the water level in a well or the measurement of the water level. It should identify wells that are also water-quality observation wells, and may be used to acknowledge the assistance of local (non-Survey) observers.

PERIOD OF PUBLISHED RECORD.--This entry indicates the period for which there are published records for the well. It reports the month and year of the start of publication of water level records by the U.S. Geological Survey or cooperating agency, and the words "to current year" if the records are to be continued to the following year. Periods for which water-level records are available, but not published by the Survey, may be noted.

EXTREMES FOR PERIOD OF PUBLISHED RECORD.--This entry contains the highest and lowest water levels of the period of published record, with respect to land-surface datum (LSD), and the dates of their occurrence.

A table of water levels follows the station description for each well. Water levels are reported in feet below (or above) land-surface datum. All periodic measurements of water levels for wells are listed. For wells equipped with recorders, daily water-level lows are published. The highest and lowest daily water levels of the water year are shown on a line below the table. Because only daily lows are published for wells with recorders, the extreme instantaneous high may be a value that is not listed in the table. Missing records are indicated by dashes in place of the water level.

Records of Ground-Water Quality

Records of ground-water quality in this report differ from other types of records in that, for most sampling sites, they consist of only one set of measurements. The quality of ground water ordinarily changes slowly, so that frequent measuring of the same parameter is not necessary unless one is concerned with a particular problem such as monitoring for trends of a particular constituent.

Data Collection and Computation

The records of ground-water quality in this report were obtained mostly as part of special studies in specific areas. Consequently, a number of chemical analyses are presented for some counties but none are presented for others. As a result, the records for this year, by themselves, do not provide a balanced view of ground-water quality statewide. Such a view can be attained only by considering records for this year in context with similar records obtained for these and other counties in earlier years.

Most methods for collecting and analyzing water samples are described in the TWRI manuals listed on p. 21-22. The data presented in this report represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. All samples were obtained by trained personnel. The wells sampled were pumped long enough to assure that the water collected came directly from aquifer and had not stood for a long time in the well casing where it would have been exposed to the atmosphere and the material comprising the casings.

Data Presentation

The records of ground-water quality are published intermixed with the ground-water-level data for network wells and with the specific project for project wells.

ACCESS TO WATSTORE DATA

The National Water Data STorage and REtrieval System (WATSTORE) was established for handling water data collected through the activities of the U.S. Geological Survey and to provide for more effective and efficient means of releasing the data to the public. The system is operated and maintained on the central computer facilities of the Survey at its National Center in Reston, VA.

WATSTORE can provide a variety of useful products ranging from simple data tables to complex statistical analyses. A minimal fee, plus the actual computer cost incurred in producing a desired product, is charged to the requester. Information about the availability of specific types of data, the acquisition of data or products, and user charges can be obtained locally from each of the Water Resources Division's District offices. (See address given on the back of the title page.)

General inquiries about WATSTORE may be directed to:

Chief Hydrologist
U.S. Geological Survey
437 National Center
Reston, VA 22092

DEFINITION OF TERMS

Terms related to streamflow, water quality, and other hydrologic data, as used in this report, are defined below. See also the table for converting inch-pound units to International System of units (SI) on the inside of the back cover.

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot, and is equivalent to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Adenosine triphosphate (ATP) is an organic, phosphate-rich, compound important in the transfer of energy in organisms. Its central role in living cells makes it an excellent indicator of the presence of living material in water. A measure of ATP therefore provides a sensitive and rapid estimate of biomass. ATP is reported in micrograms per liter of the original water sample.

Algae are mostly aquatic single-celled, colonial, or multicelled plants, containing chlorophyll and lacking roots, stems, and leaves.

Algal growth potential (AGP) is the maximum dry weight biomass that can be produced in a natural water sample under standardized laboratory conditions. The growth potential is the algal biomass present at stationary phase and is expressed as milligrams dry weight of algae produced per liter of sample.

Aquifer is a geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield reasonable quantities of water to wells and springs.

Artesian means confined, and is used to describe a well in which the water level stands above the top of the aquifer tapped by the well. A flowing artesian well is one in which the water level is above the land surface.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, others perform an essential role in nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria that ferment lactose with gas formation within 48 hours at 35 °C. In the laboratory, these bacteria are defined as the organisms that produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35 °C + 1.0 °C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal coliform bacteria are bacteria that are present in the intestine or feces of warm-blooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory, they are defined as all organisms that produce blue colonies within 24 hours when incubated at 44.5 °C + 0.2 °C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal streptococcal bacteria are bacteria found also in intestine of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, cocci bacteria that are capable of growth in brain-heart infusion broth. In the laboratory, they are defined as all the organisms that produce red or pink colonies within 48 hours at 35 °C + 1.0 °C on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Bed material is the unconsolidated material of which a streambed, lake, pond, reservoir, or estuary bottom is composed.

Biochemical oxygen demand (BOD) is a measure of the quantity of dissolved oxygen, in milligrams per liter, necessary for the decomposition of organic matter by microorganisms, such as bacteria.

Biomass is the amount of living matter present at any given time, expressed as the mass per unit area or volume of habitat.

Ash mass is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500 °C for 1 hour. The ash mass values of zooplankton and phytoplankton are expressed in grams per cubic meter (g/m^3), and periphyton and benthic organisms in grams per square meter (g/m^2).

Dry mass refers to the mass of residue present after drying in an oven at 105 °C for zooplankton and periphyton, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry-mass values are expressed in the same units as ash mass.

Organic mass or volatile mass of the living substance is the difference between the dry mass and the ash mass and represents the actual mass of the living matter. The organic mass is expressed in the same units as for ash and dry mass.

Wet mass is the mass of living matter plus contained water.

Bottom material: See Bed material.

Cells/volume refers to the number of cells of any organism, which is counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per sample, usually milliliters (mL) or liters (L).

Cfs-day is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, about 646,000 gallons, or 2,447 cubic meters.

Chemical oxygen demand (COD) is a measure of the chemically oxidizable material in the water and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with natural water color or with carbonaceous organic pollution from sewage or industrial wastes.

Chlorophyll refers to the green pigments of plants. Chlorophyll a and b are the two most common pigments in plants.

Color unit is produced by one milligram per liter of platinum in the form of the chloroplatinate ion. Color is expressed in units of the platinum-cobalt scale.

Contents is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

Control designates a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural constriction of the channel, an artificial structure, or a uniform cross section over a long reach of the channel.

Control structure as used in this report is a structure on a stream or canal that is used to regulate the flow or stage of the stream or to prevent the intrusion of salt water.

Cubic foot per second (cfs, ft³/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to approximately 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

Cubic feet per second per square mile (CFSM) is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming that the runoff is distributed uniformly in time and area.

Discharge is the volume of water (or more broadly, volume of fluid plus suspended sediment), that passes a given point within a given period of time.

Mean discharge (MEAN) is the arithmetic mean of individual daily mean discharges during a specific period.

Instantaneous discharge is the discharge at a particular instant of time.

Dissolved: That material in a representative water sample that passes through a 0.45-micrometer membrane filter. This is a convenient operational definition used by Federal agencies that collect water data. Determinations of "dissolved" constituents are made on subsamples of the filtrate.

Dissolved solids concentration of water is determined either analytically by the "residue-on-evaporation" method, or mathematically by totalling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination of dissolved solids, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. Therefore, in the mathematical calculation of dissolved-solids concentration, the bicarbonate value, in milligrams per liter, is multiplied by 0.492 to reflect the change.

Drainage area of a stream at a specific location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the stream above the specified point. Figures of drainage area given herein include all closed basins, or noncontribution areas, within the area unless otherwise noted.

Drainage basin is a part of the surface of the earth that is occupied by a drainage system, which consists of a surface stream or a body of impounded surface water together with all tributary surface stream and bodies of impounded surface water.

Gage height (G.H.) is the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the more general term "stage," although gage height is more appropriate when used with a reading on a gage.

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of hydrologic data are obtained.

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as the equivalent concentration of calcium carbonate (CaCO_3).

Hydrologic Bench-Mark Station is one that provides hydrologic data for a basin in which the hydrologic regimen will likely be governed solely by natural conditions. Data collected at a bench-mark station may be used to separate effects of natural from manmade changes in other basins which have been developed and in which the physiography, climate, and geology are similar to those in the undeveloped bench-mark basin.

Hydrologic Index Stations, in this report, refers to four continuous record gaging stations that have been selected as representative of streamflow patterns for their respective regions of Ohio. Station locations are shown in figure 1.

Hydrologic unit is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as delineated by the Office of Water Data Coordination on the State Hydrologic Unit Maps; each hydrologic unit is identified by an 8-digit number.

Measuring point (MP) is an arbitrary permanent reference point from which the distance to the water surface in a well is measured to obtain the water level.

Metamorphic stage refers to the stage of development that an organism exhibits during its transformation from an immature form to an adult form. This developmental process exists for most insects, and the degree of difference from the immature stage to the adult form varies from relatively slight to pronounced, with many intermediates. Examples of metamorphic stages of insects are egg-larva-adult or egg-nymph-adult.

Methylene blue active substance (MBAS) is a measure of apparent detergents. This determination depends on the formation of a blue color when methylene blue dye reacts with synthetic anionic detergent compounds.

Micrograms per gram (UG/G, ug/g) is a unit expressing the concentration of a chemical element as the mass (micrograms) of the element sorbed per unit mass (gram) of sediment.

Microgram per kilogram (UG/KG, ug/kg) is a unit expressing the concentration of a chemical element as the mass (micrograms) of the element sorbed per unit mass (kilogram) of bottom material.

Micrograms per liter (UG/L, ug/L) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

Milligrams per liter (MG/L, mg/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represent the mass of solute per unit volume (liter) of water. Concentration of suspended sediment also is expressed in mg/L, and is based on the mass of dry sediment per liter of water-sediment mixture.

National Geodetic Vertical Datum of 1929 (NGVD of 1929) is a geodetic datum derived from a general adjustment of the first order level nets of both the United States and Canada. It was formerly called "Sea Level Datum of 1929" or "mean sea level" in this series of reports. Although the datum was derived from the average sea level over a period of many years at 26 tide stations along the Atlantic, Gulf of Mexico, and Pacific Coasts, it does not necessarily represent local mean sea level at any particular place.

National Stream-Quality Accounting Network (NASQAN) is a data-collection network designed by the U.S. Geological Survey to meet many of the information demands of agencies or groups involved in national or regional water-quality planning and management. Both accounting and broad-scale monitoring objectives have been incorporated into the network design. Areal configuration of the network is based on river-basin accounting units (identified by 8-digit hydrologic-unit numbers) designated by the Office of Water Data Coordination in consultation with the Water Resources Council. Primary objectives of the network are (1) to depict areal variability of streamflow and water-quality conditions nationwide on a year-by-year basis and (2) to detect and assess long-term changes in streamflow and stream quality.

Organism is any living entity, such as an insect, phytoplankter, or zooplankter.

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per unit area habitat, usually square meters (m^2), acres, or hectares. Periphyton benthic organisms and macrophytes are expressed in these terms.

Organism count/volume refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually milliliters (mL) or liters (L). Numbers of planktonic organisms can be expressed in these terms.

Total organism count is the total number of organisms collected and enumerated in any particular sample.

Parameter code is a 5-digit number used in the U.S Geological Survey computerized data system, WATSTORE, to uniquely identify a specific constituent. The codes used in WATSTORE are the same as those used in the U.S. Environmental Protection Agency data system, STORET. The Environmental Protection Agency assigns and approves all requests for new codes.

Partial-record station is a particular site where limited streamflow and (or) water-quality data are collected systematically over a period of years for use in hydrologic analyses.

Particle size is the diameter, in millimeters (mm), of suspended sediment or bed material determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

Particle-size classification used in this report agrees with recommendations made by the American Geophysical Union Subcommittee on Sediment Terminology.

The classification is as follows:

<u>Classification</u>	<u>Size (mm)</u>	<u>Method of analysis</u>
Clay.....	0.00024 - 0.004	Sedimentation.
Silt.....	0.004 - 0.062	Sedimentation.
Sand.....	0.062 - 2.0	Sedimentation or sieve.
Gravel.....	2.0 - 64.0	Sieve.

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic material is removed and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native-water analysis.

Percent composition is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population in terms of types, number, mass, or volume.

Periphyton is the assemblage of microorganisms attached to and growing upon solid surfaces. While primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms. Periphyton is a useful indicator of water quality.

Pesticide program is a network of regularly sampled water-quality stations where samples are collected to determine the concentration and distribution of pesticides in streams where potential contamination could result from the application of commonly used insecticides and herbicides. Operation of the network is a Federal interagency activity.

Pesticides are chemical compounds used to control undesirable plants and animals. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides. Insecticides and herbicides, which control insects and plants respectively, are the two categories reported.

Picocurie (PCI, pCi) is one trillionth (1×10^{-12}) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields 3.7×10^{10} radioactive disintegrations per second. A picocurie yields 2.22 dpm (disintegrations per minute).

Plankton is the community of suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers.

Phytoplankton is the plant part of the plankton. They are usually microscopic and their movement is subject to the water currents. Phytoplankton growth is dependent upon solar radiation and nutrient substances. Because they are able to incorporate as well as release materials to the surrounding water, the phytoplankton have a profound effect upon the quality of the water. They are the primary food producers in the aquatic environment, and are commonly known as algae.

Blue-green algae are a group of phytoplankton organisms having a blue pigment, in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water.

Diatoms are the unicellular or colonial algae having a siliceous shell. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample.

Green algae have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algae mats or floating "moss" in lakes. Their concentrations are expressed as number of cells per millimeter (cells/mm) of sample.

Zooplankton is the animal part of the plankton. Zooplankton are capable of extensive movement within the water column and are often large enough to be seen with the unaided eye. Zooplankton are secondary consumers feeding upon bacteria, phytoplankton, and detritus. Because they are the grazers in the aquatic environment, the zooplankton are a vital part of the aquatic food web. The zooplankton community is dominated by small crustaceans and rotifers.

Primary productivity is a measure of the rate at which new organic matter is formed and accumulated through photosynthetic and chemosynthetic activity of producer organisms (chiefly, green plants). The rate of primary production is estimated by measuring the amount of oxygen released (oxygen method) or the amount of carbon assimilated by the plants (carbon method).

Milligrams of carbon per area or volume per unit time [$\text{mg C}/(\text{m}^2/\text{time})$] for periphyton and macrophytes and [$\text{mg C}/(\text{m}^3/\text{time})$] for phytoplankton are units for expressing primary productivity. They define the amount of carbon dioxide consumed as measured by radioactive carbon (carbon 14). The carbon 14 method is of greater sensitivity than the oxygen light and dark bottle method, and is preferred for use in unenriched waters. Unit time may be either the hour or day, depending on the incubation period.

Milligrams of oxygen per area or volume per unit time [$\text{mg O}_2/(\text{m}^2/\text{time})$] for periphyton and macrophytes and [$\text{mg O}_2/(\text{m}^3/\text{time})$] for phytoplankton are the units for expressing primary productivity. They define production and respiration rates as estimated from changes in the measured dissolved oxygen concentration. The oxygen light and dark bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period.

Radiochemical program is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drain-age basins in the conterminous United States.

Recoverable from bottom material.--The amount of a given constituent that is in solution after a representative sample of bottom material has been digested by a method (usually using an acid or mixture of acids) that results in dissolution of only readily soluble substances. Complete dissolution of all bottom material is not achieved by the digestion treatment, thus, the determination represents less than the total amount (that is, less than 95 percent) of the constituent in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Return period is the average time interval between occurrences of a hydrological event of a given or greater magnitude, usually expressed in years. May also be called recurrence interval.

Runoff in inches (IN., in.) shows the depth to which the drainage area would be covered if all the runoff for a given time period were uniformly distributed on it.

Sediment is solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

Bed load is the sediment that is transported in a stream by rolling, sliding, or skipping along the bed and very close to it. In this report, bed load is considered to consist of particles in transit within 0.25 ft of the streambed.

Bed-load discharge (tons per day) is the quantity of bed load measured by dry weight that moves past a section as bed load in a given time.

Suspended sediment is the sediment that at any given time is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 ft above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L).

Suspended-sediment discharge (tons/day) is the rate at which dry weight of sediment passes a section of a stream or is the quantity of sediment, as measured by dry weight or volume, that passes a section in a given time. It is computed by multiplying discharge times mg/L times 0.0027.

Suspended-sediment load is the quantity of suspended sediment passing a section in a specified period.

Total sediment discharge (tons/day) is the sum of the suspended-sediment discharge and the bed-load discharge. It is the total quantity of sediment, as measured by dry weight or volume, that passes a section during a given time.

Mean concentration is the time-weighted concentration of suspended sediment passing a stream section during a 24-hour day.

7-day, 10-year low flow ($7Q_{10}$) is the discharge at the 10-year recurrence interval taken from a frequency curve of annual values of the lowest mean discharge for 7 consecutive days (the 7-day low flow).

Sodium-adsorption-ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions within soil and is an index of sodium or alkali hazard to the soil. Waters range in respect to sodium hazard from those which can be used for irrigation on almost all soils to those which are generally unsatisfactory for irrigation.

Solute is any substance derived from the atmosphere, vegetation, soil, or rocks that is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current. It is expressed in microsiemens per centimeter at 25°C. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in microsiemens). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

Stage-discharge relation is the relation between gage height (stage) and volume of water, per unit of time, flowing in a channel.

Streamflow is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to the flow of a canal, the word "streamflow" uniquely describes the discharge in a surface stream course. The term "streamflow" is more general than "runoff" as streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Substrate is the physical surface upon which an organism lives.

Natural substrate refers to any naturally occurring emerged or submersed solid surface, such as a rock or tree, upon which an organism lives.

Artificial substrate is a device which is purposely placed in a stream or lake for colonization of organisms. The artificial substrate simplifies the community structure by standardizing the substrate from which each sample is taken. Examples of artificial substrate are basket samplers (made of wire cages filled with clean streamsize rocks) and multiplate samplers (made of hardboard) for benthic-organism collection, and plexiglass strips for periphyton.

Surface area of a lake is that area outlined on the latest USGS topographic map as the boundary of the lake and measured by a planimeter in acres. In localities not covered by topographic maps, the areas are computed from the best maps available at the time planimeted. All areas shown are those for the stage when the planimeted map was made.

Surficial bed material is the part (0.1 to 0.2 ft) of the bed material that is sampled using U.S. Series Bed-Material Samplers.

Suspended (as used in tables of chemical analyses) refers to the amount (concentration) of the total concentration in a water-sediment mixture. The water-sediment mixture is associated with (or sorbed on) that material retained on a 0.45-micrometer filter.

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45-micrometer membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Determinations of "suspended, recoverable" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total recoverable concentrations of the constituent.

Suspended, total is the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45-micrometer membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total."

Determinations of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituent.

Taxonomy is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon hierarchical scheme beginning with Kingdom and ending with Species at the base. The higher the classification level, the fewer features the organisms

WATER RESOURCES DATA FOR OHIO, 1989

have in common. For example, the taxonomy of a particular mayfly, *Hexagenia limbata*, is the following:

Kingdom.....Animal
Phylum.....Arthropoda
Class.....Insecta
Order.....Ephemeroptera
Family.....Ephemeridae
Genus.....Hexagenia
Species.....Hexagenia limbata

Thermograph is an instrument that continuously records variations of temperature on a chart. The more general term "temperature recorder" is used in the table headings and refers to any instrument that records temperature whether on a chart, a tape, or any other medium.

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the year.

Tons per acre-foot indicates the dry mass of dissolved solids in 1 acre-foot of water. It is computed by multiplying the concentration of the constituent, in milligrams per liter, by 0.00136.

Tons per day (T/DAY) is the quantity of substance in solution or suspension that passes a stream section during a 24-hour day.

Total is the total amount of a given constituent in a representative water-suspended sediment sample, regardless of the constituent's physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total." (Note that the word "total" does double duty here, indicating both that the sample consists of a water-suspended sediment mixture and that the analytical method determines all of the constituent in the sample.)

Total in bottom material is the total amount of a given constituent in a representative sample of bottom material. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total in bottom material."

Total discharge is the total quantity of any individual constituent, as measured by dry mass or volume, that passes through a stream cross-section per unit of time. This term needs to be qualified, such as "total sediment discharge," "total chloride discharge," and so on.

Total load (tons) is the total quantity of any individual constituent, as measured by dry mass or volume, that is dissolved in a specific amount of water (discharge) during a given time. It is computed by multiplying the total discharge, times the mg/L of the constituent, times the factor 0.0027, times the number of days.

Total recoverable is the amount of a given constituent that is in solution after a representative water-suspended sediment sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Water year in Geological Survey reports dealing with surface-water supply is the 12-month period, October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 1980, is called the "1980 water year."

WDR is used as an abbreviation for "Water-Data Report" in the REVISED RECORDS paragraph to refer to State annual basic-data reports published after 1975.

Weighted average is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir.

WRD is used as an abbreviation for "Water-Resources Data" in the REVISED RECORDS paragraph to refer to State annual basic-data reports published before 1975.

WSP is used as an abbreviation for "Water-Supply Paper" in references to previously published reports.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

The U.S. Geological Survey publishes a series of manuals describing procedures for planning and conducting specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) pertains to surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises.

The reports listed below are for sale by the U.S. Geological Survey, Books and Open-File Reports Section, Federal Center, Box 25425, Denver, Colorado 80225 (authorized agent of the Superintendent of Documents, Government Printing Office). Prepayment is required. Remittance should be sent by check or money order payable to the U.S. Geological Survey. Prices are not included because they are subject to change. Current prices can be obtained by writing to the above address. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations."

- 1-D1. *Water temperature--influential factors, field measurement, and data presentation*, by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.
- 1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W. W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.
- 2-D1. *Application of surface geophysics to ground-water investigations*, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.
- 2-D2. *Application of seismic-refraction techniques to hydrologic studies*, by F. P. Haeni: USGS--TWRI Book 2, Chapter D2. 1988. 86 pages.
- 2-E1. *Application of borehole geophysics to water-resources investigations*, by W. S. Keys and L. M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages.
- 2-F1. *Application of drilling, coring, and sampling techniques to test holes and wells*, by Eugene Shuter and Warren E. Teasdale: USGS--TWRI Book 2, Chapter F1. 1989. 97 pages.
- 3-A1. *General field and office procedures for indirect discharge measurements*, by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages.
- 3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.
- 3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages.
- 3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H. F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages.
- 3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages.
- 3-A6. *General procedure for gaging streams*, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages.
- 3-A7. *Stage measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages.
- 3-A8. *Discharge measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages.
- 3-A9. *Measurement of time of travel in streams by dye tracing*, by F. A. Kilpatrick and J. F. Wilson, Jr.: USGS--TWRI Book 3, Chapter A9. 1989. 27 pages.
- 3-A10. *Discharge ratings at gaging stations*, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A10. 1984. 59 pages.
- 3-A11. *Measurement of discharge by moving-boat method*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages.
- 3-A12. *Fluorometric procedures for dye tracing*, by J. F. Wilson, Jr., E. D. Cobb, and F. A. Kilpatrick: USGS--TWRI Book 3, Chapter A12. 1986. 41 pages.
- 3-A13. *Computation of continuous records of streamflow*, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A13. 1983. 53 pages.
- 3-A14. *Use of flumes in measuring discharge*, by F. A. Kilpatrick and V. R. Schneider: USGS--TWRI Book 3, Chapter A14. 1983. 46 pages.
- 3-A15. *Computation of water-surface profiles in open channels*, by Jacob Davidian: USGS--TWRI Book 3, Chapter A15. 1984. 48 pages.
- 3-A16. *Measurement of discharge using tracers*, by F. A. Kilpatrick and E. D. Cobb: USGS--TWRI Book 3, Chapter A16. 1985. 52 pages.
- 3-A17. *Acoustic velocity meter systems*, by Antonius Laenen: USGS--TWRI Book 3, Chapter A17. 1985. 38 pages.
- 3-A18. *Determination of stream reaeration coefficients by use of tracers*, by F. A. Kilpatrick, R. E. Rathbun, N. Yotsukura, G. W. Parker, and L. L. DeLong: USGS--TWRI Book 3, Chapter A18. 1989. 52 pages.

- 3-B1. *Aquifer-test design, observation, and data analysis*, by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages.
- 3-B2. *Introduction to ground-water hydraulics, a programmed text for self-instruction*, by G. D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.
- 3-B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J. E. Reed: USGS--TWRI Book 3, Chapter B3. 1980. 106 pages.
- 3-B5. *Definition of boundary and initial conditions in the analysis of saturated ground-water flow systems--An introduction*, by O. L. Franke, T. E. Reilly, and G. D. Bennett: USGS--TWRI Book 3, Chapter B5. 1987. 15 pages.
- 3-B6. *The principle of superposition and its application in ground-water hydraulics*, by T. E. Reilly, O. L. Franke, and G. D. Bennett: USGS--TWRI Book 3, Chapter B6. 1987. 28 pages.
- 3-C1. *Fluvial sediment concepts*, by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.
- 3-C2. *Field methods for measurement of fluvial sediment*, by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages.
- 3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages.
- 4-A1. *Some statistical tools in hydrology*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages.
- 4-A2. *Frequency curves*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages.
- 4-B1. *Low-flow investigations*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages.
- 4-B2. *Storage analyses for water supply*, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages.
- 4-B3. *Regional analyses of streamflow characteristics*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages.
- 4-D1. *Computation of rate and volume of stream depletion by wells*, by C. T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages.
- 5-A1. *Methods for determination of inorganic substances in water and fluvial sediments*, by M. J. Fishman and L. C. Friedman: USGS--TWRI Book 5, Chapter A1. 1989. 545 pages.
- 5-A2. *Determination of minor elements in water by emission spectroscopy*, by P. R. Barnett and E. C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages.
- 5-A3. *Methods for the determination of organic substances in water and fluvial sediments*, edited by R. L. Wershaw, M. J. Fishman, R. R. Grabbe, and L. E. Lowe: USGS--TWRI Book 5, Chapter A3. 1987. 80 pages.
- 5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples*, by L. J. Britton and P. E. Greeson, editors: USGS--TWRI Book 5, Chapter A4. 1989. 363 pages.
- 5-A5. *Methods for determination of radioactive substances in water and fluvial sediments*, by L. L. Thatcher, V. J. Janzer, and K. W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages.
- 5-A6. *Quality assurance practices for the chemical and biological analyses of water and fluvial sediments*, by L. C. Friedman and D. E. Erdmann: USGS--TWRI Book 5, Chapter A6. 1982. 181 pages.
- 5-C1. *Laboratory theory and methods for sediment analysis*, by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages.
- 6-A1. *A modular three-dimensional finite-difference ground-water flow model*, by M. G. McDonald and A. W. Harbaugh: USGS--TWRI Book 6, Chapter A1. 1988. 586 pages.
- 7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P. C. Trescott, G. F. Pinder, and S. P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages.
- 7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L. F. Konikow and J. D. Bredehoeft: USGS--TWRI Book 7, Chapter C2. 1978. 90 pages.
- 7-C3. *A model for simulation of flow in singular and interconnected channels*, by R. W. Schaffranek, R. A. Baltzer, and D. E. Goldberg: USGS--TWRI Book 7, Chapter C3. 1981. 110 pages.
- 8-A1. *Methods of measuring water levels in deep wells*, by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages.
- 8-A2. *Installation and service manual for U.S. Geological Survey manometers*, by J. D. Craig: USGS--TWRI Book 8, Chapter A2. 1983. 57 pages.
- 8-B2. *Calibration and maintenance of vertical-axis type current meters*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages.

WATER RESOURCES DATA FOR OHIO, 1989

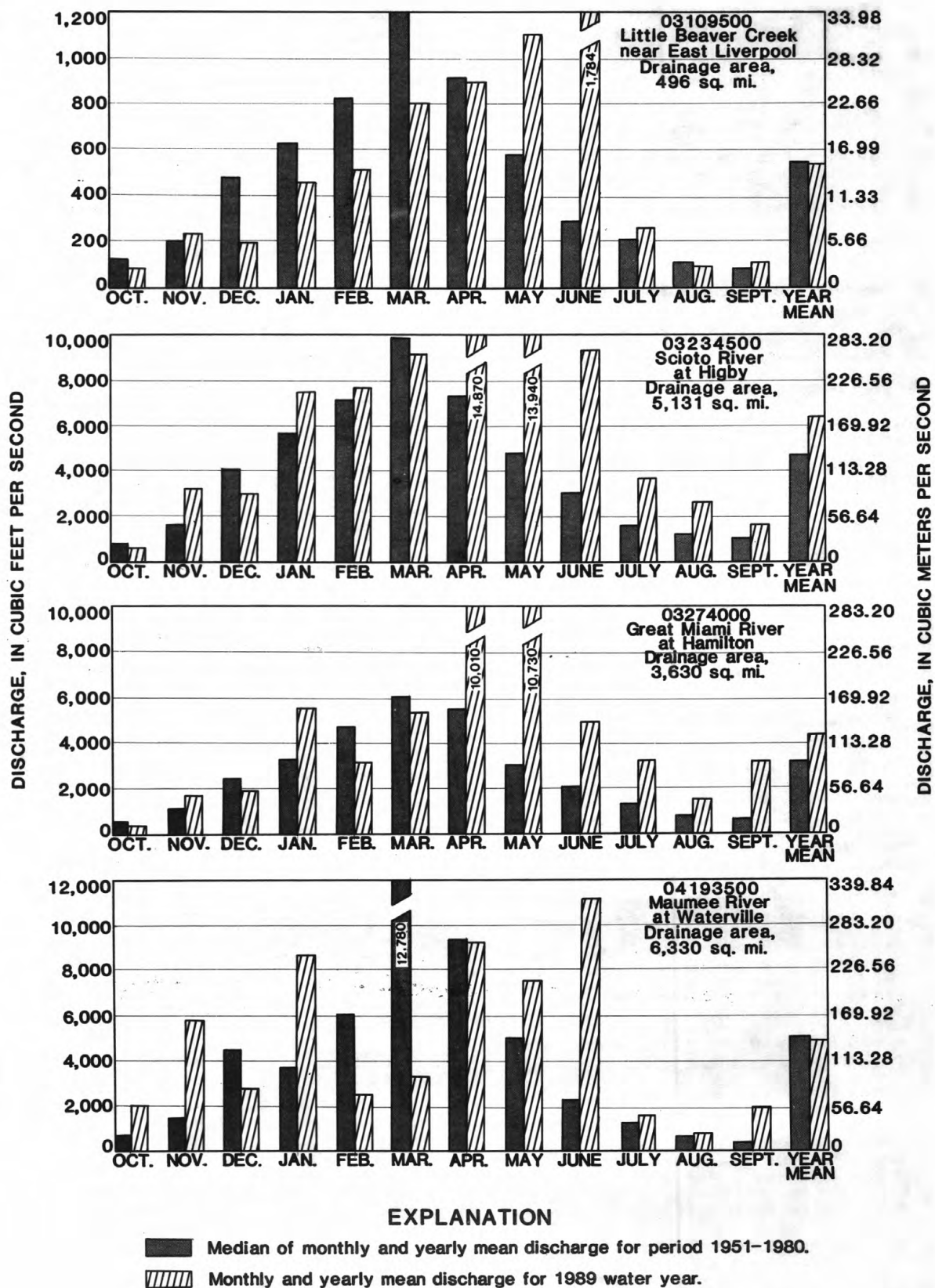


Figure 7.—Runoff during 1989 water year compared with median runoff for period 1951-1980 for four representative gaging stations.

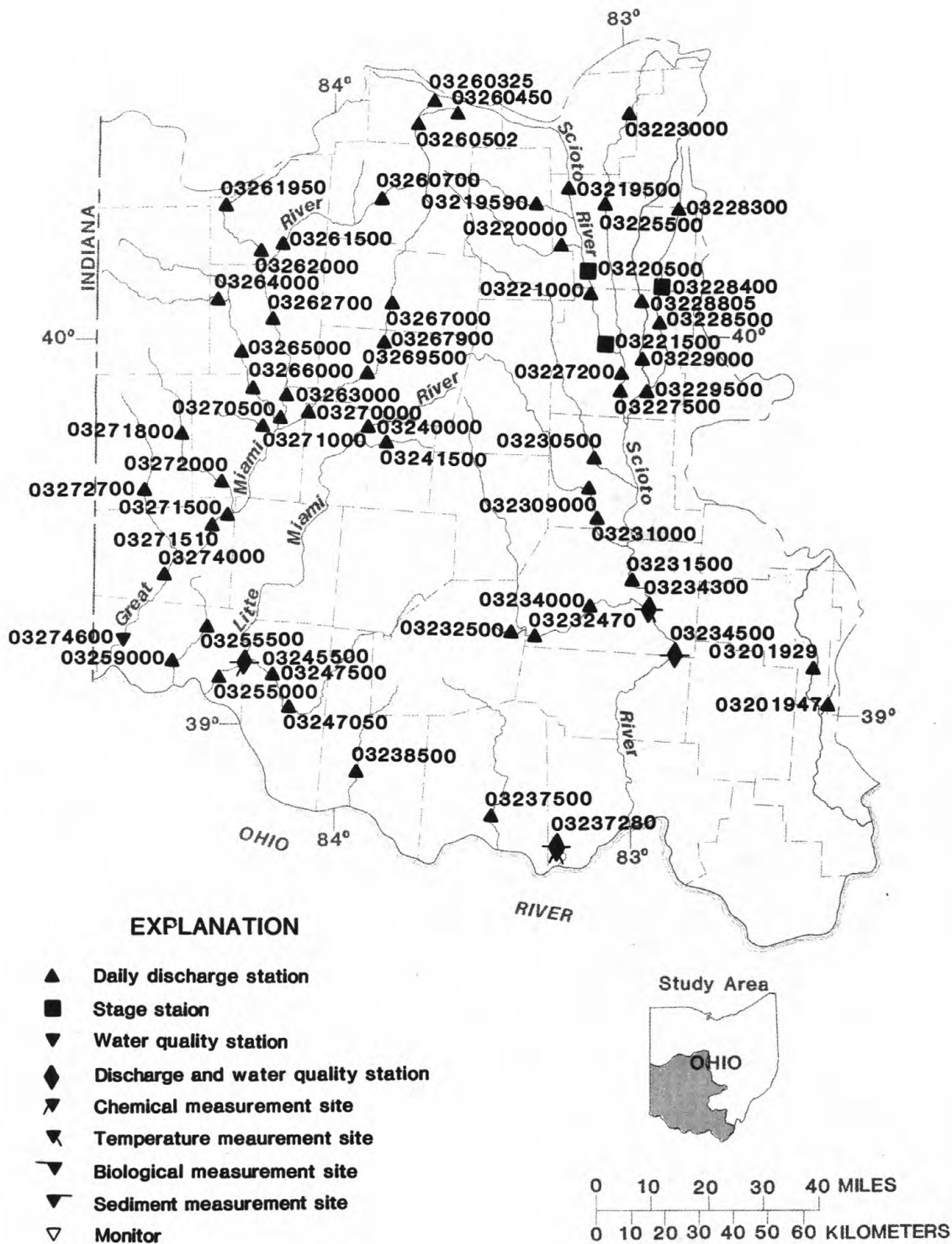


Figure 8a.—Location of data-collection stations.

WATER RESOURCES DATA FOR OHIO, 1989

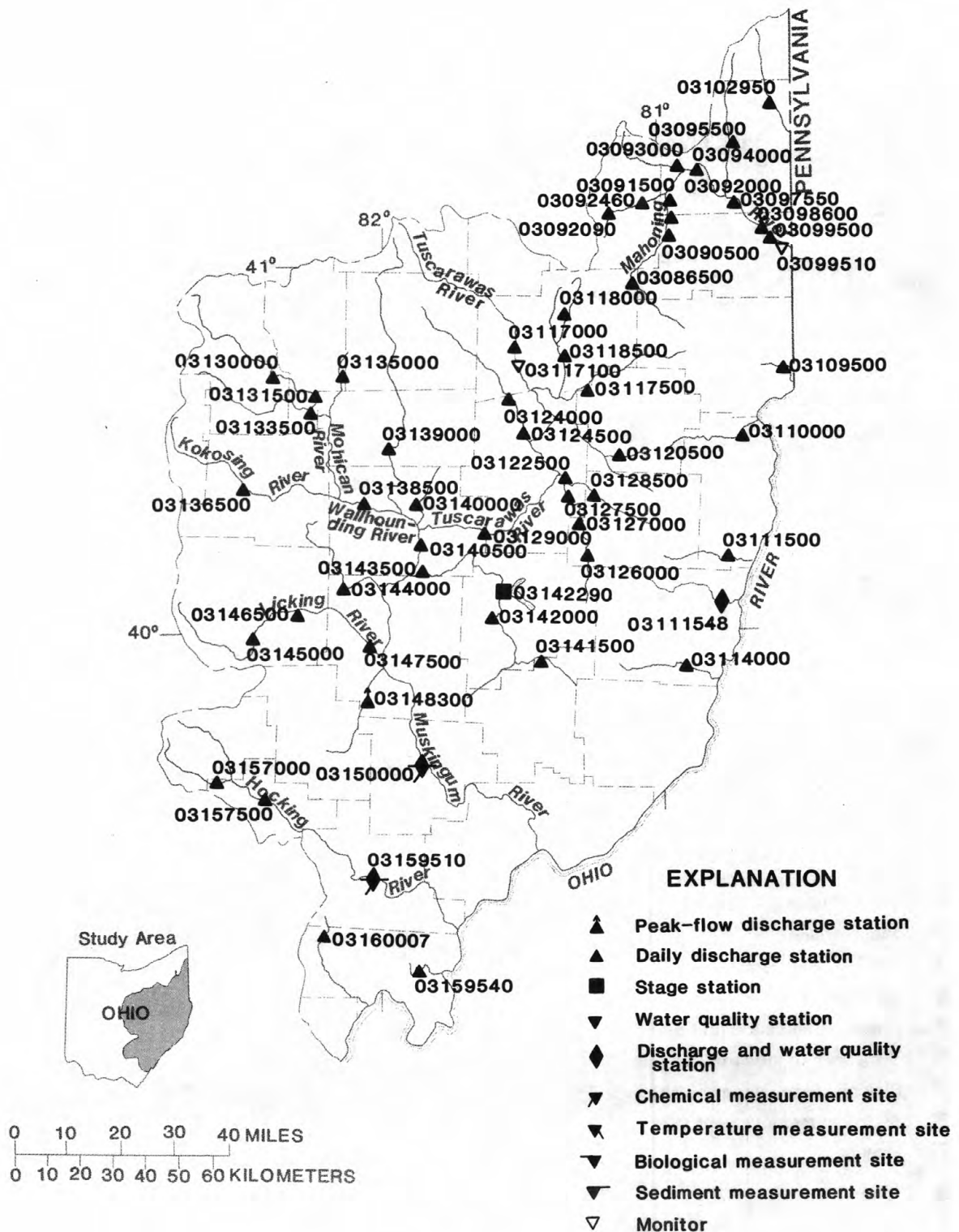


Figure 8b.—Location of data-collection stations including crest-stage sites.

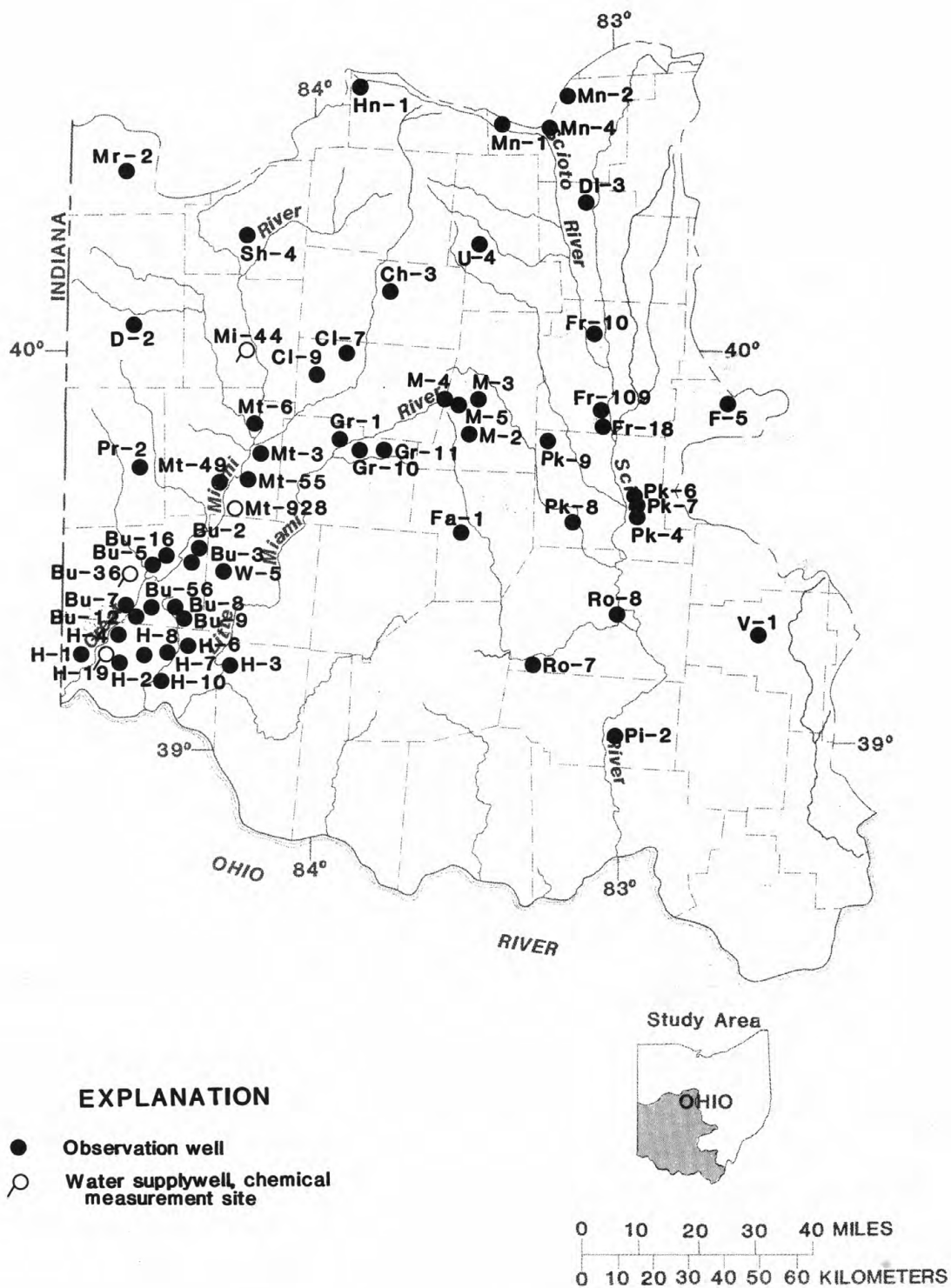


Figure 8c.—Location of wells.

WATER RESOURCES DATA FOR OHIO, 1989

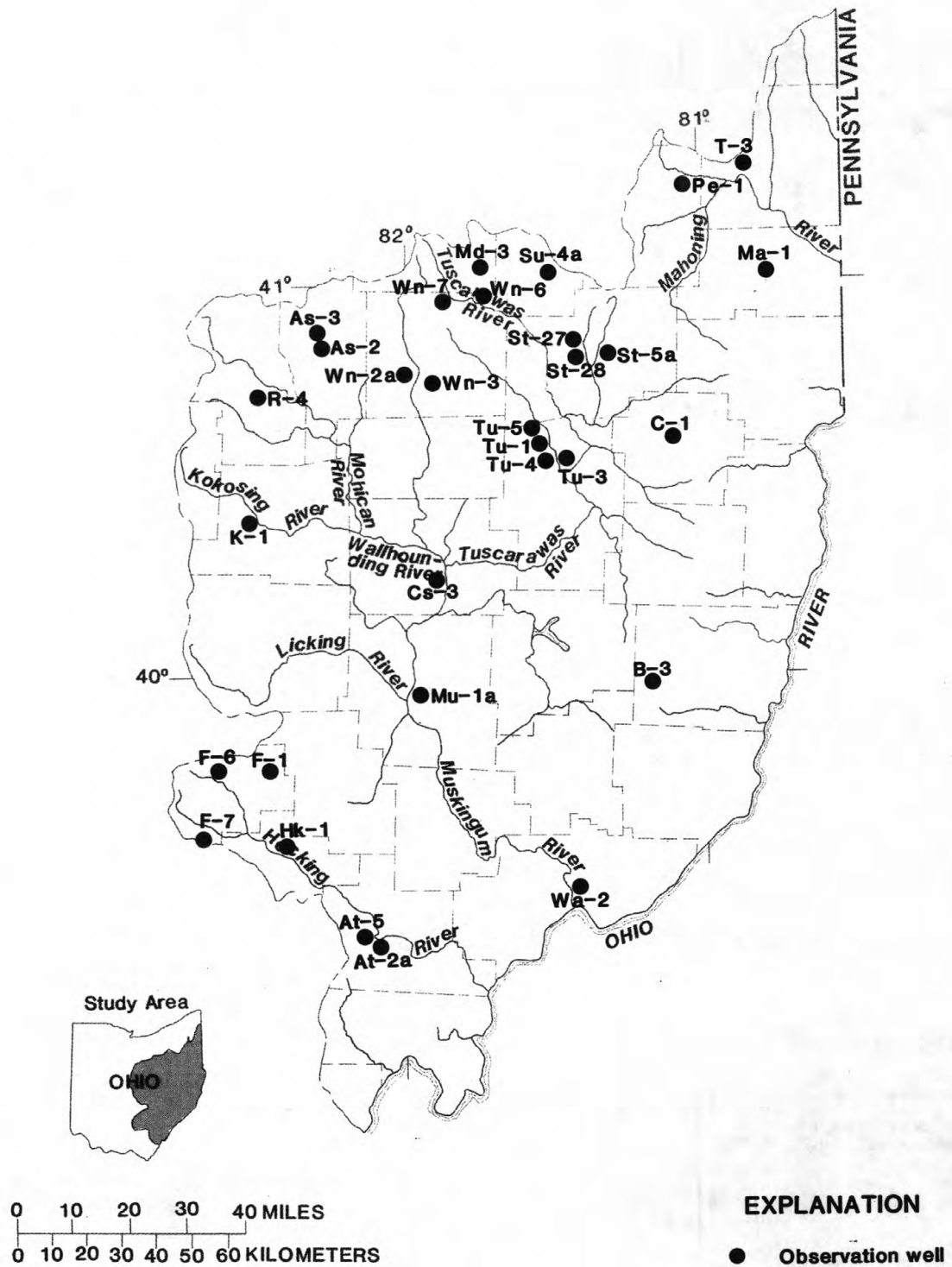


Figure 8d.—Location of wells.

HYDROLOGIC-DATA STATION RECORDS

33

OHIO RIVER BASIN

BEAVER RIVER BASIN

03086500 MAHONING RIVER AT ALLIANCE, OH

LOCATION.--Lat 40°55'58", long 81°05'41", in SE 1/4 sec. 24, T.19 N., R.6 W., Stark County, Hydrologic Unit 05030103, on right bank 15 ft upstream from Webb Avenue Bridge in Alliance, 0.2 mi upstream from waterworks dam, and 4 mi upstream from Beech Creek.

DRAINAGE AREA.--89.2 mi².

PERIOD OF RECORD.--August 1941 to current year.

REVISED RECORDS.--WSP 1907: Drainage area.

GAGE.--Water-stage recorder and concrete dam. Datum of gage is 1,037.3 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Feb. 8-13. Records fair except those for periods of estimated record which are poor. Flow slightly regulated by Westville Reservoir 9.3 mi upstream from station. Water-quality data collected at this site 1965 to 1977.

AVERAGE DISCHARGE.--48 years, 90.2 ft³/s, 13.74 in/yr, unadjusted for diversion 1941-55.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,740 ft³/s Jan. 21, 1959, gage height, 9.11 ft, from rating curve extended above 3,300 ft³/s on basis of computation of peak flow over dam; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 900 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 4	1900	1,210	3.65	June 22	2000	*2,270	*4.87
June 15	0500	1,550	4.11				

Minimum daily discharge, 0 ft³/s Aug. 17-29, Sept. 3-14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	20	29	47	67	53	574	35	55	59	8.0	1.9
2	16	19	23	41	58	47	442	96	57	43	6.7	.30
3	16	19	22	35	66	47	540	73	66	33	5.4	.00
4	17	112	21	28	65	48	700	53	845	39	6.5	.00
5	17	160	21	24	59	99	527	46	733	70	14	.00
6	17	248	20	50	52	119	230	83	179	45	6.5	.00
7	19	120	17	134	49	73	143	80	99	33	3.9	.00
8	18	102	18	416	42	64	107	79	67	25	3.4	.00
9	18	78	15	339	39	69	95	62	55	21	2.5	.00
10	15	76	14	106	35	77	79	219	60	18	1.7	.00
11	20	102	13	79	33	87	71	489	42	16	2.9	.00
12	19	63	13	84	30	96	62	401	32	9.3	5.5	.00
13	16	96	11	132	28	64	58	235	266	8.7	7.0	.00
14	15	101	13	87	67	57	63	437	888	6.2	5.8	.00
15	14	64	15	110	121	90	54	272	1380	5.5	5.0	17
16	17	47	12	102	168	75	49	473	913	5.0	2.6	43
17	19	38	12	83	95	58	44	316	435	4.4	.0	34
18	22	33	11	72	71	53	44	140	148	3.8	.00	13
19	33	28	11	70	70	51	48	96	91	5.8	.00	9.7
20	29	128	14	73	66	55	41	78	306	7.1	.00	9.9
21	32	267	21	75	425	188	38	85	770	5.4	.00	7.6
22	41	115	22	62	756	106	35	73	1780	5.3	.00	26
23	45	69	28	59	269	71	30	129	1190	5.6	.00	81
24	43	51	57	59	98	61	29	343	300	3.9	.00	26
25	40	41	95	64	78	56	28	146	126	3.0	.00	13
26	31	36	55	95	68	52	29	465	85	6.6	.00	10
27	24	33	35	225	66	46	26	649	93	34	.00	9.7
28	23	36	152	111	57	46	24	189	592	64	.00	15
29	23	37	254	88	---	130	28	100	319	26	.00	18
30	22	31	89	83	---	290	29	76	89	14	2.6	18
31	20	---	66	78	---	414	---	67	---	11	4.3	---
TOTAL	717	2370	1199	3111	3098	2842	4267	6085	12061	636.6	94.30	353.10
MEAN	23.1	79.0	38.7	100	111	91.7	142	196	402	20.5	3.04	11.8
MAX	45	267	254	416	756	414	700	649	1780	70	14	81
MIN	14	19	11	24	28	46	24	35	32	3.0	.00	.00
CFSM	.26	.89	.43	1.13	1.24	1.03	1.59	2.20	4.51	.23	.03	.13
IN.	.30	.99	.50	1.30	1.29	1.19	1.78	2.54	5.03	.27	.04	.15

CAL YR 1988 TOTAL 18798.60 MEAN 51.4 MAX 735 MIN .00 CFSM .58 IN. 7.84
WTR YR 1989 TOTAL 36834.00 MEAN 101 MAX 1780 MIN .00 CFSM 1.13 IN. 15.36

BEAVER RIVER BASIN

03090500 MAHONING RIVER BELOW BERLIN DAM, NEAR BERLIN CENTER, OH

LOCATION.--Lat 41°02'54", long 81°00'05", in T.1 N., R.6 W., Mahoning County, Hydrologic Unit 05030103, on left bank 600 ft downstream from Berlin Dam, and 3.2 mi northwest of Berlin Center.

DRAINAGE AREA.--248 mi².

PERIOD OF RECORD.--October 1930 to current year. Prior to October 1942, published as "near Berlin Center".

REVISED RECORDS.--WSP 743: 1932. WSP 853: 1936. WSP 873: 1932-34, 1935(M), 1936-38. WSP 1907: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 958.00 ft above National Geodetic Vertical Datum of 1929, (levels by U.S. Army Corps of Engineers). Prior to Oct. 1, 1942, at site 1.8 mi upstream at datum 966.15 ft above mean sea level, adjustment of 1912, levels by Mahoning Valley Sanitary District. Oct 1, 1942, to May 11, 1949, at site 200 ft downstream from present site at datum 8.00 ft lower than present datum.

REMARKS.--No estimated daily discharges. Records fair. Flow regulated since 1942 by Berlin Lake. Occasional small diversion during drought periods since 1958 from Berlin Lake to Meander Creek Reservoir, by the Berlin pipeline; diversion not included in figures of daily discharge. Water-quality data collected at this site 1965 to 1977. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--59 years, 238 ft³/s (unadjusted).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,630 ft³/s Jan. 25, 1937 gage height, 10.97 ft, site and datum then in use; no flow at times during 1948-49, 1967, 1970-71.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,310 ft³/s June 26, gage height, 4.59 ft; minimum daily discharge, 39 ft³/s June 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	108	106	212	142	89	106	613	95	490	1270	176	169
2	107	106	212	143	80	106	629	95	702	1250	176	169
3	107	106	212	143	161	106	657	95	756	1220	176	169
4	97	106	212	148	185	106	415	95	771	1200	176	169
5	89	106	212	144	185	107	487	95	864	1180	176	169
6	88	106	210	143	155	110	926	95	942	1010	176	169
7	88	106	208	143	137	85	693	95	928	610	176	169
8	88	106	208	146	140	69	253	131	717	382	176	169
9	88	122	156	146	141	69	146	166	365	325	176	169
10	87	135	124	209	139	70	143	170	196	330	176	169
11	66	135	124	246	141	70	145	172	195	292	176	169
12	52	135	88	248	140	72	145	255	165	265	175	169
13	52	135	63	252	138	72	146	324	137	267	173	169
14	52	135	63	259	138	72	146	325	112	269	173	169
15	55	168	78	248	138	72	146	521	39	269	171	169
16	58	216	83	248	138	73	145	1090	108	270	170	169
17	57	237	67	248	144	71	76	1420	459	234	169	169
18	68	237	87	110	141	71	148	1410	839	197	173	170
19	70	237	101	141	138	72	142	1170	1050	188	173	173
20	70	239	100	135	138	73	142	1020	1130	188	173	173
21	70	363	100	139	142	76	129	1000	654	187	173	173
22	70	511	100	136	348	244	116	610	578	185	171	133
23	70	539	100	101	743	347	116	299	995	184	169	61
24	70	489	100	70	791	320	102	498	1350	184	173	61
25	87	454	100	135	748	197	95	618	1720	184	170	120
26	97	309	81	113	702	135	95	624	2130	182	169	161
27	96	209	68	229	394	132	95	636	1630	180	169	162
28	95	212	89	293	136	91	95	637	980	180	169	162
29	95	212	101	288	---	110	95	630	1340	180	169	169
30	95	212	126	122	---	270	95	35	1370	180	169	200
31	104	---	143	119	---	498	---	557	---	177	169	---
TOTAL	2496	6489	3928	5387	6810	4072	7376	15683	23712	13219	5356	4791
MEAN	80.5	216	127	174	243	131	246	506	790	426	173	160
MAX	108	539	212	293	791	498	926	1420	2130	1270	176	200
MIN	52	106	63	70	80	69	76	95	39	177	169	61

CAL YR 1988 TOTAL 52360 MEAN 143 MAX 539 MIN 37
WTR YR 1989 TOTAL 99319 MEAN 272 MAX 2130 MIN 39

BEAVER RIVER BASIN

35

03091500 MAHONING RIVER AT PRICETOWN, OH

LOCATION.--Lat 41°07'53", long 80°58'17", in T.2 N., R.5 W., Mahoning County, Hydrologic Unit 05030103, on left bank 0.3 mi downstream from Milton Dam, 0.5 mi southwest of Pricetown, and 3 mi upstream from Kale Creek.

DRAINAGE AREA.--273 mi².

PERIOD OF RECORD.--July 1929 to current year.

REVISED RECORDS.--WSP 728: 1930(M). WSP 1907: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 905.00 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 14, 1929 nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Feb. 8-10. Records good. Flow regulated by Berlin Lake beginning 1942 and Milton Reservoir. Diversion upstream from station from Berlin Lake for part of municipal supply of Mahoning Valley Sanitary District. Water-quality data collected at this site 1965 to 1977.

AVERAGE DISCHARGE.--60 years, 261 ft³/s (unadjusted).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,770 ft³/s Jan. 25, 1937, gage height, 15.01 ft, from rating curve extended above 4,200 ft³/s on basis of velocity-area studies; minimum daily, 0.4 ft³/s Nov. 9, 1941, Feb. 19, 20, Oct. 11, 1945.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,440 ft³/s June 26, gage height, 7.78 ft; minimum daily discharge, 21 ft³/s Mar. 17-27.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	126	88	265	182	268	90	26	114	821	1580	170	160
2	126	88	265	182	268	90	26	115	847	1530	171	160
3	108	90	265	182	268	90	206	115	899	1440	169	160
4	90	91	265	182	268	90	255	115	907	1380	168	160
5	90	88	265	182	268	91	425	116	950	1340	167	160
6	90	88	265	182	187	90	1080	117	1050	1100	167	160
7	91	59	265	183	133	90	1250	117	1080	561	168	160
8	91	41	265	189	130	90	866	155	915	343	170	162
9	91	41	195	186	130	90	482	180	475	343	170	162
10	91	41	135	332	130	90	281	187	223	343	170	162
11	73	42	135	371	132	90	148	187	220	266	170	162
12	63	42	111	340	131	90	148	283	172	216	170	182
13	63	43	95	340	131	90	148	343	143	218	170	195
14	85	43	94	340	131	90	148	343	116	218	170	198
15	80	43	69	337	131	69	148	564	36	218	170	224
16	80	43	53	337	131	34	148	1250	122	218	170	242
17	80	43	53	337	131	21	149	1620	488	218	170	239
18	74	43	53	337	131	21	150	1610	876	183	170	236
19	73	43	53	247	131	21	152	1280	1100	160	170	236
20	84	47	53	158	131	21	153	1060	1250	162	171	236
21	88	46	75	145	136	21	135	1060	775	170	163	234
22	89	46	90	145	274	21	122	684	666	172	158	174
23	90	46	91	125	785	21	123	373	1180	172	160	62
24	88	46	91	109	1080	21	97	604	1310	172	160	60
25	88	46	91	109	975	21	104	755	1660	171	160	177
26	88	46	91	110	964	21	117	761	2290	172	160	259
27	88	46	91	169	561	21	115	764	1900	190	160	263
28	88	130	95	249	162	22	111	768	1090	170	158	263
29	88	235	120	268	---	24	112	772	1470	170	159	263
30	88	265	158	268	---	25	113	906	1630	170	160	263
31	88	---	182	268	---	25	---	994	---	170	160	---
TOTAL	2720	2099	4394	7091	8298	1691	7538	18312	26661	13936	5149	5774
MEAN	87.7	70.0	142	229	296	54.5	251	591	889	450	166	192
MAX	126	265	265	371	1080	91	1250	1620	2290	1580	171	263
MIN	63	41	53	109	130	21	26	114	36	160	158	60

CAL YR 1988 TOTAL 51471 MEAN 141 MAX 468 MIN 31
WTR YR 1989 TOTAL 103663 MEAN 284 MAX 2290 MIN 21

BEAVER RIVER BASIN

03092000 KALE CREEK NEAR PRICETOWN, OH

LOCATION.--Lat 41°08'23", long 80°59'43", in T.3 N., R.5 W., Trumbull County, Hydrologic Unit 05030103, on right bank at downstream side of private road bridge, 0.4 mi north of Mahoning-Trumbull County line, 1.5 mi northwest of Pricetown, 2.2 mi upstream from mouth, and 3.5 mi south of Newton Falls.

DRAINAGE AREA.--21.9 mi².

PERIOD OF RECORD.--October 1940 to current year. Prior to June 1941 monthly discharge only, published in WSP 1305.

REVISED RECORDS.--WSP 973: 1942. WSP 1907: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 914.70 ft above National Geodetic Vertical Datum of 1929. Prior to June 27, 1941, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Feb. 5-13, 23-25. Records fair except those for periods of estimated discharge, which are poor. Water-quality data collected at this site 1965 to 1977.

AVERAGE DISCHARGE.--49 years, 23.2 ft³/s, 14.39 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,890 ft³/s Jan. 21, 1959, gage height, 8.52 ft; no flow at times in 1952-55, 1962-66, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 14	1830	*1,200	*6.51	June 24	2330	633	4.80

Minimum daily discharge, 0 ft³/s Oct. 2-9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.07	.07	5.9	9.6	12	5.7	152	3.6	36	3.3	.70	.56
2	.00	.07	4.1	8.5	8.3	3.9	134	14	82	1.8	.47	.44
3	.00	.06	3.2	6.7	8.8	3.2	291	14	30	1.2	.33	.33
4	.00	.14	2.7	5.4	9.6	4.1	310	11	287	.88	.29	.29
5	.00	4.5	2.3	4.4	4.7	42	108	7.0	43	.80	.31	.21
6	.00	34	2.2	14	3.8	57	38	10	16	.76	.36	.22
7	.00	16	2.0	72	3.0	24	22	20	7.7	.66	.27	.43
8	.00	14	1.9	299	2.4	15	16	23	4.1	.50	.18	8.0
9	.00	10	1.8	85	2.1	8.9	12	14	3.7	.39	.15	5.8
10	.04	9.9	1.7	25	1.8	7.6	9.9	151	7.2	.37	.16	1.9
11	.11	22	1.6	15	1.7	7.9	7.6	292	5.3	.41	.15	1.2
12	.14	12	1.4	12	1.6	10	6.0	85	3.2	.34	.14	.89
13	.11	20	1.4	23	1.5	10	5.8	50	19	.30	.12	.91
14	.10	35	1.4	14	6.4	8.6	7.5	137	701	.28	.12	2.2
15	.07	14	1.9	18	49	56	6.7	55	516	.21	.11	18
16	.07	8.1	2.2	20	86	35	6.1	196	87	.20	.11	16
17	.07	6.4	2.1	13	39	17	4.6	48	38	.18	.10	21
18	.16	5.1	1.8	10	18	15	5.3	20	15	.16	.10	6.3
19	.20	3.9	1.7	9.1	8.0	17	6.0	11	8.3	.20	.10	2.3
20	.26	46	2.7	9.4	6.6	12	5.3	10	45	.25	.19	1.4
21	.20	140	8.4	9.5	220	44	4.5	31	226	.25	.28	1.0
22	.29	32	10	6.3	176	41	3.7	18	351	.29	.32	1.6
23	.56	16	11	4.5	16	21	2.9	121	51	.32	.30	45
24	1.3	9.9	20	3.9	7.0	15	2.6	235	17	.38	.22	6.4
25	.99	7.1	26	4.0	5.4	14	2.2	36	8.3	.30	.18	.76
26	.54	5.7	14	15	6.0	11	2.2	74	3.9	.33	.16	.31
27	.32	6.7	9.0	76	7.0	9.3	2.5	39	22	.57	.15	.19
28	.26	5.1	126	25	6.7	8.6	2.1	12	187	1.8	.15	.15
29	.15	6.6	121	16	---	40	1.7	6.1	21	1.2	.36	.14
30	.12	6.1	37	21	---	103	2.6	3.9	7.7	.92	.84	.14
31	.09	---	15	17	---	112	---	4.8	---	.79	.80	---
TOTAL	6.22	496.44	443.4	871.3	718.4	778.8	1180.8	1752.4	2849.4	20.34	8.22	144.07
MEAN	.20	16.5	14.3	28.1	25.7	25.1	39.4	56.5	95.0	.66	.27	4.80
MAX	1.3	140	126	299	220	112	310	292	701	3.3	.84	45
MIN	.00	.06	1.4	3.9	1.5	3.2	1.7	3.6	3.2	.16	.10	.14
CFSM	.01	.76	.65	1.28	1.17	1.15	1.80	2.58	4.34	.03	.01	.22
IN.	.01	.84	.75	1.48	1.22	1.32	2.01	2.98	4.84	.03	.01	.24

CAL YR 1988 TOTAL 4305.23 MEAN 11.8 MAX 390 MIN .00 CFSM .54 IN. 7.31
WTR YR 1989 TOTAL 9269.79 MEAN 25.4 MAX 701 MIN .00 CFSM 1.16 IN. 15.75

BEAVER RIVER BASIN

37

03092090 WEST BRANCH MAHONING RIVER NEAR RAVENNA, OH

LOCATION.--Lat 41°09'41", long 81°11'50", in T.3 N., R.8 W., Portage County, Hydrologic Unit 05030103, on left bank at downstream side of bridge on Newton Falls Road, 2.5 mi east of Ravenna.

DRAINAGE AREA.--21.8 mi².

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,011.8 ft above Portage County bench mark.

REMARKS.--Estimated daily discharges: Dec. 31 to Jan. 5, Jan. 21-24, Feb. 4-13, Feb. 26 to Mar. 3, July 10-19, Aug. 1-3, 26-28, 30-31, Sept. 3-6. Records fair except those for periods of estimated records, which are poor. Water-quality data collected at this site 1966 to 1978. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--24 years, 27.9 ft³/s, 17.38 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,810 ft³/s Sept. 14, 1979, inside gage height 8.63 ft, outside gage height, 9.34 ft; minimum, 0.02 ft³/s July 7, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 450 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 13	1930	1,130	6.53	June 14	1400	*1,250	*6.79

Minimum daily discharge, 1.2 ft³/s Aug. 18.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	13	13	17	22	8.8	124	8.8	66	10	1.9	5.7
2	10	16	12	15	18	8.4	122	14	46	8.8	1.8	3.0
3	10	15	12	14	19	8.0	319	15	49	8.2	1.7	2.5
4	10	27	11	13	15	13	240	12	159	7.6	4.9	2.2
5	11	75	11	12	13	56	78	9.3	32	7.4	15	2.0
6	11	82	10	36	11	39	38	13	17	10	5.9	1.9
7	12	48	9.5	81	10	22	25	23	11	8.0	4.5	15
8	13	46	8.9	216	9.8	22	19	21	8.0	6.0	3.5	15
9	11	33	8.2	56	9.2	16	16	17	11	5.5	3.0	9.6
10	9.6	72	7.9	32	8.8	12	14	51	18	5.3	2.5	9.9
11	12	63	7.7	22	8.4	14	12	103	11	5.0	2.2	9.5
12	14	32	7.1	23	8.2	15	11	50	14	4.9	2.0	7.3
13	14	100	7.4	25	8.0	14	12	47	240	4.7	1.8	7.0
14	12	68	8.2	24	29	14	12	76	694	4.5	1.7	14
15	12	34	12	34	67	34	10	41	236	4.4	1.6	14
16	12	23	11	28	60	23	9.1	94	79	4.4	1.8	16
17	12	20	9.7	21	31	16	8.6	37	47	4.3	1.6	12
18	29	16	9.3	18	21	27	13	20	28	4.2	1.2	9.3
19	22	14	9.4	18	15	25	11	12	19	4.2	1.5	7.6
20	15	68	23	19	15	20	9.0	12	203	11	3.5	6.2
21	13	96	45	16	154	30	7.7	21	180	11	3.3	5.2
22	24	42	23	14	98	27	6.8	13	143	9.8	2.6	11
23	42	24	40	13	33	24	5.7	90	49	8.2	2.0	20
24	33	19	38	12	27	22	5.3	154	25	5.9	1.5	12
25	23	16	33	14	13	20	5.5	39	17	4.0	1.4	8.1
26	17	15	20	67	11	17	5.6	156	14	4.9	1.3	6.5
27	14	15	18	83	10	15	5.3	45	46	6.7	1.3	5.7
28	16	19	230	34	9.2	16	5.3	18	59	4.6	1.3	5.3
29	16	17	99	31	---	143	6.8	11	20	2.3	7.5	5.8
30	15	15	41	33	---	187	7.6	9.6	14	2.4	5.0	5.3
31	14	---	21	27	---	158	---	33	---	2.0	3.3	---
TOTAL	488.6	1143	816.3	1068	753.6	1066.2	1164.3	1265.7	2555.0	190.2	94.1	254.6
MEAN	15.8	38.1	26.3	34.5	26.9	34.4	38.8	40.8	85.2	6.14	3.04	8.49
MAX	42	100	230	216	154	187	319	156	694	11	15	20
MIN	9.6	13	7.1	12	8.0	8.0	5.3	8.8	8.0	2.0	1.2	1.9
CFSM	.72	1.75	1.21	1.58	1.23	1.58	1.78	1.87	3.91	.28	.14	.39
IN.	.83	1.95	1.39	1.82	1.29	1.82	1.99	2.16	4.36	.32	.16	.43

CAL YR 1988 TOTAL 7543.32 MEAN 20.6 MAX 376 MIN .02 CFSM .95 IN. 12.87
WTR YR 1989 TOTAL 10859.6 MEAN 29.8 MAX 694 MIN 1.2 CFSM 1.36 IN. 18.53

BEAVER RIVER BASIN

03092460 WEST BRANCH MAHONING RIVER BELOW MICHAEL J. KIRWAN DAM, AT WAYLAND, OH

LOCATION.--Lat 41°09'25", long 81°04'19", in T.3 N., R.6 W., Portage County, Hydrologic Unit 05030103, on bank 200 ft upstream from bridge on Wayland Road, 0.4 mi downstream from Michael J. Kirwan Dam, and 0.2 mi of Wayland.

DRAINAGE AREA.--81.7 mi².

PERIOD OF RECORD.--October 1968 to current year. Prior to October 1969 published as "West Branch Mahoning River below West Branch Dam, at Wayland."

GAGE.--Water-stage recorder. Datum of gage is 926.44 ft above National Geodetic Vertical Datum of 1929, (levels by U.S. Army Corps of Engineers). Prior to October 1971 at datum 0.89 ft higher.

REMARKS.--No estimated daily discharges. Records good. Flow completely regulated by Michael J. Kirwan Reservoir. Water-quality data collected at this site 1969 to 1977. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--21 years, 103 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,380 ft³/s Feb. 25, 1971, gage height, 11.82 ft present datum; minimum daily, 2.5 ft³/s Apr. 9, 1969.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 811 ft³/s June 26, gage height, 8.71 ft; minimum daily, 21 ft³/s Mar. 10-13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76	53	42	93	25	23	28	82	362	366	105	95
2	76	53	42	93	25	32	28	83	389	366	104	95
3	66	53	42	93	25	39	36	82	423	365	103	94
4	59	54	42	93	25	39	47	60	442	366	103	95
5	59	58	42	84	24	42	82	44	411	364	102	96
6	59	49	41	80	24	30	146	44	409	330	101	96
7	59	48	41	82	24	22	127	45	408	255	101	96
8	59	47	41	86	24	22	100	45	328	185	102	96
9	59	46	41	79	34	22	100	45	217	148	103	95
10	60	48	41	77	26	21	88	52	150	127	103	95
11	49	47	41	77	25	21	69	52	127	85	104	95
12	41	46	40	77	25	21	62	85	109	59	104	91
13	41	50	40	77	25	21	62	120	113	58	103	91
14	41	47	39	77	25	28	62	136	171	67	103	92
15	41	45	38	77	26	32	62	167	67	74	102	91
16	41	45	37	77	24	23	62	280	110	74	102	92
17	42	45	37	76	24	23	62	420	279	95	101	91
18	46	44	37	53	24	23	62	418	363	112	101	85
19	45	44	37	37	23	23	62	251	375	112	101	90
20	46	49	38	37	23	23	62	121	393	112	101	89
21	46	47	38	36	34	24	73	122	272	111	100	89
22	48	45	37	36	25	23	81	102	249	110	100	86
23	49	44	38	36	23	23	81	108	368	110	100	76
24	36	44	38	36	23	23	81	176	440	110	100	75
25	25	43	38	36	23	23	81	259	648	109	99	95
26	25	43	37	41	23	23	81	267	807	109	98	109
27	25	43	37	74	23	32	81	258	498	109	97	109
28	27	43	48	97	23	61	81	257	227	108	97	109
29	27	43	40	97	---	44	82	310	303	107	97	108
30	27	43	68	76	---	28	82	349	367	107	96	108
31	37	---	93	40	---	28	---	353	---	106	95	---
TOTAL	1437	1409	1311	2130	697	862	2213	5193	9825	4916	3128	2824
MEAN	46.4	47.0	42.3	68.7	24.9	27.8	73.8	16	327	159	101	94.1
MAX	76	58	93	97	34	61	146	42	807	366	105	109
MIN	25	43	37	36	23	21	28	44	67	58	95	75

CAL YR 1988 TOTAL 25264.2 MEAN 69.0 MAX 155 MIN 5.1
WTR YR 1989 TOTAL 35945 MEAN 98.5 MAX 807 MIN 21

BEAVER RIVER BASIN

39

03093000 EAGLE CREEK AT PHALANX STATION, OH

LOCATION.--Lat 41°15'40", long 80°57'16", Trumbull County, Hydrologic Unit 05030103, on right bank 75 ft downstream from county road bridge, 1 mi north of Phalanx Station, 2 mi downstream from Tinkers Creek, and 4 mi upstream from mouth.

DRAINAGE AREA.--97.6 mi².

PERIOD OF RECORD.--June 1926 to September 1934, October 1937 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 953: 1938-41. WSP 1385: 1927-30, 1931-32(M), 1934, 1938-41(P). WSP 1555: 1928(M), 1929. WSP 1907: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 887.14 ft above National Geodetic Vertical Datum of 1929, (levels by Mahoning Valley Sanitary District). Prior to Sept. 14, 1929, nonrecording gage at same site and datum. Sept. 14, 1929 to Sept. 30, 1977 at same site and datum 0.28 ft higher.

REMARKS.--Estimated daily discharges: Jan. 2-5, Feb. 3-14, Feb. 27 to Mar. 4. Records good except estimated records which are fair. Water-quality data collected at this site 1965 to 1977. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--60 years, 112 ft³/s, 15.59 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,150 ft³/s Sept. 15, 1979, gage height, 13.71 ft; minimum daily, 0.9 ft³/s Aug. 4, 1939.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 4	0730	1,530	10.28	June 15	0900	*2,990	*11.99
May 24	1700	1,370	9.98	June 21	1930	1,750	10.67
May 27	0900	1,330	9.88				

Minimum daily 16 ft³/s Oct. 1-4, Sept. 5-6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	30	61	119	109	52	625	51	222	68	27	16
2	16	29	57	88	89	49	516	80	222	58	25	19
3	16	30	52	80	78	47	688	90	132	51	24	18
4	16	39	49	74	68	46	1310	89	301	49	24	16
5	17	97	47	72	60	125	893	68	247	53	50	15
6	17	357	44	94	54	236	331	69	126	62	34	15
7	18	230	42	214	50	111	208	112	95	62	26	15
8	19	212	39	415	46	92	158	120	78	44	22	33
9	18	163	36	572	42	67	132	98	70	38	22	31
10	18	154	33	196	40	59	117	193	108	36	21	21
11	20	325	33	130	38	57	107	462	88	34	20	27
12	32	177	31	102	37	63	97	414	71	31	19	23
13	35	204	33	126	37	64	97	255	221	30	19	19
14	25	363	33	91	50	60	95	345	584	29	19	19
15	21	187	44	121	225	106	84	274	2160	27	18	38
16	20	118	52	129	342	132	78	456	587	26	18	42
17	19	97	44	101	184	88	72	367	279	24	20	50
18	52	80	37	87	111	93	86	171	166	24	18	32
19	101	67	38	83	82	145	99	117	119	24	17	23
20	45	101	49	85	67	100	84	99	229	30	18	20
21	34	359	185	89	224	106	70	159	1130	43	24	19
22	44	307	139	77	538	125	64	126	1230	40	21	20
23	96	158	136	67	250	119	57	274	521	51	19	149
24	114	108	206	62	121	109	52	1120	200	37	18	72
25	83	86	180	62	96	100	49	594	132	29	17	38
26	59	75	122	118	74	88	49	458	105	37	16	29
27	45	70	93	387	62	79	47	1010	90	45	16	25
28	37	73	290	244	56	78	44	263	187	42	15	23
29	39	78	807	146	---	347	45	142	122	34	17	21
30	37	66	325	150	---	587	50	111	83	28	20	21
31	32	---	188	134	---	834	---	119	---	28	17	---
TOTAL	1161	4440	3525	4515	3230	4364	6404	8306	9905	1214	661	909
MEAN	37.5	148	114	146	115	141	213	268	330	39.2	21.3	30.3
MAX	114	363	807	572	538	834	1310	1120	2160	68	50	149
MIN	16	29	31	62	37	46	44	51	70	24	15	15
CFSM	.38	1.52	1.17	1.49	1.18	1.44	2.19	2.75	3.38	.40	.22	.31
IN.	.44	1.69	1.34	1.72	1.23	1.66	2.44	3.17	3.78	.46	.25	.35

CAL YR 1988 TOTAL 30374.9 MEAN 83.0 MAX 895 MIN 8.7 CFSM .85 IN. 11.58
WTR YR 1989 TOTAL 48634 MEAN 133 MAX 2160 MIN 15 CFSM 1.37 IN. 18.54

BEAVER RIVER BASIN

03094000 MAHONING RIVER AT LEAVITTSBURG, OH

LOCATION.--Lat 41°14'21", long 80°52'51", in T.4 N., R.4 W., Trumbull County, Hydrologic Unit 05030103, on right bank at upstream side of Leavitt Road Bridge at Leavittsburg, 300 ft downstream from Duck Creek and 1.2 mi downstream from Eagle Creek.

DRAINAGE AREA.--575 mi².

PERIOD OF RECORD.--October 1940 to current year. Prior to June 1941 monthly discharge only, published in WSP 1305.

REVISED RECORDS.--WSP 1907: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 871.25 ft above National Geodetic Vertical Datum of 1929. Prior to July 2, 1941, nonrecording gage, and July 2, 1941, to July 22, 1952, water-stage recorder, at site 50 ft downstream at same datum.

REMARKS.--Estimated daily discharges: Feb. 5-13. Records good except for periods of estimated record, which are fair. Flow regulated by Berlin Lake, 25 mi upstream, beginning in 1942, by Milton Reservoir, 17 mi upstream, and by Michael J. Kirwan Reservoir, 20 mi upstream on West Branch, beginning in 1966. Diversion upstream from station from Berlin Lake for part of municipal supply of Mahoning Valley Sanitary District (see station 03090500). Water-quality data collected at this site 1943 to 1971. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--49 years, 584 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,300 ft³/s Jan. 22, 1959, gage height, 19.37 ft; minimum daily, 60 ft³/s July 6, 1952.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 26, 1913 reached a stage of about 24 ft. Flood of Jan. 25 or 26, 1937 reached a stage of 17.8 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,870 ft³/s June 15, gage height 12.41 ft; minimum daily, 157 ft³/s Oct. 14

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	214	186	420	1070	543	301	1600	339	1620	2150	292	277
2	215	198	413	490	458	262	1360	397	1700	2040	289	274
3	212	198	407	457	447	263	1700	425	1550	1970	286	273
4	176	227	400	445	435	275	3180	407	2940	1850	299	268
5	173	310	397	436	350	397	2390	346	2440	1810	309	269
6	172	562	393	464	300	672	1830	342	1670	1670	308	269
7	175	533	392	665	280	410	1910	393	1590	1110	293	274
8	177	431	388	1300	260	315	1610	440	1470	553	288	331
9	175	378	375	1520	250	295	906	441	1080	469	286	312
10	178	358	292	934	250	274	756	707	634	446	284	294
11	179	503	273	736	240	274	477	1620	507	411	282	293
12	165	426	266	642	240	285	425	1350	459	292	281	293
13	165	409	248	668	230	287	416	1030	551	273	283	303
14	157	629	247	615	309	279	416	1150	2330	264	283	336
15	158	472	252	649	514	421	402	1130	5410	276	284	395
16	200	341	230	684	825	486	390	2020	2440	277	283	468
17	159	304	223	636	578	317	382	2930	1140	277	284	462
18	211	271	208	603	392	287	390	2560	1410	291	283	387
19	267	251	210	544	354	345	409	2260	1530	261	283	349
20	221	340	228	426	320	300	392	1440	2150	274	292	340
21	207	833	325	400	703	330	373	1430	3440	302	291	335
22	224	720	392	363	1670	418	351	1310	4380	297	277	366
23	273	444	369	355	1310	359	343	1070	3510	298	272	423
24	316	339	462	327	1290	317	333	2790	2270	291	270	332
25	281	295	468	322	1140	300	297	2420	2220	279	269	241
26	227	274	406	403	1120	275	327	19 0	2900	322	266	367
27	207	265	345	824	1040	252	318	24 0	3340	499	264	371
28	185	276	649	842	470	263	311	1590	2640	352	263	365
29	180	376	1410	675	---	755	314	1190	2010	313	279	362
30	176	434	1380	675	---	1150	324	1220	2160	297	275	359
31	183	---	1380	598	---	1530	---	1480	---	295	270	---
TOTAL	6208	11583	13848	19768	16318	12694	24632	40587	63491	20509	8768	9988
MEAN	200	386	447	638	583	409	821	1309	2116	662	283	333
MAX	316	833	1410	1520	1670	1530	3180	2930	5410	2150	309	468
MIN	157	186	208	322	230	252	297	339	459	261	263	241

CAL YR 1988 TOTAL 129257 MEAN 353 MAX 2330 MIN 156
WTR YR 1989 TOTAL 248394 MEAN 681 MAX 5410 MIN 157

BEAVER RIVER BASIN

41

03095500 MOSQUITO CREEK BELOW MOSQUITO CREEK DAM, NEAR CORTLAND, OH

LOCATION.--Lat 41°17'59", long 80°45'31", in T.5 N., R.3 W., Trumbull County, Hydrologic Unit 05030103, on right bank 100 ft downstream from Mosquito Creek Dam, 0.8 mi upstream from Confusion Run, and 2.5 mi southwest of Cortland.

DRAINAGE AREA.--97.5 mi².

PERIOD OF RECORD.--May 1926 to September 1929 (published as "near Cortland"), May 1943 to current year.

REVISED RECORDS.--WSP 1907: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 873.98 ft above U.S. Army Corps of Engineers bench mark. Prior to Aug. 23, 1943, nonrecording gage, and Aug. 23, 1943 to Feb. 14, 1951, water-stage recorder, at site 900 ft downstream at datum 6.63 ft lower.

REMARKS.--No estimated daily discharges. Records fair. Flow completely regulated by Mosquito Creek Lake beginning 1943. Diversion at lake outlet for municipal supply of city of Warren since May 1954; diversion not included in figures of daily discharge. Water-quality data collected at this site 1965 to 1977. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--49 years, 88.0 ft³/s (unadjusted).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,890 ft³/s Jan. 19, 1929, gage height, 11.5 ft, from floodmark, site and datum then in use; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 723 ft³/s June 27, gage height, 3.70 ft, minimum daily 1.5 ft³/s Apr. 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.9	4.0	28	79	80	87	3.3	45	357	654	83	83
2	8.9	4.0	27	80	81	87	3.2	45	600	658	83	83
3	5.7	4.0	27	80	81	87	3.3	45	647	401	83	83
4	4.0	4.0	27	80	81	87	3.3	45	648	50	83	83
5	4.0	4.0	28	80	81	87	1.5	35	681	17	83	62
6	4.0	4.0	27	80	81	87	49	28	701	46	83	49
7	3.9	3.9	27	80	81	87	91	28	698	60	84	49
8	3.9	3.8	27	80	89	87	91	28	695	60	83	50
9	3.6	3.8	27	81	95	87	91	28	696	61	83	51
10	3.6	3.8	27	81	95	55	91	29	576	40	83	50
11	3.6	4.0	27	99	95	32	91	29	332	27	83	49
12	3.6	4.0	27	110	95	32	80	60	164	27	83	35
13	4.2	4.0	27	111	95	32	91	93	127	58	83	25
14	4.4	4.0	27	111	95	32	91	93	95	83	83	25
15	4.4	4.0	27	111	95	15	91	157	15	83	83	25
16	4.2	18	27	111	95	3.5	91	318	17	83	83	25
17	4.0	28	27	110	88	3.2	91	466	125	83	83	25
18	4.0	28	27	110	87	3.0	91	471	207	83	83	25
19	4.0	28	27	109	87	2.9	91	466	204	83	84	25
20	4.0	28	27	110	87	2.9	91	440	204	83	85	25
21	4.0	28	27	110	87	2.9	91	424	139	83	85	25
22	4.0	28	27	110	87	2.9	91	283	280	83	85	17
23	4.0	28	27	93	89	2.9	91	133	441	83	85	2.7
24	4.0	28	27	75	89	2.9	63	123	555	82	85	16
25	4.0	28	27	80	87	2.9	45	153	667	81	85	25
26	3.9	28	27	80	87	2.9	45	156	684	82	83	25
27	4.0	28	27	80	87	2.9	44	188	548	89	83	25
28	4.0	28	27	80	87	2.9	45	277	431	82	83	25
29	4.0	28	27	80	---	2.9	45	326	623	79	83	25
30	4.0	28	58	80	---	2.9	45	437	681	79	83	24
31	4.0	---	78	80	---	3.0	---	339	---	82	83	---
TOTAL	134.8	469.3	921	2841	2464	1028.5	1931.6	5788	12838	3645	2587	1136.7
MEAN	4.35	15.6	29.7	91.6	88.0	33.2	64.4	187	428	118	83.5	37.9
MAX	8.9	28	78	111	95	87	91	471	701	658	85	83
MIN	3.6	3.8	27	75	80	2.9	1.5	28	15	17	83	2.7
(+)	23.0	21.4	20.7	20.7	20.6	20.8	20.3	21.7	23.0	23.2	22.3	21.8

CAL YR 1988 TOTAL 11767.4 MEAN 32.2 MAX 360 MIN 2.1 (+) 23.1
WTR YR 1989 TOTAL 35784.9 MEAN 98.0 MAX 701 MIN 1.5 (+) 21.6

+ Diversion, in cubic feet per second, furnished by city of Warren.

BEAVER RIVER BASIN

03097550 MAHONING RIVER AT OHIO EDISON POWER PLANT AT NILES, OH

LOCATION.--Lat 41°10'21", long 80°45'26", Trumbull County, Hydrologic Unit 05030103, on right bank 20 ft downstream from Conrail Spur Line, 100 ft downstream from Meander Creek, 0.2 mi upstream from Belmont Road, 0.4 mi downstream from Mosquito Creek in Niles.

DRAINAGE AREA.--854 mi².

PERIOD OF RECORD.--October 1987 to current year.

GAGE.--Water-stage recorder. Datum of gage is 843.08 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Water diverted upstream from station for municipal supply for cities of Niles, Warren, and Youngstown. Some sewage returned to river upstream from station. Water also diverted upstream and downstream from station for industrial use, some of which is returned to river upstream from station. Flow regulated by Berlin Lake, 37 mi upstream, beginning in 1942, by Milton Reservoir, 29 mi upstream, by Michael J. Kirwan Reservoir, 32 mi upstream on West Branch, beginning in 1966 by Mosquito Creek Lake, 11 mi upstream, beginning in 1943, by Meander Creek Reservoir.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,660 ft³/s June 15, 1989, gage height 11.01; minimum daily discharge, 195 ft³/s Oct. 16, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,660 ft³/s June 15, gage height 11.01; minimum daily discharge, 195 ft³/s Oct. 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	241	203	488	690	740	495	2590	406	2690	2840	433	400
2	247	209	475	626	647	414	2230	517	2520	2750	434	389
3	245	213	464	577	631	381	2540	594	2460	2690	437	376
4	236	287	451	537	613	397	3780	541	4240	2430	463	374
5	232	399	446	530	578	565	3500	476	4100	2060	482	372
6	234	694	444	607	557	964	2350	447	2760	1940	454	355
7	210	755	434	810	497	732	2230	458	2480	1510	433	361
8	203	577	430	1740	385	516	2050	529	2320	874	421	749
9	203	484	423	2050	327	458	1350	546	2020	686	422	471
10	211	472	385	1230	344	425	1020	1200	1520	631	425	405
11	241	573	337	911	400	380	718	2990	1200	569	426	389
12	233	587	316	838	379	371	589	2790	954	453	424	371
13	217	538	310	846	371	383	554	1800	909	388	424	352
14	208	752	302	814	454	383	553	1800	3510	409	420	558
15	205	669	306	820	765	521	535	2010	7270	425	420	791
16	195	441	296	876	1260	710	505	2870	5720	433	415	865
17	198	379	290	827	1000	498	494	3600	2180	426	419	822
18	328	355	273	766	631	423	507	3200	1800	431	422	564
19	317	328	265	732	528	425	521	2960	1880	433	414	454
20	305	461	283	614	476	443	507	2270	2850	461	424	421
21	262	1100	344	541	1160	468	479	2050	4440	466	414	405
22	297	1090	484	497	2240	585	451	1960	6030	470	405	529
23	316	690	505	473	1750	538	435	1870	5320	463	399	799
24	351	485	609	444	1420	454	426	3400	3410	441	392	594
25	352	399	652	409	1510	417	385	3290	2800	430	387	397
26	305	365	562	523	1330	391	351	2950	3220	687	385	385
27	244	342	461	1050	1300	352	369	3150	3770	933	373	447
28	221	340	964	1170	770	351	366	2460	3730	634	371	430
29	204	376	1820	913	---	1110	364	1690	2720	497	428	426
30	201	484	1460	880	---	1750	361	1610	2700	463	389	419
31	199	---	817	845	---	2220	---	2080	---	443	381	---
TOTAL	7661	15047	16096	25186	23063	18520	33110	58514	93523	28766	12936	14670
MEAN	247	502	519	812	824	597	1104	1888	3117	928	417	489
MAX	352	1100	1820	2050	2240	2220	3780	3600	7270	2840	482	865
MIN	195	203	265	409	327	351	351	40	909	388	371	352

CAL YR 1988 TOTAL 183163 MEAN 500 MAX 3300 MIN 195
WTR YR 1989 TOTAL 347092 MEAN 951 MAX 7270 MIN 195

BEAVER RIVER BASIN

43

03098600 MAHONING RIVER BELOW WEST AVENUE AT YOUNGSTOWN, OH

LOCATION.--Lat 41°06'18", long 80°39'46", Mahoning County, Hydrologic Unit 05030103, on left bank 200 ft below West Avenue Bridge, 0.4 mi upstream from Spring Common Bridge, 0.6 mi downstream from Mill Creek, in Youngstown.

DRAINAGE AREA.--978 mi².

PERIOD OF RECORD.--October 1987 to current year.

GAGE.--Water-stage recorder. Datum of gage is 824.10 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Water diverted upstream from station for municipal supply for city of Youngstown. Some sewage returned to river upstream from station. Water also diverted upstream and downstream from station by a private company for industrial use, some of which is returned to river upstream from station. Flow regulated by Berlin Lake, 49 mi upstream, beginning in 1942, by Milton Reservoir, 41 mi upstream, by Michael J. Kirwan Reservoir, 44 mi upstream on West Branch, beginning in 1966 by Mosquito Creek Lake, 23 mi upstream, beginning in 1943, by Meander Creek Reservoir, 12 mi upstream, beginning in 1929, and by reservoir on Squaw Creek, 6 mi upstream, and 2 small reservoirs on Mill Creek 0.6 mi upstream. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 9,810 ft³/s June 15, 1989, gage height 12.76 ft; minimum daily discharge 181 ft³/s Oct. 17, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 9,810 ft³/s June 15; gage height 12.76 ft; minimum daily discharge 181 ft³/s Oct. 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	285	241	548	809	809	576	3320	520	3000	2990	464	442
2	300	245	529	729	705	471	2800	712	2660	2840	456	438
3	297	250	511	673	690	431	3420	737	2600	2750	448	413
4	285	558	496	633	665	439	4620	660	5210	2460	456	405
5	267	644	488	587	632	673	4230	593	4870	2140	513	401
6	291	897	481	719	616	1100	2670	574	3140	1980	478	390
7	257	901	474	939	543	859	2350	562	2640	1560	449	394
8	251	709	469	2140	459	607	2150	631	2400	965	437	943
9	248	587	459	2390	407	535	1490	642	2190	745	431	578
10	246	597	431	1480	412	501	1110	1680	1710	690	431	461
11	309	671	365	1030	436	456	828	3700	1310	642	430	449
12	286	674	323	969	420	443	664	3380	1050	539	428	421
13	266	658	319	995	395	446	640	2070	1130	457	428	395
14	244	833	319	941	523	445	629	2030	5210	469	427	638
15	221	777	329	971	885	631	613	2370	9290	486	432	1010
16	197	539	316	1020	1440	819	579	3350	7600	491	431	1190
17	181	447	299	958	1140	597	559	3980	2820	488	426	1070
18	430	409	280	883	729	500	586	3470	2000	500	423	682
19	390	371	270	842	605	489	589	3130	1970	513	421	529
20	363	601	296	741	545	510	581	2390	3660	597	467	472
21	315	1260	361	628	1680	628	549	2120	5210	642	458	448
22	365	1240	512	550	2750	714	515	2010	7770	599	438	666
23	383	804	584	516	2050	632	488	2100	6710	564	428	1100
24	439	570	724	497	1580	540	475	3710	3990	536	422	740
25	442	461	805	458	1480	496	446	3640	3020	521	417	469
26	382	420	676	604	1370	460	402	3680	3300	826	414	410
27	304	395	560	1160	1340	412	411	3590	4030	1080	407	484
28	279	393	1220	1260	882	408	407	2780	4310	740	406	473
29	253	411	2060	994	---	1320	429	1790	3100	556	518	463
30	243	520	1580	945	---	2200	421	1650	2890	503	466	454
31	230	---	949	914	---	2860	---	2120	---	481	432	---
TOTAL	9249	18083	18033	28975	26188	22198	38971	66371	110790	31350	13682	17428
MEAN	298	603	582	935	935	716	1299	2141	3693	1011	441	581
MAX	442	1260	2060	2390	2750	2860	4620	3980	9290	2990	518	1190
MIN	181	241	270	458	395	408	402	520	1050	457	406	390

CAL YR 1988 TOTAL 212904 MEAN 582 MAX 3800 MIN 181
WTR YR 1989 TOTAL 401318 MEAN 1100 MAX 9290 MIN 181

BEAVER RIVER BASIN

03099500 MAHONING RIVER AT LOWELLVILLE, OH

LOCATION.--Lat 41°02'12", long 80°32'11", in T.1 N., R.1 W., Mahoning County, Hydrologic Unit 05030103, on left bank 100 ft upstream from First Street Bridge at Lowellville, 1 mi upstream from Ohio-Pennsylvania State line, and 3 mi downstream from Yellow Creek.

DRAINAGE AREA.--1,073 mi².

PERIOD OF RECORD.--October 1942 to current year. Prior to August 1943 monthly discharge only, published in WSP 1305.

REVISED RECORDS.--WSP 1555: 1946(M), 1952(M), 1955(M), 1956. WSP 1907: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 796.84 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 26, 1944, nonrecording gage at site 300 ft downstream at same datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by 5 flood control reservoirs at points 21 mi to 58 mi upstream and by reservoirs on Squaw Creek, 15 mi upstream, on Dry Run, 9 mi upstream, and on Yellow Creek, 5 mi upstream. Water-quality data collected at this site 1949 to 1973. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--47 years, 1,122 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 21,000 ft³/s Jan. 21, 1959, gage height, 14.43 ft; minimum daily, 155 ft³/s Feb. 5, 1944.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1913 reached a stage of 17.8 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,800 ft³/s June 15, gage height, 9.84 ft; minimum daily, 227 ft³/s, Oct. 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	311	255	586	879	916	682	3780	627	3570	3510	577	518
2	318	259	567	794	811	558	3280	971	3200	3350	563	513
3	314	270	549	739	812	505	3840	950	3130	3240	548	472
4	308	742	532	686	767	510	4820	835	5920	3020	545	458
5	301	803	526	624	729	776	4860	754	5480	2770	626	454
6	331	1020	522	796	705	1220	3300	739	3770	2520	572	447
7	283	1020	516	990	638	1020	2940	700	3140	2010	541	449
8	276	820	508	2400	537	717	2720	777	2900	1280	525	1310
9	271	665	498	2680	483	620	1960	791	2750	931	515	729
10	268	694	471	1710	477	586	1430	2290	2250	854	510	547
11	339	745	399	1100	503	542	1110	4420	1680	791	508	535
12	318	766	353	1050	484	528	890	4180	1370	662	503	491
13	300	767	346	1080	452	528	866	2780	1520	530	512	464
14	271	889	347	1020	602	525	821	2660	6410	521	497	727
15	250	877	361	1070	991	733	789	2960	11000	541	511	1320
16	239	617	348	1100	1690	914	736	3940	9090	544	499	1590
17	227	502	323	1030	1370	711	707	4500	3800	538	493	1420
18	510	454	307	940	875	594	755	4080	2630	543	488	882
19	446	410	295	897	704	567	744	3660	2560	583	490	662
20	402	701	317	814	636	606	726	2980	4320	744	564	573
21	364	1390	374	699	2140	803	682	2680	6000	858	553	537
22	415	1430	517	640	3160	857	636	2530	8860	740	513	794
23	422	932	643	594	2450	765	598	2620	7600	636	496	1520
24	506	654	793	577	1780	650	574	4230	4840	584	485	972
25	478	522	889	535	1700	595	547	4310	3680	564	472	610
26	426	466	749	687	1550	553	483	4510	3870	1180	465	495
27	341	433	610	1300	1500	499	485	4280	4650	1490	457	578
28	316	446	1420	1450	1070	486	481	3450	5130	1040	453	565
29	278	442	2340	1130	---	1450	512	2300	3790	726	635	550
30	258	552	1830	1070	---	2690	503	2050	3400	652	555	535
31	246	---	1050	1020	---	3370	---	2540	---	613	497	---
TOTAL	10333	20543	19886	32101	30532	26160	46575	81094	132310	38565	16168	21717
MEAN	333	685	641	1036	1090	844	1552	2616	4410	1244	522	724
MAX	510	1430	2340	2680	3160	3370	4860	4510	11000	3510	635	1590
MIN	227	255	295	535	452	486	481	627	1370	521	453	447

CAL YR 1988 TOTAL 253154 MEAN 692 MAX 3910 MIN 227
WTR YR 1989 TOTAL 475984 MEAN 1304 MAX 11000 MIN 227

03099510 MAHONING RIVER AT OHIO-PENNSYLVANIA STATE LINE, BELOW LOWELLVILLE, OH

LOCATION.--Lat 41°01'53", long 80°31'10", Mahoning County, Hydrologic Unit 05030103, on left bank 800 ft upstream from Ohio-Pennsylvania State line, just below Lowellville, 0.9 mi downstream from gaging station at Lowellville, and 3.9 mi downstream from Yellow Creek.

DRAINAGE AREA.--1,075 mi².

PERIOD OF RECORD.--January 1967 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January 1967 to current year.

pH: January 1967 to current year.

WATER TEMPERATURES: January 1967 to current year.

DISSOLVED OXYGEN: January 1967 to current year.

INSTRUMENTATION.--Water-quality monitor since Jan. 1967. Digital recorder set for one-hour-interval punches since Oct. 1970.

REMARKS.--Interruptions in the water-quality record were due to malfunction of the instrument. See records of daily discharge for gaging station at Lowellville (station 03099500).

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 1,640 microsiemens Feb. 22, 1979; minimum, 172 microsiemens March 30, 1985.

pH: Maximum, 9.9 units Jan. 26, 1969; minimum, 3.0 units Jan. 24, 1967.

WATER TEMPERATURES: Maximum, 39.0°C June 29, 1971; minimum, 0.0°C Dec. 25, 1983, Dec. 26, 1985.

DISSOLVED OXYGEN: Maximum, 14.2 mg/L Mar. 25, 1970; minimum, 0.0 mg/L June 1, 1975, June 17, 1977.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 962 microsiemens Jan. 6; minimum, 196 microsiemens June 16.

pH: Maximum, 8.7 units Sept. 29; minimum, 7.0 units Mar. 2 and Mar. 15.

WATER TEMPERATURES: Maximum, 28.5°C July 23, 25; minimum, 2.0°C Feb. 24, 25.

DISSOLVED OXYGEN: Maximum, 13.8 mg/L Dec. 31, Jan. 5; minimum, 5.9 mg/L June 1.

BEAVER RIVER BASIN

03099510 MAHONING RIVER AT OHIO-PENNSYLVANIA STATE LINE, BELOW LOWELLVILLE, OH--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	682	662	672	760	736	746	576	548	559	452	438	443
2	678	666	673	770	752	761	576	546	559	486	454	468
3	688	672	682	774	756	764	588	578	582	498	484	488
4	686	674	680	764	462	625	590	576	585	524	490	502
5	698	676	687	654	552	625	598	578	586	670	520	599
6	684	648	667	632	594	617	588	576	581	962	650	775
7	688	648	668	628	596	609	596	580	587	830	756	786
8	700	680	691	614	594	602	598	588	592	790	636	705
9	700	682	696	594	586	590	606	596	601	626	494	551
10	716	680	699	604	560	588	602	586	591	486	438	452
11	706	682	698	610	586	603	618	596	606	478	452	463
12	706	680	693	612	592	603	616	598	610	562	476	504
13	714	688	705	616	554	588	616	600	610	602	562	585
14	702	680	694	572	550	561	668	614	643	600	582	591
15	716	672	689	554	526	540	698	658	681	632	592	614
16	732	712	722	556	522	531	674	662	668	616	596	605
17	734	716	726	554	534	542	676	654	665	602	584	590
18	730	562	665	572	554	560	698	676	689	598	582	587
19	688	656	667	602	576	591	728	680	706	608	596	600
20	702	658	688	596	506	561	820	718	775	614	602	607
21	658	620	640	562	488	535	770	692	738	626	608	618
22	680	658	672	486	458	469	722	696	710	626	616	620
23	696	668	683	478	460	467	724	686	704	632	612	620
24	688	632	671	490	472	479	696	604	639	630	600	615
25	682	648	666	506	484	492	630	582	609	634	612	619
26	690	684	687	524	508	519	582	542	556	674	638	649
27	700	686	694	536	528	532	616	550	570	660	618	640
28	720	686	704	556	534	546	670	580	632	616	520	563
29	726	710	717	562	550	556	620	470	546	522	496	506
30	748	710	729	572	560	566	462	410	432	538	502	519
31	752	738	744	---	---	---	442	408	419	568	536	550
MONTH	752	562	689	774	458	579	820	408	614	962	438	582
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	588	562	570	646	620	631	---	---	---	690	648	670
2	580	568	573	682	644	659	---	---	---	640	606	624
3	628	572	593	682	662	669	---	---	---	626	610	616
4	638	616	627	710	676	689	---	---	---	622	602	610
5	652	620	631	752	680	699	---	---	---	624	610	615
6	688	640	663	680	636	658	322	298	316	614	600	608
7	656	628	643	668	584	611	452	322	407	612	600	605
8	666	642	654	668	622	637	488	456	473	610	598	604
9	650	624	636	630	608	619	---	---	---	606	580	598
10	664	650	656	638	608	620	530	492	518	574	482	523
11	666	646	656	658	630	645	528	480	502	500	416	451
12	666	640	657	680	656	665	568	520	540	416	346	370
13	648	632	640	732	674	695	594	564	577	386	352	364
14	748	652	698	740	728	733	586	574	580	408	374	392
15	742	718	725	956	716	773	584	570	579	422	402	412
16	734	618	685	730	676	702	582	570	576	430	390	404
17	610	554	578	682	624	647	604	576	585	426	366	395
18	566	530	546	664	644	651	618	592	600	438	400	416
19	594	566	577	656	630	646	620	592	601	460	434	443
20	606	588	594	658	622	641	626	576	594	474	450	463
21	636	580	605	710	624	682	646	610	621	460	444	453
22	596	448	527	694	644	661	646	616	634	462	450	455
23	444	372	405	654	626	635	626	602	612	466	440	458
24	412	366	382	632	612	620	612	594	603	444	324	384
25	544	410	492	658	634	644	620	600	607	326	278	294
26	604	542	572	666	652	659	642	600	617	392	316	358
27	600	582	591	674	656	667	674	638	653	400	362	383
28	624	588	601	708	678	691	686	650	667	358	322	338
29	---	---	---	696	588	662	668	646	654	424	364	393
30	---	---	---	578	490	524	680	658	669	460	426	442
31	---	---	---	490	420	450	---	---	---	458	422	446
MONTH	748	366	599	956	420	651	686	298	574	690	278	471

03099510 MAHONING RIVER AT OHIO-PENNSYLVANIA STATE LINE, BELOW LOWELLVILLE, OH--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	422	370	394	426	422	424	536	528	531	541	518	533
2	430	378	403	428	422	425	536	528	530	549	510	526
3	414	322	401	428	422	424	542	536	538	541	510	522
4	396	324	370	440	422	426	540	530	536	533	502	513
5	346	300	317	462	440	452	540	528	534	525	494	509
6	444	326	389	460	448	456	530	508	526	533	494	509
7	478	444	461	482	456	470	522	508	510	518	498	509
8	498	480	487	522	482	499	530	520	523	500	356	453
9	494	480	485	538	518	526	530	528	529	478	412	444
10	496	476	482	552	536	542	542	530	538	482	442	453
11	490	474	480	550	504	529	542	528	536	516	488	508
12	488	466	477	528	514	519	542	528	534	534	516	523
13	530	474	502	554	530	542	530	500	521	536	524	529
14	602	308	454	570	554	558	530	508	524	542	434	519
15	310	212	261	570	554	559	558	522	531	518	438	480
16	292	196	225	568	526	549	552	522	530	470	354	426
17	326	298	322	538	524	532	530	512	521	462	440	454
18	---	---	---	532	516	524	532	520	525	486	456	468
19	---	---	---	532	514	521	524	514	520	534	488	509
20	532	390	480	540	478	511	524	496	515	544	530	535
21	444	400	431	528	342	505	510	488	499	558	538	547
22	396	286	346	528	368	489	514	504	511	560	428	539
23	332	278	290	528	510	519	514	500	507	500	462	478
24	442	340	394	530	520	525	520	512	515	480	458	466
25	488	448	472	534	522	527	526	520	521	514	484	498
26	486	472	479	536	402	486	532	518	523	558	516	531
27	484	444	473	488	402	464	526	512	518	564	542	554
28	488	456	472	482	418	448	557	525	539	560	542	550
29	478	412	438	490	468	476	541	478	519	584	540	559
30	430	414	422	522	488	500	541	518	529	556	522	540
31	---	---	---	530	518	522	549	510	528	---	---	---
MONTH	602	196	415	570	342	498	558	478	525	584	354	506
YEAR	962	196	559									

PH (STANDARD UNITS), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	7.8	7.5	7.7	7.5	7.4	7.5	7.7	7.6	7.7	7.8	7.7	7.7
2	7.7	7.6	7.7	7.5	7.4	7.5	7.8	7.7	7.8	7.9	7.8	7.8
3	7.6	7.6	7.6	7.5	7.4	7.5	7.9	7.7	7.8	7.9	7.8	7.9
4	7.7	7.5	7.6	7.5	7.4	7.5	8.0	7.8	7.9	7.9	7.9	7.9
5	7.6	7.4	7.5	7.6	7.5	7.5	8.0	7.7	7.9	8.0	7.9	7.9
6	7.6	7.4	7.5	7.7	7.5	7.6	8.0	7.8	7.9	8.0	7.9	7.9
7	7.6	7.5	7.6	7.7	7.4	7.6	7.8	7.7	7.8	8.0	7.9	8.0
8	7.6	7.5	7.5	7.7	7.5	7.6	7.8	7.7	7.7	8.0	7.9	7.9
9	7.6	7.5	7.5	7.6	7.5	7.6	7.8	7.7	7.8	7.9	7.7	7.8
10	7.6	7.4	7.5	7.7	7.5	7.6	7.9	7.7	7.8	7.7	7.6	7.6
11	7.6	7.4	7.5	7.7	7.5	7.6	7.9	7.7	7.8	7.7	7.6	7.6
12	7.7	7.5	7.6	7.7	7.6	7.6	7.9	7.7	7.8	7.7	7.6	7.7
13	7.6	7.5	7.6	7.7	7.7	7.7	7.8	7.8	7.8	7.8	7.7	7.8
14	7.7	7.5	7.6	7.9	7.6	7.7	7.9	7.8	7.8	7.9	7.8	7.9
15	7.6	7.5	7.5	7.7	7.6	7.6	7.9	7.8	7.8	8.0	7.8	7.9
16	7.6	7.5	7.5	7.7	7.5	7.6	8.0	7.8	7.9	7.9	7.8	7.9
17	7.6	7.5	7.6	7.6	7.5	7.6	7.9	7.8	7.8	7.9	7.8	7.9
18	7.7	7.4	7.5	7.8	7.5	7.6	7.9	7.8	7.8	8.0	7.9	7.9
19	7.6	7.5	7.6	7.6	7.3	7.5	7.9	7.8	7.8	7.9	7.8	7.9
20	7.6	7.5	7.5	7.6	7.5	7.6	7.8	7.7	7.8	7.9	7.6	7.8
21	7.6	7.4	7.5	7.6	7.6	7.6	7.8	7.8	7.8	8.0	7.8	7.9
22	7.6	7.4	7.5	7.7	7.6	7.6	7.8	7.7	7.7	7.9	7.8	7.9
23	7.6	7.5	7.6	7.7	7.6	7.6	7.8	7.7	7.8	8.0	7.8	7.9
24	7.6	7.5	7.6	7.7	7.6	7.6	7.8	7.7	7.8	7.9	7.8	7.8
25	7.6	7.5	7.6	7.7	7.6	7.6	7.8	7.7	7.8	8.1	7.8	7.9
26	7.7	7.5	7.6	7.7	7.6	7.6	7.8	7.7	7.8	8.1	7.8	7.9
27	7.8	7.6	7.6	7.7	7.6	7.7	7.9	7.8	7.8	8.0	7.8	7.9
28	7.6	7.5	7.6	7.7	7.5	7.6	7.8	7.7	7.8	8.0	8.0	8.0
29	7.6	7.5	7.6	7.7	7.6	7.6	7.8	7.7	7.8	8.0	7.8	7.9
30	7.6	7.5	7.6	7.7	7.6	7.6	7.8	7.6	7.7	8.0	7.8	7.9
31	7.6	7.5	7.5	---	---	---	7.8	7.6	7.7	8.0	7.8	7.9
MONTH	7.8	7.4	7.6	7.9	7.3	7.6	8.0	7.6	7.8	8.1	7.6	7.9

BEAVER RIVER BASIN

03099510 MAHONING RIVER AT OHIO-PENNSYLVANIA STATE LINE, BELOW LOWELLVILLE, OH--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	8.0	7.8	7.9	8.2	7.9	8.1	---	---	---	7.9	7.4	7.6
2	7.9	7.8	7.9	8.1	7.0	7.9	---	---	---	7.6	7.4	7.5
3	8.0	7.8	7.9	7.9	7.8	7.9	---	---	---	7.6	7.5	7.6
4	8.0	7.9	8.0	8.0	7.4	7.8	---	---	---	7.8	7.4	7.6
5	8.1	7.9	8.0	7.9	7.8	7.8	---	---	---	7.7	7.5	7.6
6	8.1	7.9	8.0	8.0	7.8	7.9	7.6	7.4	7.6	7.6	7.3	7.5
7	8.2	8.0	8.0	8.0	7.5	7.9	7.6	7.4	7.5	7.7	7.5	7.6
8	8.3	7.9	8.0	8.1	7.7	7.9	7.8	7.6	7.7	7.9	7.6	7.8
9	8.2	8.0	8.1	8.0	7.7	7.9	---	---	---	7.8	7.7	7.7
10	8.1	7.9	8.0	7.9	7.6	7.8	7.9	7.8	7.9	7.8	7.6	7.7
11	8.1	7.9	8.0	8.0	7.6	7.8	7.8	7.5	7.7	7.9	7.6	7.7
12	8.2	7.9	8.0	8.2	7.8	7.9	8.0	7.8	7.9	7.7	7.4	7.5
13	8.2	8.0	8.0	8.0	7.7	7.8	8.0	7.8	7.9	7.6	7.2	7.4
14	8.2	7.9	8.0	8.0	7.5	7.8	8.0	7.7	7.9	7.8	7.4	7.6
15	8.0	7.9	8.0	7.7	7.0	7.6	7.9	7.6	7.8	7.8	7.4	7.6
16	8.0	7.9	8.0	7.9	7.6	7.7	8.1	7.7	7.9	7.8	7.6	7.7
17	8.0	7.5	8.0	8.0	7.7	7.8	8.1	7.8	7.9	7.8	7.4	7.5
18	8.0	7.6	7.9	7.7	7.6	7.7	8.0	7.6	7.8	7.7	7.4	7.5
19	8.5	7.7	8.0	7.8	7.6	7.7	8.1	7.3	7.7	7.7	7.4	7.5
20	7.9	7.8	7.9	7.7	7.5	7.6	8.1	7.6	7.8	7.6	7.5	7.5
21	8.0	7.9	8.0	7.8	7.4	7.7	8.0	7.6	7.8	7.6	7.4	7.5
22	8.0	7.7	7.9	7.8	7.6	7.7	8.1	7.7	7.9	7.8	7.5	7.6
23	7.8	7.4	7.7	7.8	7.5	7.7	8.2	7.8	8.0	7.6	7.4	7.5
24	7.8	7.5	7.7	7.8	7.6	7.7	8.1	7.8	7.9	7.6	7.3	7.4
25	8.1	7.7	8.0	7.7	7.4	7.6	8.0	7.7	7.8	7.5	7.2	7.3
26	8.3	8.0	8.1	7.8	7.6	7.7	7.9	7.6	7.7	7.7	7.3	7.6
27	8.2	8.0	8.1	7.8	7.6	7.7	8.2	7.5	7.8	7.6	7.4	7.5
28	8.3	8.1	8.1	7.9	7.6	7.7	7.9	7.6	7.8	7.4	7.4	7.4
29	---	---	---	7.7	7.5	7.6	7.8	7.5	7.7	7.6	7.4	7.5
30	---	---	---	7.7	7.5	7.6	7.9	7.4	7.6	7.6	7.5	7.5
31	---	---	---	7.6	7.5	7.6	---	---	---	7.6	7.5	7.5
MONTH	8.5	7.4	8.0	8.2	7.0	7.8	8.2	7.3	7.8	7.9	7.2	7.5
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE				JULY			AUGUST			SEPTEMBER		
1	7.5	7.4	7.5	7.7	7.7	7.7	7.8	7.6	7.7	7.7	7.5	7.7
2	7.5	7.3	7.4	7.7	7.6	7.7	7.9	7.6	7.8	7.8	7.4	7.6
3	7.5	7.4	7.5	7.7	7.7	7.7	8.0	7.7	7.8	7.8	7.6	7.7
4	7.5	7.3	7.4	7.7	7.7	7.7	7.9	7.3	7.8	7.8	7.6	7.7
5	7.3	7.2	7.3	7.7	7.6	7.7	7.9	7.6	7.8	7.9	7.7	7.8
6	7.7	7.3	7.4	7.8	7.6	7.7	7.9	7.7	7.8	7.9	7.7	7.8
7	7.6	7.4	7.5	7.8	7.7	7.7	7.8	7.6	7.7	7.7	7.6	7.7
8	7.6	7.5	7.5	7.8	7.7	7.8	7.8	7.6	7.7	7.6	7.4	7.5
9	7.6	7.5	7.5	7.8	7.7	7.8	7.9	7.7	7.8	7.7	7.5	7.5
10	7.8	7.5	7.5	7.9	7.8	7.8	7.9	7.7	7.8	7.6	7.5	7.5
11	7.6	7.4	7.5	7.9	7.7	7.8	7.8	7.7	7.8	7.6	7.5	7.5
12	7.6	7.5	7.6	7.8	7.7	7.8	7.9	7.6	7.8	7.7	7.5	7.6
13	7.6	7.5	7.6	7.8	7.7	7.7	7.9	7.7	7.8	7.7	7.3	7.6
14	7.7	7.5	7.6	7.8	7.7	7.7	7.8	7.7	7.8	7.7	7.3	7.6
15	7.5	7.3	7.4	7.9	7.7	7.8	7.9	7.7	7.8	7.7	7.5	7.6
16	7.4	7.2	7.3	8.0	7.8	7.9	8.0	7.4	7.8	7.7	7.4	7.6
17	---	---	---	7.9	7.8	7.8	8.0	7.7	7.8	7.9	7.6	7.7
18	---	---	---	8.0	7.7	7.9	8.0	7.7	7.8	7.7	7.6	7.7
19	---	---	---	7.8	7.7	7.8	7.8	7.7	7.8	7.8	7.6	7.7
20	7.6	7.4	7.5	7.8	7.4	7.6	7.8	7.5	7.7	7.7	7.6	7.7
21	7.6	7.3	7.5	7.8	7.3	7.6	7.8	7.4	7.6	7.7	7.6	7.6
22	7.4	7.3	7.4	7.8	7.4	7.6	7.7	7.5	7.6	7.7	7.4	7.6
23	7.4	7.3	7.3	7.9	7.6	7.7	7.8	7.5	7.6	7.7	7.3	7.6
24	7.6	7.3	7.5	7.9	7.6	7.7	7.8	7.5	7.6	7.9	7.6	7.7
25	7.6	7.5	7.6	7.9	7.6	7.8	7.7	7.2	7.6	7.7	7.5	7.7
26	7.6	7.5	7.6	7.7	7.4	7.6	7.8	7.6	7.7	7.7	7.6	7.6
27	7.6	7.5	7.6	7.6	7.4	7.6	7.8	7.7	7.7	7.7	7.6	7.7
28	7.6	7.3	7.5	7.7	7.4	7.6	7.8	7.7	7.8	7.8	7.5	7.7
29	7.7	7.5	7.6	7.8	7.5	7.6	7.8	7.5	7.6	8.7	7.7	7.8
30	7.8	7.5	7.7	7.7	7.4	7.6	7.8	7.6	7.7	8.5	7.4	7.8
31	---	---	---	7.7	7.6	7.7	7.8	7.6	7.7	---	---	---
MONTH	7.8	7.2	7.5	8.0	7.3	7.7	8.0	7.2	7.7	8.7	7.3	7.7
YEAR	8.7	7.0	7.7									

BEAVER RIVER BASIN

49

03099510 MAHONING RIVER AT OHIO-PENNSYLVANIA STATE LINE, BELOW LOWELLVILLE, OH--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	23.0	21.0	22.0	14.0	12.5	13.5	11.0	10.0	10.5	5.0	3.5	4.0
2	22.5	22.0	22.5	14.0	13.5	13.5	10.0	9.0	9.5	5.0	4.5	4.5
3	22.0	20.5	22.0	14.5	13.5	14.0	9.5	8.5	9.0	5.0	4.5	4.5
4	20.0	19.0	20.0	14.5	13.0	13.5	9.5	8.5	9.0	4.5	4.0	4.0
5	19.0	17.5	18.0	14.5	13.0	13.5	9.0	8.0	8.5	4.5	3.5	4.0
6	18.0	17.0	17.5	14.5	13.0	14.0	9.0	8.5	8.5	5.5	4.5	5.0
7	17.0	16.0	16.5	13.0	11.0	12.0	9.0	8.5	9.0	6.5	5.0	5.5
8	16.5	15.5	16.0	11.5	11.0	11.0	9.5	8.0	9.0	6.5	4.0	5.5
9	16.5	15.5	16.0	12.5	11.5	12.0	8.5	7.5	8.0	4.0	3.0	3.5
10	17.5	16.0	16.5	13.0	12.0	12.5	7.5	7.0	7.5	3.5	2.5	3.0
11	17.5	16.5	17.0	13.0	12.5	12.5	7.0	6.0	6.5	4.5	3.0	3.5
12	16.5	15.0	16.0	12.5	12.0	12.0	6.0	5.0	5.5	5.5	4.5	5.0
13	15.0	14.0	15.0	12.0	11.0	11.5	5.5	5.0	5.5	5.5	5.0	5.0
14	15.5	13.5	14.5	12.5	11.0	11.5	5.5	5.0	5.5	5.0	4.0	4.5
15	17.0	14.5	16.0	12.0	11.0	11.5	6.0	5.0	6.0	5.0	4.5	5.0
16	17.5	16.0	17.0	12.5	11.5	12.0	6.0	4.5	5.5	5.5	4.5	5.0
17	17.5	17.0	17.0	12.0	11.0	11.5	6.5	6.0	6.5	5.0	4.5	5.0
18	17.0	16.5	17.0	12.5	11.0	12.0	6.5	5.5	6.0	5.5	4.5	5.0
19	18.5	16.0	17.0	12.5	12.0	12.5	7.0	5.5	6.0	6.5	5.5	6.0
20	18.0	16.5	17.0	12.5	12.0	12.5	7.5	6.5	7.0	6.5	5.5	6.0
21	16.5	15.0	15.5	12.5	11.0	12.0	8.0	7.5	8.0	5.5	5.0	5.5
22	15.5	15.5	15.5	11.0	8.5	10.0	10.0	8.5	9.5	6.0	5.0	5.5
23	16.0	15.0	15.5	8.5	8.0	8.5	10.5	8.5	10.0	6.5	5.5	6.0
24	16.0	14.5	15.5	8.5	7.5	8.0	8.5	7.5	8.0	7.0	6.0	6.5
25	14.5	14.0	14.5	8.5	7.5	8.0	8.0	6.5	7.5	7.5	7.0	7.5
26	14.0	13.5	14.0	10.0	8.5	9.5	6.5	5.5	5.5	8.5	7.5	8.5
27	13.5	12.5	13.0	11.0	10.0	10.5	7.0	5.0	5.5	8.5	7.0	8.0
28	14.0	13.0	13.5	11.0	10.5	11.0	7.5	6.5	7.0	7.0	5.5	6.0
29	13.5	12.5	13.0	11.0	10.0	10.5	6.5	3.5	5.0	7.0	6.0	6.5
30	14.0	12.5	13.5	11.5	10.5	11.0	3.5	2.5	3.0	7.0	7.0	7.0
31	13.0	11.5	12.5	---	---	---	3.5	2.5	3.0	8.0	6.5	7.5
MONTH	23.0	11.5	16.5	14.5	7.5	11.5	11.0	2.5	7.0	8.5	2.5	5.5
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	9.0	7.5	8.0	5.5	4.5	5.0	---	---	---	18.5	17.0	18.0
2	8.5	8.0	8.5	6.0	5.0	5.5	---	---	---	17.0	16.5	16.5
3	8.5	7.0	8.0	8.0	6.0	7.0	---	---	---	16.5	15.0	16.0
4	7.0	6.5	6.5	10.0	7.5	9.0	---	---	---	17.0	14.5	16.0
5	6.5	5.5	6.0	9.5	8.0	9.5	---	---	---	17.0	16.0	16.5
6	6.0	5.0	5.5	8.0	6.0	7.5	10.5	10.0	10.5	16.5	15.5	16.0
7	5.5	4.5	5.0	6.0	5.0	5.5	10.5	9.0	10.0	15.5	15.0	15.0
8	5.0	3.0	4.0	6.0	4.0	5.5	9.5	8.5	9.0	15.5	14.5	15.0
9	4.0	2.5	3.0	7.5	5.5	6.5	---	---	---	15.0	14.5	15.0
10	4.5	3.5	4.0	8.5	6.5	7.5	11.0	9.0	10.0	15.0	13.5	14.0
11	5.5	4.5	5.0	10.0	8.0	9.0	10.0	9.5	10.0	13.5	11.5	12.0
12	6.5	4.5	6.0	9.0	8.5	9.0	11.5	9.0	10.5	11.5	11.0	11.5
13	5.0	4.0	4.5	10.0	8.0	9.0	12.0	10.5	11.5	11.5	11.5	11.5
14	7.0	5.0	6.0	12.0	9.5	11.0	13.5	10.5	12.0	13.0	11.5	12.5
15	7.5	7.0	7.0	12.0	11.0	11.5	13.0	12.5	13.0	13.0	13.0	13.0
16	6.5	3.5	5.5	12.5	10.5	11.5	14.5	11.5	13.0	13.5	12.5	13.0
17	4.0	3.0	3.5	11.5	9.5	10.5	14.5	13.0	14.0	14.5	13.0	13.5
18	4.0	3.0	3.5	11.0	10.0	10.5	15.0	13.5	14.5	16.0	14.5	15.0
19	6.0	4.0	5.0	10.0	8.5	9.0	15.5	13.0	14.5	17.0	15.5	16.5
20	7.0	6.0	6.5	9.0	8.0	8.5	16.0	13.5	15.0	17.0	17.0	17.0
21	7.0	5.5	6.5	8.0	7.0	7.5	15.5	15.0	15.0	18.5	17.0	17.5
22	5.5	3.5	4.5	8.0	6.0	7.0	16.5	14.0	15.0	19.0	17.0	18.0
23	3.5	2.5	3.0	9.5	6.5	8.0	16.5	14.0	15.0	18.0	17.5	18.0
24	3.5	2.0	2.5	9.5	8.5	9.0	16.0	14.0	15.0	17.5	17.0	17.0
25	3.0	2.0	2.5	11.0	9.0	10.0	15.5	14.0	14.5	18.5	16.5	17.5
26	4.5	3.5	4.0	13.5	11.0	12.0	17.0	14.5	15.5	19.0	18.5	19.0
27	5.0	4.0	4.5	15.0	12.5	14.0	19.5	16.5	18.0	19.5	18.5	19.0
28	5.5	4.5	5.0	17.0	14.5	16.0	19.0	17.0	18.0	19.0	18.0	18.5
29	---	---	---	18.5	15.5	17.0	17.5	15.5	16.5	19.5	18.0	18.5
30	---	---	---	15.5	13.0	14.0	19.0	16.5	17.5	20.5	18.5	19.5
31	---	---	---	13.0	9.0	11.0	---	---	---	21.0	20.0	20.5
MONTH	9.0	2.0	5.0	18.5	4.0	9.5	19.5	8.5	13.5	21.0	11.0	16.0

BEAVER RIVER BASIN

03099510 MAHONING RIVER AT OHIO-PENNSYLVANIA STATE LINE, BELOW LOWELLVILLE, OH--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	21.0	20.5	21.0	23.0	21.5	22.5	24.5	23.5	24.0	27.0	26.0	26.5
2	22.0	21.0	21.5	23.5	22.5	23.0	25.0	23.5	24.5	27.0	25.5	26.0
3	21.5	20.5	21.0	23.5	23.5	23.5	26.5	24.0	25.5	26.5	24.5	25.5
4	20.5	20.0	20.0	23.5	23.0	23.5	26.5	25.5	26.0	25.0	23.5	24.5
5	20.0	19.0	19.5	24.0	23.0	23.5	27.5	25.5	26.5	25.0	23.0	24.0
6	20.0	18.5	19.5	24.5	23.5	24.0	27.0	26.0	26.5	26.0	24.0	25.0
7	21.0	19.5	20.0	25.5	24.0	24.5	26.0	24.0	25.0	26.5	25.0	25.5
8	22.0	20.5	21.5	25.5	24.0	25.0	24.0	23.0	23.5	27.5	24.0	26.0
9	21.5	21.0	21.5	25.0	23.5	24.5	24.0	22.0	23.0	27.0	24.5	26.0
10	21.0	20.0	20.5	26.5	24.5	25.5	24.5	22.0	23.5	26.0	25.5	26.0
11	21.0	19.5	20.0	27.5	25.5	26.5	24.0	22.5	23.5	27.0	25.5	26.0
12	19.5	19.0	19.0	27.0	26.0	26.5	25.0	23.0	24.0	26.5	26.0	26.0
13	20.5	19.0	19.5	27.5	25.5	26.5	23.0	22.0	22.5	26.5	25.0	26.0
14	20.0	18.5	19.5	26.5	24.5	25.5	24.0	21.5	22.5	25.5	23.0	25.0
15	18.5	18.0	18.5	26.0	24.0	25.0	24.0	22.0	23.0	25.0	21.5	23.5
16	18.5	18.0	18.5	27.0	25.5	26.0	24.5	23.0	23.5	21.5	20.0	21.0
17	19.0	18.5	18.5	26.5	25.0	25.5	24.5	23.0	23.5	21.5	20.5	20.5
18	---	---	---	26.5	24.0	25.0	25.0	23.0	23.5	21.5	20.0	20.5
19	---	---	---	26.0	24.5	25.0	24.5	23.0	24.0	22.0	20.5	21.5
20	21.0	20.0	20.5	27.0	25.5	26.0	24.5	23.5	24.0	23.5	21.5	22.5
21	20.0	19.5	20.0	27.5	25.5	26.5	25.5	23.5	24.5	24.5	22.5	23.5
22	20.5	19.5	20.0	28.0	25.5	26.5	25.0	24.0	24.5	24.5	24.0	24.5
23	21.5	20.0	20.5	28.5	27.0	27.5	26.0	24.5	25.0	24.0	20.5	22.5
24	22.5	21.0	22.0	28.0	26.0	27.0	26.5	24.5	25.5	20.5	19.5	20.0
25	23.0	22.5	23.0	28.5	26.5	27.5	26.0	24.0	25.0	19.5	18.0	18.5
26	23.5	23.0	23.0	28.0	26.0	27.0	26.5	24.0	25.0	18.5	17.5	18.0
27	23.5	22.5	23.0	27.0	24.5	26.0	25.5	24.0	25.0	19.0	17.0	18.0
28	23.5	22.5	23.0	26.0	24.0	25.0	25.5	23.5	25.0	19.0	17.5	18.0
29	22.5	22.0	22.5	25.5	24.0	25.0	27.0	24.5	25.5	19.5	18.0	19.0
30	22.5	21.5	22.0	24.5	23.5	24.0	28.0	26.5	27.0	20.5	19.0	19.5
31	---	---	---	24.0	23.5	24.0	28.0	25.5	26.5	---	---	---
MONTH	23.5	18.0	20.5	28.5	21.5	25.5	28.0	21.5	24.5	27.5	17.0	23.0
YEAR	28.5	2.0	15.0									

OXYGEN, DISSOLVED (MG/L), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	8.2	7.1	7.5	8.8	8.2	8.5	10.9	8.5	9.6	13.4	12.4	12.7
2	7.6	6.7	7.1	8.3	8.0	8.1	11.1	10.4	10.7	13.2	12.0	12.5
3	7.6	6.7	7.1	8.7	7.4	8.2	11.2	10.5	10.8	13.0	11.7	12.1
4	7.9	7.2	7.5	9.2	8.2	8.6	11.2	10.3	10.7	12.9	11.7	12.0
5	7.8	7.0	7.4	9.1	7.9	8.5	11.8	10.5	10.9	13.8	11.8	12.7
6	8.0	6.8	7.6	9.7	8.2	8.6	10.5	9.0	10.1	13.1	12.4	12.8
7	8.3	7.9	8.1	9.6	8.4	9.2	10.0	8.8	9.2	13.3	11.9	12.7
8	8.4	7.9	8.1	10.2	9.1	9.5	9.2	8.4	8.8	13.1	11.3	11.9
9	8.4	7.8	8.1	10.2	9.3	9.7	9.5	8.4	8.8	11.6	10.4	11.2
10	7.9	7.3	7.6	10.2	9.3	9.6	9.0	8.5	8.7	12.0	10.3	11.0
11	7.6	7.2	7.4	10.4	9.5	10.1	9.4	8.1	8.7	12.5	10.5	11.2
12	8.2	7.5	7.8	10.5	10.1	10.3	12.9	8.0	10.1	11.9	11.1	11.5
13	8.5	8.0	8.3	10.3	10.0	10.1	11.5	11.0	11.3	11.8	10.6	11.1
14	8.6	8.0	8.4	10.4	8.3	9.6	11.9	11.3	1.5	11.5	10.4	10.9
15	8.5	7.8	8.1	10.6	8.3	9.2	11.3	11.0	11.2	11.5	11.3	11.4
16	8.3	7.7	7.9	10.2	9.2	9.7	11.7	10.6	11.1	12.4	11.2	11.6
17	8.2	7.6	7.9	10.1	8.9	9.3	11.1	10.3	10.7	12.7	11.3	11.8
18	7.9	7.2	7.6	10.6	8.7	9.5	11.0	10.3	10.6	12.5	11.2	11.7
19	8.2	7.6	8.0	9.4	9.2	9.3	11.5	10.4	10.9	12.6	11.5	11.9
20	8.4	7.6	8.0	9.8	9.3	9.5	11.1	10.1	10.7	11.7	10.6	11.4
21	8.6	7.7	8.2	9.4	9.2	9.3	10.5	10.0	10.4	12.0	10.5	11.0
22	8.4	7.3	8.0	10.3	8.6	9.5	10.5	9.4	9.9	12.7	10.3	11.3
23	8.6	8.2	8.4	10.4	8.2	9.0	10.5	9.1	9.6	12.7	10.5	11.4
24	8.5	8.2	8.3	11.3	8.3	9.4	10.4	9.2	9.7	12.3	10.6	11.2
25	9.0	8.2	8.7	10.8	8.5	9.5	9.8	9.7	9.8	11.3	10.7	10.9
26	9.2	8.7	9.0	11.3	9.5	10.2	10.6	9.7	10.1	11.5	10.4	10.8
27	9.6	9.0	9.3	10.5	9.4	10.1	11.9	10.1	10.8	11.7	10.4	11.2
28	9.2	8.9	9.1	9.3	8.3	8.7	10.9	9.5	10.2	12.4	11.5	12.0
29	9.4	8.7	9.0	9.6	8.2	8.7	13.1	9.5	11.1	12.2	11.8	12.0
30	9.2	8.7	8.9	8.9	8.5	8.7	13.6	11.8	12.7	11.8	10.2	11.1
31	9.3	8.6	8.9	---	---	---	13.8	12.4	12.9	11.4	10.1	10.6
MONTH	9.6	6.7	8.1	11.3	7.4	9.3	13.8	8.0	10.4	13.8	10.1	11.6

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY												
1	11.5	10.1	10.7	12.9	12.2	12.5	---	---	---	8.5	7.3	8.1
2	11.2	9.8	10.4	12.2	11.2	11.8	---	---	---	8.7	7.2	8.0
3	10.9	10.6	10.8	12.3	11.0	11.5	---	---	---	9.2	8.2	8.7
4	11.5	10.7	11.1	12.0	10.7	11.2	---	---	---	9.7	8.5	9.2
5	11.7	11.1	11.4	10.6	10.2	10.4	---	---	---	8.7	8.3	8.5
6	11.9	11.2	11.5	11.7	10.3	11.0	10.1	9.4	9.9	8.6	7.7	8.2
7	12.3	11.3	11.6	12.9	11.7	12.3	10.3	9.0	9.9	9.1	8.0	8.5
8	12.4	11.1	11.7	12.7	11.9	12.3	10.1	9.4	9.7	9.4	8.3	8.8
9	12.3	11.3	11.7	12.5	11.0	11.9	---	---	---	9.3	8.4	8.9
10	12.2	11.3	11.6	12.5	10.7	11.4	11.2	9.9	10.3	9.1	8.1	8.8
11	12.2	11.2	11.6	12.0	10.2	10.9	11.0	10.0	10.4	9.2	8.7	9.0
12	12.4	11.0	11.6	11.0	9.8	10.3	10.5	9.3	10.0	9.5	9.1	9.3
13	11.9	11.4	11.7	11.6	9.6	10.3	10.7	9.1	10.1	9.6	9.3	9.4
14	11.8	11.2	11.5	10.7	8.9	9.6	10.9	9.9	10.4	10.3	9.7	9.9
15	11.6	11.0	11.2	9.2	8.6	8.9	10.2	9.1	9.9	10.0	9.7	9.8
16	12.4	11.4	12.0	10.0	9.1	9.4	10.9	9.0	9.8	10.1	9.6	9.8
17	13.0	12.2	12.5	10.7	9.4	9.9	10.7	9.0	9.6	10.3	9.6	9.9
18	13.2	12.2	12.7	9.7	9.1	9.4	10.3	8.6	9.3	10.0	9.2	9.6
19	13.0	12.1	12.5	10.6	9.2	9.8	10.3	8.7	9.4	9.7	9.0	9.4
20	12.2	11.6	11.9	10.1	9.6	9.9	10.7	8.8	9.7	9.5	8.8	9.0
21	11.9	11.4	11.6	11.2	9.6	10.3	9.8	8.6	9.0	9.1	8.6	8.8
22	12.4	11.9	12.2	11.7	10.6	11.1	10.0	8.4	9.2	9.3	8.5	8.8
23	12.6	12.2	12.4	11.9	10.8	11.2	10.3	8.5	9.3	8.6	8.1	8.4
24	13.1	12.4	12.7	11.3	10.3	10.8	10.3	8.4	9.4	8.5	8.0	8.2
25	13.5	12.7	13.1	11.2	10.1	10.6	10.1	8.5	9.2	8.6	8.1	8.3
26	13.3	12.7	13.0	11.0	9.6	10.2	10.2	8.4	9.1	8.3	7.9	8.1
27	12.9	12.5	12.7	10.5	8.6	9.4	10.5	7.9	9.0	8.2	8.1	8.2
28	13.4	12.4	12.8	9.8	7.9	8.7	8.9	8.0	8.4	8.7	8.1	8.4
29	---	---	---	8.3	7.2	7.6	9.7	8.3	8.7	9.0	8.3	8.6
30	---	---	---	9.4	8.4	8.8	10.1	8.1	8.9	8.7	8.4	8.6
31	---	---	---	9.5	8.5	9.1	---	---	---	8.4	8.1	8.3
MONTH	13.5	9.8	11.9	12.9	7.2	10.4	11.2	7.9	9.5	10.3	7.2	8.8
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE												
1	8.2	5.9	7.1	8.4	7.6	7.9	8.3	7.2	7.7	8.7	7.9	8.2
2	8.1	7.9	8.0	8.3	7.6	7.9	8.9	7.2	8.0	8.7	7.8	8.2
3	8.2	7.0	8.0	8.1	7.6	7.8	9.0	7.5	8.1	8.9	7.7	8.2
4	7.6	6.8	7.4	7.9	7.6	7.7	8.7	7.6	8.0	8.9	7.7	8.2
5	7.7	7.3	7.5	8.0	7.5	7.7	8.7	7.3	7.8	8.3	7.1	7.5
6	8.2	7.5	7.9	8.2	7.5	7.8	8.3	7.3	7.7	8.4	7.1	7.6
7	8.3	7.8	8.0	8.1	7.4	7.7	7.9	7.1	7.4	7.8	7.0	7.3
8	8.3	7.9	8.1	7.9	7.2	7.5	8.6	7.0	7.8	7.8	6.8	7.3
9	8.0	7.5	7.8	7.7	7.0	7.4	9.4	7.8	8.4	7.9	7.2	7.5
10	7.9	7.7	7.8	8.1	7.1	7.5	9.7	7.9	8.6	7.4	7.0	7.2
11	8.3	7.7	8.0	8.2	7.0	7.5	9.2	8.0	8.5	7.7	6.9	7.2
12	8.1	7.7	7.9	7.6	7.2	7.4	9.6	7.8	8.6	7.6	6.9	7.1
13	8.3	7.6	8.0	7.8	7.1	7.4	9.2	8.0	8.5	7.9	6.5	7.2
14	7.9	7.5	7.7	7.7	7.0	7.4	9.8	8.0	8.7	7.1	6.5	6.9
15	7.5	7.2	7.3	8.1	7.0	7.5	9.3	8.1	8.6	7.5	6.4	7.1
16	7.3	6.8	7.1	8.3	7.1	7.6	9.2	7.6	8.4	7.4	7.1	7.2
17	7.2	6.0	7.0	8.4	7.1	7.6	9.7	7.6	8.5	7.5	7.1	7.3
18	---	---	---	8.4	7.0	7.6	9.7	7.8	8.6	7.9	7.0	7.3
19	---	---	---	7.6	6.9	7.3	9.5	8.1	8.7	7.9	6.9	7.3
20	8.0	7.6	7.8	7.9	6.3	7.1	9.4	8.2	8.7	8.2	7.0	7.4
21	8.1	7.5	7.8	7.8	6.6	7.2	10.2	7.7	9.0	8.1	7.0	7.4
22	8.5	7.8	8.1	8.0	6.6	7.2	10.0	8.7	9.3	7.6	6.6	7.2
23	8.2	8.0	8.1	8.3	6.5	7.3	10.2	9.0	9.5	7.0	6.6	6.8
24	8.5	8.0	8.3	8.3	6.8	7.4	10.3	9.0	9.5	7.6	6.7	7.0
25	8.5	8.1	8.3	8.3	6.8	7.5	10.7	8.9	9.6	7.9	6.6	7.1
26	8.4	8.0	8.2	7.1	6.5	6.9	10.9	9.1	9.8	7.6	6.9	7.1
27	8.1	7.3	7.9	7.2	6.6	6.9	10.8	9.3	10.0	7.9	6.6	7.1
28	7.8	7.5	7.6	7.6	6.8	7.1	11.1	9.6	10.2	8.3	6.6	7.2
29	8.1	7.4	7.7	7.9	6.8	7.2	10.1	8.3	9.3	8.2	6.8	7.4
30	8.5	7.5	7.9	7.6	6.9	7.2	9.3	8.2	8.6	8.4	6.9	7.4
31	---	---	---	8.1	7.0	7.5	9.4	8.2	8.6	---	---	---
MONTH	8.5	5.9	7.8	8.4	6.3	7.4	11.1	7.0	8.7	8.9	6.4	7.4
YEAR	13.8	5.9	9.3									

BEAVER RIVER BASIN

03102950 PYMATUNING CREEK AT KINSMAN, OH

LOCATION.--Lat 41°26'34", long 80°35'18", in T.7 N., R.1 W., Trumbull County, Hydrologic Unit 05030102, on left bank at downstream side of bridge on State Highway 7 at Kinsman, 0.8 mi downstream from Sugar Creek, and 1.2 mi upstream from Stratton Creek.

DRAINAGE AREA.--96.7 mi².

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 906.8 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Feb. 5-13, 17-21. Records good, except for periods of estimated record, which are fair. Water-quality data collected at this site 1966 to 1977. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--24 years, 128 ft³/s, 17.98 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,740 ft³/s Nov. 6, 1985, gage height, 12.40 ft from rating curve extended above 800 ft³/s; minimum daily discharge, 0.05 ft³/s July 10, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 4	2100	841	10.75	May 31	2400	830	10.73
May 27	2000	765	10.61	June 22	1500	*1,120	*11.19

Minimum daily discharge, 3.5 ft³/s Aug. 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.2	44	89	264	159	61	649	37	673	290	13	13
2	9.6	41	85	174	115	61	619	64	504	179	11	26
3	10	40	78	125	92	49	659	85	418	98	9.0	34
4	11	66	72	92	78	58	759	88	398	64	7.9	20
5	11	113	65	94	66	101	753	79	308	49	12	9.5
6	12	250	59	72	58	157	605	71	218	51	28	5.9
7	15	267	55	76	52	139	446	72	148	60	19	5.2
8	15	294	49	258	48	122	301	92	93	50	13	11
9	16	295	45	365	44	87	184	116	71	37	9.9	12
10	15	283	41	298	42	67	116	199	82	28	8.0	10
11	19	339	41	237	40	56	91	438	74	23	6.9	10
12	25	302	36	166	38	54	80	490	63	19	5.7	9.7
13	22	289	34	127	36	52	75	446	136	18	5.2	8.5
14	23	320	35	106	62	51	73	395	234	17	4.6	11
15	26	277	45	101	149	70	68	321	628	15	3.9	33
16	24	234	52	96	279	84	64	294	476	12	4.3	49
17	20	191	53	87	170	74	59	251	354	11	7.0	80
18	56	137	49	81	110	83	64	178	269	9.6	7.6	72
19	78	100	47	78	92	100	71	119	193	8.0	6.5	47
20	79	112	56	79	84	94	70	85	203	12	5.9	29
21	76	271	104	79	82	95	63	77	500	16	6.6	17
22	80	295	140	84	370	103	57	74	993	19	6.2	14
23	82	261	188	76	317	98	50	90	852	18	6.0	47
24	85	211	237	70	273	91	43	231	618	16	6.3	73
25	84	146	250	70	185	84	38	250	492	12	5.8	62
26	78	102	221	119	101	77	35	477	360	9.7	5.1	42
27	69	84	170	309	74	71	32	711	249	13	4.4	25
28	62	82	255	354	69	71	30	696	264	30	3.5	16
29	60	86	453	374	---	163	29	514	261	38	6.1	12
30	56	89	393	319	---	275	34	325	328	26	11	9.7
31	50	---	336	231	---	490	---	387	---	17	10	---
TOTAL	1277.8	5621	3833	5061	3285	3238	6217	7752	10460	1265.3	259.4	813.5
MEAN	41.2	187	124	163	117	104	207	250	349	40.8	8.37	27.1
MAX	85	339	453	374	370	490	759	711	993	290	28	80
MIN	9.2	40	34	70	36	49	29	37	63	8.0	3.5	5.2
CFSM	.43	1.94	1.28	1.69	1.21	1.08	2.14	2.59	3.61	.42	.09	.28
IN.	.49	2.16	1.47	1.95	1.26	1.25	2.39	2.98	4.02	.49	.10	.31

CAL YR 1988	TOTAL 31686.06	MEAN 86.6	MAX 602	MIN .05	CFSM .90	IN. 12.19
WTR YR 1989	TOTAL 49083.0	MEAN 134	MAX 993	MIN 3.5	CFSM 1.39	IN. 18.88

LITTLE BEAVER CREEK BASIN

03109500 LITTLE BEAVER CREEK NEAR EAST LIVERPOOL, OH

LOCATION.--Lat 40°40'33", long 80°32'27", Columbiana County, Hydrologic Unit 05030101, on right bank at downstream side of Grimms Bridge, 1.5 mi upstream from Island Run, 4 mi upstream from mouth, and 4 mi northeast of East Liverpool.

DRAINAGE AREA.--496 mi².

PERIOD OF RECORD.--May 1915 to current year.

REVISED RECORDS.--WSP 873: 1937(M). WSP 1305: 1916-18(M), 1921-22(M), 1924-30(M), 1933(M), 1936(M). WSP 1907: 1950(P), drainage area.

GAGE.--Water-stage recorder. Datum of gage is 702.77 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 22, 1926, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Dec. 10-14, Feb. 4-13. Records good except for periods of estimated records, which are fair. Water-quality data collected at this site 1964-1978. Sediment data collected at this site 1969 to 1974. Satellite telemeter at station.

AVERAGE DISCHARGE.--74 years, 520 ft³/s, 14.24 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,000 ft³/s July 19, 1941, gage height, 17.4 ft, from rating curve extended above 16,000 ft³/s on basis of slope-area measurement of peak flow; minimum, 12 ft³/s several days in 1918, 1930, 1932, 1936.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,000 ft³/s and maximum (*).

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 30	2100	5,620	9.15	June 28	0900	6,840	9.90
June 22	0300	*10,700	*11.92				

Minimum discharge, 37 ft³/s Oct. 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	87	138	349	333	407	4140	257	582	957	154	92
2	44	88	131	292	306	335	2510	432	545	759	138	81
3	41	89	125	250	318	326	2300	437	475	644	126	74
4	40	168	119	435	260	332	2370	361	1120	588	118	69
5	38	391	114	468	230	459	2210	330	1370	653	124	59
6	40	525	110	592	210	685	1630	399	702	693	140	54
7	41	345	108	577	190	499	1290	471	506	499	139	53
8	45	249	107	852	180	432	1070	444	416	412	114	67
9	52	217	100	1000	170	433	934	403	419	356	102	97
10	55	205	96	522	160	481	767	1330	590	331	94	88
11	64	295	94	420	160	533	653	2740	450	303	89	72
12	65	245	90	432	150	593	587	2200	361	273	85	64
13	56	227	88	557	140	549	551	1590	676	268	83	63
14	51	285	86	433	271	515	521	1550	1900	251	82	61
15	48	242	127	538	424	644	481	1690	3170	226	84	87
16	49	197	103	534	866	643	448	2780	2930	209	81	184
17	50	175	106	446	590	531	410	2010	1660	199	75	294
18	63	157	99	390	450	500	410	1390	1060	186	71	185
19	108	143	98	359	399	489	421	1050	757	179	73	123
20	97	231	113	354	346	471	376	858	2220	211	92	99
21	93	604	140	339	1590	1100	343	802	4560	213	97	87
22	121	414	145	366	2390	962	322	680	7340	182	91	95
23	148	285	167	541	1290	725	296	843	4810	172	84	299
24	157	230	284	341	750	685	274	1400	2390	156	77	275
25	150	200	434	263	609	660	268	939	1450	145	71	164
26	129	182	318	281	601	578	279	2320	1080	136	65	124
27	110	174	234	523	526	510	263	2380	1180	178	61	104
28	100	170	381	464	447	540	247	1330	5170	292	58	93
29	95	166	883	385	---	1160	248	947	2340	204	62	86
30	92	149	476	369	---	3340	250	789	1300	160	98	81
31	89	---	371	355	---	4810	---	686	---	160	120	---
TOTAL	2376	7135	5985	14027	14356	24927	26869	35838	53529	10195	2948	3374
MEAN	76.6	238	193	452	513	804	896	1156	1784	329	95.1	112
MAX	157	604	883	1000	2390	4810	4140	2780	7340	957	154	299
MIN	38	87	86	250	140	326	247	257	361	136	58	53
CFSM	.15	.48	.39	.91	1.03	1.62	1.81	2.33	3.60	.66	.19	.23
IN.	.18	.54	.45	1.05	1.08	1.87	2.02	2.69	4.01	.76	.22	.25
CAL YR 1988	TOTAL 109444	MEAN 299	MAX 4360	MIN 20	CFSM .60	IN. 8.21						
WTR YR 1989	TOTAL 201559	MEAN 552	MAX 7340	MIN 38	CFSM 1.11	IN. 15.12						

YELLOW CREEK BASIN

03110000 YELLOW CREEK NEAR HAMMONDSVILLE, OH

LOCATION.--Lat 40°32'16", long 80°43'31", in sec. 29, T.8 N., R.2 W., Jefferson County, Hydrologic Unit 05030101, on right bank 1,000 ft upstream from Lowery Run, 0.9 mi upstream from Brush Creek and 1.6 mi southwest of Hammondsville.

DRAINAGE AREA.--147 mi².

PERIOD OF RECORD.--October 1940 to current year.

REVISED RECORDS.--WSP 1907: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 692.10 ft above Ohio State Highway Department bench mark.

REMARKS.--Estimated daily discharges: Dec. 12-16, Feb. 5-13. Records fair. Water-quality data collected at this site 1965 to 1977. Sediment data collected 1969 to 1974. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--49 years, 161 ft³/s, 14.87 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,580 ft³/s Jan. 27, 1952, gage height, 12.17 ft; minimum, 0.8 ft³/s Sept. 24 to Oct. 1, Oct. 7, 8, 1963.

EXTREMES OUTSIDE PERIOD OF RECORD.--The highest stage observed is reported to have occurred in 1912.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 1	0030	2,550	6.61	June 22	0900	2,930	7.04
May 26	2230	*3,450	*7.59	June 28	0800	2,360	6.38
June 15	1800	2,070	6.01				

Minimum daily discharge, 2.7 ft³/s Oct. 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	95	29	154	99	101	1910	21	229	297	95	14
2	3.0	99	25	106	78	62	1030	66	187	237	60	13
3	40	106	23	76	79	63	850	72	158	189	44	13
4	34	138	21	121	63	68	748	61	319	184	37	12
5	30	242	20	197	46	159	764	56	211	174	36	11
6	26	319	18	83	40	377	637	149	175	154	33	10
7	21	202	18	224	28	302	537	147	136	136	43	11
8	16	172	17	315	24	219	443	153	121	122	35	14
9	8.9	154	16	309	22	198	400	114	125	110	28	14
10	6.2	139	15	190	20	293	323	509	250	109	24	13
11	13	168	12	177	19	393	256	1150	158	79	22	11
12	20	147	11	181	17	554	205	938	183	67	20	11
13	25	140	11	335	16	472	185	662	1220	61	19	11
14	28	200	10	238	40	443	157	623	652	54	18	11
15	28	168	9.6	372	148	579	124	578	1190	46	18	22
16	30	145	9.0	354	648	488	103	853	1030	42	17	56
17	32	134	14	307	419	380	80	723	584	39	16	84
18	39	116	12	246	320	340	74	530	378	35	15	39
19	44	103	12	191	241	295	90	416	274	34	16	25
20	62	180	14	153	169	250	65	345	816	37	53	19
21	68	393	22	112	826	653	52	333	1770	37	37	17
22	77	276	29	96	937	567	45	235	2280	32	27	45
23	116	155	30	112	551	444	38	290	921	29	21	138
24	119	92	195	83	365	396	33	454	534	27	20	67
25	143	65	402	65	285	351	31	362	373	25	21	36
26	146	50	225	65	259	296	36	2050	309	28	18	30
27	116	42	127	256	203	227	31	1600	369	79	16	24
28	99	41	185	199	120	219	27	721	1630	219	15	21
29	92	39	423	158	---	506	29	484	646	79	14	19
30	88	34	293	143	---	1270	29	365	402	52	14	17
31	92	---	247	122	---	2230	---	286	---	166	14	---
TOTAL	1664.8	4354	2494.6	5740	6082	13195	9332	15346	17630	2979	866	828
MEAN	53.7	145	80.5	185	217	426	311	495	588	96.1	27.9	27.6
MAX	146	393	423	372	937	2230	1910	2050	2280	297	95	138
MIN	2.7	34	9.0	65	16	62	27	21	121	25	14	10
CFSM	.37	.99	.55	1.26	1.48	2.90	2.12	3.37	4.00	.65	.19	.19
IN.	.42	1.10	.63	1.45	1.54	3.34	2.36	3.88	4.46	.75	.22	.21
CAL YR 1988	TOTAL 34742.0	MEAN 94.9	MAX 1310	MIN 2.6	CFSM .65	IN. 8.79						
WTR YR 1989	TOTAL 80511.4	MEAN 221	MAX 2280	MIN 2.7	CFSM 1.50	IN. 20.37						

SHORT CREEK BASIN

55

03111500 SHORT CREEK NEAR DILLONVALE, OH

LOCATION.--Lat 40°11'38", long 80°44'03", in sec. 30, T.4 N., R.2 W., Jefferson County, Hydrologic Unit 05030106, on right bank 350 ft downstream from bridge on State Highway 150, 2.1 mi east of Dillonvale, 2.2 mi downstream from Jug Run, and 2.9 mi upstream from Little Short Creek.

DRAINAGE AREA.--123 mi².

PERIOD OF RECORD.--October 1941 to current year.

REVISED RECORDS.--WSP 1003: 1942-43. WSP 1907: Drainage area. WRD-OH-82-1: 1981

GAGE.--Water-stage recorder. Datum of gage is 675.1 ft above State of Ohio bench mark. Prior to Oct. 21, 1982 at datum 1.00 ft higher, prior to Oct. 21, 1941, nonrecording gage at same site and 676.1 elevation.

REMARKS.--Estimated daily discharges: Dec. 10-15, 18-19, Feb. 3-15. Records fair except for those for periods of estimated record and Nov. 1 to Dec. 6 which are poor. Water-quality data collected at this site 1964 to 1977. Sediment data collected 1969 to 1974. U.S. Army Corps of Engineers satellite telemeter at station. Water year 1986 stream flow records published in 1987 water year report.

AVERAGE DISCHARGE.--48 years, 129 ft³/s, 14.24 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,500 ft³/s Mar. 6, 1945, gage height, 8.77 ft; maximum gage height, 10.15 ft Mar. 5, 1963, from graph based on gage readings; minimum daily discharge, 2.8 ft³/s Sept. 21, 27, 1947.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 21	1100	1,360	4.86	June 20	1800	2,100	6.17
June 13	0330	1,470	5.07	June 21	1100	*2,910	*7.37
June 15	1500	2,580	6.90	June 28	0400	1,930	5.89

Minimum daily discharge, 15 ft³/s Oct. 16, 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	18	31	50	43	98	573	143	172	224	86	38
2	17	20	29	46	42	85	351	238	154	200	80	38
3	17	18	33	42	42	86	332	219	144	187	86	37
4	22	24	24	37	46	89	301	186	215	178	81	34
5	24	85	24	37	50	180	349	168	169	179	73	35
6	20	134	28	83	46	259	279	173	151	166	69	40
7	19	64	24	114	42	172	243	171	130	149	67	39
8	19	51	24	95	38	141	220	166	120	137	65	38
9	19	42	23	74	36	144	229	164	130	129	60	36
10	19	38	22	57	34	181	191	403	303	134	58	41
11	21	35	21	54	32	201	173	534	167	127	54	48
12	19	34	20	65	32	198	163	402	151	124	52	40
13	17	41	20	103	30	163	155	404	764	119	48	38
14	16	58	20	71	80	151	144	367	315	111	48	38
15	16	38	26	129	150	191	137	556	1330	107	47	60
16	15	35	34	102	523	161	130	581	675	101	47	115
17	15	33	42	78	217	134	122	391	389	98	44	80
18	17	31	38	66	143	127	136	310	289	96	42	52
19	19	33	37	61	119	119	174	271	242	100	45	43
20	19	162	40	56	103	138	137	254	866	100	51	39
21	22	130	32	46	791	417	126	259	1770	94	46	35
22	37	74	28	41	412	281	120	215	735	90	43	61
23	32	59	32	46	238	204	115	300	449	85	45	210
24	42	43	282	50	159	204	109	283	342	80	98	93
25	42	37	211	45	134	190	118	245	284	79	53	62
26	27	33	84	48	131	163	129	618	268	213	46	50
27	23	31	60	85	121	146	112	406	279	224	41	43
28	22	32	102	60	104	140	108	285	1040	173	39	40
29	21	32	129	52	---	310	147	239	355	108	39	40
30	20	31	73	51	---	501	136	213	267	92	45	41
31	19	---	60	47	---	714	---	191	---	89	40	---
TOTAL	675	1496	1653	1991	3938	6288	5759	9355	12665	4093	1738	1604
MEAN	21.8	49.9	53.3	64.2	141	203	192	302	422	132	56.1	53.5
MAX	42	162	282	129	791	714	573	618	1770	224	98	210
MIN	15	18	20	37	30	85	108	143	120	79	39	34
CFSM	.18	.41	.43	.52	1.14	1.65	1.56	2.45	3.43	1.07	.46	.43
IN.	.20	.45	.50	.60	1.19	1.90	1.74	2.83	3.83	1.24	.53	.49

CAL YR 1988 TOTAL 27927 MEAN 76.3 MAX 2010 MIN 11 CFSM .62 IN. 8.45
WTR YR 1989 TOTAL 51255 MEAN 140 MAX 1770 MIN 15 CFSM 1.14 IN. 15.50

WHEELING CREEK BASIN

03111548 WHEELING CREEK BELOW BLAINE, OH

LOCATION.--Lat 40°04'01", long 80°48'31", Belmont County, Hydrologic Unit 05030106, on left bank at bridge on Pease Township Road 320 near U.S. Route 40, 0.5 mi east of Blaine, and 4.8 mi upstream from mouth.

DRAINAGE AREA.--97.7 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1982 to September 1987, October 1988 to September 1989.

GAGE.--Water-stage recorder. Datum of gage is 699.11 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1988 at datum 1.00 ft higher.

REMARKS.--Estimated daily discharges: Dec. 10-15, 18, 19, Feb. 4-13. Records good except periods of estimated record, which are fair. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--5 years, 102 ft³/s, 14.18 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,780 ft³/s June 21, 1989, gage height, 6.85 ft; minimum daily discharge, 7.0 ft³/s, Sept. 21-23, 1985.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 15	1100	1,780	4.84	June 21	0730	*3,780	*6.85

Minimum daily discharge, 11 ft³/s Oct. 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	17	22	46	49	95	499	167	149	135	57	29
2	12	17	21	44	47	85	313	223	136	128	56	29
3	12	20	21	40	74	84	303	171	142	122	53	28
4	12	21	20	38	66	90	275	152	183	119	50	26
5	12	59	19	38	56	280	314	154	155	131	63	25
6	12	78	19	124	50	319	243	158	152	114	55	25
7	12	46	19	122	45	182	217	155	127	110	52	25
8	11	35	19	110	42	150	199	146	115	99	48	26
9	12	28	18	80	40	157	208	161	125	94	44	26
10	13	26	18	61	38	175	170	331	173	98	41	28
11	17	28	17	54	36	173	158	332	128	88	39	30
12	16	24	17	93	34	160	146	281	110	129	38	28
13	14	29	16	123	33	139	140	372	150	170	37	27
14	13	34	16	81	230	132	131	305	131	94	35	31
15	14	28	20	149	535	164	125	295	821	82	38	41
16	14	25	28	105	493	138	119	336	353	75	44	106
17	14	25	37	81	192	122	114	259	217	73	42	67
18	20	21	35	70	138	134	161	223	164	70	35	39
19	20	21	28	63	116	121	223	203	143	78	41	33
20	17	229	37	59	103	185	148	198	554	76	40	29
21	19	115	29	52	717	546	130	218	1930	70	38	30
22	34	54	23	55	322	255	124	185	623	66	37	75
23	29	38	30	56	198	195	114	279	353	61	38	196
24	40	32	237	49	149	200	108	246	271	59	42	79
25	34	28	174	45	131	182	116	190	222	59	38	50
26	24	26	65	53	128	158	121	439	200	93	33	42
27	21	26	49	87	117	144	108	279	200	95	31	35
28	18	28	101	62	103	136	106	209	283	104	31	32
29	19	25	105	54	---	277	203	186	177	70	32	31
30	20	22	64	54	---	383	153	17	158	58	40	30
31	17	---	52	52	---	715	---	164	---	56	33	---
TOTAL	556	1205	1376	2200	4282	6276	5489	7189	8645	2876	1301	1298
MEAN	17.9	40.2	44.4	71.0	153	202	183	232	288	92.8	42.0	43.3
MAX	40	229	237	149	717	715	499	439	1930	170	63	196
MIN	11	17	16	38	33	84	106	146	110	56	31	25
CFSM	.18	.41	.45	.73	1.57	2.07	1.87	2.37	2.95	.95	.43	.44
IN.	.21	.46	.52	.84	1.63	2.39	2.09	2.74	3.29	1.10	.50	.49

WTR YR 1989 TOTAL 42693 MEAN 117 MAX 1930 MIN 11 CFSM 1.20 IN. 16.26

WHEELING CREEK BASIN

03111548 WHEELING CREEK BELOW BLAINE, OH--Continued

SEDIMENT ANALYSIS

PERIOD OF RECORD.--December 1982 to September 1987, October 1988 to September 1989.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 4,640 mg/L May 22, 1983; minimum daily mean, 8 mg/L Oct. 29, 1988.

SEDIMENT LOADS: Maximum daily 14,600 tons May 22, 1983; minimum daily, 0.32 ton Oct. 2, 3, 1988.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,170 mg/L June 15; minimum daily mean, 8 mg/L Oct. 29.

SEDIMENT LOADS: Maximum daily, 6,160 tons June 21; minimum daily, 0.32 ton Oct. 2, 3.

WHEELING CREEK BASIN

03111548 WHEELING CREEK BELOW BLAINE, OH--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	14	10	.38	17	15	.69	22	48	2.9
2	12	10	.32	17	20	.92	21	46	2.6
3	12	10	.32	20	31	1.7	21	42	2.4
4	12	12	.39	21	15	.85	20	45	2.4
5	12	11	2.0	59	255	58	19	28	1.4
6	12	20	.65	78	250	65	19	38	1.9
7	12	21	.68	46	38	4.7	19	50	2.6
8	11	36	1.1	35	18	1.7	19	36	1.8
9	12	34	1.1	28	14	1.1	18	31	1.5
10	13	20	.70	26	24	1.7	18	58	3.9
11	17	36	1.7	28	16	1.2	17	60	2.9
12	16	11	.48	24	10	.65	17	82	5.8
13	14	33	1.2	29	23	1.8	16	62	5.0
14	13	18	.63	34	29	2.7	16	42	3.9
15	14	26	.98	28	46	3.5	20	69	6.5
16	14	18	.68	25	30	2.0	28	42	3.2
17	14	19	.72	25	38	2.6	37	56	5.6
18	20	40	2.2	21	10	.57	35	42	4.1
19	20	38	2.1	21	40	2.3	28	53	5.3
20	17	24	1.1	229	753	605	37	36	3.6
21	19	20	1.0	115	130	40	29	52	4.1
22	34	94	8.6	54	53	7.7	23	43	2.7
23	29	80	6.3	38	52	5.3	30	52	4.2
24	40	15	1.6	32	26	2.2	237	861	959
25	34	12	1.1	28	45	3.4	174	746	432
26	24	26	1.7	26	58	4.1	65	150	26
27	21	16	.91	26	44	3.1	49	26	3.4
28	18	14	.68	28	24	1.8	101	93	39
29	19	8	.41	25	34	2.3	105	80	23
30	20	18	.97	22	28	1.7	64	38	6.6
31	17	15	.69	---	---	---	52	38	5.3
TOTAL	556	---	43.39	1205	---	830.28	1376	---	1574.6
JANUARY			FEBRUARY			MARCH			
1	46	34	4.2	49	19	2.5	95	38	9.7
2	44	22	2.6	47	19	2.4	85	33	7.6
3	40	47	5.1	74	26	5.2	84	38	8.6
4	38	43	4.4	66	16	3.0	90	60	15
5	38	28	2.9	56	21	3.4	280	794	805
6	124	95	37	50	17	2.5	319	249	241
7	122	67	22	45	23	3.4	182	70	34
8	110	35	10	42	38	11	150	40	16
9	80	30	6.5	40	111	56	157	63	27
10	61	25	4.1	38	133	78	175	67	32
11	54	40	5.8	36	125	68	173	43	20
12	93	82	25	34	97	43	160	45	19
13	123	92	31	33	81	30	139	34	13
14	81	56	12	230	145	90	132	35	12
15	149	43	17	535	976	1770	164	85	38
16	105	33	9.4	493	429	774	138	38	14
17	81	32	7.0	192	70	36	122	34	11
18	70	24	4.5	138	35	13	134	65	24
19	63	19	3.2	116	28	8.8	121	36	12
20	59	30	4.8	103	33	9.2	185	184	192
21	52	35	4.9	717	729	1670	546	670	1170
22	55	41	6.1	322	130	113	255	55	38
23	56	30	4.5	198	116	62	195	30	16
24	49	38	5.0	149	51	21	200	28	15
25	45	32	3.9	131	45	16	182	36	18
26	53	42	6.0	128	45	16	158	31	13
27	87	42	9.9	117	46	15	144	30	12
28	62	31	5.2	103	41	11	136	34	12
29	54	18	2.6	---	---	---	277	166	135
30	54	18	2.6	---	---	---	383	157	181
31	52	28	3.9	---	---	---	715	400	742
TOTAL	2200	---	273.1	4282	---	4933.4	6276	---	3902.9

WHEELING CREEK BASIN

59

03111548 WHEELING CREEK BELOW BLAINE, OH--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	499	150	202	167	98	44	149	87	35
2	313	58	49	223	140	84	136	82	30
3	303	52	43	171	104	48	142	94	36
4	275	60	45	152	90	37	183	107	53
5	314	85	72	154	91	38	155	91	38
6	243	42	28	158	91	39	152	91	37
7	217	26	15	155	91	38	127	79	27
8	199	25	13	146	86	34	115	74	23
9	208	19	11	161	94	41	125	77	26
10	170	26	12	331	224	200	173	103	48
11	158	18	7.7	332	234	210	128	112	39
12	146	18	7.1	281	184	140	110	72	21
13	140	20	7.6	372	269	270	150	132	53
14	131	16	5.7	305	206	170	131	105	37
15	125	18	6.1	295	195	155	821	1170	3720
16	119	20	6.4	336	232	210	353	243	275
17	114	18	5.5	259	164	115	217	117	69
18	161	63	30	223	140	84	164	78	35
19	223	91	60	203	124	68	143	88	34
20	148	33	13	198	122	65	554	788	1750
21	130	42	15	218	134	79	1930	1100	6160
22	124	85	28	185	112	56	623	240	404
23	114	55	17	279	184	139	353	116	111
24	108	60	17	246	158	105	271	80	59
25	116	62	19	190	115	59	222	72	43
26	121	62	20	439	338	401	200	108	58
27	108	48	14	279	186	140	200	112	60
28	106	62	18	209	128	72	283	298	228
29	203	269	164	186	112	56	177	75	36
30	153	190	78	174	104	49	158	100	43
31	---	---	---	162	96	42	---	---	---
TOTAL	5489	---	1029.1	7189	---	3288	8645	---	13588
JULY			AUGUST			SEPTEMBER			
1	135	58	21	57	68	10	29	32	2.5
2	128	64	22	56	51	7.7	29	50	3.9
3	122	60	20	53	67	9.6	28	35	2.6
4	119	40	13	50	44	5.9	26	36	2.5
5	131	54	19	63	47	8.0	25	43	2.9
6	114	64	20	55	47	7.0	25	36	2.4
7	110	47	14	52	43	6.0	25	37	2.5
8	99	78	21	48	46	6.0	26	30	2.1
9	94	73	19	44	42	5.0	26	40	2.8
10	98	73	19	41	41	4.5	28	34	2.6
11	88	64	15	39	49	5.2	30	46	3.7
12	129	324	277	38	51	5.2	28	39	2.9
13	170	884	519	37	40	4.0	27	30	2.2
14	94	63	16	35	44	4.2	31	32	2.7
15	82	59	13	38	41	4.2	41	55	6.1
16	75	54	11	44	48	5.7	106	807	315
17	73	51	10	42	42	4.8	67	719	145
18	70	53	10	35	37	3.5	39	90	9.5
19	78	57	12	41	56	6.2	33	45	4.0
20	76	54	11	40	51	5.5	29	34	2.7
21	70	53	10	38	32	3.3	30	27	2.2
22	66	50	8.9	37	42	4.2	75	363	191
23	61	49	8.1	38	54	5.5	196	596	364
24	59	50	8.0	42	50	5.7	79	140	30
25	59	50	8.0	38	34	3.5	50	40	5.4
26	93	60	15	33	35	3.1	42	34	3.9
27	95	62	16	31	34	2.8	35	23	2.2
28	104	162	45	31	30	2.5	32	15	1.3
29	70	94	18	32	33	2.9	31	51	4.3
30	58	61	9.6	40	46	5.0	30	32	2.6
31	56	62	9.4	33	46	4.1	---	---	---
TOTAL	2876	---	1238.0	1301	---	160.8	1298	---	1127.5
YEAR	42693		31989.07						

CAPTINA CREEK BASIN

03114000 CAPTINA CREEK AT ARMSTRONGS MILLS, OH

LOCATION.--Lat 39°54'31", long 80°55'27", in NE 1/4 sec. 10, T.5 N., R.4 W., Belmont County, Hydrologic Unit 05030106, on left bank at downstream side of bridge on State Highway 148, 0.5 mi east of Armstrongs Mills, and 0.7 mi downstream from Anderson Run.

DRAINAGE AREA.--134 mi².

PERIOD OF RECORD.--August 1926 to September 1935, October 1958 to current year.

REVISED RECORDS.--WSP 1907: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 739.53 ft above National Geodetic Vertical Datum of 1929. Aug. 20, 1926 to Sept. 30, 1935, nonrecording gage at same site, at datum 1.0 ft higher.

REMARKS.--Estimated daily discharges: Dec. 11-14, 18-19, Feb. 3-13. Records good except for periods of estimated record, which are fair. Water-quality data collected at this site 1965 to 1977. Sediment data collected 1969 to 1974.

AVERAGE DISCHARGE.--40 years, 164 ft³/s, 16.62 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,900 ft³/s Aug. 11, 1980, gage height, 17.48 ft; no flow at times during 1929-30, 1932, 1934, 1959, 1963-66, 1972-74, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 21	0930	*3,470	*7.76	June 21	1130	3,080	7.31

Minimum daily discharge, 2.9 ft³/s Oct. 11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.1	5.0	52	149	104	163	1200	427	123	152	29	25
2	5.3	4.8	45	133	95	139	684	548	105	120	26	21
3	4.8	4.6	41	117	86	138	608	408	94	102	23	17
4	4.2	5.6	38	103	78	154	512	305	152	92	20	13
5	3.6	131	34	96	72	997	609	308	124	125	38	11
6	3.2	163	30	483	66	1280	435	509	129	96	58	8.6
7	3.4	86	30	533	60	629	372	440	92	77	30	7.8
8	3.2	66	28	527	56	395	311	355	78	64	23	8.8
9	4.3	55	26	351	52	381	341	404	76	58	19	8.8
10	4.0	47	23	232	48	402	258	917	96	69	16	6.9
11	2.9	54	12	182	44	371	213	769	74	59	14	5.5
12	3.8	42	10	361	42	339	189	619	64	388	11	4.9
13	5.6	54	9.0	492	40	273	171	803	97	147	9.5	4.8
14	4.5	81	8.0	301	281	243	152	652	111	89	8.4	4.9
15	4.0	57	31	701	1570	266	141	575	1010	65	7.9	23
16	3.6	46	27	416	1550	214	131	579	570	51	8.0	235
17	3.0	45	24	289	644	183	116	420	356	44	7.7	97
18	5.0	37	22	224	399	192	263	312	212	40	11	54
19	13	34	21	186	298	186	623	241	162	39	40	38
20	8.7	1050	27	158	241	263	333	208	941	43	46	29
21	7.2	453	58	122	1940	1240	246	303	1660	38	27	24
22	17	199	70	108	951	596	204	198	908	33	23	154
23	22	129	137	119	522	388	171	418	467	29	24	1080
24	42	96	1080	101	322	363	148	452	283	26	24	333
25	45	78	677	92	306	317	160	290	202	25	20	156
26	22	66	283	104	236	254	448	903	282	44	16	106
27	15	59	189	208	204	213	270	606	171	91	13	74
28	10	70	312	146	172	192	212	338	847	86	12	58
29	8.0	63	353	126	---	1030	1050	238	342	51	10	48
30	7.1	53	222	128	---	1470	593	188	204	35	85	43
31	5.8	---	177	114	---	2030	---	152	---	31	40	---
TOTAL	296.3	3334.0	4096.0	7402	10479	15301	11164	13885	10032	2409	739.5	2700.0
MEAN	9.56	111	132	239	374	494	372	448	334	77.7	23.9	90.0
MAX	45	1050	1080	701	1940	2030	1200	917	1660	388	85	1080
MIN	2.9	4.6	8.0	92	40	138	116	152	64	25	7.7	4.8
CFSM	.07	.83	.99	1.78	2.79	3.68	2.78	3.34	2.50	.58	.18	.67
IN.	.08	.93	1.14	2.05	2.91	4.25	3.10	3.85	2.79	.67	.21	.75

CAL YR 1988	TOTAL 45564.66	MEAN 124	MAX 4720	MIN .00	CFSM .93	IN. 12.65
WTR YR 1989	TOTAL 81837.8	MEAN 224	MAX 2030	MIN 2.9	CFSM 1.67	IN. 22.72

MUSKINGUM RIVER BASIN

61

03117000 TUSCARAWAS RIVER AT MASSILLON, OH

LOCATION.--Lat 40°46'13", long 81°31'27", in sec. 20 T.10 N., R.9 W., Stark County, Hydrologic Unit 05040001, on left bank at sewage-treatment works, 0.7 mi south of Massillon, and 3 mi downstream from Newman Creek.

DRAINAGE AREA.--518 mi².

PERIOD OF RECORD.--October 1937 to current year. Prior to April 1938 monthly discharge only, published in WSP 1305.

REVISED RECORDS.--WSP 1907: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 916.00 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 19, 1944, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Dec. 7-19, Feb. 6-14. Records fair. Some water diverted through the Portage Lakes into the Ohio Canal at Long Lake, 28 mi and 3 mi south of Akron. Part of the diverted water flows through the Ohio Canal into the Cuyahoga River basin. Flow affected by industrial plants upstream from station and supplemented at times by diversion from Nimisila Reservoir, capacity, 6,500 acre-ft, since 1939. Water-quality data collected at this site 1965 to 1977. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--52 years, 442 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,700 ft³/s July 5, 1969, gage height, 16.43 ft; minimum daily, 49 ft³/s July 17, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,030 ft³/s June 15, gage height, 9.67 ft; minimum daily, 85 ft³/s Oct. 16, 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	95	93	202	426	342	308	2010	310	494	621	222	159
2	92	94	193	372	306	274	2060	361	546	451	187	176
3	93	95	179	308	309	253	2350	364	503	386	169	147
4	93	136	169	250	300	249	3190	319	2840	385	173	128
5	93	320	164	249	278	511	3240	302	1980	382	301	122
6	92	1120	160	358	230	906	2370	307	1140	340	256	119
7	92	682	150	962	200	537	1370	388	657	293	176	141
8	92	523	140	2050	180	413	840	477	469	258	155	318
9	87	456	130	1880	170	371	714	398	455	239	144	211
10	88	421	120	940	160	371	597	601	702	239	138	151
11	93	756	120	567	150	385	523	942	534	229	130	150
12	94	443	110	442	140	400	465	881	426	213	129	143
13	91	432	110	468	140	359	491	723	1010	205	145	130
14	89	629	110	399	130	346	490	1100	2270	198	157	176
15	88	448	100	451	451	594	409	852	3930	184	152	532
16	85	352	100	450	775	577	370	773	3910	177	139	463
17	85	319	100	391	526	430	348	618	3210	172	133	375
18	159	269	98	346	379	424	375	496	2000	173	126	280
19	306	229	98	326	319	455	376	375	1110	180	121	195
20	250	475	163	322	295	422	342	352	1160	214	133	152
21	187	904	186	315	1060	752	294	549	2420	216	166	142
22	243	590	201	280	1600	612	268	476	3550	200	154	239
23	218	424	207	267	918	481	245	538	2500	171	140	1970
24	123	338	277	261	560	443	232	1820	1480	171	136	2100
25	111	288	324	261	401	377	255	1470	901	158	129	930
26	104	257	270	324	366	336	370	2230	660	156	118	462
27	100	240	223	840	382	315	294	2380	925	215	107	320
28	99	243	780	596	339	307	256	1440	2830	344	106	251
29	97	233	1780	447	---	545	289	749	2080	409	119	215
30	94	213	962	424	---	1260	329	554	1020	303	196	189
31	93	---	557	389	---	1880	---	472	---	266	174	---
TOTAL	3726	12022	8483	16361	11406	15893	25762	23617	47712	8148	4831	11086
MEAN	120	401	274	528	407	513	859	762	1590	263	156	370
MAX	306	1120	1780	2050	1600	1880	3240	2380	3930	621	301	2100
MIN	85	93	98	249	130	249	232	302	426	156	106	119

CAL YR 1988 TOTAL 102803 MEAN 281 MAX 2720 MIN 49
WTR YR 1989 TOTAL 189047 MEAN 518 MAX 3930 MIN 85

MUSKINGUM RIVER BASIN

03117100 TUSCARAWAS RIVER AT NAVARRE, OH

LOCATION.--Lat 40°43'36", long 81°31'47", Stark County, Hydrologic Unit 05040001, on left bank at Navarre water treatment plant, 800 ft upstream from bridge on Elton Road at Navarre, 3.5 mi downstream from gaging station at Massillon, 1.2 mi downstream from Pigeon Run, and just upstream from Wolf Creek.

DRAINAGE AREA.--534 mi².

PERIOD OF RECORD.--March 1968 to September 1986, August 1987 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: March 1968 to September 1986, August 1987 to current year.

pH: March 1968 to September 1986, August 1987 to current year.

WATER TEMPERATURES: March 1968 to September 1986, August 1987 to current year.

DISSOLVED OXYGEN: March 1968 to September 1986, August 1987 to current year.

INSTRUMENTATION.--Water-quality monitor. Digital recorder set for one-hour-interval punches.

REMARKS.--Interruptions in the water-quality record were due to malfunction of the instrument. See records of daily discharge for gaging station at Massillon (station 03117000).

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 16,700 microsiemens Jan. 27, 1970; minimum, 200 microsiemens Mar. 8, 9, 1980.

pH: Maximum, 10.7 units Oct. 27, 1971; minimum, 3.9 units Oct. 26, 1969.

WATER TEMPERATURES: Maximum, 30.0°C June 27, 28, 1969, Aug. 25, 1975, July 7, 16, 20, 1977; minimum, 0.0°C on many days during winters.

DISSOLVED OXYGEN: Maximum, >20.0 mg/L July 15, 16, 23-26, 1982; minimum, 0.0 mg/L on many days during 1971 to 1973.

EXTREMES FOR CURRENT YEAR--

SPECIFIC CONDUCTANCE: Maximum, 2,030 microsiemens Oct. 19; minimum, 270 microsiemens June 4.

pH: Maximum, 9.1 units Aug. 15; minimum, 7.3 units June 29, 30.

WATER TEMPERATURES: Maximum, 27.0°C July 11, 24, 25; minimum, 0.5°C Dec. 31, Feb. 9, 25.

DISSOLVED OXYGEN: Maximum, 19.9 mg/L Aug. 16; minimum, 3.2 mg/L Sept. 23.

MUSKINGUM RIVER BASIN

63

03117100 TUSCARAWAS RIVER AT NAVARRE OH--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	1630	1560	1610	1590	1530	1560	1280	1190	1230	1050	972	1000
2	1690	1580	1640	1670	1600	1630	1300	1280	1300	1090	1050	1060
3	1690	1610	1650	1650	1500	1570	1330	1300	1310	1120	1090	1100
4	1680	1570	1650	1530	1040	1250	1360	1320	1340	1280	1090	1180
5	1700	1640	1670	1570	699	1170	1430	1340	1390	1380	1260	1320
6	1730	1600	1670	1070	615	740	1450	1400	1420	1380	1250	1300
7	1700	1600	1630	825	672	750	1510	1440	1480	1290	909	1150
8	1730	1610	1670	900	828	859	1620	1480	1560	885	597	674
9	1720	1590	1670	930	903	911	1630	1590	1610	702	606	646
10	1720	1560	1650	930	885	916	1590	1510	1560	828	708	770
11	1750	1650	1700	1210	648	799	1590	1540	1560	936	831	880
12	1740	1660	1700	906	747	823	1670	1490	1590	1020	933	953
13	1800	1610	1730	975	885	925	1670	1490	1600	1060	996	1030
14	1660	1560	1610	1040	795	868	1760	1480	1620	996	954	982
15	1660	1580	1620	942	816	875	1630	1560	1600	1100	954	1010
16	1690	1610	1660	1030	948	984	1630	1500	1590	1020	954	983
17	1730	1590	1670	1150	1010	1070	1520	1490	1500	1060	1010	1040
18	1840	1500	1650	1150	1050	1090	1680	1520	1630	1100	1050	1080
19	2030	813	1120	1190	1120	1150	1640	1540	1600	---	---	---
20	945	885	916	1190	924	1060	1740	1510	1600	1130	1120	1130
21	960	906	922	1140	687	771	1590	1520	1560	1140	1130	1140
22	999	900	971	834	726	774	1630	1580	1610	---	---	---
23	1020	882	933	951	843	891	1610	1440	1520	---	---	---
24	1170	1030	1100	1010	948	972	1520	1280	1440	---	---	---
25	1400	1180	1290	1090	1010	1040	1280	1200	1240	---	---	---
26	1450	1400	1430	1160	1090	1110	1200	1120	1150	---	---	---
27	1450	1360	1400	1220	1140	1170	1240	1160	1190	---	---	---
28	1520	1440	1460	1230	1200	1210	1250	684	1110	885	801	828
29	1520	1420	1470	1230	1210	1220	702	603	649	969	891	926
30	1510	1450	1480	1220	1190	1200	846	702	773	1000	960	985
31	1520	1400	1450	---	---	---	981	855	914	1030	999	1010
MONTH	2030	813	1480	1670	615	1050	1760	603	1400	1380	597	1010
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	1080	1020	1040	1220	1180	1190	738	645	678	1080	1040	1070
2	1120	1070	1090	1240	1180	1200	648	609	627	1120	1060	1090
3	1170	1090	1120	1250	1200	1230	648	525	597	1050	1010	1030
4	1170	1110	1140	1310	1240	1270	522	501	515	1050	1020	1040
5	1330	1170	1250	1320	1010	1180	546	492	515	1080	1050	1060
6	1340	1270	1310	1060	762	841	645	549	602	1110	1080	1100
7	1340	1300	1320	1050	813	910	759	645	686	1120	1030	1100
8	1390	1330	1350	1200	972	1040	831	759	795	1010	909	962
9	1450	1350	1410	1370	1180	1240	852	816	835	945	909	928
10	1500	1340	1430	1260	1150	1210	885	825	853	948	828	909
11	1680	1360	1480	1140	1080	1100	939	888	905	834	711	786
12	1600	1490	1540	1090	1030	1060	954	918	942	756	696	718
13	1520	1410	1470	1090	1050	1070	---	---	---	795	756	777
14	1530	1390	1450	1160	1080	1110	---	---	---	768	675	723
15	1460	1200	1350	1180	1000	1100	---	---	---	759	681	719
16	1170	876	980	1020	936	977	---	---	---	795	741	764
17	942	873	895	1060	1010	1030	1070	1040	1050	840	786	806
18	1050	945	987	1140	1030	1070	1120	1020	1070	894	840	866
19	1190	1040	1100	1060	1020	1040	1060	1010	1030	939	879	911
20	1200	1150	1170	1050	930	1020	1060	1030	1040	1150	903	1030
21	1190	684	928	1040	870	956	1070	1030	1060	990	861	935
22	681	612	650	987	870	927	1200	1080	1160	876	801	835
23	786	684	733	1030	957	977	1210	1160	1190	900	747	842
24	897	789	838	1080	1030	1040	1230	1190	1210	822	513	596
25	1020	897	931	1060	1030	1040	1280	1090	1210	645	561	611
26	1200	1030	1110	1150	1070	1110	1370	1000	1200	648	447	510
27	1200	1160	1180	1180	1140	1160	1040	981	1010	552	450	496
28	1320	1150	1230	1200	1170	1190	1190	1030	1140	687	555	612
29	---	---	---	1200	993	1080	1250	1190	1210	828	687	745
30	---	---	---	1050	657	798	1230	1090	1130	906	831	866
31	---	---	---	711	633	651	---	---	---	966	909	931
MONTH	1680	612	1160	1370	633	1060	1370	492	933	1150	447	851

MUSKINGUM RIVER BASIN

03117100 TUSCARAWAS RIVER AT NAVARRE OH--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	1100	849	939	897	750	803	1490	1180	1290	1230	1090	1150
2	945	837	873	975	891	914	1330	1230	1270	1430	1250	1340
3	867	540	822	1110	990	1060	1390	1320	1360	1480	1230	1360
4	555	270	407	1180	1080	1130	1450	1390	1420	1320	1240	1280
5	561	423	499	1100	1020	1060	1650	1270	1450	1460	1310	1400
6	672	567	629	1120	1080	1100	1260	873	974	1580	1450	1530
7	852	660	713	1170	1100	1130	1110	1030	1080	1550	1430	1520
8	945	861	899	1270	1160	1220	1390	1120	1270	1640	1220	1400
9	960	816	922	1320	1280	1300	1490	1400	1450	1250	873	975
10	927	717	823	1390	1320	1350	1510	1480	1500	1170	969	1090
11	816	759	776	1390	1350	1370	1530	1490	1510	1360	1160	1240
12	906	819	859	1390	1360	1370	1650	1540	1590	1500	1360	1440
13	918	639	763	1400	1370	1390	1630	1390	1570	1490	1420	1440
14	660	345	509	1440	1400	1420	1530	1400	1470	1470	1060	1370
15	417	345	373	1450	1400	1430	1640	1420	1570	1600	693	1100
16	462	420	440	1500	1440	1460	1570	1380	1470	735	618	672
17	510	465	477	1480	1430	1460	1560	1420	1490	909	771	865
18	636	513	573	1490	1450	1470	1610	1520	1570	1020	888	969
19	723	639	688	1630	1430	1520	1640	1590	1610	1090	1030	1050
20	759	615	702	1470	1350	1420	1690	1570	1610	1240	1050	1100
21	687	324	470	1600	1310	1490	1710	1580	1640	1460	1250	1370
22	468	336	394	1290	1030	1190	1870	1370	1650	1510	843	1380
23	555	471	519	1400	1270	1310	1400	1320	1360	1270	348	593
24	726	555	651	1530	1410	1480	1520	1400	1470	513	405	452
25	798	726	757	1520	1440	1470	1550	1500	1530	681	510	596
26	897	813	857	1580	1470	1520	1560	1460	1530	852	690	751
27	903	384	793	1590	987	1440	1570	1490	1530	984	861	916
28	555	336	393	1570	1100	1350	1620	1550	1590	1070	984	1020
29	609	553	553	1230	807	925	1740	1620	1670	---	---	---
30	744	618	691	933	777	895	1990	1520	1740	---	---	---
31	---	---	---	1400	798	1020	1970	1100	1390	---	---	---
MONTH	1100	270	659	1630	750	1270	1990	873	1470	1640	348	1120
YEAR	2030	270	1130									

PH (STANDARD UNITS), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	8.4	8.0	8.2	8.0	7.8	7.9	8.0	7.9	8.0	8.0	7.8	7.9
2	8.4	8.0	8.2	7.9	7.9	7.9	8.1	7.9	8.0	8.0	7.9	7.9
3	8.3	8.0	8.2	8.0	7.8	7.9	8.1	8.0	8.0	8.0	7.9	7.9
4	8.3	8.0	8.2	7.9	7.8	7.8	8.1	8.0	8.1	8.0	7.9	8.0
5	8.2	8.0	8.1	7.8	7.6	7.8	8.1	8.0	8.1	8.0	7.9	8.0
6	8.3	8.1	8.2	7.7	7.6	7.6	8.1	8.0	8.1	7.9	7.9	7.9
7	8.3	8.0	8.2	7.7	7.6	7.7	8.1	8.0	8.0	7.9	7.7	7.8
8	8.2	8.1	8.2	7.9	7.7	7.8	8.2	7.9	8.0	7.7	7.6	7.7
9	8.3	8.1	8.2	7.9	7.8	7.9	8.1	7.9	8.0	7.7	7.6	7.7
10	8.2	8.0	8.2	7.9	7.8	7.9	8.2	8.0	8.1	7.8	7.7	7.8
11	8.2	7.9	8.1	7.8	7.6	7.7	8.2	8.0	8.1	7.9	7.8	7.8
12	8.2	8.0	8.1	7.8	7.6	7.7	8.2	8.0	8.1	7.9	7.8	7.9
13	8.3	8.0	8.1	7.9	7.8	7.8	8.1	8.0	8.0	7.9	7.8	7.8
14	8.3	8.0	8.2	7.8	7.7	7.8	8.1	7.9	8.0	8.0	7.8	7.9
15	8.3	8.1	8.2	7.8	7.7	7.8	8.1	7.9	8.0	7.9	7.9	7.9
16	8.2	8.0	8.1	7.8	7.8	7.8	8.1	7.9	8.0	8.0	7.8	7.9
17	8.1	7.9	8.0	7.9	7.8	7.9	8.2	8.0	8.1	8.1	7.9	8.0
18	8.1	7.9	8.0	7.9	7.8	7.9	8.2	7.9	8.1	8.1	7.9	8.0
19	8.0	7.8	7.9	7.9	7.9	7.9	8.2	7.9	8.1	8.0	7.9	8.0
20	8.1	7.9	8.0	7.9	7.8	7.9	8.2	8.0	8.1	8.0	7.9	8.0
21	8.1	7.9	8.0	7.8	7.6	7.7	8.2	8.0	8.1	7.9	7.9	7.9
22	8.0	7.9	8.0	7.8	7.7	7.7	8.2	8.0	8.1	---	---	---
23	8.0	7.9	7.9	7.9	7.8	7.8	8.2	8.0	8.0	---	---	---
24	7.9	7.8	7.9	7.9	7.8	7.9	8.0	8.0	8.0	---	---	---
25	8.0	7.8	7.9	8.0	7.9	7.9	8.1	7.9	8.0	---	---	---
26	8.0	7.8	7.9	8.0	7.9	7.9	8.1	7.8	8.0	---	---	---
27	8.0	7.8	7.9	7.9	7.8	7.9	8.3	7.9	8.1	7.8	7.8	7.8
28	8.0	7.9	7.9	7.9	7.8	7.9	8.1	7.6	8.0	7.9	7.8	7.9
29	7.9	7.8	7.9	8.0	7.9	7.9	7.7	7.6	7.7	8.0	7.9	7.9
30	8.0	7.8	7.9	8.0	7.9	8.0	7.8	7.7	7.7	8.0	7.9	7.9
31	8.0	7.9	7.9	---	---	---	7.9	7.8	7.8	8.1	7.9	8.0
MONTH	8.4	7.8	8.1	8.0	7.6	7.8	8.3	7.6	8.0	8.1	7.6	7.9

PH (STANDARD UNITS), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	8.2	7.9	8.0	8.3	7.9	8.1	7.8	7.7	7.7	8.1	7.8	7.9
2	8.0	7.9	7.9	8.3	8.0	8.1	7.7	7.7	7.7	8.2	7.8	8.0
3	8.1	7.9	8.0	8.4	8.0	8.2	7.7	7.6	7.7	8.1	7.8	8.0
4	8.2	7.9	8.1	8.4	8.1	8.2	7.6	7.6	7.6	8.4	7.8	8.1
5	8.3	8.0	8.1	8.1	7.8	8.0	7.6	7.6	7.6	8.1	7.9	8.0
6	8.2	8.0	8.1	7.8	7.7	7.8	7.7	7.6	7.6	8.1	7.9	8.0
7	8.3	8.0	8.1	8.1	7.8	7.9	7.8	7.6	7.7	8.2	7.9	8.0
8	8.3	8.0	8.1	8.3	7.9	8.1	7.8	7.7	7.8	8.2	7.9	8.0
9	8.2	8.0	8.1	8.3	7.9	8.1	8.0	7.7	7.9	8.0	7.9	8.0
10	8.2	8.0	8.1	8.3	7.9	8.1	8.1	7.8	7.9	7.9	7.9	7.9
11	8.2	7.9	8.1	8.4	7.9	8.1	8.1	7.9	8.0	7.9	7.8	7.9
12	8.3	7.9	8.1	8.3	7.9	8.1	8.2	7.9	8.0	7.9	7.8	7.8
13	8.1	7.9	8.0	8.6	7.9	8.2	---	---	---	7.9	7.9	7.9
14	8.2	7.9	8.0	8.6	8.0	8.3	---	---	---	7.9	7.8	7.9
15	8.0	7.8	8.0	8.2	7.8	8.0	---	---	---	7.9	7.8	7.8
16	7.9	7.8	7.8	7.9	7.7	7.8	---	---	---	8.0	7.8	7.9
17	8.0	7.8	7.9	8.4	7.8	8.1	---	---	---	8.1	7.8	8.0
18	8.2	7.9	8.0	8.2	7.9	8.0	8.4	7.9	8.1	8.3	7.9	8.1
19	8.3	8.0	8.1	8.3	7.9	8.0	8.6	7.9	8.2	8.3	7.9	8.1
20	8.2	8.0	8.1	8.2	8.0	8.1	8.7	8.0	8.3	8.0	7.9	7.9
21	8.0	7.7	7.8	8.0	7.8	7.9	8.6	8.0	8.3	8.0	7.8	7.9
22	7.7	7.6	7.7	8.2	7.8	7.9	8.7	8.0	8.4	7.9	7.7	7.8
23	7.8	7.7	7.8	8.4	7.9	8.1	8.8	8.1	8.4	7.8	7.7	7.8
24	8.1	7.8	7.9	8.3	8.0	8.1	8.8	8.1	8.4	7.7	7.6	7.7
25	8.1	7.9	8.0	8.5	7.9	8.1	8.3	8.0	8.1	7.8	7.7	7.7
26	8.0	7.9	7.9	8.6	8.0	8.2	8.3	7.9	8.1	7.8	7.5	7.6
27	8.2	7.9	8.0	8.6	8.0	8.3	8.4	7.8	8.1	7.7	7.5	7.6
28	8.2	7.9	8.0	8.5	7.9	8.2	8.1	7.9	8.0	7.8	7.6	7.7
29	---	---	---	8.1	7.8	7.9	8.1	7.9	8.0	7.8	7.7	7.8
30	---	---	---	7.8	7.7	7.7	8.3	7.8	8.1	7.9	7.7	7.8
31	---	---	---	7.7	7.6	7.7	---	---	---	8.0	7.8	7.9
MONTH	8.3	7.6	8.0	8.6	7.6	8.0	8.8	7.6	8.0	8.4	7.5	7.9
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	7.8	7.7	7.8	7.8	7.7	7.8	8.0	7.8	7.9	8.1	7.7	7.8
2	7.8	7.7	7.8	7.9	7.8	7.8	8.2	7.8	8.0	8.5	7.7	8.1
3	7.8	7.7	7.8	7.9	7.8	7.8	8.6	7.9	8.2	8.2	7.8	8.0
4	7.6	7.4	7.5	7.9	7.8	7.8	8.7	8.0	8.3	8.6	7.7	8.1
5	7.7	7.5	7.6	7.9	7.8	7.9	8.4	7.9	8.1	8.8	7.9	8.4
6	7.8	7.6	7.7	8.0	7.8	7.9	8.4	7.8	8.1	8.4	7.9	8.2
7	7.8	7.7	7.8	8.0	7.8	7.9	8.3	7.9	8.1	8.3	7.8	8.0
8	7.9	7.7	7.8	8.1	7.9	8.0	8.4	7.9	8.1	8.0	7.7	7.8
9	7.8	7.8	7.8	8.1	7.9	8.0	8.7	8.0	8.3	7.8	7.6	7.7
10	7.8	7.7	7.7	8.2	7.9	8.0	8.7	8.0	8.3	7.7	7.6	7.6
11	7.8	7.7	7.7	8.3	7.9	8.1	8.6	8.1	8.4	7.8	7.6	7.7
12	7.8	7.7	7.8	8.3	7.9	8.1	8.7	8.1	8.4	7.8	7.6	7.7
13	7.8	7.6	7.7	8.4	7.9	8.1	8.9	8.2	8.5	7.9	7.7	7.8
14	7.7	7.5	7.6	8.3	8.0	8.1	8.8	8.2	8.5	7.8	7.7	7.7
15	7.5	7.5	7.5	8.5	8.0	8.2	9.1	8.2	8.6	7.7	7.5	7.6
16	7.5	7.5	7.5	8.6	8.0	8.3	8.9	8.1	8.5	7.6	7.5	7.6
17	7.5	7.5	7.5	8.7	8.0	8.4	8.8	8.2	8.5	7.7	7.6	7.6
18	7.6	7.5	7.6	8.9	8.0	8.4	8.6	8.2	8.4	7.8	7.6	7.7
19	7.7	7.6	7.6	8.7	8.1	8.4	8.6	8.1	8.4	7.8	7.6	7.7
20	7.7	7.6	7.7	8.6	8.0	8.3	8.6	8.2	8.4	7.8	7.7	7.8
21	7.6	7.5	7.6	8.4	8.1	8.2	8.7	8.0	8.4	7.8	7.7	7.7
22	7.5	7.5	7.5	8.4	8.0	8.1	8.5	8.0	8.3	7.8	7.6	7.7
23	7.6	7.5	7.6	8.6	7.9	8.2	8.3	7.9	8.1	7.6	7.4	7.5
24	7.7	7.6	7.6	8.7	7.9	8.3	8.5	7.9	8.2	7.4	7.4	7.4
25	7.8	7.7	7.7	8.5	7.9	8.2	8.5	8.0	8.3	7.5	7.4	7.4
26	7.8	7.7	7.8	8.5	7.9	8.2	8.6	8.0	8.3	7.6	7.5	7.5
27	7.8	7.5	7.7	8.3	7.9	8.1	8.7	8.2	8.4	7.7	7.5	7.6
28	7.5	7.4	7.5	8.2	7.9	8.0	8.8	8.2	8.5	7.8	7.6	7.7
29	7.4	7.3	7.4	8.0	7.7	7.9	8.5	8.0	8.3	---	---	---
30	7.7	7.3	7.6	8.0	7.8	7.9	8.3	7.8	8.1	---	---	---
31	---	---	---	8.1	7.8	7.9	8.0	7.7	7.9	---	---	---
MONTH	7.9	7.3	7.6	8.9	7.7	8.1	9.1	7.7	8.3	8.8	7.4	7.6
YEAR	9.1	7.3	8.0									

MUSKINGUM RIVER BASIN

03117100 TUSCARAWAS RIVER AT NAVARRE OH--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	20.8	18.7	19.7	10.0	7.5	8.5	5.5	5.0	5.5	3.0	1.5	2.0
2	20.8	19.2	19.8	9.0	8.0	8.5	5.5	4.0	5.0	2.5	1.5	2.0
3	19.1	17.2	17.9	10.0	7.0	8.5	6.0	3.5	4.5	2.0	1.5	2.0
4	17.2	14.8	15.7	11.0	9.5	10.5	5.5	4.0	4.5	2.0	1.0	1.5
5	15.6	13.2	14.1	12.0	10.5	11.0	5.5	4.0	4.5	2.5	1.0	1.5
6	14.0	12.0	13.0	11.0	8.5	10.0	6.0	4.0	5.0	2.5	2.0	2.5
7	13.5	12.0	13.0	8.5	7.5	8.0	6.0	4.5	5.5	4.0	2.5	3.5
8	14.0	11.5	12.5	8.0	7.0	7.5	6.0	5.0	5.5	5.0	4.0	4.5
9	13.5	12.0	12.5	9.0	7.5	8.0	4.5	3.5	4.0	4.0	2.0	3.0
10	13.5	12.5	13.0	10.5	8.5	9.5	4.0	3.0	3.5	2.5	1.5	2.0
11	13.5	11.5	12.5	9.5	8.5	9.5	2.5	1.0	2.0	3.0	1.5	2.5
12	13.0	10.0	11.0	8.5	7.5	8.0	3.0	1.0	2.0	5.0	3.0	4.0
13	11.0	10.0	10.5	8.5	7.5	8.0	3.0	2.0	2.5	4.5	3.5	4.0
14	12.0	9.0	10.5	9.0	7.0	8.0	4.0	2.0	3.0	3.0	2.0	2.5
15	13.5	10.5	11.5	9.5	7.0	8.5	3.5	2.0	3.0	3.0	2.5	3.0
16	13.5	11.5	12.5	11.0	9.0	10.0	2.5	1.0	2.0	4.0	3.0	3.5
17	14.5	13.0	13.5	10.0	8.5	9.5	2.5	2.0	2.0	4.5	2.5	3.5
18	15.0	14.0	14.5	9.0	7.5	8.5	2.0	1.5	2.0	5.0	3.0	4.0
19	14.0	12.5	13.5	8.0	7.5	8.0	3.5	2.0	2.5	---	---	---
20	13.0	11.0	12.0	9.5	8.0	8.5	5.0	3.0	4.0	5.0	4.0	5.0
21	12.0	11.0	11.5	8.5	8.0	8.5	5.0	3.5	4.5	4.0	2.5	2.5
22	12.0	11.0	11.5	8.0	7.0	7.5	6.0	4.0	5.0	---	---	---
23	11.0	10.0	10.5	7.0	5.5	6.5	6.5	5.5	6.0	---	---	---
24	10.0	9.0	9.5	6.5	4.5	5.5	6.0	4.5	5.0	---	---	---
25	10.0	8.5	9.0	6.0	4.5	5.5	5.5	4.0	5.0	---	---	---
26	9.5	8.0	8.5	8.0	6.0	7.0	4.0	3.0	3.5	---	---	---
27	10.0	7.0	8.5	10.0	8.0	9.0	5.5	3.0	4.0	---	---	---
28	10.5	8.5	9.5	9.5	7.5	8.5	5.5	3.5	5.0	5.5	4.0	4.5
29	9.5	7.0	8.5	7.5	6.5	7.0	3.5	1.5	2.5	5.5	4.5	5.0
30	9.0	7.0	8.5	6.5	6.0	6.0	1.5	1.0	1.5	6.5	6.0	6.0
31	9.0	6.0	7.5	---	---	---	1.5	.5	1.0	7.5	5.5	6.5
MONTH	20.8	6.0	12.0	12.0	4.5	8.0	6.5	.5	3.5	7.5	1.0	3.5
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	9.0	6.5	7.5	4.5	2.5	3.5	7.0	6.0	6.5	16.5	15.0	15.5
2	7.5	7.0	7.0	4.0	2.5	3.0	7.5	6.5	7.0	15.0	13.5	14.5
3	7.0	4.0	5.5	5.5	3.0	4.0	9.0	7.5	8.0	14.0	12.5	13.5
4	4.0	2.5	3.0	8.5	5.0	6.5	10.5	9.0	10.0	15.5	12.0	13.5
5	3.0	2.0	2.5	8.0	5.0	7.0	10.5	10.0	10.5	15.0	14.0	14.5
6	2.5	1.5	2.0	5.0	2.0	3.5	10.0	9.0	9.5	14.5	13.0	14.0
7	3.0	1.5	2.0	3.5	1.0	2.0	9.5	8.5	9.0	13.0	11.5	12.0
8	2.5	1.0	1.5	5.0	2.0	3.0	9.0	8.5	8.5	13.5	10.5	12.0
9	2.5	.5	1.0	6.0	2.5	4.5	9.0	8.0	8.5	13.0	12.0	12.5
10	3.0	1.0	1.5	7.0	4.0	5.5	9.0	6.5	8.0	12.5	12.0	12.0
11	3.5	1.5	2.0	8.5	5.0	6.5	9.0	7.0	8.0	13.0	11.0	12.0
12	3.0	1.0	2.0	7.5	6.5	7.0	9.5	7.0	7.0	13.0	12.0	12.5
13	3.0	1.5	2.0	8.0	5.5	6.5	---	---	---	12.5	11.5	12.0
14	3.5	2.5	3.0	10.0	6.5	8.0	---	---	---	13.0	11.5	12.0
15	4.0	2.5	3.0	10.0	8.5	9.5	---	---	---	13.5	12.5	13.0
16	3.5	2.5	3.0	8.5	7.0	8.0	---	---	---	14.0	12.5	13.0
17	3.5	2.0	2.5	10.0	6.0	8.0	13.5	10.5	12.0	17.0	13.0	15.0
18	4.0	1.5	2.5	9.5	7.5	9.0	13.5	11.5	12.5	19.0	15.5	17.0
19	4.0	2.0	3.0	8.0	6.5	7.0	13.0	10.5	11.5	19.5	17.0	18.5
20	5.0	3.5	4.5	6.0	5.5	5.5	14.5	10.0	12.0	19.0	18.0	18.5
21	5.0	4.0	4.5	5.5	4.5	5.0	14.5	12.5	13.5	20.0	17.0	18.5
22	4.0	3.0	3.5	6.0	3.5	4.5	15.0	11.5	13.0	20.5	17.0	18.5
23	3.0	1.5	2.5	7.5	4.0	6.0	15.0	11.0	13.0	19.0	16.5	18.0
24	3.0	1.0	1.5	8.0	6.5	7.5	15.5	11.5	13.5	17.0	15.0	16.0
25	3.5	.5	2.0	9.5	7.0	8.0	14.0	12.5	13.5	19.5	17.0	18.5
26	3.5	2.5	3.0	12.5	8.5	10.0	17.0	13.5	15.0	20.0	19.0	19.5
27	4.5	2.5	3.5	14.5	10.5	12.5	18.5	14.5	16.5	19.5	18.5	19.5
28	5.0	2.5	3.5	17.0	13.5	15.0	17.0	15.5	16.0	19.0	17.5	18.0
29	---	---	---	16.0	15.0	15.5	16.0	14.5	15.0	19.5	17.5	18.0
30	---	---	---	14.5	10.5	12.5	18.0	14.5	16.0	21.5	18.5	19.5
31	---	---	---	10.5	7.0	8.5	---	---	---	23.0	20.0	21.5
MONTH	9.0	.5	3.0	17.0	1.0	7.0	18.5	6.0	11.5	23.0	10.5	15.5

03117100 TUSCARAWAS RIVER AT NAVARRE OH--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	24.0	21.5	22.5	23.5	20.5	22.0	23.0	20.5	22.0	23.5	22.0	22.5
2	24.0	21.5	22.5	24.0	21.0	22.5	24.0	21.0	22.5	23.5	21.0	22.0
3	23.0	21.0	22.0	24.0	22.0	23.0	25.5	21.0	23.0	22.5	19.5	21.0
4	20.5	18.5	19.5	23.0	22.5	22.5	25.0	22.5	24.0	22.0	18.0	20.0
5	20.0	19.0	19.5	24.5	21.5	23.0	26.5	22.5	24.5	22.5	19.0	20.5
6	20.0	18.0	19.0	25.5	22.0	23.5	26.5	23.5	24.5	23.0	20.5	21.5
7	21.5	19.0	20.0	26.0	22.5	24.0	25.0	21.5	22.5	22.5	21.0	21.5
8	23.0	19.5	21.0	25.5	22.5	24.0	21.5	19.5	20.5	23.5	20.5	22.5
9	22.0	21.0	21.5	24.0	22.5	23.5	22.0	18.0	20.0	24.0	22.0	23.0
10	20.5	18.5	19.5	26.5	22.5	24.5	23.0	18.5	20.5	23.5	22.0	22.5
11	20.5	17.5	19.0	27.0	24.5	25.5	23.0	19.5	21.0	23.0	20.5	22.0
12	19.0	18.0	18.5	25.5	24.0	25.0	23.0	19.5	21.5	22.5	20.5	21.5
13	19.5	18.5	19.0	25.5	22.5	24.0	23.0	20.0	21.5	22.5	19.0	21.0
14	19.5	19.0	19.0	24.0	21.5	22.5	24.0	20.0	21.5	22.0	19.5	20.0
15	19.5	19.0	19.0	23.5	20.0	22.0	24.0	20.5	22.0	19.5	18.5	19.0
16	19.5	19.0	19.0	23.5	20.5	22.0	23.5	21.0	22.5	19.0	18.0	18.5
17	19.0	18.5	18.5	23.5	19.5	21.5	23.0	20.5	22.0	19.5	17.5	18.5
18	19.5	18.5	19.0	24.5	20.5	22.5	22.5	20.0	21.0	20.5	17.5	18.5
19	20.5	19.5	20.0	23.0	21.0	22.0	22.0	20.0	21.5	20.0	17.5	19.0
20	20.0	19.0	19.5	24.0	21.0	22.5	22.0	20.0	21.0	21.0	18.0	19.5
21	19.5	19.0	19.0	24.5	21.5	23.0	23.5	21.0	22.0	21.0	18.5	20.0
22	20.0	19.5	19.5	25.5	22.5	24.0	22.5	21.0	22.0	21.0	19.5	20.5
23	22.0	20.5	21.0	26.5	22.5	24.5	23.5	21.5	22.5	20.5	18.0	19.5
24	23.0	21.5	22.5	27.0	23.5	25.0	23.5	21.0	22.5	18.0	16.0	17.0
25	25.0	23.0	24.0	27.0	24.0	25.5	23.5	20.0	22.0	16.5	15.5	16.0
26	26.0	23.5	24.5	26.0	24.0	25.0	23.5	20.0	22.0	17.0	15.0	16.0
27	26.0	22.0	24.0	25.0	23.5	24.5	23.5	20.5	22.0	16.5	14.0	15.5
28	22.5	21.5	22.0	25.5	23.0	24.0	24.0	21.0	22.5	16.5	13.0	15.0
29	22.5	21.5	22.5	25.5	22.5	24.0	24.5	22.5	23.5	---	---	---
30	22.5	20.5	21.5	23.5	21.0	22.0	25.0	22.0	23.5	---	---	---
31	---	---	---	23.0	20.5	21.5	24.5	21.5	23.0	---	---	---
MONTH	26.0	17.5	20.5	27.0	19.5	23.5	26.5	18.0	22.0	24.0	13.0	20.0
YEAR	27.0	.5	13.0									

OXYGEN, DISSOLVED (MG/L), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	---	---	---	9.8	8.4	9.1	11.0	10.1	10.6	12.1	11.5	11.7
2	---	---	---	9.3	8.5	8.9	11.7	10.5	11.0	11.9	11.4	11.6
3	---	---	---	10.5	8.4	9.4	11.9	10.8	11.2	11.9	11.3	11.5
4	---	---	---	9.5	8.5	8.9	12.2	10.6	11.3	12.5	11.5	11.9
5	8.5	6.2	7.1	8.8	7.3	8.3	12.0	10.8	11.3	12.7	11.8	12.1
6	12.1	6.7	9.3	7.8	6.4	7.2	11.8	10.4	11.0	11.7	11.5	11.6
7	12.4	9.9	11.1	8.9	7.7	8.4	11.8	10.2	10.9	11.4	10.9	11.1
8	12.6	10.2	11.3	10.9	8.4	9.8	12.4	10.1	11.1	11.1	10.3	10.7
9	12.3	10.0	11.2	9.8	8.8	9.4	12.5	10.5	11.3	11.3	10.4	11.0
10	11.6	9.7	10.8	10.2	8.8	9.6	12.7	10.6	11.6	11.9	11.4	11.7
11	11.9	8.9	10.3	9.1	8.0	8.4	13.4	11.0	12.1	12.4	11.8	12.1
12	12.3	9.5	10.8	9.8	8.7	9.3	13.3	11.4	12.3	11.8	11.1	11.5
13	13.0	10.1	11.5	10.4	9.4	9.9	12.8	11.2	12.1	11.6	11.1	11.3
14	12.6	10.6	11.8	10.4	8.8	9.7	13.2	11.1	12.0	12.4	11.2	11.8
15	12.5	10.2	11.4	9.9	9.1	9.6	13.4	10.9	12.0	12.2	11.6	11.9
16	11.8	9.1	10.6	9.4	8.5	9.0	13.7	11.4	12.4	12.3	11.3	11.7
17	10.3	8.2	9.0	9.6	8.8	9.1	13.8	11.4	12.5	12.8	11.5	12.0
18	9.1	7.1	7.9	9.7	9.1	9.4	14.0	11.4	12.6	12.8	11.6	12.1
19	8.7	6.3	7.4	9.8	9.4	9.6	13.5	11.2	12.4	---	---	---
20	9.4	7.8	8.5	9.6	8.6	9.3	13.1	11.2	12.0	---	---	---
21	9.3	8.4	8.8	8.6	8.1	8.3	12.9	10.8	11.7	---	---	---
22	8.9	8.2	8.5	9.4	8.6	9.1	13.1	10.7	11.6	---	---	---
23	9.0	8.0	8.5	10.1	9.3	9.7	12.7	10.4	11.2	---	---	---
24	8.9	8.0	8.4	10.5	9.7	10.1	11.1	10.2	10.8	---	---	---
25	9.1	8.4	8.7	11.5	10.0	10.5	11.7	9.8	10.5	---	---	---
26	9.5	8.2	8.8	10.7	9.4	10.3	12.8	10.4	11.4	---	---	---
27	9.7	8.8	9.2	9.2	8.7	8.9	13.8	11.2	12.2	---	---	---
28	9.2	8.3	8.8	9.6	8.9	9.2	11.7	9.7	10.9	12.0	10.8	11.4
29	9.2	8.3	8.7	10.8	9.5	10.1	11.2	9.7	10.6	12.2	11.0	11.5
30	10.0	8.2	9.0	10.7	10.0	10.3	11.5	11.1	11.3	11.5	10.5	11.0
31	10.0	8.7	9.3	---	---	---	11.9	11.4	11.6	12.2	10.3	11.0
MONTH	13.0	6.2	9.5	11.5	6.4	9.3	14.0	9.7	11.5	12.8	10.3	11.6

MUSKINGUM RIVER BASIN

03117100 TUSCARAWAS RIVER AT NAVARRE OH--Continued

OXYGEN, DISSOLVED (MG/L), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	12.4	10.3	11.0	15.1	12.3	13.5	11.7	11.1	11.5	7.6	6.2	6.9
2	10.9	10.0	10.4	15.3	12.5	13.7	11.8	11.1	11.5	9.1	6.4	7.5
3	12.6	10.1	11.1	16.1	12.6	14.2	11.4	10.4	11.0	9.1	7.1	8.1
4	13.9	11.5	12.5	15.4	12.5	13.7	9.9	8.6	9.3	11.1	7.7	9.0
5	14.6	12.4	13.3	12.4	10.3	11.1	8.7	8.5	8.6	8.8	7.3	8.1
6	14.6	12.5	13.5	11.8	10.3	11.1	9.6	7.8	8.6	8.9	6.9	7.9
7	14.4	12.6	13.4	13.6	11.8	12.7	9.2	8.5	8.9	9.6	7.4	8.3
8	14.5	12.6	13.4	15.0	12.6	13.5	9.1	8.4	8.7	9.9	7.9	8.7
9	14.9	12.7	13.5	15.2	12.4	13.5	10.0	8.4	9.0	9.0	8.0	8.5
10	14.9	12.6	13.5	15.0	12.0	13.2	10.2	8.7	9.4	8.4	7.8	8.1
11	15.2	12.4	13.4	14.7	11.4	12.7	9.9	8.7	9.3	8.6	7.8	8.2
12	15.3	12.4	13.5	13.7	10.9	12.0	---	---	---	8.5	8.1	8.2
13	13.3	11.8	12.8	15.0	11.0	12.6	---	---	---	8.8	8.1	8.4
14	14.0	11.7	12.5	15.0	10.8	12.5	---	---	---	8.8	8.1	8.5
15	12.5	11.4	12.0	10.7	9.0	9.6	---	---	---	8.4	8.0	8.3
16	12.4	11.4	12.0	10.2	9.0	9.5	---	---	---	8.7	8.0	8.4
17	13.7	12.2	12.9	13.3	10.0	11.3	---	---	---	9.2	8.2	8.6
18	15.1	12.8	13.7	11.2	10.0	10.5	11.1	8.5	9.4	9.7	7.7	8.5
19	15.2	13.0	13.9	12.6	9.9	11.0	12.4	8.1	9.8	8.6	6.7	7.7
20	14.8	12.6	13.5	12.7	11.1	11.7	12.9	8.8	10.5	7.2	5.8	6.6
21	12.7	11.5	12.0	12.0	11.4	11.7	11.7	8.3	9.8	7.1	5.7	6.3
22	12.1	11.6	11.8	13.5	11.2	12.3	13.4	8.1	10.3	7.0	5.5	6.1
23	12.9	12.1	12.6	14.7	12.0	13.2	13.7	8.3	10.6	6.5	5.4	6.0
24	14.0	12.7	13.3	13.3	11.3	12.4	13.7	8.3	10.6	6.6	5.7	6.1
25	14.7	13.2	13.8	13.9	10.8	12.0	9.5	7.7	8.4	6.2	5.6	5.9
26	13.9	12.7	13.2	15.1	10.9	12.5	9.9	7.0	8.1	6.3	4.7	5.6
27	14.2	12.3	13.0	14.9	10.4	12.2	10.2	6.5	8.0	5.5	4.8	5.1
28	14.8	11.9	13.1	16.2	9.3	11.6	8.2	6.3	7.2	6.1	5.3	5.7
29	---	---	---	9.5	8.3	8.8	8.2	6.4	7.3	7.7	5.8	6.7
30	---	---	---	9.4	8.0	8.7	9.6	6.4	7.7	7.7	6.7	7.2
31	---	---	---	11.1	9.4	10.1	---	---	---	7.6	6.5	6.9
MONTH	15.3	10.0	12.8	16.2	8.0	11.9	13.7	6.3	9.3	11.1	4.7	7.4
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE				JULY			AUGUST			SEPTEMBER		
1	6.2	5.6	5.9	5.8	4.7	5.3	8.8	7.0	7.9	8.1	5.5	6.7
2	6.1	5.4	5.8	5.8	4.9	5.3	9.9	7.1	8.1	11.0	5.8	8.1
3	6.7	5.5	6.0	5.5	4.8	5.2	8.9	7.1	7.9	9.5	6.2	7.8
4	7.1	5.8	6.2	5.7	5.0	5.4	9.7	7.7	8.7	11.0	6.1	8.2
5	5.9	4.6	5.6	6.0	4.8	5.5	9.4	7.8	8.7	14.0	6.7	10.2
6	7.0	5.7	6.3	6.0	4.8	5.5	9.7	8.0	8.9	11.3	6.8	9.4
7	7.9	6.4	7.4	6.1	4.9	5.5	10.2	8.7	9.7	9.0	5.7	7.2
8	8.2	7.2	7.6	6.2	5.1	5.6	11.3	10.1	10.6	6.8	5.0	5.6
9	7.7	7.0	7.3	6.4	5.5	5.8	12.3	9.3	10.9	5.6	4.2	4.9
10	7.5	7.3	7.4	6.5	5.1	5.7	12.1	9.0	10.5	4.9	4.3	4.6
11	8.0	7.0	7.7	6.1	5.0	5.7	11.5	9.0	10.3	5.9	4.2	5.0
12	8.3	7.7	8.0	6.1	5.1	5.6	11.3	9.1	10.1	6.0	4.5	5.2
13	8.5	7.4	8.0	6.4	5.5	6.0	11.3	9.0	10.1	6.2	4.5	5.3
14	7.4	6.8	7.2	6.8	5.8	6.4	11.4	8.6	10.1	6.0	4.5	5.3
15	6.6	5.8	6.3	7.3	5.9	6.7	11.3	8.4	9.8	5.3	4.7	5.0
16	6.2	5.4	5.9	7.2	6.0	6.7	19.9	9.1	13.3	5.8	4.9	5.5
17	---	---	---	7.6	6.0	6.8	15.1	7.8	10.3	5.8	5.5	5.6
18	---	---	---	7.2	6.0	6.6	10.1	6.1	8.1	6.4	5.5	5.9
19	---	---	---	7.2	6.2	6.7	9.7	5.6	7.6	6.8	5.6	6.1
20	---	---	---	13.9	6.4	9.1	8.5	5.9	7.2	6.9	5.6	6.2
21	---	---	---	11.3	7.1	9.1	9.0	5.0	6.8	6.7	5.4	6.0
22	---	---	---	12.5	6.6	8.8	8.0	5.1	6.5	6.2	4.6	5.3
23	---	---	---	14.5	6.6	9.6	7.4	4.8	6.1	6.2	3.2	5.0
24	---	---	---	15.1	6.4	9.7	8.1	4.8	6.4	6.1	5.3	5.6
25	---	---	---	12.2	6.1	8.5	8.5	5.3	6.9	7.1	5.5	6.2
26	---	---	---	9.3	5.7	7.5	8.9	5.5	7.1	7.0	6.2	6.7
27	---	---	---	8.0	5.6	6.5	9.0	5.8	7.3	7.3	6.6	6.9
28	---	---	---	7.7	5.4	6.2	12.6	6.7	9.7	7.4	6.7	7.0
29	---	---	---	7.8	5.6	6.7	11.4	7.5	9.6	---	---	---
30	5.7	4.9	5.3	7.4	6.5	6.9	9.9	5.8	8.0	---	---	---
31	---	---	---	8.6	6.8	7.5	8.3	5.8	7.0	---	---	---
MONTH	8.5	4.6	6.7	15.1	4.7	6.7	19.9	4.8	8.7	14.0	3.2	6.3
YEAR	19.9	3.2	9.4									

MUSKINGUM RIVER BASIN

69

03117500 SANDY CREEK AT WAYNESBURG, OH

LOCATION.--Lat 40°40'21", long 81°15'36", in sec. 21, T.17 N., R.7 W., Stark County, Hydrologic Unit 05040001, on upstream side of left pier of bridge on State Highway 183 in Waynesburg, 300 ft downstream from Little Sandy Creek, and 0.6 mi upstream from Indian Run.

DRAINAGE AREA.--253 mi².

PERIOD OF RECORD.--October 1938 to current year. Prior to December 1938 monthly discharge only, published in WSP 1305.

REVISED RECORDS.--WSP 923: 1939-40. WSP 1555: 1940(M), 1943(M), 1947(M), 1952, 1956(M). WSP 1907: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 955.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 7-19. Records good except for periods of estimated record, and discharges between 800 and 1,600 ft³/s, which are fair. Water-quality data collected at this site 1964 to 1977. Sediment data collected 1969 to 1974. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--51 years, 269 ft³/s, 14.44 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,000 ft³/s Jan. 22, 1959, gage height, 10.05 ft, from rating curve extended above 8,000 ft³/s on basis of contracted-opening and flow-over-road measurement of peak flow; minimum, 6.9 ft³/s Sept. 12, 13, 1971.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,800 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 23	1030	*3,090	*6.50	June 28	1830	2,350	5.52

Minimum discharge, 25 ft³/s Oct. 31.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	34	115	243	210	229	1650	142	314	500	133	50
2	31	42	107	214	187	191	1420	243	277	364	106	51
3	48	40	99	186	188	177	1400	242	246	304	92	47
4	60	149	93	157	175	200	1350	207	645	277	86	42
5	64	304	88	141	157	304	1090	192	410	300	88	40
6	59	470	85	178	149	414	798	268	294	241	91	38
7	59	341	80	315	126	298	620	281	242	216	83	48
8	58	278	76	634	119	264	516	282	211	199	82	104
9	56	230	72	607	146	256	473	247	202	184	75	72
10	52	228	68	434	103	297	396	428	297	176	67	58
11	48	343	66	311	97	345	334	768	253	161	63	53
12	45	261	62	289	97	373	299	739	201	141	59	48
13	56	244	60	393	94	338	288	700	312	125	56	45
14	56	288	58	291	114	310	279	963	679	117	55	57
15	52	220	54	330	164	368	252	824	1070	108	53	87
16	39	182	52	344	302	394	236	1260	877	101	51	146
17	29	153	52	288	244	318	213	1000	657	93	48	165
18	41	130	50	266	180	283	201	755	446	89	46	108
19	51	115	48	248	178	263	215	568	342	88	49	80
20	42	230	63	236	164	248	193	465	578	104	61	65
21	44	533	85	223	784	514	174	448	872	91	66	56
22	48	398	93	187	1290	478	164	375	2010	87	61	73
23	53	298	101	173	956	375	152	382	2860	84	54	208
24	60	237	169	163	613	337	141	578	1590	79	50	157
25	78	197	267	159	445	326	149	424	858	76	45	101
26	75	164	203	188	330	288	166	1160	543	74	43	82
27	54	151	160	409	303	253	149	1450	472	104	41	69
28	31	146	295	315	257	246	134	1160	2160	355	39	60
29	28	141	538	258	---	564	135	776	1750	194	39	56
30	27	127	411	248	---	893	133	538	843	129	42	51
31	25	---	327	235	---	1220	---	400	---	154	44	---
TOTAL	1496	6674	4097	8663	8172	11364	13720	18265	22511	5315	1968	2317
MEAN	48.3	222	132	279	292	367	457	589	750	171	63.5	77.2
MAX	78	533	538	634	1290	1220	1650	1450	2860	500	133	208
MIN	25	34	48	141	94	177	133	142	201	74	39	38
CFSM	.19	.88	.52	1.10	1.15	1.45	1.81	2.33	2.97	.68	.25	.31
IN.	.22	.98	.60	1.27	1.20	1.67	2.02	2.69	3.31	.78	.29	.34

CAL YR 1988 TOTAL 59677 MEAN 163 MAX 2270 MIN 22 CFSM .64 IN. 8.77
WTR YR 1989 TOTAL 104562 MEAN 286 MAX 2860 MIN 25 CFSM 1.13 IN. 15.37

MUSKINGUM RIVER BASIN

03118000 MIDDLE BRANCH NIMISHILLEN CREEK AT CANTON, OH

LOCATION.--Lat 40°50'29", long 81°21'14" in NE 1/4 sec. 27, T.11 N., R.8 W., Stark County, Hydrologic Unit 05040001, on right bank at downstream side of bridge on Martindale Road, 2.4 mi upstream from mouth, and 0.5 mi northeast of Canton.

DRAINAGE AREA.--43.1 mi².

PERIOD OF RECORD.--September 1941 to current year.

REVISED RECORDS.--WSP 1033: 1942(M), 1943(P), 1944(M). WSP 1305: 1946(M). WSP 1143: 1948. WSP 1907: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,046.60 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 9-20, Feb. 3-14. Records fair except for estimated daily discharges which are poor. Part of municipal water supply for city of Canton is pumped from its northeast well field; a portion of pumpage is believed to be derived from creek as recharge to aquifer supplying well field about 1 mi downstream from gage. Mean pumpage for water year 1989, 12.6 ft³/s. At times low flow regulated by small pools above station. Water-quality data collected at this site 1965 to 1977.

AVERAGE DISCHARGE.--48 years, 36.0 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,470 ft³/s Jan. 22, 1959, gage height, 6.50 ft, from rating curve extended above 1,600 ft³/s on basis of contracted-opening measurement of peak flow; minimum daily, 0.2 ft³/s Nov. 9, 1944, Sept. 19, 1962.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft³/s and maximum (*).

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 4	1400	438	4.99	June 15	0100	*454	*5.05

Minimum daily discharge, 0.99 ft³/s Oct. 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	1.4	17	23	35	29	142	41	60	84	38	14
2	1.6	1.5	16	20	31	27	129	45	68	77	33	14
3	1.7	1.5	16	19	29	25	221	46	73	74	27	12
4	1.7	8.0	15	17	26	28	278	43	361	74	27	10
5	1.6	26	14	16	24	47	201	42	220	75	44	9.8
6	1.6	71	14	18	22	76	118	44	122	69	34	9.4
7	1.4	46	13	37	21	52	88	46	92	65	26	11
8	1.3	33	12	157	19	40	74	47	79	61	22	12
9	1.3	27	11	141	18	35	67	45	77	58	20	9.9
10	1.5	25	10	75	17	33	59	65	81	55	19	9.6
11	1.5	28	9.8	51	16	32	53	113	74	52	18	9.1
12	1.5	24	9.4	43	16	34	48	100	70	48	17	8.5
13	1.3	25	9.0	48	15	33	50	86	104	44	18	8.3
14	1.3	35	8.4	44	15	32	49	120	277	39	18	18
15	1.2	29	8.0	43	27	42	46	105	393	33	16	29
16	.99	22	7.8	41	49	51	43	167	274	29	15	33
17	1.1	18	7.4	37	45	42	41	123	206	23	14	29
18	1.4	16	7.2	33	35	37	40	84	133	21	13	21
19	1.2	13	7.0	31	27	33	40	66	105	19	13	15
20	1.1	28	6.8	31	25	33	37	59	141	21	14	12
21	1.3	103	11	31	97	61	36	65	207	18	15	11
22	1.7	64	11	28	172	56	34	61	270	16	14	17
23	1.7	38	13	27	95	44	33	67	181	14	14	32
24	2.4	28	15	27	76	37	34	132	125	12	13	28
25	2.6	24	17	28	54	34	36	105	103	10	11	20
26	2.3	22	17	36	39	31	37	185	92	8.8	11	15
27	2.1	20	15	83	36	29	35	173	106	15	10	12
28	1.9	20	33	67	32	27	34	100	179	89	10	11
29	1.6	19	79	51	---	38	36	77	123	72	11	10
30	1.6	18	46	44	---	80	38	66	94	52	18	11
31	1.5	---	30	39	---	123	---	60	---	45	16	---
TOTAL	48.79	834.4	505.8	1386	1113	1321	2177	2578	4490	1372.8	589	461.6
MEAN	1.57	27.8	16.3	44.7	39.7	42.6	72.6	83.2	150	44.3	19.0	15.4
MAX	2.6	103	79	157	172	123	278	185	393	89	44	33
MIN	.99	1.4	6.8	16	15	25	33	41	60	8.8	10	8.3

CAL YR 1988 TOTAL 6080.99 MEAN 16.6 MAX 198 MIN .99
WTR YR 1989 TOTAL 16877.39 MEAN 46.2 MAX 393 MIN .99

MUSKINGUM RIVER BASIN

71

03118500 NIMISHILLEN CREEK AT NORTH INDUSTRY, OH

LOCATION.--Lat 40°44'03", long 81°21'08", in sec. 35, T.10 N., R.8 W., Stark County, Hydrologic Unit 05040001, on left bank just downstream from railroad bridge, 1 mi southeast of North Industry, and 3 mi downstream from Sherrick Run.

DRAINAGE AREA.--175 mi².

PERIOD OF RECORD.--October 1921 to current year.

REVISED RECORDS.--WSP 1113: 1924-30, 1932-37, 1938(M), 1939-40, 1943(M), 1945(P). WSP 1555: 1929, 1935, 1937(M), 1940(M), 1950(M).

GAGE.--Water-stage recorder. Datum of gage is 970.77 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 13, 1923, nonrecording gage at site 1 mi upstream at different datum.

REMARKS.--Estimated daily discharges: Dec. 9-19, Feb. 2-14. Records good except for periods of estimated record, which are fair. Low flow slightly regulated by plants at Canton. Records include diversion from Sugar Creek well field. Mean pumpage for the 1989 water year, 16.6 ft³/s. See REMARKS for station 03124500. Water-quality data collected at this site 1964 to 1969, 1975, 1977. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--68 years, 188 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,600 ft³/s Jan. 21, 1959, gage height, 11.29 ft, from rating curve extended above 6,500 ft³/s on basis of slope-area measurement of peak flow; minimum, 3.6 ft³/s Sept. 2, 1934.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 26	0600	2,160	5.36	June 14	2130	2,600	5.94
June 4	0500	*3,340	*6.82	June 27	1930	2,400	5.68

Minimum daily, 59 ft³/s Oct. 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	62	101	132	151	150	771	189	218	256	159	137
2	61	64	97	125	130	139	639	201	267	227	148	109
3	63	67	94	121	130	137	1220	213	465	217	143	96
4	64	240	90	115	120	145	1450	171	2550	275	167	93
5	64	646	92	110	110	313	814	199	712	252	214	97
6	64	341	92	233	100	287	480	192	395	211	152	100
7	64	213	91	275	98	198	369	205	293	194	139	169
8	63	183	89	888	92	182	309	185	245	180	133	163
9	60	146	82	454	88	181	300	189	347	178	130	99
10	65	200	78	237	84	187	253	417	383	177	127	96
11	76	158	74	181	82	193	230	505	240	169	125	98
12	64	128	72	205	80	188	214	367	225	160	121	94
13	63	225	70	224	78	174	249	396	654	161	129	93
14	62	172	68	192	78	170	219	607	1750	156	129	359
15	60	140	68	217	209	252	200	524	1730	148	121	188
16	59	123	66	182	255	200	187	888	1030	142	120	411
17	61	114	64	163	182	173	181	461	640	142	117	161
18	119	103	64	152	153	172	192	313	401	143	116	125
19	68	97	62	146	139	153	189	253	327	139	115	109
20	64	479	90	153	143	234	175	248	1080	212	131	103
21	80	385	101	139	947	357	169	274	1130	150	129	99
22	93	213	95	129	722	228	163	215	1350	151	116	294
23	77	160	127	131	334	190	153	410	601	136	113	240
24	92	133	152	133	213	171	150	543	401	134	114	133
25	73	118	126	135	176	163	200	394	318	132	107	117
26	67	113	107	237	187	154	167	1480	281	131	105	108
27	66	109	104	328	176	150	149	635	798	249	101	101
28	71	120	406	212	158	157	148	348	1120	467	105	107
29	64	109	310	176	---	466	159	264	410	213	112	95
30	61	104	192	172	---	777	147	234	301	232	168	91
31	62	---	152	160	---	805	---	211	---	196	110	---
TOTAL	2133	5465	3476	6457	5415	7446	10246	11731	20662	5930	4016	4285
MEAN	68.8	182	112	208	193	240	342	378	689	191	130	143
MAX	119	646	406	888	947	805	1450	1480	2550	467	214	411
MIN	59	62	62	110	78	137	147	171	218	131	101	91

CAL YR 1988 TOTAL 51730 MEAN 141 MAX 1670 MIN 47
WTR YR 1989 TOTAL 87262 MEAN 239 MAX 2550 MIN 59

MUSKINGUM RIVER BASIN

03120500 MCGUIRE CREEK BELOW LEESVILLE DAM, NEAR LEESVILLE, OH

LOCATION.--Lat 40°28'13", long 81°11'48", in E. 1/2 sec. 36, T.13 N., R.6 W., Carroll County, Hydrologic Unit 05040001, on left bank at outlet of Leesville Dam, 1.3 mi upstream from mouth, and 1.4 mi northeast of Leesville.

DRAINAGE AREA.--48.3 mi².

PERIOD OF RECORD.--October 1938 to current year. Published as McGuire Creek near Leesville 1938-39.

REVISED RECORDS.--WSP 1907: Drainage area.

GAGE.--Water-stage recorder and V-notch weir. Datum of gage is 915.00 ft above National Geodetic Vertical Datum of 1929. Prior to May 27, 1942, nonrecording gage at site 100 ft upstream at present datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Leesville Lake. Water-quality data collected at this site 1965 to 1977. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--51 years, 53.3 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 740 ft³/s Mar. 4, 1940; maximum gage height, 7.88 ft Mar. 4, 1940 (backwater from Conotton Creek); no flow several days during 1939-41.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 280 ft³/s May 27, gage height, 4.57 ft; minimum daily, 1.6 ft³/s Dec. 21, Feb. 5

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	3.0	59	37	9.9	15	141	30	227	200	19	3.6
2	2.1	3.1	61	37	1.9	21	137	39	244	199	16	3.6
3	2.1	3.1	65	23	1.8	21	120	40	245	196	14	3.2
4	2.0	3.1	65	16	1.7	21	118	38	247	162	12	2.8
5	2.0	4.8	65	16	1.6	21	129	43	244	110	9.8	2.4
6	1.9	7.9	74	29	1.7	126	209	58	228	54	8.3	2.2
7	1.8	9.5	61	37	1.8	200	245	64	149	44	9.2	2.2
8	1.8	10	71	37	1.8	162	243	65	46	35	8.2	2.3
9	1.8	11	78	110	1.8	38	243	66	40	29	7.4	2.2
10	1.8	14	81	183	1.8	7.5	240	77	38	29	6.8	2.1
11	2.0	20	81	74	1.8	4.2	239	160	30	24	5.8	1.9
12	2.7	20	81	5.5	1.7	5.7	243	183	26	19	5.1	1.9
13	2.7	26	81	56	1.7	132	244	160	47	16	4.8	2.0
14	2.8	29	81	43	1.8	204	201	162	52	13	4.5	2.4
15	2.9	60	42	43	1.8	73	117	188	67	11	4.3	3.5
16	2.9	71	1.9	43	1.8	2.4	73	200	86	9.2	4.1	6.2
17	2.7	83	1.9	134	1.8	6.2	57	200	85	8.1	3.8	11
18	2.8	106	1.9	161	1.9	24	51	200	79	7.4	3.6	12
19	2.9	105	1.8	49	2.0	39	50	198	112	6.8	3.4	11
20	2.9	104	1.8	8.9	2.1	48	48	192	75	6.7	3.6	9.1
21	2.8	124	1.6	8.9	2.2	70	43	176	101	6.7	3.9	7.9
22	2.9	134	3.2	8.5	2.3	117	39	177	160	6.7	3.9	11
23	3.0	134	4.0	80	2.2	163	35	91	168	6.6	3.9	29
24	3.1	134	4.0	48	2.1	87	31	66	169	6.3	4.1	27
25	3.1	117	4.0	5.6	2.1	57	32	68	188	5.7	4.1	17
26	3.1	108	4.0	5.6	2.1	59	34	151	204	5.5	4.0	14
27	3.1	108	56	45	2.3	59	32	248	195	8.0	3.7	11
28	3.1	108	154	38	2.3	58	28	194	183	23	3.4	8.2
29	3.1	93	196	37	---	95	29	199	202	20	3.2	7.2
30	3.0	69	129	81	---	127	29	202	200	16	4.0	6.4
31	2.9	---	37	68	---	117	---	202	---	23	3.8	---
TOTAL	80.0	1822.5	1648.1	1568.0	61.8	2180.0	3480	4137	4137	1306.7	195.7	226.3
MEAN	2.58	60.7	53.2	50.6	2.21	70.3	116	133	138	42.2	6.31	7.54
MAX	3.1	134	196	183	9.9	204	245	248	247	200	19	29
MIN	1.8	3.0	1.6	5.5	1.6	2.4	28	30	26	5.5	3.2	1.9

CAL YR 1988 TOTAL 10423.9 MEAN 28.5 MAX 264 MIN 1.1
WTR YR 1989 TOTAL 20843.1 MEAN 57.1 MAX 248 MIN 1.6

MUSKINGUM RIVER BASIN

73

03122500 TUSCARAWAS RIVER BELOW DOVER DAM, NEAR DOVER, OH

LOCATION.--Lat 40°31'47", long 81°25'48", in T.9 N., R.2 W., Tuscarawas County, Hydrologic Unit 05040001, on left bank at downstream side of bridge on State Highway 416, 2.2 mi downstream from Dover Dam, 1.5 mi east of Dover, and 3.4 mi upstream from Sugar Creek.

DRAINAGE AREA.--1,405 mi².

PERIOD OF RECORD.--October 1923 to current year. Published as Tuscarawas River near Dover 1923-39.

REVISED RECORDS.--WSP 803: 1933(M). WSP 1907: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 861.51 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 30, 1930, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Dec. 7-22, Feb. 8-14. Records good except for estimated daily discharges, which are poor. Diversion from basin at Portage Lakes (See REMARKS for stations 03116000 and 03117000). Records include diversion from Sugar Creek well field. Mean pumpage for the 1989 water year, 16.6 ft³/s (see REMARKS for station 03124500). Flow regulated by four flood-control reservoirs since 1936 at points 2.2 mi to 25 mi upstream. Water quality data collected at this site 1965 to 1977. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--66 years, 1,427 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,400 ft³/s Jan. 26, 1937, gage height, 15.51 ft; minimum daily, 6.5 ft³/s Oct. 26, 1948.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,570 ft³/s Apr. 4, gage height, 7.10 ft; minimum daily, 209 ft³/s Oct. 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	211	271	774	1410	1060	1190	4820	885	3120	4910	793	467
2	211	419	704	1220	913	1020	5010	1090	2350	4960	674	495
3	209	424	647	1090	871	933	5060	1190	1930	4530	589	458
4	237	680	639	862	895	930	5360	1110	3540	3080	540	413
5	255	1170	612	779	827	1140	5380	1020	5020	2390	625	393
6	252	2390	605	884	793	2110	5150	1150	4730	1500	766	390
7	254	2140	560	1590	741	1880	5100	1250	3330	1510	609	401
8	256	1650	520	3140	680	1570	5250	1400	1770	1130	526	626
9	258	1450	500	3910	640	1380	5310	1310	1410	1010	485	674
10	257	1400	460	3000	580	1340	5170	1600	1870	966	458	479
11	265	1710	430	2160	540	1430	4080	2580	1770	922	441	430
12	275	1580	410	1720	520	1560	3000	3390	1380	844	426	432
13	267	1360	380	1680	480	1520	2260	3190	1740	772	415	416
14	271	1600	370	1550	460	1530	1920	3550	3300	731	446	429
15	271	1490	350	1510	860	1720	1670	3820	4880	689	441	931
16	270	1280	350	1630	1610	1910	1470	4070	5090	647	426	1120
17	255	1150	340	1500	1860	1530	1330	4180	4990	616	410	1130
18	315	1050	330	1710	1280	1340	1270	3900	5040	603	401	786
19	534	912	330	1320	1050	1330	1310	3310	5050	601	400	587
20	522	1220	320	1210	958	1260	1260	2400	4910	698	417	461
21	459	2510	320	1070	1970	1940	1140	2290	5010	717	476	413
22	477	2460	320	956	4510	2280	1040	2210	5030	648	494	443
23	547	1910	713	882	4150	1890	959	1880	4870	623	462	1500
24	501	1520	777	920	3420	1680	889	3040	5000	570	436	2630
25	426	1320	1090	834	2210	1490	873	3470	5050	551	439	2030
26	380	1120	1060	837	1720	1330	1070	4020	5070	534	403	1030
27	341	1050	831	1490	1610	1190	1010	4960	5080	571	381	677
28	328	1020	1340	1750	1340	1130	870	4920	4970	1190	365	538
29	306	1040	3300	1310	---	1500	839	4860	5140	1250	372	460
30	279	965	2810	1170	---	3040	910	4870	4960	898	456	417
31	267	---	1820	1180	---	4610	---	4660	---	891	501	---
TOTAL	9956	40261	24012	46274	38548	50703	80780	87575	117400	41552	15073	21656
MEAN	321	1342	775	1493	1377	1636	2693	2825	3913	1340	486	722
MAX	547	2510	3300	3910	4510	4610	5380	4960	5140	4960	793	2630
MIN	209	271	320	779	460	930	839	885	1380	534	365	390

CAL YR 1988 TOTAL 321379 MEAN 878 MAX 5190 MIN 202
WTR YR 1989 TOTAL 573790 MEAN 1572 MAX 5380 MIN 209

MUSKINGUM RIVER BASIN

03124000 SUGAR CREEK BELOW BEACH CITY DAM, NEAR BEACH CITY, OH

LOCATION.--Lat 40°38'08", long 81°33'11", in T10 N., R.3 W., Tuscarawas County, Hydrologic Unit 05040001, on right bank 1,000 ft downstream from Beach City Dam, 0.4 mi downstream from South Fork, and 1.8 mi southeast of Beach City.

DRAINAGE AREA.--300 mi².

PERIOD OF RECORD.--October 1938 to current year. Published as Sugar Creek near Beach City prior to 1940.

REVISED RECORDS.--WSP 953: 1941.

GAGE.--Water-stage recorder. Datum of gage is 928.00 ft above National Geodetic Vertical Datum of 1929. Prior to Mar. 23, 1939, nonrecording gage at site 500 ft downstream at datum 1 ft higher. Mar. 23, 1939, to Sept. 26, 1949, water-stage recorder at site 300 ft downstream at present datum.

REMARKS.--Estimated daily discharges: Dec. 15-19. Feb. 11-14. Records good except periods of estimated record which are fair. Flood flow regulated by Beach City Lake. Water-quality data collected at this site 1965 to 1977. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--51 years, 274 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,520 ft³/s July 6, 1969, gage height, 11.26 ft, from floodmark in well; no flow Oct. 7-30, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,970 ft³/s Apr. 6, gage height, 6.39 ft; minimum daily, 0.25 ft³/s Oct. 27.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	19	108	273	171	215	1580	132	278	378	82	29
2	18	18	99	221	155	183	1590	166	252	277	66	34
3	17	19	88	175	149	168	1520	164	225	230	56	36
4	17	51	82	156	142	176	1740	147	588	207	51	29
5	18	183	75	129	122	245	1820	139	984	193	52	25
6	17	584	72	248	124	569	1860	200	899	171	68	22
7	17	440	70	664	100	356	1060	200	451	149	63	23
8	16	288	70	1050	95	292	648	193	285	132	48	29
9	16	245	65	1380	87	275	546	173	233	120	42	36
10	16	225	59	738	78	361	463	266	380	132	39	33
11	16	514	49	420	75	489	382	413	340	111	36	31
12	21	347	53	354	70	572	335	407	237	104	35	32
13	20	255	46	497	67	468	314	370	309	96	34	29
14	17	377	49	378	64	390	312	612	523	86	33	34
15	14	282	45	437	176	460	275	582	932	76	32	118
16	14	209	44	445	407	561	249	534	1170	69	31	109
17	13	171	43	360	322	387	222	519	1170	64	30	104
18	19	141	41	305	216	323	207	388	673	61	29	61
19	33	117	40	274	196	294	224	309	382	60	31	43
20	31	232	53	251	171	263	208	264	577	77	37	34
21	24	945	74	220	502	591	182	278	1050	80	47	31
22	29	687	74	170	1430	626	166	249	1200	66	42	42
23	43	372	77	178	1110	425	151	233	1320	60	35	366
24	43	267	125	165	507	353	139	620	1330	54	39	262
25	2.5	213	208	152	335	317	135	575	1260	50	38	108
26	.75	181	151	157	340	286	179	734	819	49	31	69
27	.25	160	114	259	290	253	161	1400	447	68	28	53
28	22	148	249	258	241	230	136	1440	893	193	26	45
29	82	135	811	210	---	357	136	1060	1050	153	25	41
30	31	119	538	194	---	796	139	485	768	89	25	37
31	22	---	316	188	---	1460	---	350	---	84	28	---
TOTAL	668.50	7944	3988	10906	7742	12741	17079	13600	21025	3739	1259	1945
MEAN	21.6	265	129	352	276	411	569	439	701	121	40.6	64.8
MAX	82	945	811	1380	1430	1460	1860	1440	1330	378	82	366
MIN	.25	18	40	129	64	168	135	132	225	49	25	22
CAL YR 1988	TOTAL 63472.40	MEAN 173	MAX 2100	MIN .25								
WTR YR 1989	TOTAL 102638.50	MEAN 281	MAX 1860	MIN .25								

MUSKINGUM RIVER BASIN

75

03124500 SUGAR CREEK AT STRASBURG, OH

LOCATION.--Lat 40°35'15", long 81°31'24", in NW 1/4 sec. 1, T.9 N., R.3 W., Tuscarawas County, Hydrologic Unit 05040001, on left bank 150 ft upstream from bridge on State Highway 21, 0.8 mi upstream from Broad Run, and 0.1 mi southeast of Strasburg.

DRAINAGE AREA.--311 mi².

PERIOD OF RECORD.--August 1931 to March 1933, January 1935 to July 1939, October 1961 to current year.

REVISED RECORDS.--WSP 1305: 1932-33(M). WSP 1907: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 896.24 ft above National Geodetic Vertical Datum of 1929.

July 29, 1931 to Mar. 31, 1933, and Dec. 10, 1934, to July 31, 1939, nonrecording gage, and Oct. 1, 1961, to May 26, 1964 water-stage recorder at datum 2.00 ft higher.

REMARKS.--Estimated daily discharges: Dec. 16-19, Feb. 11-14. Records fair. Flood flow regulated by Beach City Lake 5.0 mi upstream, since August 1937. Part of municipal water supply for city of Canton, starting May 1962, is pumped from well field 4.3 mi upstream; pumpage is returned to Nimishillen Creek. Mean pumpage for water year 1989, 16.6 ft³/s. Water-quality data collected at this site 1965 to 1977.

AVERAGE DISCHARGE.--32 years (1931-32, 1935-38, 1961-89), 305 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,700 ft³/s Aug. 7, 1935, gage height, 14.70 ft (present datum), from rating curve extended above 8,400 ft³/s; no flow all or part of each day Sept. 29 to Nov. 6, 1963, Sept. 20, Dec. 3, 4, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,340 ft³/s Apr. 6, gage height, 5.80 ft; minimum daily, 1.7 ft³/s Oct. 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	20	109	291	173	219	1730	154	273	455	91	31
2	17	18	100	228	157	186	1750	186	239	321	75	32
3	17	18	91	179	148	167	1680	193	216	264	64	36
4	17	38	84	151	144	173	1950	176	572	232	57	32
5	17	163	80	129	123	221	2000	162	1070	216	54	27
6	17	573	75	203	126	571	2060	224	1020	192	70	24
7	17	468	73	643	102	446	1290	239	485	166	71	22
8	17	290	72	1030	97	296	751	228	279	145	55	26
9	17	243	69	1550	89	272	634	207	219	130	48	32
10	17	212	63	878	83	355	539	296	354	140	43	33
11	17	514	50	468	80	485	440	481	343	123	41	30
12	18	366	53	367	74	574	383	495	228	112	37	30
13	20	248	51	512	68	489	352	437	277	106	36	27
14	18	379	51	414	66	403	354	711	525	94	35	31
15	16	288	59	440	164	447	311	718	1010	83	34	106
16	15	205	49	483	401	576	280	635	1340	76	32	118
17	15	166	46	390	350	406	252	635	1360	72	30	110
18	18	138	44	325	223	334	229	468	781	68	30	68
19	27	115	41	288	193	302	244	367	394	66	31	47
20	32	193	53	263	170	265	235	309	545	77	36	37
21	24	957	70	228	462	569	204	317	1170	89	46	32
22	25	763	78	171	1520	648	188	294	1370	75	45	45
23	37	398	74	181	1230	443	172	262	1530	68	37	364
24	41	276	108	168	569	366	159	697	1560	62	38	309
25	32	213	191	154	356	329	153	699	1490	56	39	124
26	5.1	179	162	158	366	294	196	836	1040	54	33	77
27	2.2	160	118	257	304	256	188	1650	534	71	29	59
28	1.7	145	180	270	251	230	157	1720	961	191	28	50
29	93	134	809	214	---	338	153	1290	1190	178	27	44
30	33	118	633	195	---	791	158	533	939	102	26	39
31	23	---	341	189	---	1570	---	355	---	90	29	---
TOTAL	684.0	7998	4077	11417	8089	13021	19192	15974	23314	4174	1347	2042
MEAN	22.1	267	132	368	289	420	640	515	777	135	43.5	68.1
MAX	93	957	809	1550	1520	1570	2060	1720	1560	455	91	364
MIN	1.7	18	41	129	66	167	153	154	216	54	26	22

CAL YR 1988 TOTAL 64615.3 MEAN 177 MAX 2200 MIN 1.7
WTR YR 1989 TOTAL 111329.0 MEAN 305 MAX 2060 MIN 1.7

LOCATION.--Lat 40°11'41", long 81°12'56", in sec. 35, T.10 N., R.6 W., Harrison County, Hydrologic Unit 05040001, on left bank 400 ft downstream from outlet of Piedmont Dam and Boogs Fork, and 0.7 mi northwest of Piedmont.

PERIOD OF RECORD.--October 1938 to current year. Prior to February 1939 monthly discharge only, published in WSP 1305.

GAGE.--Water-stage recorder. Datum of gage is 872.00 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 9, 1949, at site 1,000 ft downstream at datum 1.00 ft higher.

AVERAGE DISCHARGE.--51 years, 137 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,040 ft³/s June 22, gage height, 9.26 ft; minimum daily, 3.5 ft³/s Oct. 17.

CAL YR 1988	TOTAL	27095.40	MEAN	74.0	MAX	690	MIN	.90
WTR YR 1989	TOTAL	59609.3	MEAN	163	MAX	703	MIN	3.5

MUSKINGUM RIVER BASIN

77

03127000 STILLWATER CREEK AT TIPPECANOE, OH

LOCATION.--Lat 40°16'13", long 81°17'26", in NW 1/4 sec. 22, T.12 N., R.7 W., Harrison County, Hydrologic Unit 05040001, on left bank at downstream side of highway bridge at Tippecanoe, 0.4 mi downstream from Brushy Fork, 3.6 mi upstream from Weaver Run, 6 mi upstream from Laurel Creek, and 9 mi south of Dennison.

DRAINAGE AREA.--282 mi².

PERIOD OF RECORD.--October 1938 to current year. Prior to January 1939 monthly discharge only, published in WSP 1305.

REVISED RECORDS.--WSP 1907: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 849.00 ft above National Geodetic Vertical Datum of 1929. Prior to Feb. 9, 1939, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Feb. 5-14. Records good except those for periods of estimated record which are fair. Flow regulated by Clendening Lake on Brushy Fork, 1.9 mi upstream, and Piedmont Lake, 16 mi upstream. Water-quality data collected at this site 1965 to 1977. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--51 years, 320 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,410 ft³/s Mar. 7, 1945, Mar. 5, 1963; maximum gage height, 17.29 ft Mar. 5, 1963; minimum daily discharge, 1.1 ft³/s Oct. 4, 1939.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,760 ft³/s Apr. 1, gage height, 13.17 ft; minimum daily discharge, 16 ft³/s Oct. 8-10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	29	149	321	184	369	1730	494	270	987	97	43
2	20	29	203	301	82	288	1510	696	237	986	90	43
3	20	30	290	306	87	209	1330	739	224	1030	79	37
4	20	35	282	192	112	205	1390	687	351	1020	72	33
5	18	56	280	115	100	271	1440	622	413	1010	87	29
6	17	176	270	188	76	697	1410	425	475	1010	90	25
7	17	139	226	462	64	942	1420	402	306	824	93	22
8	16	106	222	355	54	792	1350	399	217	441	85	22
9	16	91	183	371	47	659	1200	342	212	389	71	21
10	16	84	155	589	43	422	956	599	433	282	62	21
11	17	102	153	564	37	440	771	875	371	184	56	20
12	17	96	150	356	34	452	349	892	379	195	51	22
13	21	89	149	487	32	553	309	894	1360	273	46	21
14	20	100	125	317	30	789	296	1000	1050	408	43	29
15	18	100	104	449	344	644	282	1040	1020	191	39	66
16	17	154	34	453	1040	299	275	1080	1570	146	36	140
17	17	152	24	467	1070	219	292	1010	1380	130	33	216
18	19	143	22	641	694	192	372	1030	1010	117	29	149
19	19	136	21	511	449	179	438	988	1010	108	34	108
20	21	214	22	312	385	168	445	835	1020	106	47	84
21	23	458	29	137	905	662	444	815	1110	104	52	70
22	27	409	35	102	1470	785	272	835	1560	97	45	73
23	36	326	42	103	1320	631	241	739	1420	89	45	271
24	38	291	243	122	1190	599	227	606	903	80	50	274
25	47	270	743	162	1010	572	200	593	940	74	49	193
26	45	167	448	159	917	523	243	846	1030	73	43	149
27	39	151	353	261	913	482	287	1010	1020	104	36	118
28	35	150	663	275	889	446	278	765	962	172	32	98
29	33	165	910	242	---	599	354	920	1020	154	29	84
30	32	260	733	238	---	1020	487	764	960	118	32	73
31	30	---	370	231	---	1460	---	405	---	105	37	---
TOTAL	751	4708	7633	9789	13578	16568	20598	23347	24233	11007	1690	2554
MEAN	24.2	157	246	316	485	534	687	753	808	355	54.5	85.1
MAX	47	458	910	641	1470	1460	1730	1080	1570	1030	97	274
MIN	16	29	21	102	30	168	200	342	212	73	29	20

CAL YR 1988 TOTAL 65229 MEAN 178 MAX 2070 MIN 13
WTR YR 1989 TOTAL 136456 MEAN 374 MAX 1730 MIN 16

MUSKINGUM RIVER BASIN

03127500 STILLWATER CREEK AT UHRICHVILLE, OH

LOCATION.--Lat 40°23'10", long 81°20'50", Tuscarawas County, Hydrologic Unit 05040001, on left bank at concrete dam of Dennison Water Supply Co. at Uhrichsville, 2.2 mi upstream from Little Stillwater Creek.

DRAINAGE AREA.--367 mi².

PERIOD OF RECORD.--July 1922 to current year.

REVISED RECORDS.--WSP 853: Drainage area. WSP 1113: 1923-24, 1926-31, 1932(M), 1933-35.

GAGE.--Water-stage recorder above concrete dam. Datum of gage is 839.37 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1936, nonrecording gage at site 1.7 mi upstream at same datum. Auxiliary water-stage recorder below concrete dam at datum 10.00 ft lower.

REMARKS.--Estimated daily discharges: Feb. 6-14, 16-17, 22-24, Mar. 31 to Apr. 9, May 12-18, 27-29, June 14-24, Aug. 31 to Sept. 30. Records fair, except estimated daily discharges, which are poor. Flow regulated by Piedmont Lake, 35 mi upstream, and Clendening Lake on Brushy Fork, 22 mi upstream, beginning in 1938. Water is diverted from Dennison water-supply dam 1.7 mi upstream from station for municipal supply of cities of Dennison and Uhrichsville; diversion not included in figures of daily discharge. Water-quality data collected at this site 1965 to 1977. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--67 years, 430 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,650 ft³/s Aug. 8, 9, 1935, gage height, 14.2 ft at former site, 12.8 ft at present site; no flow at times in 1930, 1932, 1936, 1939-40, 1953, 1973.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1913 reached a stage of about 17.5 ft at former site, and about 15.5 ft at present site.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 2,100 ft³/s Apr. 2, maximum gage height, 4.67 ft Apr. 1 (backwater from Tuscarawas River); minimum daily discharge, 22 ft³/s Oct. 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	51	273	486	314	683	1800	584	451	1020	130	40
2	25	51	170	434	234	393	2100	782	348	1000	117	48
3	26	53	260	413	158	312	1750	904	322	1030	108	46
4	25	75	321	378	180	274	1620	863	847	1050	93	42
5	25	138	319	232	187	332	1600	802	730	1040	92	40
6	23	373	315	237	150	638	1620	688	660	1030	108	36
7	23	355	290	646	120	1000	1620	559	518	999	106	34
8	23	248	252	716	92	953	1600	539	374	666	106	32
9	22	186	243	570	78	846	1550	503	322	458	90	30
10	23	156	192	673	68	694	1290	629	550	405	77	30
11	24	166	165	802	58	648	991	1100	579	278	66	30
12	27	188	160	632	52	714	651	1010	486	228	60	30
13	29	175	154	714	46	654	425	1010	1260	251	53	36
14	32	203	155	652	44	868	392	1080	1220	385	49	65
15	34	204	125	665	381	945	368	1180	1400	372	45	100
16	34	201	97	811	1200	621	355	1220	1700	209	41	170
17	33	265	43	638	1250	395	342	1280	1710	176	40	240
18	34	258	31	821	1070	326	399	1260	1250	159	35	180
19	34	238	32	782	677	296	482	1170	1100	148	34	120
20	37	290	32	589	518	276	529	1060	1200	139	38	100
21	45	665	36	358	980	698	524	972	1600	136	45	90
22	53	679	43	203	1740	1030	443	945	1750	130	46	80
23	62	511	57	171	1750	881	330	967	1450	122	43	180
24	77	402	146	175	1400	758	305	828	1200	112	43	310
25	62	349	896	204	1210	720	293	723	1110	102	46	220
26	73	298	823	246	1050	658	295	2030	1120	97	45	180
27	72	196	481	360	967	596	346	1200	1170	104	39	140
28	61	179	708	443	1010	555	359	1300	1310	167	33	120
29	55	175	1190	393	---	739	371	1000	1140	223	31	110
30	52	223	1150	360	---	1590	538	1070	1070	178	30	96
31	51	---	737	374	---	1600	---	695	---	144	30	---
TOTAL	1221	7551	9896	15178	16984	21693	25288	29953	29947	12558	1919	2975
MEAN	39.4	252	319	490	607	700	843	966	998	405	61.9	99.2
MAX	77	679	1190	821	1750	1600	2100	2030	1750	1050	130	310
MIN	22	51	31	171	44	274	293	503	322	97	30	30
(+)	1.74	1.62	1.61	1.58	1.64	1.62	1.53	1.63	1.70	1.73	1.78	1.71

CAL YR 1988 TOTAL 86738 MEAN 237 MAX 2600 MIN 15 (+) 1.69
WTR YR 1989 TOTAL 175163 MEAN 480 MAX 2100 MIN 22 (+) 1.66

(+) Diversion, in cubic feet per second, for municipal supply of cities of Dennison and Uhrichsville, furnished by Dennison Water Supply Company.

MUSKINGUM RIVER BASIN

79

03128500 LITTLE STILLWATER CREEK BELOW TAPPAN DAM, AT TAPPAN, OH

LOCATION.--Lat 40°21'25", long 81°13'49", in NW 1/4 sec. 4, T.13 N., R.7 W., Harrison County, Hydrologic Unit 05040001, on right bank 150 ft downstream from outlet of lake at Tappan Dam, 1 mi west of Tappan, and 2 mi upstream from Plum Run.

DRAINAGE AREA.--71.1 mi².

PERIOD OF RECORD.--October 1938 to current year. Published as Little Stillwater Creek at Tappan 1938-39.

REVISED RECORDS.--WSP 1907: Drainage area.

GAGE.--Water-stage recorder and masonry control. Datum of gage is 861.00 ft above National Geodetic Vertical Datum of 1929. Prior to Jan. 30, 1939, water-stage recorder at gate house of Tappan Dam at datum 9 ft higher. Jan. 30 to Mar. 24, 1939, nonrecording gage and Mar. 25, 1939, to Aug. 6, 1944, water-stage recorder, at site 150 ft downstream at present datum.

REMARKS.--Estimated daily discharges: Feb. 7-15, May 5-12, June 29 to Aug. 5, Aug. 9 to Sept. 5. Records poor. Flow completely regulated by Tappan Lake. Water-quality data collected at this site 1965 to 1977. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--51 years, 77.0 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,050 ft³/s Mar. 13, 1939, gage height, 10.00 ft; no flow Sept. 12-15, 18, 19, 21-29, Oct. 13-21, 1939.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 710 ft³/s Apr. 8, gage height 7.57 ft; minimum daily, 1.7 ft³/s Oct. 1-15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	2.1	9.8	112	58	78	115	58	177	170	32	6.0
2	1.7	2.4	9.5	100	54	77	146	91	90	120	18	4.8
3	1.7	2.2	9.1	82	59	67	327	116	96	78	13	4.4
4	1.7	2.5	8.5	69	69	63	516	122	175	68	12	4.0
5	1.7	2.7	8.9	49	65	69	536	96	351	60	13	3.8
6	1.7	2.6	9.7	44	59	117	536	92	423	54	13	3.5
7	1.7	2.6	9.2	66	57	179	591	90	204	48	14	3.4
8	1.7	2.7	8.9	73	54	149	658	84	90	46	12	3.2
9	1.7	2.8	8.9	84	50	78	540	76	90	44	8.5	3.1
10	1.7	3.0	8.6	82	38	81	164	64	93	42	7.6	2.9
11	1.7	3.0	8.4	68	26	88	84	100	92	40	7.0	2.8
12	1.7	3.1	8.4	72	18	97	87	315	236	38	6.2	3.1
13	1.7	3.2	8.4	78	12	171	88	357	287	36	5.8	3.1
14	1.7	3.0	8.4	84	18	245	90	357	270	32	5.4	3.6
15	1.7	3.0	7.9	87	21	313	90	421	311	30	5.0	4.4
16	1.8	3.2	7.9	90	126	195	86	464	332	28	4.8	5.4
17	1.8	3.4	7.9	112	240	95	51	497	321	26	4.6	5.9
18	1.8	3.8	7.9	120	129	74	38	209	375	24	4.6	6.1
19	1.8	4.0	8.0	112	124	77	84	142	458	22	4.4	6.0
20	1.8	8.0	8.0	80	121	102	175	158	498	20	4.4	7.0
21	1.8	14	7.9	78	204	265	72	162	420	18	4.3	7.7
22	1.8	18	8.1	66	304	325	35	231	328	17	4.3	8.1
23	1.8	14	9.2	57	319	113	38	266	330	16	4.3	10
24	1.9	14	24	48	262	72	41	261	384	15	4.3	11
25	2.0	14	80	45	206	80	39	209	466	14	4.4	11
26	2.0	14	86	50	199	84	47	198	500	13	6.4	9.7
27	2.0	14	80	63	158	148	58	182	418	15	12	8.9
28	2.0	14	86	64	87	165	55	266	307	22	4.0	8.9
29	2.2	13	121	64	---	226	42	446	297	32	12	8.5
30	2.2	11	129	62	---	354	42	560	200	26	10	8.4
31	2.1	---	121	62	---	197	---	560	---	26	7.6	---
TOTAL	56.3	203.3	924.5	2323	3137	4444	5471	7250	8619	1240	268.9	178.7
MEAN	1.82	6.78	29.8	74.9	112	143	182	234	287	40.0	8.67	5.96
MAX	2.2	18	129	120	319	354	658	560	500	170	32	11
MIN	1.7	2.1	7.9	44	12	63	35	58	90	13	4.0	2.8

CAL YR 1988 TOTAL 9726.67 MEAN 26.6 MAX 442 MIN .65
WTR YR 1989 TOTAL 34115.7 MEAN 93.5 MAX 658 MIN 1.7

MUSKINGUM RIVER BASIN

03129000 TUSCARAWAS RIVER AT NEWCOMERSTOWN, OH

LOCATION.--Lat 40°15'41", long 81°36'33", in T.5 N., R.3 W., Tuscarawas County, Hydrologic Unit 05040001, on right bank 150 ft upstream from highway bridge, 0.2 mi south of Newcomerstown, 2 mi upstream from Buckhorn Creek, and 4 mi downstream from Dunlap Creek.

DRAINAGE AREA.--2,443 mi².

PERIOD OF RECORD.--September 1921 to current year.

REVISED RECORDS.--WSP 728: 1929(M). WSP 873: 1935. WSP 1907: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 780.00 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 28, 1925, and July 18, 1935, to Feb. 13, 1939, nonrecording gage, Sept. 28, 1925, to July 17, 1935, water-stage recorder at site 1.5 mi upstream at datum 5.03 ft higher prior to Oct. 1, 1934, and 0.03 ft higher Oct. 1, 1934, to Feb. 13, 1939.

REMARKS.--Estimated daily discharges: Dec. 7-22, Feb. 6-15. Records good except for periods of estimated record which are fair. Diversion from basin at Portage Lakes (see REMARKS for station 03117000). Flow regulated by eight flood-control reservoirs at points 40 mi to 64 mi upstream. Water-quality data collected at this site 1946 to 1949, 1955 to 1977. U.S. Army of Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--68 years, 2,531 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 46,800 ft³/s Jan. 26, 1937, gage height, 20.65 ft, site and datum then in use; minimum daily, 170 ft³/s Aug. 6, 1930.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1913 reached a stage of about 21.5 ft, at site and datum used prior to Oct. 1, 1934, discharge, 83,000 ft³/s computed by U.S. Army Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,300 ft³/s May 27, gage height, 8.56 ft; minimum daily, 334 ft³/s Oct. 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	359	400	1330	2620	1880	2780	10700	2050	5800	7000	1280	575
2	354	401	1100	2190	1650	2140	10300	2340	4110	6580	1140	556
3	341	511	1040	1960	1470	1860	9940	2760	3460	6400	1010	557
4	334	674	1080	1710	1440	1720	9970	2770	4250	5760	920	517
5	349	1360	1050	1360	1430	1870	10300	2600	6590	4580	883	473
6	360	2830	1030	1390	1300	3090	10100	2660	7120	3910	1020	451
7	357	3420	1000	2290	1100	4100	9800	2640	6450	3090	1050	439
8	353	2450	920	4280	1000	3630	8980	2650	3900	2950	901	446
9	352	2000	820	5910	960	3210	8710	2670	2770	2250	817	696
10	349	1830	760	5620	920	3010	8390	2780	3180	2090	756	642
11	361	2130	700	4180	880	3100	7000	4330	3630	1900	710	521
12	362	2440	660	3410	880	3490	5370	5610	2980	1680	672	479
13	366	1950	620	3180	860	3510	4260	5860	3750	1560	641	468
14	359	2000	600	3220	840	3470	3400	6170	5420	1500	618	456
15	357	2180	600	2970	840	3890	3230	6780	7110	1530	647	596
16	349	1800	580	3310	3200	4210	2780	7510	8830	1330	621	1250
17	346	1590	570	3000	4410	3380	2540	7520	8830	1180	594	1530
18	354	1480	560	2970	3650	2690	2370	6980	8440	1120	570	1350
19	412	1330	550	2950	2630	2440	2500	6120	7630	1070	557	1020
20	641	1570	550	2460	2190	2350	2600	5200	7610	1070	550	801
21	647	3470	540	2060	3750	3330	2520	4440	8550	1150	608	664
22	622	4380	540	1730	7400	5010	2210	4290	9510	1090	642	633
23	651	3350	921	1500	8610	4490	1940	4070	9110	1020	635	1290
24	733	2510	1090	1460	7210	3580	1790	4190	8790	950	670	3040
25	671	2080	1850	1470	5590	3240	1710	5440	8300	900	585	3120
26	570	1800	2280	1420	4110	2930	1840	8350	8150	865	578	1920
27	515	1540	1760	1790	3700	2640	1990	11000	7790	873	538	1230
28	477	1440	1920	2750	3350	2570	1880	9600	8330	1190	506	964
29	441	1410	4320	2380	---	2970	1770	8340	8070	1950	488	828
30	483	1390	5460	2020	---	5510	1860	7760	7750	1610	506	739
31	428	---	3890	1930	---	8570	---	7120	---	1340	562	---
TOTAL	13653	57716	40691	81490	77250	104780	152750	162600	196210	71488	22275	28251
MEAN	440	1924	1313	2629	2759	3380	5092	5245	6540	2306	719	942
MAX	733	4380	5460	5910	8610	8570	10700	11000	9510	7000	1280	3120
MIN	334	400	540	1360	840	1720	1710	2050	2770	865	488	439

CAL YR 1988 TOTAL 553861 MEAN 1513 MAX 10800 MIN 255
WTR YR 1989 TOTAL 1009154 MEAN 2765 MAX 11000 MIN 334

MUSKINGUM RIVER BASIN

81.

03130000 BLACK FORK BELOW CHARLES MILL DAM, NEAR MIFFLIN, OH

LOCATION.--Lat 40°44'16", long 82°21'48", in NE 1/4 sec. 35, T.23 N., R.17 W., Ashland County, Hydrologic Unit 05040002, on left bank 700 ft downstream from Charles Mill Dam, 2.5 mi south of Mifflin, and 4 mi upstream from Rocky Fork.

DRAINAGE AREA.--217 mi².

PERIOD OF RECORD.--October 1938 to current year. Prior to October 1940, published as Black Fork near Mifflin. Monthly discharge only for October 1938, published in WSP 1305.

REVISED RECORDS.--WSP 1907: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 981.56 ft above National Geodetic Vertical Datum of 1929. Dec. 3, 1941, to Dec. 5, 1944, water-stage recorder at site 300 ft downstream at same datum.

REMARKS.--No estimated daily discharges. Records fair. Flow regulated by Charles Mill Lake. Water-quality data collected at this site 1965 to 1977. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--51 years, 203 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,800 ft³/s Mar. 13, 1964 from rating curve extended above 1,900 ft³/s; maximum gage height, 8.45 ft Mar. 14, 1939; minimum daily discharge, 0.5 ft³/s Nov. 18, 1982.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1913 reached a discharge of 11,700 ft³/s, computed by U.S. Army Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,260 ft³/s Apr. 7, gage height, 5.67 ft; minimum daily, 5.1 ft³/s Oct. 12, 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	23	170	170	166	187	492	129	1180	296	97	26
2	40	24	165	168	164	175	623	125	1140	257	91	28
3	23	22	162	166	163	168	768	120	659	164	80	25
4	6.7	28	158	165	162	165	628	111	899	55	72	22
5	7.2	45	95	162	160	168	1110	99	1030	62	67	21
6	7.0	60	66	164	157	175	1230	98	1050	64	72	21
7	7.0	70	64	170	121	192	1250	109	1040	66	72	21
8	6.1	77	63	209	70	201	1210	121	888	107	65	21
9	5.6	75	62	305	68	197	1030	134	618	144	56	20
10	5.5	108	61	426	68	189	872	199	412	199	51	21
11	5.6	142	60	486	67	182	731	224	369	201	46	21
12	5.1	147	60	455	67	178	589	254	348	169	42	20
13	5.1	165	60	385	67	173	494	297	311	146	39	20
14	5.2	172	47	328	68	169	418	323	323	74	36	27
15	5.4	257	36	289	68	170	375	350	351	21	34	36
16	5.4	280	30	258	98	143	340	383	405	24	35	35
17	5.5	243	27	231	158	102	312	382	406	24	33	36
18	6.8	212	26	209	160	108	290	332	382	25	32	34
19	27	196	24	190	160	116	262	284	342	27	31	32
20	45	207	25	183	159	133	100	250	324	33	30	30
21	43	210	25	178	165	164	165	227	342	37	30	29
22	45	217	25	177	175	230	120	210	384	44	29	30
23	37	221	27	171	217	283	118	215	397	48	31	35
24	37	220	27	166	258	283	114	256	361	48	32	26
25	34	199	26	162	254	262	112	363	309	47	31	24
26	30	192	25	161	240	237	116	137	262	46	31	25
27	26	189	67	161	222	214	120	380	237	53	30	22
28	28	186	130	163	203	194	122	676	263	78	28	20
29	26	179	159	166	---	200	128	1200	289	92	27	20
30	25	174	165	167	---	253	131	1220	314	102	27	20
31	23	---	170	166	---	358	---	1210	---	101	23	---
TOTAL	622.2	4530	2307	6957	4105	5969	14370	10418	15635	2854	1400	768
MEAN	20.1	151	74.4	224	147	193	479	336	521	92.1	45.2	25.6
MAX	45	280	170	486	258	358	1250	1220	1180	296	97	36
MIN	5.1	22	24	161	67	102	100	98	237	21	23	20

CAL YR 1988 TOTAL 47740.3 MEAN 130 MAX 933 MIN 2.3
WTR YR 1989 TOTAL 69935.2 MEAN 192 MAX 1250 MIN 5.1

MUSKINGUM RIVER BASIN

03131500 BLACK FORK AT LOUDONVILLE, OH

LOCATION.--Lat 40°38'09", long 82°14'22", in NW 1/4 sec. 1, T.19 N., R.16 W., Ashland County, Hydrologic Unit 05040002, on right bank at downstream side of bridge on State Highway 39 at Loudonville, 1.5 mi downstream from Big Run.

DRAINAGE AREA.--349 mi².

PERIOD OF RECORD.--May 1931 to current year.

REVISED RECORDS.--WSP 873: 1935. WSP 1907: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 929.16 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 23, 1941, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharge. Records good. Flow regulated since 1936 by Charles Mill Lake, 16 mi upstream from station. Records include diversion from Clear Fork Reservoir which enters the Black Fork drainage as sewage effluent from the city of Mansfield (see REMARKS for station 03133500). Water-quality data collected at this site 1958, 1968 to 1977. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--58 years, 356 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,460 ft³/s July 5, 1969, gage height, 14.11 ft, from rating curve extended above 4,000 ft³/s on basis of contracted-opening measurement of peak flow; minimum daily, 29 ft³/s Aug. 7, 8, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,010 ft³/s May 26, gage height, 9.89 ft; minimum daily, 66 ft³/s Oct. 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	101	86	242	291	278	323	955	248	1370	508	202	106
2	96	88	236	284	272	298	1060	245	1380	438	186	149
3	94	85	232	273	275	286	1540	242	905	381	173	106
4	77	98	227	270	267	289	1910	224	2000	213	164	100
5	71	179	195	260	260	458	1670	232	1440	199	166	95
6	71	275	144	341	256	450	1630	265	1360	194	156	96
7	71	168	140	495	243	355	1590	274	1330	188	155	98
8	71	175	138	1170	163	357	1520	274	1210	213	150	102
9	71	172	136	624	151	359	1430	262	964	246	140	99
10	68	413	136	631	160	355	1170	401	654	281	134	98
11	76	349	132	687	156	347	1010	467	572	325	129	102
12	75	247	131	716	153	345	824	443	535	288	124	96
13	69	372	132	648	152	328	747	702	566	256	122	94
14	69	338	129	511	227	321	629	769	922	224	119	101
15	69	318	118	547	273	459	551	629	814	134	115	227
16	68	402	109	443	334	372	491	612	982	125	124	124
17	66	349	99	387	320	267	438	612	789	125	117	114
18	107	299	98	353	298	268	411	534	671	125	112	114
19	97	270	98	330	292	279	410	460	584	125	111	110
20	103	429	101	312	285	288	231	435	1060	155	112	107
21	106	617	111	291	510	526	328	392	942	143	114	105
22	127	359	111	280	522	425	244	349	728	137	109	113
23	112	334	143	274	403	475	237	639	691	136	108	123
24	123	312	158	269	408	470	228	967	619	135	112	113
25	109	290	164	263	407	437	230	659	528	143	109	100
26	101	275	124	286	398	404	255	2370	445	228	108	99
27	95	269	123	405	388	370	234	772	796	172	107	97
28	94	271	605	305	346	345	239	1000	1020	347	102	94
29	102	259	485	290	---	584	292	1410	565	206	101	93
30	93	248	331	286	---	1020	267	1440	541	207	101	93
31	87	---	308	285	---	967	---	1440	---	270	99	---
TOTAL	2739	8346	5636	12807	8197	12827	22771	19768	26983	6867	3981	3268
MEAN	88.4	278	182	413	293	414	759	638	899	222	128	109
MAX	127	617	605	1170	522	1020	1910	2370	2000	508	202	227
MIN	66	85	98	260	151	267	228	224	445	125	99	93

CAL YR 1988 TOTAL 92933 MEAN 254 MAX 1500 MIN 63
WTR YR 1989 TOTAL 134190 MEAN 368 MAX 2370 MIN 66

MUSKINGUM RIVER BASIN

83

03133500 CLEAR FORK BELOW PLEASANT HILL DAM, NEAR PERRYVILLE, OH

LOCATION.--Lat 40°37'13", long 82°19'28", in NE 1/4 sec. 7, T.19 N., R.16 W., Ashland County, Hydrologic Unit 05040002, on right bank 0.2 mi downstream from Pleasant Hill Dam, 2.8 mi south of Perryville, and 4.7 mi upstream from the confluence of Clear Fork and Black Fork.

DRAINAGE AREA.--198 mi².

PERIOD OF RECORD.--October 1938 to current year. Published as Clear Fork near Perryville prior to 1940. Monthly discharge only for October 1938, published in WSP 1305.

REVISED RECORDS.--WSP 1907: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 967.00 ft above National Geodetic Vertical Datum of 1929. Prior to May 1, 1947, water-stage recorder at site 0.5 mi downstream at datum 4.88 ft lower.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Pleasant Hill Lake. Water diverted from Clear Fork Reservoir (upstream from Pleasant Hill Lake) for municipal supply of city of Mansfield since 1953; mean pumpage for 1989 water year 15.6 ft³/s returned to Rocky Fork as sewage effluent. Water-quality data collected at this site 1965 to 1977. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--51 years, 198 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,340 ft³/s Jan. 23, 1959, gage height, 4.89 ft; minimum daily, 0.6 ft³/s Nov. 2, 4, 1938.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 955 ft³/s Apr. 4, gage height 3.26 ft; minimum daily, 26 ft³/s Oct. 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	33	142	168	66	84	878	208	892	223	84	40
2	29	33	141	168	42	126	909	204	786	209	75	43
3	29	33	139	168	36	114	932	199	578	193	71	40
4	28	33	142	168	35	100	919	189	624	180	71	37
5	100	33	142	105	35	101	894	185	793	166	75	40
6	26	34	141	107	35	387	894	198	690	153	75	43
7	27	34	141	126	35	505	900	213	377	139	69	41
8	29	34	141	130	36	179	883	224	248	128	61	42
9	29	34	141	596	36	134	845	220	244	120	57	43
10	30	34	141	882	36	184	596	241	237	114	55	41
11	30	53	141	585	36	169	375	296	218	108	53	40
12	30	62	140	277	36	170	318	302	198	103	51	37
13	30	77	139	248	36	211	321	367	211	101	50	36
14	30	99	121	161	36	233	311	519	364	95	49	38
15	30	117	69	163	36	121	294	633	783	88	48	48
16	30	111	55	163	37	60	228	779	908	83	47	48
17	30	95	53	314	37	88	211	425	885	79	47	46
18	32	92	52	308	37	122	202	250	546	76	44	43
19	32	86	52	241	37	152	205	235	362	76	43	41
20	32	92	52	181	37	164	200	227	530	82	44	39
21	32	231	79	96	157	249	187	220	764	80	48	38
22	32	327	64	96	594	287	174	199	586	77	47	42
23	32	293	54	179	317	270	163	269	316	73	47	47
24	33	251	57	118	162	247	153	752	252	69	47	41
25	33	235	57	96	192	225	151	866	247	68	46	38
26	33	181	57	138	194	202	163	848	228	93	43	36
27	33	143	83	147	194	176	164	865	257	122	42	34
28	33	143	204	120	121	164	160	890	722	126	41	45
29	33	143	412	120	---	227	177	864	569	110	41	47
30	33	143	368	167	---	475	202	889	338	98	41	45
31	33	---	168	153	---	681	---	901	---	91	38	---
TOTAL	1021	3309	3888	6689	2688	6607	13009	13677	14753	3523	1650	1239
MEAN	32.9	110	125	216	96.0	213	434	441	492	114	53.2	41.3
MAX	100	327	412	882	594	681	932	901	908	223	84	48
MIN	26	33	52	96	35	60	151	185	198	68	38	34

CAL YR 1988 TOTAL 40727 MEAN 111 MAX 691 MIN 24
WTR YR 1989 TOTAL 72053 MEAN 197 MAX 932 MIN 26

MUSKINGUM RIVER BASIN

03135000 LAKE FORK BELOW MOHICANVILLE DAM, NEAR MOHICANVILLE, OH

LOCATION.--Lat 40°43'24", long 82°09'18", in sec. 3, T.20 N., R.15 W., Ashland County, Hydrologic Unit 05040001, on right bank 800 ft downstream from Mohicanville Dam, 2 mi east of Mohicanville, and 2.4 mi downstream from the confluence of Jerome and Muddy Forks.

DRAINAGE AREA.--271 mi².

PERIOD OF RECORD.--October 1938 to current year. Published as Lake Fork near Mohicanville prior to 1940.

REVISED RECORDS.--WSP 1907: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 930.00 ft above National Geodetic Vertical Datum of 1929. Prior to July 25, 1949, water-stage recorder at site 500 ft downstream at same datum.

REMARKS.--Estimated daily discharges: Feb. 9-14. Records good. Flow regulated by Mohicanville Reservoir. Water-quality data collected at this site 1965 to 1977. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--51 years, 239 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,490 ft³/s July 5, 1969, gage height, 14.32 ft; minimum daily 1.0 ft³/s June 10, 1947, Jan. 25, 1959.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,200 ft³/s Apr. 4, gage height, 8.42 ft; minimum daily, 16 ft³/s Aug. 28, Sept. 5-8, 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	30	120	292	160	163	975	152	692	703	60	19
2	24	31	112	238	141	139	970	160	502	447	51	36
3	24	31	105	186	141	138	999	153	371	322	47	20
4	25	49	99	175	123	153	1060	137	847	255	92	18
5	24	301	95	175	122	519	1080	138	783	211	55	16
6	22	660	93	173	118	504	1080	163	668	172	40	16
7	22	329	90	610	113	257	1070	322	451	146	36	16
8	23	264	84	1030	98	207	1040	290	309	203	33	16
9	23	232	79	1010	90	202	995	209	244	132	31	17
10	23	500	74	994	85	224	738	341	292	112	30	16
11	29	695	65	664	80	249	564	549	220	97	27	21
12	29	360	62	527	78	275	435	423	179	91	28	23
13	28	412	62	457	76	246	421	510	436	86	32	22
14	27	472	65	326	150	233	370	718	633	77	34	30
15	29	293	75	373	432	380	303	515	789	71	23	102
16	29	223	64	328	511	295	260	350	807	68	31	38
17	29	183	61	275	255	218	226	272	794	64	26	29
18	56	148	57	247	192	239	211	217	815	61	24	25
19	42	129	58	232	168	286	214	181	798	60	23	23
20	31	385	68	218	158	250	189	178	807	87	29	21
21	30	778	90	182	606	550	169	242	810	72	34	20
22	47	449	88	154	610	377	155	228	806	62	32	51
23	40	290	115	146	317	269	143	320	796	83	26	182
24	44	224	182	137	221	228	133	800	692	61	42	90
25	41	185	206	133	200	205	146	783	462	53	24	56
26	39	164	144	169	197	183	184	726	332	54	20	45
27	34	152	119	442	194	167	150	693	374	61	18	38
28	33	147	574	253	169	158	137	805	799	139	16	34
29	33	133	1030	198	---	406	166	807	823	75	17	32
30	30	123	573	191	---	754	181	803	789	70	19	32
31	29	---	392	178	---	1040	---	788	---	78	19	---
TOTAL	964	8372	5101	10713	5805	9514	14764	12973	18120	4273	1019	1104
MEAN	31.1	279	165	346	207	307	492	418	604	138	32.9	36.8
MAX	56	778	1030	1030	610	1040	1080	807	847	703	92	182
MIN	22	30	57	133	76	138	133	137	179	53	16	16

CAL YR 1988 TOTAL 65046.4 MEAN 178 MAX 1110 MIN 9.4
WTR YR 1989 TOTAL 92722 MEAN 254 MAX 1080 MIN 16

MUSKINGUM RIVER BASIN

85

03136500 KOKOSING RIVER AT MOUNT VERNON, OH

LOCATION.--Lat 40°24'20", long 82°30'00", in sec. 2, T.6 N., R.13 W., Knox County, Hydrologic Unit 05040003, on right bank 300 ft downstream from Tilden Avenue Bridge at Mount Vernon, 0.8 mi downstream from North Branch, and 2.7 mi upstream from Dry Creek.

DRAINAGE AREA.--202 mi².

PERIOD OF RECORD.--February 1953 to current year.

REVISED RECORDS.--WSP 2107: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 984.16 ft above National Geodetic Vertical Datum of 1929. (Levels by U.S. Army Corps of Engineers.) Prior to Apr. 3, 1953, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good. Some regulation by Knox Lake, capacity, 3,750 acre-ft, 8.2 mi upstream on East Branch of North Branch Kokosing River beginning in 1954 and North Branch Kokosing River Lake 10.0 mi upstream on North Branch Kokosing River, beginning in June 1972. Water-quality data collected at this site 1965 to 1977. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--36 years, (1954-89), 214 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,000 ft³/s Jan. 21, 1959, gage height, 18.19 ft, from rating curve extended above 9,000 ft³/s on basis of slope-area measurement of peak flow; minimum daily, 8.6 ft³/s Aug. 22, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,480, ft³/s June 14 gage height 6.40 ft; minimum daily, 13 ft³/s Oct. 2, 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	26	83	237	133	133	958	404	239	282	89	48
2	13	26	76	198	125	119	811	313	216	231	79	52
3	13	26	68	163	119	114	952	273	202	205	71	45
4	14	36	65	152	113	122	1660	236	709	189	68	40
5	14	65	58	130	106	362	1250	234	486	176	75	37
6	14	150	57	285	98	550	688	311	351	162	77	36
7	15	131	54	713	88	297	533	306	268	148	69	36
8	15	116	51	1600	83	216	447	284	218	135	61	35
9	14	113	49	1160	79	202	443	263	192	125	57	33
10	14	167	47	511	79	257	380	511	179	115	56	32
11	18	276	42	320	70	349	313	440	164	121	55	35
12	20	196	53	313	69	393	272	359	160	131	52	34
13	19	266	39	517	68	296	265	493	204	115	48	31
14	18	340	39	339	84	256	252	901	1850	103	47	36
15	17	222	39	382	138	280	227	580	2130	94	45	56
16	16	168	39	350	275	280	205	404	1620	90	44	51
17	17	130	38	276	211	227	188	316	1070	87	41	49
18	24	106	36	231	166	211	183	257	617	84	40	43
19	24	90	36	210	151	224	252	220	442	85	40	38
20	24	228	37	203	129	249	228	216	563	94	43	36
21	26	493	43	175	717	716	196	229	543	91	52	34
22	31	351	53	149	879	470	174	205	466	85	51	38
23	29	233	78	139	444	321	158	460	360	87	54	40
24	33	178	150	128	260	258	147	1220	285	76	52	31
25	33	149	212	123	205	224	253	667	240	73	50	27
26	29	128	167	131	189	199	792	2090	212	72	46	27
27	26	113	142	194	165	182	404	2220	700	99	44	26
28	26	108	571	189	144	168	286	1050	1820	150	43	29
29	23	98	847	164	---	735	410	679	674	127	43	33
30	20	91	436	151	---	1540	607	394	392	97	46	32
31	23	---	308	141	---	1430	---	292	---	97	46	---
TOTAL	636	4820	4013	9974	5387	11380	13934	16827	17572	3826	1684	1120
MEAN	20.5	161	129	322	192	367	464	543	586	123	54.3	37.3
MAX	33	493	847	1600	879	1540	1660	2220	2130	282	89	56
MIN	13	26	36	123	68	114	147	205	160	72	40	26

CAL YR 1988 TOTAL 47813.6 MEAN 131 MAX 2050 MIN 8.6

WTR YR 1989 TOTAL 91173 MEAN 250 MAX 2220 MIN 13

MUSKINGUM RIVER BASIN

03138500 WALHONDING RIVER BELOW MOHAWK DAM, AT NELLIE, OH

LOCATION.--Lat 40°20'29", long 82°03'56", in T.6 N., R.8 W., Coshocton County, Hydrologic Unit 05040003, on right bank at upstream side of bridge on U.S. Highway 36 at Nellie, 0.5 mi upstream from Mohawk Creek, and 1.7 mi downstream from Mohawk Dam.

DRAINAGE AREA.--1,505 mi².

PERIOD OF RECORD.--December 1910 to March 1913 (gage heights and discharge measurements only), September 1921 to current year. Published as Mohican River at Pomerene 1910-13, as Walhonding River at Pomerene 1921-37, and as Walhonding River at Nellie 1938-39.

REVISED RECORDS.--WSP 1907: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 790.00 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 7, 1925, nonrecording gage and Nov. 7, 1925, to Sept. 30, 1937, water-stage recorder at site 3.8 mi upstream at datum 15.53 ft higher. Oct. 1, 1937, to Sept. 30, 1938, nonrecording gage at present site at datum 2.09 ft higher. U.S. Army Corps of Engineers satellite telemeter at station.

REMARKS.--Estimated daily discharges: Dec. 8-22, Feb. 9-14. Records good except those for periods of estimated record, which are fair. Flow regulated beginning 1936 by 5 flood-control reservoirs at points 1.7 mi to 54 mi upstream. Water-quality data collected at this site 1964 to 1977.

AVERAGE DISCHARGE.--68 years, 1,519 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge at site at Pomerene, 43,800 ft³/s Jan. 25, 1937; maximum discharge at present site since regulation began at Mohawk Dam, 24,000 ft³/s Jan. 25, 26, 1937, gage height, 18.8 ft, present datum (from floodmarks), from rating curve extended above 13,000 ft³/s; minimum daily discharge, 19 ft³/s Feb. 27 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1913 reached a stage of 26.9 ft, discharge, 102,000 ft³/s present site and datum, from information by U.S. Army Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,290 ft³/s Apr. 4, gage height, 11.29 ft; minimum daily, 200 ft³/s Oct. 8, 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	253	250	818	1580	1030	1120	7000	2260	6590	2860	733	314
2	248	248	789	1350	921	1040	6700	2110	6370	2340	636	358
3	239	251	757	1190	881	1000	6840	1910	4380	1960	582	368
4	233	302	729	1090	848	978	6950	1690	4870	1650	546	308
5	217	563	706	1040	799	1270	7000	1640	5330	1410	587	288
6	282	1680	648	1160	769	2870	7070	1800	4540	1270	620	280
7	206	1340	607	2520	694	2390	6070	1910	4260	1150	539	284
8	200	973	520	5160	624	1830	6920	2020	3020	1100	501	286
9	200	897	490	5690	580	1420	6690	1840	2560	1090	467	288
10	201	1100	450	4560	540	1620	6190	2440	2220	1010	440	286
11	208	2360	430	3590	510	1930	3800	2820	1960	1000	423	287
12	214	1600	400	2620	490	2160	3080	2880	1700	1040	408	291
13	221	1270	380	2890	480	1950	2640	3220	1870	952	398	278
14	215	1910	360	2210	470	1840	2490	4630	2890	871	386	282
15	212	1570	350	2320	902	2000	2200	4220	6490	768	374	482
16	212	1540	340	2290	1600	2080	1960	3590	6730	662	364	519
17	212	1380	330	1990	1510	1610	1740	3090	6560	635	376	379
18	219	1200	320	1970	1160	1440	1630	2310	5060	615	354	346
19	281	1100	320	1640	1050	1510	1770	1980	3400	608	350	323
20	283	1390	310	1590	975	1480	1670	1890	3620	677	349	308
21	271	2790	310	1320	2210	2800	1420	1880	5310	683	366	295
22	286	2540	310	1140	4670	2910	1340	1740	4630	639	367	308
23	320	1790	452	1080	3330	2340	1240	1680	5790	596	359	707
24	319	1450	624	1120	1940	2050	1160	4520	5380	595	358	614
25	322	1260	900	972	1740	1820	1150	4470	5080	555	374	442
26	304	1120	814	971	1610	1630	2780	3500	2810	605	344	368
27	284	996	669	1410	1510	1460	2100	3130	2330	761	329	334
28	282	938	1320	1450	1350	1330	1610	5610	5490	924	318	310
29	276	903	4230	1190	---	1880	1900	6730	6060	1030	312	303
30	272	847	3000	1120	---	5340	2570	6760	3800	743	320	299
31	262	---	1970	1160	---	6780	---	6720	---	754	311	---
TOTAL	7754	37558	24653	61383	35193	63878	107680	96990	131100	31553	13193	10535
MEAN	250	1252	795	1980	1257	2061	3589	3129	4370	1018	426	351
MAX	322	2790	4230	5690	4670	6780	7070	6760	6730	2860	733	707
MIN	200	248	310	971	470	978	1150	1640	1700	555	311	278

CAL YR 1988 TOTAL 365852 MEAN 1000 MAX 6370 MIN 158
WTR YR 1989 TOTAL 621470 MEAN 1703 MAX 7070 MIN 200

MUSKINGUM RIVER BASIN

87

03139000 KILLBUCK CREEK AT KILLBUCK, OH

LOCATION.--Lat 40°28'53", long 81°59'10", Holmes County, Hydrologic Unit 05040003, on right bank at downstream side of U.S. Highway 62 bridge south of Killbuck, 1.2 mi downstream from Black Creek. Prior to Oct. 5, 1976, at site 0.9 mi upstream.

DRAINAGE AREA.--464 mi².

PERIOD OF RECORD.--October 1930 to current year.

REVISED RECORDS.--WSP 873: 1935. WSP 1555: 1935. WSP 1907: Drainage area. WRD-OH-70-1: 1969. WRD-OH-77-1: Drainage area. WRD-OH-87-1: 1984-86.

GAGE.--Water-stage recorder. Datum of gage is 788.05 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1949, nonrecording gage and Oct. 1, 1949 to Oct. 5, 1976, water-stage recorder and nonrecording gage, at site 0.9 mi upstream at same datum.

REMARKS.--Estimated daily discharges: Oct. 1-7, Dec. 10-20, Feb. 7-14, May 25-26. Records good except those for periods of estimated record which are fair. Water-quality data collected at this site 1962 to 1977. Sediment data collected 1962 to 1969. U.S. Army Corps of Engineers Satellite telemeter at station.

AVERAGE DISCHARGE.--59 years, 418 ft³/s, 12.29 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 47,500 ft³/s July 5, 1969, gage height, 26.40 ft (from flood- marks), from rating curve extended above 11,000 ft³/s on basis of slope-area measurement of peak flow at site then in use; minimum, 23 ft³/s Sept. 10-15, 28-30, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 4	2330	2,490	15.38	June 22	2000	*2,750	*15.87
May 27	0300	2,190	15.28				

Minimum daily discharge 48 ft³/s Oct. 4, 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52	81	196	521	289	343	1900	320	693	1300	184	69
2	50	80	196	429	269	298	1890	354	587	1150	162	84
3	49	82	194	358	268	281	1980	351	518	929	145	74
4	48	117	188	311	251	279	2230	331	1360	704	136	63
5	48	352	176	275	232	403	2260	339	1370	585	162	60
6	60	737	171	427	219	659	2170	375	1160	503	152	59
7	62	573	176	790	190	549	2040	430	941	441	130	61
8	56	456	167	1330	180	465	1790	520	734	393	115	68
9	58	382	150	1390	170	434	1550	476	634	349	107	78
10	60	425	140	1220	160	476	1350	583	653	324	100	83
11	62	540	130	1070	155	570	1120	671	575	289	93	73
12	65	469	120	945	150	657	900	691	506	268	88	70
13	66	446	110	885	145	571	790	754	539	245	82	63
14	67	498	105	689	140	527	711	991	871	224	82	71
15	66	428	99	748	272	612	640	953	1430	202	82	189
16	64	354	96	680	469	669	585	974	1430	185	84	161
17	63	306	94	591	451	591	531	830	1520	172	87	152
18	69	258	93	521	379	527	498	663	1610	163	83	120
19	93	225	90	469	337	482	505	555	1620	156	79	94
20	97	410	110	428	300	470	464	571	1650	174	81	83
21	83	662	138	374	843	824	429	610	1770	169	89	77
22	91	551	144	327	1250	766	394	549	2600	162	87	132
23	100	454	152	302	1010	663	358	549	2550	151	84	605
24	107	376	196	290	697	583	324	964	2040	149	92	449
25	105	319	261	275	552	517	317	1500	1690	137	84	319
26	100	284	235	280	514	467	366	2100	1410	184	73	232
27	91	261	204	362	458	423	349	2100	1170	263	68	176
28	88	242	498	393	388	392	316	1740	1530	397	66	139
29	88	224	899	353	---	612	322	1490	1430	275	65	113
30	87	205	749	326	---	1330	324	1260	1340	205	67	97
31	84	---	633	309	---	1920	---	973	---	201	66	---
TOTAL	2279	10797	6910	17668	10738	18360	29403	25567	37931	11049	3075	4114
MEAN	73.5	360	223	570	383	592	980	825	1264	356	99.2	137
MAX	107	737	899	1390	1250	1920	2260	2100	2600	1300	184	605
MIN	48	80	90	275	140	279	316	320	506	137	65	59
CFSM	.16	.78	.48	1.23	.83	1.28	2.11	1.78	2.72	.77	.21	.30
IN.	.18	.87	.55	1.42	.86	1.47	2.36	2.05	3.04	.89	.25	.33

CAL YR 1988 TOTAL 98155 MEAN 268 MAX 2040 MIN 36 CFSM .58 IN. 7.87
WTR YR 1989 TOTAL 177891 MEAN 487 MAX 2600 MIN 48 CFSM 1.05 IN. 14.26

MUSKINGUM RIVER BASIN

03140000 MILL CREEK NEAR COSHOCTON, OH

LOCATION.--Lat 40°21'46", long 81°51'45", Coshocton County, Hydrologic Unit 05040003, on left bank 0.5 mi downstream from Little Mill Creek and 6 mi north of Coshocton.

DRAINAGE AREA.--27.2 mi².

PERIOD OF RECORD.--October 1936 to current year. Monthly discharge only for October 1936, published in WSP 1305.

REVISED RECORDS.--WSP 1143: 1946, 1947-48(P). WSP 1907: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 782.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 11-20, Feb. 8-14. Records fair. Water-quality data collected at this site 1965 to 1977.

AVERAGE DISCHARGE.--53 years, 28.6 ft³/s, 14.28 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,720 ft³/s July 5, 1969, gage height, 13.92 ft, from rating curve extended above 2,200 ft³/s on basis of slope-area measurement of peak flow; maximum gage height, 15.38 ft Sept. 14, 1979; no flow Sept. 28, 29, 1954, Aug. 29-31, 1962, and part of each day Dec. 23, 31, 1963.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 26	1015	*1,190	*10.21	June 21	2245	732	8.57

Minimum daily discharge 0.60 ft³/s Oct. 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.96	1.4	11	34	22	30	164	37	34	27	5.5	2.4
2	.86	1.4	9.6	31	20	25	133	39	32	23	4.6	3.4
3	.87	1.5	9.0	28	23	26	141	37	51	22	4.2	1.9
4	.85	12	8.3	22	18	29	287	32	69	19	4.5	1.5
5	.74	72	7.7	23	17	63	145	63	38	17	14	1.3
6	.64	29	7.6	90	16	54	94	65	32	14	6.8	1.2
7	.60	20	7.3	81	14	42	72	55	26	13	4.5	1.2
8	.63	20	6.7	179	10	40	63	48	22	12	3.8	1.1
9	.70	16	6.1	77	9.0	49	63	47	28	12	3.9	1.4
10	.73	75	5.6	55	8.0	63	50	60	43	11	3.2	1.4
11	.91	33	4.0	45	7.6	77	44	58	25	8.8	2.8	1.5
12	1.2	21	3.6	67	7.0	74	40	55	30	9.9	2.5	1.5
13	1.0	33	3.4	59	6.8	60	39	85	47	8.6	2.4	1.2
14	.81	25	3.2	54	6.6	56	35	95	71	6.9	2.2	14
15	.72	20	3.1	92	53	77	33	81	98	6.0	2.2	11
16	.85	17	3.0	63	69	55	30	72	66	5.5	2.2	6.0
17	.84	15	3.0	52	42	48	27	59	49	5.0	2.1	4.3
18	1.2	12	2.9	46	34	45	29	49	38	4.7	1.9	2.6
19	1.8	11	2.8	41	32	39	34	42	34	4.8	2.3	2.0
20	1.4	159	4.5	37	32	54	27	40	98	8.3	3.8	1.8
21	1.4	71	7.7	30	239	97	25	36	232	5.6	4.1	1.6
22	3.8	39	5.4	27	113	62	23	31	249	4.6	2.5	6.9
23	2.5	30	12	26	67	53	21	79	90	4.0	2.4	24
24	3.2	24	30	24	57	48	19	92	57	3.6	2.2	6.4
25	3.9	21	26	24	70	44	23	54	44	3.3	2.0	4.1
26	2.1	18	16	30	46	40	21	503	43	19	1.8	3.5
27	1.6	17	15	34	39	36	18	141	63	18	1.6	2.8
28	1.5	15	128	27	34	34	21	74	86	27	1.5	2.5
29	1.6	13	69	26	---	86	23	54	40	8.4	1.4	2.4
30	1.6	12	48	26	---	228	43	44	32	6.4	10	2.4
31	1.4	---	38	23	---	179	---	37	---	6.8	2.7	---
TOTAL	42.91	854.3	507.5	1473	1112.0	1913	1787	2264	1867	345.2	111.6	119.3
MEAN	1.38	28.5	16.4	47.5	39.7	61.7	59.6	73.0	62.2	11.1	3.60	3.98
MAX	3.9	159	128	179	239	228	287	503	249	27	14	24
MIN	.60	1.4	2.8	22	6.6	25	18	31	22	3.3	1.4	1.1
CFSM	.05	1.05	.60	1.75	1.46	2.27	2.19	2.69	2.29	.41	.13	.15
IN.	.06	1.17	.69	2.01	1.52	2.62	2.44	3.10	2.55	.47	.15	.16

CAL YR 1988	TOTAL 6854.32	MEAN 18.7	MAX 799	MIN .16	CFSM .69	IN. 9.37
WTR YR 1989	TOTAL 12396.81	MEAN 34.0	MAX 503	MIN .60	CFSM 1.25	IN. 16.95

LOCATION.--Lat 40°14'54", long 81°52'23", in T.5 N., R.6 W., Coshocton County, Hydrologic Unit 05040004, on right bank at upstream side of highway bridge, 1 mi southwest of Coshocton, and 2 mi downstream from confluence of Tuscarawas and Walhonding Rivers.

GAGE.--Water-stage recorder. Datum of gage is 725.00 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 19, 1936, nonrecording gage and Sept. 20, 1936 to Sept. 30, 1977, water-stage recorder at same site at datum 5.00 ft higher.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 24,000 ft³/s June 22, gage height, 15.82 ft; minimum daily, 699 ft³/s Oct. 17.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	783	846	2690	5390	3720	5050	20700	5290	14600	11600	2680	1220
2	770	806	2450	4550	3380	4300	21000	5390	12000	10500	2390	1220
3	750	867	2300	4060	3140	3850	20600	5540	9680	9740	2200	1280
4	734	1130	2280	3500	3000	3630	21500	5440	9550	8790	2040	1170
5	722	2210	2240	2800	2910	3860	22200	5330	13000	7210	2030	1080
6	765	4780	2170	3500	2770	6260	21900	5720	13100	6360	2120	1030
7	747	5570	2080	5550	2590	7280	20200	5740	12600	5420	2120	1020
8	707	4460	1800	10100	2000	6450	19900	5800	8790	5130	1940	1020
9	709	3730	1700	13500	1900	5730	19100	5780	6820	4450	1790	1150
10	714	3830	1600	12000	1800	5720	17700	6070	6580	4090	1670	1300
11	722	5300	1500	9560	1750	6160	13700	7470	6610	3940	1580	1160
12	731	4920	1400	7700	1700	6790	10500	9190	5990	3800	1510	1080
13	739	4210	1300	7510	1600	6710	8560	10100	6410	3440	1450	1040
14	728	4550	1300	6850	1800	6380	7400	12100	7970	3170	1400	1070
15	720	4550	1200	6750	2800	6840	6720	12900	13500	3060	1390	1300
16	707	4180	1200	6880	5120	7390	6130	13100	17400	2750	1370	2000
17	699	3740	1200	6350	6520	6580	5580	12400	17600	2460	1340	2260
18	733	3360	1100	5910	5880	5550	5210	10900	16100	2330	1310	2200
19	773	3060	1100	5800	4730	5110	5350	9390	13000	2270	1290	1840
20	1030	3790	1100	5130	4120	4980	5370	8180	12800	2340	1270	1560
21	1140	6740	1100	4540	6770	6460	4990	7520	16400	2400	1310	1360
22	1160	7580	1100	3910	12900	8780	4710	7070	21100	2320	1360	1340
23	1170	6200	1800	3530	13600	8150	4250	6880	19200	2200	1370	2320
24	1270	4930	2160	3400	10700	6900	3920	9040	18800	2110	1370	3840
25	1270	4170	3110	3260	8470	6260	3810	11100	17400	2010	1340	4320
26	1170	3710	3610	3180	6840	5750	5160	16600	14200	2070	1280	3250
27	1050	3300	3170	3690	6220	5280	5160	17700	12300	2400	1220	2290
28	991	3040	3590	4740	5670	4930	4480	18700	14900	2760	1160	1870
29	942	2890	8320	4550	---	5490	4430	18900	16200	3650	1110	1640
30	943	2790	9360	4020	---	11100	5350	17700	14100	3220	1160	1490
31	917	---	7160	3850	---	17300	---	16300	---	2730	1160	---
TOTAL	27006	115239	78190	176060	134400	201020	325580	309340	388700	130720	48730	50720
MEAN	871	3841	2522	5679	4800	6485	10850	9979	12960	4217	1572	1691
MAX	1270	7580	9360	13500	13600	17300	222					

MUSKINGUM RIVER BASIN

03141500 SENECA FORK BELOW SENECAVILLE DAM, NEAR SENECAVILLE, OH

LOCATION.--Lat 39°55'28", long 81°26'17", Guernsey County, Hydrologic Unit 05040005, on left bank 650 ft downstream from Senecaville Dam and 1.5 mi southeast of Senecaville.

DRAINAGE AREA.--118 mi².

PERIOD OF RECORD.--September 1938 to current year. Published as Seneca Fork near Senecaville prior to 1940.

REVISED RECORDS.--WSP 1907: Drainage area. WDR-OH-81-1: (M). WDR-OH-83-1: 1982. WDR-OH-88-1: 1987.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 799.00 ft above National Geodetic Vertical Datum of 1929. Prior to Jan. 24, 1942, at site 150 ft downstream at same datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Senecaville Lake. Water is diverted from Senecaville Lake for U.S. Fish Hatchery; figures for diversion after 1982 unavailable, diversion not included in figures of daily discharge. Water-quality data collected at this site 1965 to 1977. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--51 years, 132 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 985 ft³/s Aug. 24, 1980, gage height, 9.69 ft; Maximum gage height, 10.96 ft Aug. 11, 1980 (affected by backwater); no flow May 3, 4, 1939, Jan. 28, 29, Feb. 4, 5, Apr. 25, 1952.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 910 ft³/s Feb. 17, gage height, 9.13 ft; minimum daily, 2.3 ft³/s, Oct. 13, Mar. 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	3.5	277	228	20	7.9	8.4	414	270	688	4.2	4.3
2	2.9	3.4	150	225	3.6	7.9	395	725	65	690	4.0	4.3
3	2.9	3.3	84	351	3.6	7.7	736	717	6.0	225	4.0	4.3
4	2.7	3.3	84	320	3.6	7.9	774	708	5.5	3.7	4.0	4.2
5	2.5	3.4	84	96	3.6	7.6	838	704	87	104	4.2	3.8
6	2.6	3.5	84	3.4	3.5	8.8	878	707	263	133	4.5	3.8
7	2.5	3.6	141	3.4	3.4	481	880	706	145	27	4.5	3.6
8	2.4	3.6	165	3.5	3.3	872	871	698	4.2	15	4.7	4.5
9	2.4	82	163	332	3.3	876	868	697	4.2	16	4.5	5.1
10	2.5	183	163	629	3.8	861	872	301	4.1	145	3.7	5.1
11	2.5	184	163	761	4.0	826	805	406	4.0	104	2.7	5.5
12	2.6	183	162	566	3.7	813	564	720	178	317	2.9	5.5
13	2.3	181	110	255	3.5	337	257	367	275	198	2.9	5.1
14	2.7	181	86	2.8	3.5	3.7	60	419	167	10	3.9	4.7
15	2.9	181	31	2.8	3.6	3.1	84	612	156	5.9	4.5	4.5
16	3.1	181	4.5	2.8	4.3	3.6	84	274	11	5.9	4.5	4.4
17	2.9	181	4.5	416	262	3.9	71	412	403	5.5	4.5	4.2
18	3.1	181	4.3	746	870	2.7	244	697	711	5.5	4.5	4.3
19	3.4	181	5.6	740	876	2.3	321	703	710	4.2	4.4	4.2
20	3.4	183	8.4	287	863	3.1	538	705	347	3.4	4.0	4.2
21	3.4	184	8.4	3.5	246	4.0	468	699	410	3.2	4.0	4.0
22	3.4	378	54	3.4	5.0	121	141	603	158	3.3	4.3	4.0
23	3.4	616	75	3.4	396	306	141	267	442	3.3	4.4	4.1
24	3.5	702	75	3.4	795	285	178	307	707	3.4	4.5	4.3
25	3.3	620	76	47	874	139	279	365	701	4.0	4.5	80
26	3.2	471	76	193	871	139	92	167	700	4.1	4.5	266
27	3.3	466	201	213	861	329	369	4.8	716	4.4	4.5	342
28	3.6	462	414	148	487	352	718	399	106	4.5	4.5	187
29	3.6	402	442	148	---	138	333	703	2.6	4.4	4.6	69
30	3.5	342	323	113	---	53	7.2	702	427	4.3	4.6	3.4
31	3.4	---	228	58	---	7.2	---	636	---	4.2	4.4	---
TOTAL	92.8	6752.6	3946.7	6904.4	7480.3	7009.4	12874.6	16544.8	8185.6	2749.2	129.9	1053.4
MEAN	2.99	225	127	223	267	226	429	5.4	273	88.7	4.19	35.1
MAX	3.6	702	442	761	876	876	880	725	716	690	4.7	342
MIN	2.3	3.3	4.3	2.8	3.3	2.3	7.2	4.8	2.6	3.2	2.7	3.4

CAL YR 1988 TOTAL 30223.3 MEAN 82.6 MAX 829 MIN 1.8
WTR YR 1989 TOTAL 73723.7 MEAN 202 MAX 880 MIN 2.3

MUSKINGUM RIVER BASIN

91

03142000 WILLS CREEK AT CAMBRIDGE, OH

LOCATION.--Lat 40°00'52", long 81°35'14", Guernsey County, Hydrologic Unit 05040005, on left bank at upstream side of bridge on Campbell Avenue in Cambridge, 0.9 mi downstream from Leatherwood Creek.

DRAINAGE AREA.--406 mi².

PERIOD OF RECORD.--June 1926 to September 1928, May 1937 to current year.

REVISED RECORDS.--WSP 853: 1929(M). WSP 893: 1928. WSP 973: 1942.

GAGE.--Water-stage recorder. Datum of gage is 772.34 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 6, 1927, nonrecording gage at site 1.5 mi downstream at different datum. Oct. 6, 1927, to Sept. 30, 1928, and May 22, 1937, to Oct. 18, 1938, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharges: Feb. 3-13. Records fair except for periods of estimated daily discharges which are poor. Flow regulated by Senecaville Lake on Seneca Fork, 22 mi upstream, beginning in 1937. Water is diverted 2.7 mi upstream from station for municipal supply of city of Cambridge; diversion not included in figures of daily discharge. Water-quality data collected at this site 1964 to 1975, 1977.

AVERAGE DISCHARGE.--54 years, 445 ft³/s (unadjusted).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 8,500 ft³/s June 6 or 7, 1963; maximum gage height, 24.51 ft Aug. 13, 1980 (backwater from tributaries); minimum daily discharge, 0.7 ft³/s Oct. 6, 1960.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 8, 1935, reached a stage of 25.4 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,740 ft³/s Apr. 1, gage height, 12.67 ft; minimum daily 5.0 ft³/s Oct. 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.6	15	386	445	212	627	2610	1800	751	808	47	121
2	6.6	17	318	422	172	263	2530	1400	399	816	43	62
3	6.0	14	197	403	160	219	1980	1360	208	763	35	49
4	7.2	14	134	507	140	245	1650	1190	267	310	33	41
5	9.3	44	128	375	130	497	1560	1100	248	168	43	36
6	7.8	358	124	584	120	1580	1500	1170	347	254	71	30
7	6.4	259	124	1440	110	1710	1360	1190	447	220	58	27
8	5.7	142	181	1080	100	1350	1260	1110	242	126	51	25
9	5.4	96	201	683	92	1340	1230	1040	174	101	41	29
10	5.0	160	198	723	86	1400	1180	1450	450	157	36	32
11	6.7	336	192	810	82	1370	1090	1500	279	276	28	33
12	9.5	326	191	945	80	1280	972	1430	179	526	24	30
13	8.7	297	188	1220	78	1140	744	1550	506	631	25	29
14	8.3	326	136	765	272	606	415	1790	546	291	27	32
15	9.2	316	124	851	982	477	269	1960	939	117	26	46
16	12	284	83	984	2120	601	276	2110	2050	85	26	84
17	17	266	42	506	2520	378	261	1780	2140	70	26	416
18	25	254	34	780	2220	312	457	1230	1330	67	32	306
19	29	245	32	892	1470	358	1210	1070	920	71	40	114
20	36	562	34	843	1170	341	1320	1020	1050	72	65	76
21	25	1430	47	384	1670	1280	1030	1140	1700	70	60	70
22	25	1130	67	159	2570	1890	685	1120	2070	54	42	85
23	37	675	125	134	2450	1230	432	901	1520	47	91	520
24	53	715	507	147	1990	859	390	1030	940	42	203	770
25	64	720	1540	133	1650	700	582	944	892	43	281	286
26	60	621	1210	190	1090	521	1980	1230	846	76	82	227
27	36	526	439	468	1090	466	2340	2010	853	125	48	366
28	25	522	578	446	1030	647	1790	1850	1630	147	36	406
29	18	518	1150	335	---	739	1730	1170	1970	121	31	245
30	13	441	874	317	---	1510	2160	966	1270	66	213	133
31	14	---	557	280	---	2010	---	885	---	49	506	---
TOTAL	598.4	11629	10141	18251	25856	27946	36993	41496	27163	6769	2370	4726
MEAN	19.3	388	327	589	923	901	1233	1339	905	218	76.5	158
MAX	64	1430	1540	1440	2570	2010	2610	2110	2140	816	506	770
MIN	5.0	14	32	133	78	219	261	885	174	42	24	25
(+)	5.67	5.59	5.32	5.13	4.89	4.70	5.01	5.16	5.48	5.61	6.46	6.05

CAL YR 1988 TOTAL 106364.5 MEAN 291 MAX 4170 MIN 2.4 (+) 5.60
WTR YR 1989 TOTAL 213938.4 MEAN 586 MAX 2610 MIN 5.0 (+) 5.42

+ Diversion, in cubic feet per second, furnished by city of Cambridge.

MUSKINGUM RIVER BASIN

03142290 SALT FORK LAKE NEAR CAMBRIDGE.

LOCATION.--Lat 40°06'15", long 81°33'15", in T.3 N., R.3 W., Guernsey County, Hydrologic Unit 05040005, at outlet works near left end of dam on Salt Fork, 0.8 mi upstream from mouth, 5.0 mi north of Cambridge, and 3.5 mi south of Kimbolton.

DRAINAGE AREA.--159 mi².

PERIOD OF RECORD. September 1968 to current year. (Discontinued)

GAGE.--Water-stage recorder. Datum of gage is 700.00 ft above National Geodetic Vertical Datum of 1929; gage readings have been reduced to elevations NGVD.

REMARKS.--Reservoir is formed by earthfill dam with concrete morning-glory spillway and emergency spillway cut in natural rock; storage began Dec. 30, 1967. Usable capacity, 41,950 acre-ft between elevations 772.5 ft (invert of lowest outlet) and 800.0 ft (crest of morning-glory spillway). Dead storage below elevation 772.5 ft, 1,250 acre-ft. Additional flood-retention capacity, 28,600 acre-ft between elevations 800.0 ft and 808.0 ft (crest of emergency spillway). Figures given herein represent usable contents. There are no gates on spillway and all regulation is done by conduits through dam. Reservoir is used for recreation, flood control, and future municipal supply.

COOPERATION.--Capacity table furnished by State Department of Natural Resources.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 72,570 acre-ft Aug. 13, 1980, elevation, 808.48 ft; minimum, 12,200 acre-ft Oct. 17, 1968, elevation, 786.53 ft.

EXTREMES FOR CURRENT YEAR: Maximum contents, 54,280 acre-ft Apr. 1, elevation, 803.75 ft; minimum, 42,070 acre-ft Oct. 15, elevation, 800.04 ft.

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	800.24	42,690	--
Oct. 31.....	800.13	42,350	-340
Nov. 30.....	800.83	44,520	+2,170
Dec. 31.....	801.64	47,100	+2,580
CAL YR 1988	--	--	-380
Jan. 31.....	801.25	45,850	-1,250
Feb. 29.....	802.22	49,000	+3,150
Mar. 31.....	803.41	53,080	+4,080
Apr. 30.....	802.01	48,280	-4,800
May 31.....	802.52	50,020	+1,740
June 30.....	802.41	49,640	-380
July 31.....	800.72	44,180	-5,460
Aug. 31.....	800.41	43,220	-960
Sept. 30.....	800.62	43,870	+650
WTR YR 1989.....	--	--	+1,180

MUSKINGUM RIVER BASIN

93

03143500 WILLS CREEK BELOW WILLS CREEK DAM, AT WILLS CREEK, OH

LOCATION.--Lat 40°09'34", long 81°50'51", in sec. 22, T.4 N., R.6 W., Coshocton County, Hydrologic Unit 05040005, on left bank 1,200 ft downstream from Wills Creek Dam, 1.3 mi southeast of town of Wills Creek, 2.7 mi southeast of Conesville, and 6.2 mi upstream from mouth.

DRAINAGE AREA.--842 mi².

PERIOD OF RECORD.--October 1938 to current year. Prior to October 1939, published as Wills Creek at Wills Creek.

REVISED RECORDS.--WSP 1907: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 717.00 ft above National Geodetic Vertical Datum of 1929. Prior to Feb. 18, 1939, nonrecording gage and Feb. 18, 1939, to Sept. 30, 1949, water-stage recorder, at site 1,500 ft downstream at same datum.

REMARKS.--Estimated daily discharges: Feb. 5-14. Records fair. Flow regulated by Senecaville Lake on Seneca Fork, 80 mi upstream, Salt Fork Reservoir 43 mi upstream, and Wills Creek Lake, 0.2 mi upstream (see station 03142290). Water-quality data collected at this site 1957, 1965 to 1977. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--51 years, 927 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,930 ft³/s Mar. 7, 1940, gage height, 17.40 ft; maximum gage height, 17.50 ft Mar. 22, 1964 (backwater from Muskingum River); minimum daily discharge, 1.0 ft³/s Aug. 10, Oct. 27-29, 1948, Jan. 28, 1952, July 6-9, 1969, Apr. 3, 1970, Feb. 25, 1975, Feb. 19, 1976, when gates at Wills Creek Lake were closed.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1913 reached a discharge of 22,300 ft³/s, computed by U.S. Army Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,370 ft³/s Apr. 7, gage height, 14.49 ft; minimum daily, 26 ft³/s Oct. 8-10, 14, 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	62	624	1180	622	1890	4520	3110	2080	2700	228	188
2	43	56	566	951	565	1600	4440	3240	1570	1900	194	310
3	39	52	510	828	523	1130	4580	2980	1130	1490	169	257
4	34	66	446	764	500	868	4350	2640	1020	1320	153	185
5	32	130	358	736	450	828	3460	2390	943	1060	154	139
6	30	249	291	839	420	1150	4460	2200	862	736	148	111
7	28	283	252	1120	390	1970	4950	2130	774	591	138	93
8	26	400	231	1760	370	2500	4850	2100	690	579	136	81
9	26	394	220	2020	350	2500	3440	2030	635	542	135	72
10	26	321	233	1620	340	2400	2800	2110	536	533	131	66
11	29	277	255	1260	320	2430	2400	2540	562	514	123	61
12	29	278	258	1210	320	2470	2060	2980	607	869	113	58
13	27	366	248	1370	310	2390	1840	3140	731	1060	104	56
14	26	431	251	1600	310	2210	1570	3450	986	1120	96	58
15	26	433	262	1650	508	1880	1250	3690	1380	878	88	64
16	27	429	238	1580	1470	1460	940	3940	2240	592	83	72
17	29	412	211	1640	2370	1320	796	4210	2980	421	77	85
18	34	382	185	1380	2800	1160	752	4150	3300	335	74	135
19	36	356	153	1190	2920	998	849	3580	2960	286	76	285
20	37	464	131	1240	2630	931	1410	2800	2290	280	78	308
21	46	819	124	1230	2560	1240	1860	2390	2310	259	84	239
22	55	1300	118	1040	3200	2010	1760	2290	1370	233	98	203
23	64	1450	127	752	3730	2710	1450	2270	1820	213	113	281
24	69	1140	230	574	3990	2710	1080	2340	3030	194	117	305
25	69	935	680	497	3850	2160	931	2380	3970	175	126	633
26	71	879	1460	478	3080	1730	1430	2280	4460	164	191	637
27	76	833	1710	507	2390	1390	2440	3150	2470	173	245	442
28	80	751	1370	595	2080	1180	3070	3930	1990	216	209	363
29	83	688	1230	744	---	1280	3190	3960	2480	249	160	390
30	79	654	1440	725	---	2000	3020	4190	2950	270	131	394
31	70	---	1450	662	---	3570	---	3030	---	261	110	---
TOTAL	1392	15290	15862	33742	43368	56065	75948	91620	55126	20213	4082	6571
MEAN	44.9	510	512	1088	1549	1809	2532	2955	1838	652	132	219
MAX	83	1450	1710	2020	3990	3570	4950	4210	4460	2700	245	637
MIN	26	52	118	478	310	828	752	2030	536	164	74	56

CAL YR 1988 TOTAL 191312 MEAN 523 MAX 5070 MIN 20
WTR YR 1989 TOTAL 419279 MEAN 1149 MAX 4950 MIN 26

MUSKINGUM RIVER BASIN

03144000 WAKATOMIKA CREEK NEAR FRAZEYSBURG, OH

LOCATION.--Lat 40°07'57", long 82°08'53", in NW 1/4 sec. 13, T.3 N., R.9 W., Muskingum County, Hydrologic Unit 05040004, on right bank 2.0 mi northwest of Frazeyburg, 2.0 mi downstream from Fivemile Run, and 2.5 mi upstream from Black Run.

DRAINAGE AREA.--140 mi².

PERIOD OF RECORD.--September 1936 to current year.

REVISED RECORDS.--WSP 1113: 1937(M). WSP 1555: 1952(M).

GAGE.--Water-stage recorder. Datum of gage is 748.12 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 31, 1936, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Feb. 8-14. Records good except for estimated daily discharges, which are fair. Water-quality data collected at this site 1965 to 1977. Sediment data collected 1970 to 1974. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--53 years, 153 ft³/s, 14.84 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,800 ft³/s Sept. 14, 1979, gage height, 14.07 ft, from rating curve extended above 7,700 ft³/s on basis of contracted-opening measurement of peak flow; minimum, 2.0 ft³/s Oct. 3, 1963, gage height, 0.94.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,600 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 8	2030	2,050	5.71	May 27	0100	3,120	7.31
Mar. 30	2030	2,200	5.96	June 22	0800	*5,320	*9.54

Minimum discharge, 7.0 ft³/s Oct. 4-9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.3	15	60	167	100	135	1000	330	162	110	29	11
2	8.3	16	55	146	90	116	764	391	138	94	26	14
3	8.9	18	51	124	97	107	721	300	127	86	23	13
4	7.6	35	49	112	87	103	1320	251	364	80	22	11
5	7.4	302	45	93	80	181	1010	311	175	76	34	9.2
6	7.3	512	45	383	78	344	709	381	147	66	43	8.7
7	7.3	217	44	597	76	232	466	320	116	59	27	8.5
8	7.2	161	42	1390	70	181	335	281	100	54	21	8.3
9	7.3	138	39	834	68	186	323	281	106	51	18	8.4
10	7.4	250	37	385	64	254	239	565	121	49	16	8.7
11	8.5	377	50	265	62	324	198	470	88	44	14	9.8
12	9.8	167	48	326	60	377	173	396	89	56	13	9.4
13	8.8	178	49	394	60	303	167	1180	250	64	13	8.4
14	8.0	191	46	265	78	275	150	1190	240	45	12	14
15	7.8	134	35	453	152	316	136	705	340	38	12	41
16	8.1	111	35	385	431	315	125	551	317	35	11	26
17	8.0	96	34	287	270	222	113	407	235	32	11	20
18	12	77	34	231	195	201	119	306	164	30	11	14
19	16	69	34	194	167	182	174	249	134	30	13	12
20	13	362	32	163	148	164	138	240	244	40	14	10
21	16	609	40	129	814	477	127	231	937	38	15	9.4
22	23	256	37	105	824	346	120	173	3510	32	16	12
23	22	172	57	102	413	274	113	245	844	31	26	48
24	25	132	181	95	294	230	105	634	438	26	16	34
25	28	108	305	91	295	197	301	366	287	25	16	20
26	22	95	152	106	246	169	948	1690	229	49	14	15
27	17	86	118	175	181	147	565	1520	182	48	12	13
28	17	78	503	125	157	133	361	541	380	46	11	11
29	18	69	645	113	---	313	362	358	189	39	10	11
30	18	63	304	115	---	1220	424	274	133	30	11	10
31	16	---	215	106	---	1170	---	209	---	31	11	---
TOTAL	399.0	5094	3421	8456	5657	9194	11806	15346	10786	1534	541	448.8
MEAN	12.9	170	110	273	202	297	394	495	360	49.5	17.5	15.0
MAX	28	609	645	1390	824	1220	1320	1690	3510	110	43	48
MIN	7.2	15	32	91	60	103	105	173	88	25	10	8.3
CFSM	.09	1.21	.79	1.95	1.44	2.12	2.81	3.54	2.57	.35	.12	.11
IN.	.11	1.35	.91	2.25	1.50	2.44	3.14	4.08	2.87	.41	.14	.12

CAL YR 1988 TOTAL 35269.2 MEAN 96.4 MAX 2990 MIN 3.3 CFSM .69 IN. 9.37
WTR YR 1989 TOTAL 72682.8 MEAN 199 MAX 3510 MIN 7.2 CFSM 1.42 IN. 19.31

MUSKINGUM RIVER BASIN

95

03145000 SOUTH FORK LICKING RIVER NEAR HEBRON, OH

LOCATION.--Lat 39°59'19", long 82°28'30", in NW 1/4 sec. 3, T.1 N., R.12 W., Licking County, Hydrologic Unit 05040006, on right bank at upstream side of bridge on county road, 800 ft downstream from Beaver Run, 2.3 mi north of Hebron, and 2.5 mi upstream from Ramp Creek.

DRAINAGE AREA.--133 mi².

PERIOD OF RECORD.--October 1939 to September 1948, July 1968 to current year.

REVISED RECORDS.--WSP 923: 1940. WSP 1033: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 856.08 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 13, 1974 nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Oct. 1-13; Dec. 25 to Jan. 4. Records fair except for periods of estimated discharges which are poor. Occasional regulation by Buckeye Lake, capacity, 27,300 acre-ft, on unnamed tributary 5.6 mi upstream from station. Occasional diversion from Buckeye Lake into Jonathan Creek which bypasses station. Water-quality data collected at this site 1969 to 1977. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--30 years, 154 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,120 ft³/s Mar. 6, 1945, gage height, 12.1 ft, from flood marks; no flow Aug. 22, 1942.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 21, 1959, reached a stage of 12.4 ft present datum, from flood marks; discharge 5,880 ft³/s, by slope-area measurement.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,620 ft³/s Jan. 8, gage height 9.36 ft; minimum daily, 5.7 ft³/s Oct. 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	13	299	200	91	300	968	462	91	330	30	39
2	14	13	364	190	77	85	540	430	201	75	26	62
3	12	13	361	175	156	79	584	406	246	48	23	46
4	10	21	354	350	385	118	1030	365	310	48	25	26
5	8.5	215	348	306	349	394	1090	476	288	44	91	20
6	7.7	657	337	510	270	608	551	486	255	38	157	17
7	6.3	323	335	606	63	243	431	395	75	33	75	16
8	5.8	267	292	1240	58	167	388	375	44	28	39	15
9	5.7	225	94	1150	52	191	398	350	42	29	28	14
10	7.1	242	30	407	46	369	356	662	39	232	23	17
11	7.6	424	33	258	39	402	320	372	33	80	21	19
12	5.9	182	30	375	37	316	302	214	44	100	18	18
13	5.9	230	27	515	37	198	269	409	124	279	17	14
14	6.4	310	26	337	163	158	106	543	180	95	16	31
15	6.8	181	22	623	380	266	86	307	274	49	15	154
16	7.0	184	26	449	801	194	75	568	202	34	13	72
17	11	163	27	320	331	134	66	454	128	25	12	40
18	17	143	28	261	182	113	177	263	84	22	15	30
19	17	134	28	235	142	93	475	152	62	21	18	24
20	17	586	28	216	123	133	237	335	89	52	16	21
21	17	912	30	191	895	620	146	337	223	45	17	18
22	19	403	31	176	1000	350	113	308	1040	111	40	134
23	19	292	37	170	392	175	91	517	827	46	67	1020
24	33	234	105	165	425	138	78	974	299	28	124	578
25	44	211	540	165	399	118	187	545	242	23	84	317
26	33	200	400	199	392	101	601	864	375	27	37	259
27	23	191	128	408	382	89	520	1080	369	67	25	223
28	19	206	250	265	370	82	407	380	753	195	22	204
29	18	266	700	198	---	347	835	187	568	111	20	153
30	19	272	500	120	---	1000	798	136	390	46	126	33
31	15	---	300	106	---	1200	---	106	---	33	72	---
TOTAL	455.7	7713	6110	10886	8037	8781	12225	13458	7897	2394	1312	3628
MEAN	14.7	257	197	351	287	283	407	434	263	77.2	42.3	121
MAX	44	912	700	1240	1000	1200	1090	1080	1040	330	157	1020
MIN	5.7	13	22	106	37	79	66	106	33	21	12	14

CAL YR 1988 TOTAL 44138.7 MEAN 121 MAX 1800 MIN 3.7
WTR YR 1989 TOTAL 82896.7 MEAN 227 MAX 1240 MIN 5.7

MUSKINGUM RIVER BASIN

03146500 LICKING RIVER NEAR NEWARK, OH

LOCATION.--Lat 40°03'33", long 82°20'23", in T.2 N., R.11 W., Licking County, Hydrologic Unit 05040006, on right bank at downstream side of Stadden Bridge, 1.0 mi downstream from Shawnee Run, 1.5 mi upstream from Equality Run, and 3.5 mi east of Newark.

DRAINAGE AREA.--537 mi².

PERIOD OF RECORD.--October 1939 to current year.

REVISED RECORDS.--WSP 973: 1940(M). WSP 1907: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 779.02 ft above National Geodetic Vertical Datum of 1929. Prior to May 9, 1940, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records fair. Occasional regulation by Buckeye Lake, capacity, 27,300 acre-ft, on South Fork 15.2 mi upstream. Water-quality data collected at this site 1962 to 1980. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--50 years, 603 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 45,000 ft³/s Jan. 21, 1959, gage height, 20.3 ft (from high-water mark), from rating curve extended above 24,000 ft³/s on basis of flood-routing studies from station at Toboso; minimum daily, 28 ft³/s Sept. 27, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 8	1100	9,380	10.93	Apr. 26	1030	7,220	9.52
Feb. 21	1830	7,110	9.44	May 24	0300	6,530	9.02
Mar. 30	1930	9,070	10.74	May 26	2200	10,600	11.57
Apr. 4	1800	8,590	10.44	Jun. 22	0530	*21,300	*15.50

Minimum daily discharge, 67 ft³/s Oct. 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	81	80	375	744	601	874	4620	1940	893	1500	375	271
2	79	77	429	698	547	538	3090	1800	908	1010	316	245
3	75	78	422	631	650	506	3100	1520	1010	810	276	230
4	75	110	411	658	960	625	6090	1290	3600	758	347	189
5	74	524	390	553	854	2010	4360	1640	1820	698	976	167
6	73	2280	382	2000	758	2520	2430	1960	1350	614	1290	160
7	73	1070	376	3000	440	1250	1840	1510	969	562	601	153
8	73	868	356	6420	368	938	1580	1340	768	496	399	153
9	71	771	176	3680	336	960	1550	1280	697	460	316	146
10	72	1630	146	1860	321	1550	1340	3220	697	736	272	157
11	82	2500	131	1280	313	2010	1150	1910	610	611	247	153
12	71	964	122	1680	304	1900	1050	1330	617	1010	228	146
13	69	980	123	2310	303	1280	1010	1920	925	1070	212	140
14	68	1270	121	1500	592	1070	777	2410	1360	676	206	280
15	68	709	122	2570	1410	1470	683	1530	2280	452	200	470
16	67	559	123	1940	2900	1230	616	2380	1550	376	201	365
17	68	451	120	1440	1450	903	567	1690	1250	333	189	241
18	98	362	113	1200	942	798	731	1210	895	306	189	199
19	81	325	110	1090	789	709	1490	887	744	308	187	171
20	76	1760	110	1000	687	729	1060	1040	1290	435	185	160
21	85	2510	125	863	4800	2880	789	1110	4200	434	176	149
22	84	1110	136	766	4200	1760	669	953	14700	575	264	510
23	83	723	300	718	1880	1120	592	1840	4400	425	357	2990
24	95	557	1680	676	1350	920	536	4830	2570	318	328	1700
25	95	465	2280	651	1180	795	2150	2360	1900	281	374	937
26	96	411	884	753	1160	695	5990	6190	1960	269	240	711
27	90	380	525	1450	1050	626	2740	6280	1890	362	200	580
28	89	354	3060	1060	950	579	1970	2410	4100	1320	182	501
29	83	384	3530	868	---	1800	4030	1500	2770	1070	176	459
30	79	381	1440	727	---	6430	3190	1210	1820	549	389	230
31	80	---	930	668	---	5500	---	1030	---	414	343	---
TOTAL	2453	24643	19548	45454	32095	46975	61790	63520	64543	19238	10241	12963
MEAN	79.1	821	631	1466	1146	1515	2060	2049	2151	621	330	432
MAX	98	2510	3530	6420	4800	6430	6090	6280	14700	1500	1290	2990
MIN	67	77	110	553	303	506	536	887	610	269	176	140

CAL YR 1988 TOTAL 180296.9 MEAN 493 MAX 10800 MIN 46
WTR YR 1989 TOTAL 403463 MEAN 1105 MAX 14700 MIN 67

MUSKINGUM RIVER BASIN

03147500 LICKING RIVER BELOW DILLON DAM, NEAR DILLON FALLS, OH

LOCATION.--Lat 39°59'18", long 82°04'50", in T.1 N., R.8 W., Muskingum County, Hydrologic Unit 05040006, on left bank 500 ft downstream from Dillon Dam, 2.0 mi northwest of Dillon Falls, and 5.8 mi upstream from mouth.

DRAINAGE AREA.--742 mi².

PERIOD OF RECORD.--October 1939 to current year. Prior to October 1962, published as Licking River at Dillon.

REVISED RECORDS.--WSP 2107: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 700.0 ft above National Geodetic Vertical Datum of 1929, U.S. Army Corps of Engineers bench mark. Prior to Oct. 27, 1940, water-stage recorder at site 2.3 mi downstream at different datum. Oct. 27, 1940, to Sept. 30, 1962, water-stage recorder at site 2.6 mi downstream at datum 16.3 ft lower.

REMARKS.--Estimated daily discharges: June 24-27. Records good except for estimated daily discharges, which are fair. Flow regulated by Dillon Lake since December 1960. Water-quality data collected at this site 1965 to 1977. Water-temperature data collected 1961 to 1975. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--21 years (water years 1940-60), 760 ft³/s; 29 years (water years 1961-89), 870 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 47,000 ft³/s Jan. 22, 1959, gage height, 32.46 ft; minimum daily, 19 ft³/s Dec. 22, 1960.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1913 reached a stage of 37.0 ft site and datum in use 1940-62, from floodmark, backwater from Muskingum River.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,720 ft³/s June 28, gage height, 9.66 ft; minimum daily, 80 ft³/s Sept. 6-8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	119	201	559	1200	625	824	2290	3960	999	1780	211	226
2	119	310	555	1180	619	770	3970	4250	738	817	210	224
3	118	285	552	2450	559	499	4120	3390	670	682	210	223
4	119	235	550	2160	484	417	4430	2220	2020	629	227	223
5	119	240	551	872	489	425	4470	2020	3030	527	224	143
6	107	241	553	1320	713	2590	4470	979	1050	523	213	80
7	89	1660	552	2040	1080	2870	4410	2140	1100	474	739	80
8	90	2830	551	3050	586	1510	4460	2580	717	387	1090	80
9	90	1760	436	3510	258	1110	4460	1610	627	356	607	82
10	90	733	350	3890	229	1350	4220	2800	639	353	222	82
11	89	989	348	3840	228	1180	2370	3150	543	513	151	82
12	89	1560	215	3740	229	1210	1080	1630	487	546	110	90
13	85	1540	144	2570	500	2860	1050	1200	896	623	112	110
14	87	2120	144	1550	597	2040	855	2320	1170	644	204	297
15	88	1890	190	1540	763	1260	656	3250	2060	425	250	383
16	88	900	222	1550	2570	1460	657	3190	2420	299	219	267
17	88	895	221	2610	2850	1180	736	2310	1330	288	175	264
18	89	570	222	2730	1270	843	777	1460	907	252	161	236
19	206	415	195	1520	686	844	1260	972	697	253	144	150
20	264	427	130	1030	848	807	1460	613	824	254	144	99
21	199	2030	157	848	2730	2250	910	1230	1950	297	144	98
22	86	3310	203	845	4160	2700	654	1770	2510	304	146	104
23	87	1420	238	598	4130	1620	652	1620	4020	304	473	1580
24	86	503	274	476	2670	973	652	3200	4400	504	337	1750
25	168	778	918	558	1230	757	894	4280	4500	345	107	772
26	261	889	1540	671	1230	759	2480	2750	4600	193	148	558
27	164	881	1510	776	1960	998	4270	3100	4500	193	148	351
28	86	635	1940	822	1440	806	4120	4520	4450	311	196	295
29	86	442	3210	824	---	1070	3580	4550	4530	654	226	271
30	86	507	2560	1180	---	2940	3640	4400	3470	918	226	227
31	86	---	1210	990	---	3400	---	2950	---	488	226	---
TOTAL	3628	31196	21000	52940	35733	44322	74053	80414	61854	15136	8000	9427
MEAN	117	1040	677	1708	1276	1430	2468	2594	2062	488	258	314
MAX	264	3310	3210	3890	4160	3400	4470	4550	4600	1780	1090	1750
MIN	85	201	130	476	228	417	652	613	487	193	107	80

CAL YR 1988 TOTAL 216440 MEAN 591 MAX 4440 MIN 58
WTR YR 1989 TOTAL 437703 MEAN 1199 MAX 4600 MIN 80

MUSKINGUM RIVER BASIN

03150000 MUSKINGUM RIVER AT MCCONNELSVILLE, OH

(National stream quality accounting network station)

LOCATION.--Lat 39°38'42", long 81°51'00", in SE 1/4 sec. 11, T.10 N., R.12 W., Morgan County Hydrologic Unit 05040004, on left bank just upstream from Dam 7, at McConnellsville, and 3.5 mi downstream from Oilspring Run.

DRAINAGE AREA.--7,422 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1921 to current year.

REVISED RECORDS.--WSP 783:: 1913(M). WSP 853: 1933(M). WSP 1173: 1922-24, 1928(M). WSP 1907: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 650.31 ft above National Geodetic Vertical Datum of 1929. Prior to July 27, 1922, nonrecording gage at site 0.5 mi upstream at same datum. July 27, 1922, to Aug. 10, 1926, nonrecording gage and Aug. 11, 1926, to Sept. 8, 1959, water-stage recorder at present site and datum. Sept. 9, 1959, to July 18, 1960, nonrecording gage at site 0.5 mi upstream at same datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by 17 flood-control reservoirs 36.6 mi to 148 mi upstream from station. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--68 years, 7,612 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 126,000 ft³/s Jan. 26, 1937, gage height, 21.14 ft; minimum daily, 325 ft³/s Oct. 12, 1930, may have been lower during August 1930.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 1913 reached a stage of 33.5 ft, discharge, 270,000 ft³/s computed by U.S. Army Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 33,200 ft³/s Mar. 31, gage height, 9.67 ft; minimum daily, 852 ft³/s Oct. 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1040	1250	4540	10500	6250	10000	30700	15900	20900	19500	3810	1890
2	1070	1430	4390	8720	5930	8990	31000	16700	18000	16300	3520	1970
3	1070	1440	4090	8190	5790	7600	30700	15700	15500	14300	3150	2050
4	1020	1520	3890	8810	5520	6750	31200	13800	13900	13200	3030	1950
5	972	2580	3770	5980	5160	8220	31900	13500	17900	11600	3800	1870
6	945	4820	3610	8200	5080	11800	30900	12200	17500	9770	4390	1550
7	925	7240	3450	9870	5210	14800	30800	12200	16600	8380	3560	1420
8	941	8910	3340	14000	4740	13200	29700	13100	14800	7450	3950	1370
9	865	7610	3160	20100	3760	12500	29000	12300	11400	6960	3560	1340
10	852	5330	2840	20400	3100	12300	26600	14400	10200	6490	2690	1460
11	926	6400	2790	18100	3040	12500	23600	16300	9580	5990	2470	1670
12	879	7770	2550	16100	3320	13100	18000	16900	9550	7570	2290	1510
13	875	7430	2140	15000	3500	13900	15100	18800	10100	6720	2100	1450
14	871	7260	2140	12900	4680	13900	13100	21900	11400	6140	2020	1390
15	869	8080	2390	13800	7930	12400	11300	26100	18200	5570	2050	2030
16	855	6400	2480	13300	13500	12700	10300	25400	23500	4850	2060	2190
17	862	5950	2370	12800	14700	12100	9250	23100	22900	4350	1920	2880
18	1030	5300	2140	12800	13300	10100	9530	20700	22200	3910	1870	3000
19	1060	4560	1990	10900	11500	9040	11300	18300	20300	3540	1870	2820
20	1190	6690	1900	9530	10400	8790	10700	15700	18500	3590	1830	2520
21	1450	9360	1970	8610	18100	13300	10300	15300	19700	3670	1860	2250
22	1570	13300	2080	7700	23000	16000	9370	14200	27000	3890	1970	2260
23	1510	11900	2290	6760	24000	15800	8630	13900	28200	3520	2480	4150
24	1570	8930	5320	5820	21600	14000	7750	16800	27300	3380	2610	6160
25	1640	7470	6610	5520	17000	12100	9680	20200	26500	3310	1960	5640
26	1840	6820	7360	5450	14900	10800	22800	27200	26000	2810	1920	5760
27	1790	6250	8050	5840	13000	9850	18600	28400	23700	3020	1910	4370
28	1490	5630	8510	6550	12100	8850	15700	28100	23700	3780	1920	3310
29	1340	4780	12600	7380	---	9430	19500	28200	23900	4390	1950	2820
30	1290	4570	15500	7290	---	16800	16900	27300	23200	5260	3470	2540
31	1260	---	13000	7020	---	29100	---	25700	---	4680	2210	---
TOTAL	35867	186980	143260	323940	280110	380720	573910	588900	572130	207890	80200	77610
MEAN	1157	6233	4621	10450	10000	12280	19130	19000	19070	6706	2587	2587
MAX	1840	13300	15500	20400	24000	29100	31900	28700	28200	19500	4390	6160
MIN	852	1250	1900	5450	3040	6750	7750	12200	9550	2810	1830	1340

CAL YR 1988 TOTAL 1851562 MEAN 5059 MAX 30400 MIN 567
WTR YR 1989 TOTAL 3451517 MEAN 9456 MAX 31900 MIN 852

MUSKINGUM RIVER BASIN

99

03150000 MUSKINGUM RIVER AT MCCONNELSVILLE, OH--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1950 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED SEDIMENT DISCHARGE: November 1978 to current year.

REMARKS.--Samples collected as part of the National Stream Quality Accounting Network. Water-quality monitor data collected at site, 1.0 mi upstream from discharge station, from 1973 to 1980.

COOPERATION.--Pesticide analyses furnished by Environmental Protection Agency.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,710 mg/L Aug. 11, 1980; minimum daily, 2 mg/L Jan. 28, 1983.

SEDIMENT LOADS.--Maximum daily 167,000 tons Aug. 11, 1980; minimum daily, 19 tons Jan. 22, 23, 1984.

EXTREMES FOR WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,340 mg/L Feb. 2; minimum daily mean, 6 mg/L Dec. 19.

SEDIMENT LOADS: Maximum daily, 90,500 tons Feb. 2; minimum daily, 22 tons July 17.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,240 mg/L Apr. 26; minimum daily mean, 9 mg/L Jan. 26.

SEDIMENT LOADS: Maximum daily, 76,300 tons Apr. 26; minimum daily, 28 tons Oct. 1.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE AIR (DEG C)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
NOV 28...	1215	5800	551	7.5	1.0	7.0	13	10.9	94	450	110
DEC 29...	1130	12100	535	7.9	1.0	3.0	40	13.2	101	3200	M
MAR 07...	0945	15100	527	6.7	-5.0	3.5	25	15.0	116	1100	4300
MAY 31...	1015	26400	386	7.8	27.0	19.5	27	9.9	112	370	370
JUN 27...	1030	23400	417	7.9	26.0	24.0	42	7.2	89	420	820
AUG 21...	1200	2000	750	8.3	29.5	25.0	6.0	5.2	66	55	<10000E

DATE	HARD- NESS TOTAL (MG/L AS CACO3)	HARD- NESS NONCARB WAT TOT FLD MG/L AS CACO3	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3	ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
NOV 28...	240	40	62	20	23	4.1	242	0	198	100	35
DEC 29...	210	130	55	18	27	3.3	100	0	81	100	44
MAR 07...	200	110	54	17	23	3.3	117	0	93	92	39
MAY 31...	160	74	44	13	11	3.5	110	0	90	70	16
JUN 27...	180	95	49	14	12	3.5	105	0	85	74	18
AUG 21...	280	160	71	26	44	5.7	149	2	125	160	62

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHOROUS TOTAL (MG/L AS P)	PHOS- PHOROUS DIS- SOLVED (MG/L AS P)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P)
NOV 28...	0.2	7.6	350	0.02	2.70	0.07	0.06	0.70	0.12	0.04	0.03
DEC 29...	0.2	6.0	337	0.02	1.40	0.13	0.13	0.90	0.16	0.02	0.02
MAR 07...	0.2	5.6	299	0.02	2.00	0.09	0.08	0.50	0.11	0.01	0.01
MAY 31...	0.1	7.8	228	0.02	1.90	0.04	0.06	0.90	0.07	0.12	0.04
JUN 27...	0.2	8.3	235	0.03	1.60	0.03	0.03	0.40	0.06	0.04	0.03
AUG 21...	0.3	1.4	456	0.02	0.510	0.13	0.13	0.60	0.06	0.03	0.01

MUSKINGUM RIVER BASIN

03150000 MUSKINGUM RIVER AT MCCONNELSVILLE, OH--Continued

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM DIS- SOLVED (UG/L AS LI)
NOV 28...	20	1	44	<0.5	<1	<1	<3	10	20	<5	10
DEC 29...	40	<1	38	<0.5	<1	<1	<3	6	45	<5	9
MAR 07...	--	--	--	--	--	--	--	--	--	--	--
MAY 31...	40	1	34	<0.5	<1	<1	<3	12	50	1	7
JUN 27...	30	1	39	<0.5	<1	<1	<3	9	33	1	6
AUG 21...	--	--	--	--	--	--	--	--	--	--	--

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)
NOV 28...	150	<0.1	<10	6	<1	1.0	270	<6	8	24
DEC 29...	220	<0.1	<10	11	<1	1.0	280	<6	27	97
MAR 07...	--	--	--	--	--	--	--	--	--	52
MAY 31...	21	<0.1	<10	5	<1	<1.0	170	<6	11	78
JUN 27...	5	<0.1	<10	2	<1	<1.0	190	<6	8	121
AUG 21...	--	--	--	--	--	--	--	--	--	14

E Estimated value

M Presence of material verified but not quantified

MUSKINGUM RIVER BASIN

101

03150000 MUSKINGUM RIVER AT MCCONNELSVILLE, OH--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	1450	66	258	1420	23	88	3280	18	159
2	1530	41	169	1340	23	83	3340	15	135
3	1640	57	252	1300	28	98	3390	13	119
4	1590	88	379	1250	34	115	3500	18	170
5	1490	96	386	1440	25	97	3410	10	92
6	1450	60	234	1500	46	186	3410	22	203
7	1550	95	397	1580	26	111	3370	8	73
8	1640	52	230	1620	28	122	3260	18	158
9	1900	58	298	1630	24	106	3140	6	51
10	2070	54	302	1650	37	165	3040	9	74
11	1980	84	448	1660	24	108	3140	9	76
12	1880	77	390	1670	20	90	3360	9	82
13	1930	70	365	1700	20	92	3310	14	125
14	1960	56	296	1730	32	149	3200	14	121
15	1820	59	290	1750	20	95	2940	10	79
16	1670	50	225	1770	26	125	2970	13	104
17	1630	48	211	1780	20	96	3140	17	144
18	1620	46	202	1990	36	194	3350	12	109
19	1630	54	238	2580	22	153	3140	6	51
20	1610	36	156	2840	31	238	2990	12	97
21	1560	60	253	2920	24	189	3140	7	59
22	1500	50	202	2850	16	123	4330	22	257
23	1410	52	199	2780	13	98	4950	12	160
24	1330	28	101	2730	14	103	4580	14	173
25	1330	26	93	2770	17	127	4220	20	228
26	1290	27	94	2730	11	81	4390	20	237
27	1350	33	120	2780	14	105	4180	14	158
28	1420	27	103	2960	18	144	4470	17	205
29	1420	31	119	3020	18	147	5390	12	175
30	1500	24	97	3070	18	149	5640	16	244
31	1440	28	109	---	---	---	5940	17	273
TOTAL	49590	---	7216	62810	---	3777	115910	---	4391
JANUARY			FEBRUARY			MARCH			
1	5620	20	303	5070	148	2760	7310	30	592
2	4800	56	726	22000	1340	90500	6530	35	617
3	4190	50	565	28600	1140	88200	6750	45	820
4	3610	45	439	30400	470	38600	13000	179	6660
5	2780	40	300	28400	112	8570	12600	220	7510
6	2450	30	198	27400	110	8150	12000	75	2430
7	2120	30	172	26100	100	7050	12500	68	2290
8	2170	25	146	23200	95	5960	13200	74	2640
9	2460	25	166	20800	93	5220	14100	104	3950
10	2310	25	156	19300	90	4700	14400	100	3890
11	2130	20	115	18100	66	3220	13600	119	4380
12	2160	20	116	14900	64	2580	11900	81	2610
13	2100	20	114	9840	28	744	11100	66	1980
14	2110	15	86	8080	30	654	10700	67	1930
15	2040	15	83	8100	31	678	10400	51	1430
16	1950	10	53	10100	50	1370	9480	35	896
17	1870	10	51	11500	57	1780	8730	36	848
18	1880	10	51	10800	67	1960	8420	24	545
19	2270	10	61	10200	50	1380	8060	34	740
20	7500	197	4050	13300	51	1830	7790	22	463
21	10100	196	5330	16700	130	5850	7800	35	737
22	10600	190	5420	18200	185	9090	7430	22	441
23	9370	144	3640	15800	118	5030	6960	32	602
24	7340	144	2860	13900	77	2890	6780	24	440
25	5980	94	1520	13400	67	2430	6750	30	547
26	5230	52	734	11400	78	2410	8040	71	1700
27	4610	50	622	9730	58	1520	13400	319	11600
28	4060	45	494	8720	46	1080	16200	204	8900
29	3880	40	419	7850	39	827	14700	153	6080
30	3790	38	389	---	---	---	12600	137	4670
31	3760	54	548	---	---	---	11000	118	3500
TOTAL	127240	---	29927	461890	---	307033	324230	---	86438

MUSKINGUM RIVER BASIN

03150000 MUSKINGUM RIVER AT MCCONNELSVILLE, OH--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	9610	96	2490	3720	46	462	1980	48	256
2	8340	92	2070	3670	59	584	1940	56	293
3	7750	56	1170	3370	42	382	1960	52	275
4	13700	153	6350	3160	61	520	1840	57	283
5	20700	350	19600	3460	37	345	1810	63	308
6	22500	257	15600	3960	65	694	1750	60	283
7	21000	194	11000	3830	40	414	1670	46	207
8	18200	174	8560	3710	34	341	1650	52	232
9	15700	122	5170	3500	36	340	1880	30	152
10	13700	100	3690	3740	51	515	1850	45	225
11	12100	88	2870	3760	34	345	1660	39	174
12	10600	90	2570	3850	49	509	1580	29	124
13	9130	58	1430	3980	38	408	1570	31	132
14	8080	66	1440	3740	34	343	1440	35	136
15	7510	43	872	3390	24	220	1390	30	112
16	6820	51	940	3130	24	203	1300	10	35
17	6090	48	789	3190	31	267	1280	9	31
18	5720	62	958	2970	37	296	1310	8	28
19	5430	37	543	2960	28	224	1330	18	65
20	5020	46	624	3000	36	292	1280	9	31
21	4960	38	509	3200	34	294	1230	48	159
22	4660	66	830	3070	34	282	1130	35	107
23	4160	44	495	2980	34	273	1100	30	89
24	4240	44	503	3490	44	415	968	34	89
25	3960	62	663	3650	60	591	932	32	81
26	4120	14	156	3570	65	626	954	34	88
27	3740	28	283	3510	60	568	898	37	90
28	3600	60	583	3100	60	502	871	38	89
29	3640	40	393	2780	45	338	850	34	78
30	3560	48	461	2520	32	218	843	29	66
31	---	---	---	2350	32	203	---	---	---
TOTAL	268340	---	93612	104310	---	12014	42246	---	4318
JULY			AUGUST			SEPTEMBER			
1	782	62	131	1480	19	76	1900	19	98
2	748	45	91	1540	18	75	1650	18	80
3	756	28	57	1300	18	63	1410	18	68
4	762	27	56	1170	18	57	2310	26	162
5	766	20	41	1240	18	60	6720	23	418
6	754	24	49	1360	19	70	7370	25	498
7	732	14	28	1470	19	75	5110	23	317
8	704	28	53	1290	20	69	3800	22	226
9	647	21	37	1360	20	73	2900	22	172
10	602	24	39	1260	20	68	2270	20	123
11	648	21	37	1000	21	57	1880	20	102
12	647	20	35	921	21	52	1680	66	299
13	624	21	35	912	22	54	2120	28	160
14	601	22	36	946	22	56	3000	84	680
15	609	14	23	881	22	52	2660	57	410
16	569	22	34	807	22	48	2510	77	523
17	579	14	22	752	20	41	2240	58	350
18	567	16	25	743	20	40	1980	82	439
19	632	12	20	836	20	45	1760	26	124
20	1480	19	76	772	23	48	1550	74	310
21	3290	18	160	1060	21	60	1550	64	267
22	5250	20	283	1420	22	84	1450	62	242
23	4470	20	241	1230	22	73	1450	18	71
24	4650	20	251	1390	23	87	1380	77	286
25	4490	20	243	1150	20	62	1350	32	116
26	3290	18	160	1310	20	71	1260	66	225
27	3090	18	150	1210	20	66	1120	15	45
28	2520	19	129	1060	21	60	1060	26	75
29	2160	19	111	1740	22	104	1020	21	58
30	1690	19	87	1690	22	100	1020	44	121
31	1540	19	79	1770	23	110	---	---	---
TOTAL	50649	---	2819	37070	---	2056	69480	---	7065
YEAR	1713804		560666						

MUSKINGUM RIVER BASIN

103

03150000 MUSKINGUM RIVER AT MCCONNELSVILLE, OH--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	1040	10	28	1250	24	82	4540	50	624
2	1070	11	32	1430	18	70	4390	34	409
3	1070	18	52	1440	52	204	4090	58	651
4	1020	27	74	1520	40	166	3890	24	257
5	972	14	37	2580	33	233	3770	18	185
6	945	15	38	4820	70	920	3610	11	107
7	925	67	167	7240	65	1280	3450	39	363
8	941	114	290	8910	45	1090	3340	35	316
9	865	68	159	7610	52	1080	3160	36	307
10	852	84	193	5330	30	437	2840	40	307
11	926	69	173	6400	32	559	2790	46	347
12	879	73	173	7770	35	741	2550	18	124
13	875	62	146	7430	79	1600	2140	23	133
14	871	120	282	7260	60	1190	2140	14	81
15	869	37	87	8080	70	1540	2390	18	116
16	855	27	63	6400	52	908	2480	11	74
17	862	23	54	5950	42	682	2370	12	77
18	1030	40	112	5300	37	535	2140	17	98
19	1060	20	58	4560	32	398	1990	18	97
20	1190	26	84	6690	117	2240	1900	28	144
21	1450	20	79	9360	125	3190	1970	23	122
22	1570	24	103	13300	182	6580	2080	12	67
23	1510	27	111	11900	138	4470	2290	24	148
24	1570	26	112	8930	94	2280	5320	155	3150
25	1640	30	134	7470	54	1100	6610	180	3210
26	1840	23	116	6820	43	803	7360	99	1970
27	1790	44	215	6250	31	531	8050	60	1300
28	1490	31	126	5630	30	463	8510	65	1490
29	1340	21	77	4780	21	276	12600	157	5340
30	1290	26	91	4570	39	490	15500	260	10900
31	1260	19	65	---	---	---	13000	180	6320
TOTAL	35867	---	3531	186980	---	36138	143260	---	38834
JANUARY			FEBRUARY			MARCH			
1	10500	118	3350	6250	35	591	10000	36	972
2	8720	54	1270	5930	55	881	8990	48	1170
3	8190	46	1020	5790	47	735	7600	21	431
4	8810	38	904	5520	58	864	6750	43	784
5	5980	28	452	5160	29	404	8220	74	1810
6	8200	88	2240	5080	53	727	11800	182	5800
7	9870	79	2110	5210	22	309	14800	132	5270
8	14000	115	4350	4740	41	525	13200	62	2210
9	20100	455	24700	3760	25	254	12500	76	2560
10	20400	405	22300	3100	20	167	12300	58	1930
11	18100	220	10800	3040	12	98	12500	62	2090
12	16100	124	5390	3320	23	206	13100	52	1840
13	15000	101	4090	3500	19	180	13900	66	2480
14	12900	70	2440	4680	20	253	13900	59	2210
15	13800	72	2680	7930	124	3460	12400	60	2010
16	13300	56	2010	13500	295	10800	12700	63	2160
17	12800	60	2070	14700	165	6550	12100	64	2090
18	12800	51	1760	13300	94	3380	10100	53	1450
19	10900	48	1410	11500	89	2760	9040	54	1320
20	9530	37	952	10400	82	2300	8790	45	1070
21	8610	42	976	18100	293	15900	13300	108	3880
22	7700	22	457	23000	452	28100	16000	95	4100
23	6760	26	475	24000	370	24000	15800	104	4440
24	5820	12	189	21600	235	13700	14000	86	3250
25	5520	10	149	17000	118	5420	12100	72	2350
26	5450	9	132	14900	86	3460	10800	66	1920
27	5840	14	221	13000	57	2000	9850	60	1600
28	6550	22	389	12100	51	1670	8850	58	1390
29	7380	24	478	---	---	---	9430	75	1910
30	7290	24	472	---	---	---	16800	141	7150
31	7020	24	455	---	---	---	29100	480	37700
TOTAL	323940	---	100691	280110	---	129694	380720	---	111347

MUSKINGUM RIVER BASIN

03150000 MUSKINGUM RIVER AT MCCONNELLSVILLE, OH--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	30700	380	31500	15900	104	4460	20900	106	5980
2	31000	280	23400	16700	106	4780	18000	96	4670
3	30700	205	17000	15700	94	3980	15500	108	4520
4	31200	165	13900	13800	68	2530	13900	94	3530
5	31900	210	18100	13500	68	2480	17900	242	11700
6	30900	155	12900	12200	64	2110	17500	260	12300
7	30800	131	10900	12200	66	2170	16600	230	10300
8	29700	99	7940	13100	55	1950	14800	140	5590
9	29000	104	8140	12300	56	1860	11400	144	4430
10	26600	80	5750	14400	56	2180	10200	82	2260
11	23600	82	5230	16300	62	2730	9580	96	2480
12	18000	64	3110	16900	80	3650	9550	71	1830
13	15100	74	3020	18800	90	4570	10100	84	2290
14	13100	80	2830	21900	133	7860	11400	150	4620
15	11300	82	2500	26100	235	16600	18200	314	15400
16	10300	55	1530	25400	160	11000	23500	300	19100
17	9250	68	1700	23100	90	5610	22900	180	11100
18	9530	50	1290	20700	86	4810	22200	164	9870
19	11300	113	3450	18300	76	3760	20300	140	7710
20	10700	89	2570	15700	68	2880	18500	147	7340
21	10300	76	2110	15300	82	3390	19700	150	7980
22	9370	53	1340	14200	91	3490	27000	359	26300
23	8630	60	1400	13900	94	3530	28200	300	22900
24	7750	34	711	16800	120	5440	27300	185	13700
25	9680	213	7580	20200	123	6710	26500	163	11700
26	22800	1240	76300	27200	345	25500	26000	110	7720
27	18600	340	17100	28400	420	32200	23700	237	15200
28	15700	180	7630	28700	255	19800	23700	381	24500
29	19500	320	16800	28200	164	12500	23900	160	10400
30	16900	181	8260	27300	136	10000	23200	172	10800
31	---	---	---	25700	114	7910	---	---	---
TOTAL	573910	---	315991	588900	---	222440	572130	---	298220
JULY			AUGUST			SEPTEMBER			
1	19500	132	6990	3810	96	1000	1890	19	97
2	16300	124	5460	3520	60	570	1970	19	101
3	14300	100	3890	3150	86	731	2050	20	111
4	13200	102	3660	3030	50	409	1990	19	102
5	11600	70	2210	3800	77	790	1870	19	96
6	9770	81	2150	4390	118	1400	1550	19	80
7	8380	46	1050	3560	126	1210	1420	20	77
8	7450	58	1180	3950	78	832	1370	20	74
9	6960	98	1860	3560	100	961	1340	20	72
10	6490	104	1840	2690	77	559	1460	19	75
11	5990	56	918	2470	100	667	1670	19	86
12	7570	104	2150	2290	85	526	1510	20	82
13	6720	98	1800	2100	80	454	1430	20	77
14	6140	82	1380	2020	72	393	1390	20	75
15	5570	75	1150	2050	78	432	2030	18	99
16	4850	66	880	2060	45	250	2190	19	112
17	4350	69	825	1920	64	332	2880	18	140
18	3910	33	356	1870	72	364	3000	19	154
19	3540	78	764	1870	82	414	2820	18	137
20	3590	90	894	1830	49	242	2520	19	129
21	3670	88	891	1860	70	352	2250	18	109
22	3890	102	1090	1970	74	394	2260	18	110
23	3520	86	838	2480	90	603	4150	19	214
24	3380	70	656	2610	82	578	6160	22	368
25	3310	62	571	1960	19	101	5640	21	323
26	2810	72	564	1920	19	98	5760	22	346
27	3020	56	472	1910	19	98	4370	20	239
28	3780	68	712	1920	19	98	3310	19	173
29	4390	59	717	1950	19	100	2820	18	140
30	5260	77	1120	3470	18	169	2540	19	133
31	4680	74	957	2210	18	107	---	---	---
TOTAL	207890	---	49995	80200	---	15234	77610	---	4131
YEAR	3451517		1326246						

HOCKING RIVER BASIN

03157000 CLEAR CREEK NEAR ROCKBRIDGE, OH

LOCATION.--Lat 39°35'18", long 82°34'43", in NE 1/4 sec. 20, T.13 N., R.18 W., Hocking County, Hydrologic Unit 05030204, on left bank at upstream side of county road bridge, 400 ft downstream from unnamed right bank tributary, 2.0 mi upstream from mouth, and 3 mi west of Rockbridge.

DRAINAGE AREA.--89.0 mi².

PERIOD OF RECORD.--October 1939 to current year.

REVISED RECORDS.--WSP 1305: 1940(M), 1943(M), 1945(M). WSP 1907: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 760.13 ft above National Geodetic Vertical Datum of 1929. Prior to May 2, 1940, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Dec. 12-22, Feb. 10-12 and May 16-31. Records good except for periods of estimated record which are fair. Water-quality data collected at this site 1965 to 1977.

AVERAGE DISCHARGE.--50 years, 89.0 ft³/s, 13.58 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,000 ft³/s July 22, 1948, gage height, 17.68 ft (from high-water mark in well), from rating curve extended above 4,300 ft³/s on basis of slope-area measurement of peak flow; minimum, 3.0 ft³/s Dec. 29, 1947, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,900 ft³/s and maximum (*);

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 21	0800	1,910	7.86	May 26	unknown	*4,780	*11.96

Minimum discharge, 12 ft³/s Oct. 4-7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	24	39	83	59	113	438	239	134	69	68	69
2	13	22	37	96	56	105	265	239	128	65	49	74
3	12	21	39	82	82	113	317	224	113	147	41	54
4	12	35	36	70	81	148	620	176	113	143	39	44
5	12	112	34	60	68	427	324	239	116	97	363	40
6	12	158	34	235	61	494	223	228	107	82	670	37
7	12	99	33	183	54	248	190	182	89	71	160	35
8	12	83	32	175	52	196	173	160	81	62	96	34
9	13	67	31	121	46	254	159	254	160	55	68	33
10	13	154	30	89	45	363	136	364	138	51	54	33
11	15	120	29	76	43	330	124	232	99	49	46	32
12	14	76	29	125	42	239	116	191	134	53	40	30
13	13	89	28	141	45	189	116	241	162	53	37	28
14	13	92	28	105	134	169	105	248	216	45	35	72
15	14	67	27	229	431	173	99	403	408	41	32	152
16	14	59	27	149	536	141	93	520	260	39	31	64
17	15	49	26	111	224	129	93	370	172	37	29	50
18	101	42	26	92	150	129	267	270	135	36	29	41
19	56	41	26	81	122	115	521	210	120	36	31	37
20	34	353	25	73	108	180	225	190	128	41	30	34
21	31	226	25	63	1040	492	176	190	166	41	32	33
22	40	123	25	58	443	242	148	160	138	39	51	206
23	34	88	39	56	243	183	130	380	111	36	282	424
24	35	72	164	55	170	159	118	530	97	33	363	153
25	32	62	143	56	146	142	112	740	82	38	182	98
26	28	57	81	65	147	127	259	1100	74	45	99	76
27	25	53	67	91	132	118	173	1700	73	48	71	59
28	25	48	220	70	118	111	229	700	243	125	58	51
29	24	43	177	65	---	163	741	400	111	57	51	48
30	22	42	109	67	---	793	332	300	83	43	207	44
31	25	---	85	62	---	716	---	200	---	136	84	---
TOTAL	734	2577	1751	3084	4878	7501	7022	11580	4191	1913	3428	2185
MEAN	23.7	85.9	56.5	99.5	174	242	234	374	140	61.7	111	72.8
MAX	101	353	220	235	1040	793	741	1700	408	147	670	424
MIN	12	21	25	55	42	105	93	160	73	33	29	28
CFSM	.27	.97	.63	1.12	1.96	2.72	2.63	4.20	1.57	.69	1.24	.82
IN.	.31	1.08	.73	1.29	2.04	3.14	2.94	4.84	1.75	.80	1.43	.91

CAL YR 1988	TOTAL	20509.9	MEAN	56.0	MAX	1300	MIN	8.4	CFSM	.63	IN.	8.57
WTR YR 1989	TOTAL	50844	MEAN	139	MAX	1700	MIN	12	CFSM	1.57	IN.	21.25

HOCKING RIVER BASIN

03157500 HOCKING RIVER AT ENTERPRISE, OH

LOCATION.--Lat 39°33'54", long 82°28'30", in NW 1/4 sec. 5, T.14 N., R.17 W., Hocking County, Hydrologic Unit 05030204, on right bank at upstream side of bridge at Enterprise, 4.0 mi downstream from Buck Run, and 4.3 mi upstream from Scott Creek.

DRAINAGE AREA.--459 mi².

PERIOD OF RECORD.--October 1930 to current year. Prior to May 1931 monthly discharge only, published in WSP 1305

REVISED RECORDS.--WSP 873: 1938. WSP 1907: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 723.58 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 24, 1933, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Dec. 12-22 and Feb. 9-12. Records good, except for periods of estimated record, which are fair. Flood flow affected by temporary retention in eight retarding basins, combined capacity, 8,710 acre-ft constructed between 1955 and 1961 upstream from station. Water-quality data collected at this site 1965 to 1977. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--59 years, 459 ft³/s, 13.58 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,000 ft³/s Mar. 10, 1964, gage height, 21.31 ft, from rating curve extended above 17,000 ft³/s on basis of contracted-opening and slope-area measurement of peak flow; minimum daily, 23 ft³/s Aug. 12, 13, 1944.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1907, reached a stage of 22.0 ft, from floodmark, discharge, 36,000 ft³/s, from reports of U.S. Army Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 3,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 16	0630	4,370	10.42	May 24	0430	3,690	9.28
Feb. 21	2200	5,630	12.04	May 25	2030	4,200	10.16
Mar. 31	2400	4,640	10.84	May 26	2300	*9,900	*15.69
Apr. 29	2130	6,340	12.87	Aug. 6	0730	4,340	10.38

Minimum daily discharge, 45 ft³/s Oct. 5, 7-10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	78	177	443	330	581	3620	2190	766	700	411	518
2	47	74	163	451	300	505	1990	1970	683	600	285	425
3	46	71	155	402	414	496	1740	1630	601	547	233	313
4	46	126	147	365	512	605	2280	1240	766	681	213	249
5	45	325	138	298	410	1660	1890	1490	771	524	1420	214
6	46	703	135	1190	368	3120	1310	1460	709	438	3280	191
7	45	389	134	1270	306	1860	1070	1200	553	368	1000	175
8	45	305	129	1050	254	1250	898	1020	466	729	585	165
9	45	252	122	827	230	1250	833	1050	552	429	403	155
10	45	443	108	586	210	1660	698	2430	593	370	310	153
11	57	532	93	464	200	1730	609	1640	439	309	254	161
12	53	306	88	595	200	1440	545	1270	457	324	215	154
13	51	310	86	871	211	1090	516	1330	777	389	192	136
14	50	363	82	660	608	903	466	1580	740	306	174	172
15	49	272	80	1310	1680	882	431	2200	1470	260	162	558
16	49	229	78	1040	3800	750	401	2250	1720	226	151	280
17	53	195	76	753	1950	640	373	1470	1030	200	141	221
18	265	167	74	595	1200	599	925	1100	738	177	134	188
19	233	159	74	492	886	540	2660	881	610	170	139	161
20	126	1180	72	422	725	574	1490	824	644	179	138	147
21	104	1390	80	358	3880	2360	1030	820	784	189	139	137
22	130	680	120	308	3740	1630	794	608	950	194	210	229
23	125	453	165	295	1790	1110	658	1980	1040	161	1140	1880
24	128	359	953	280	1100	880	561	3150	766	145	1460	881
25	117	299	1400	281	822	746	524	2700	591	136	971	531
26	104	264	670	324	788	643	2430	5970	484	202	534	397
27	90	240	462	588	742	564	1910	7080	415	258	363	306
28	88	220	820	464	628	500	1490	2600	2120	703	283	254
29	85	201	1150	394	---	644	4480	1600	1380	432	239	227
30	79	187	677	387	---	2770	4150	1210	767	275	1670	206
31	78	---	508	358	---	3590	---	946	---	749	880	---
TOTAL	2571	10772	9216	18121	28284	37572	42772	58949	24382	11370	17729	9784
MEAN	82.9	359	297	585	1010	1212	1426	1902	813	367	572	326
MAX	265	1390	1400	1310	3880	3590	4480	7080	2120	749	3280	1880
MIN	45	71	72	280	200	496	373	668	415	136	134	136
CFSM	.18	.78	.65	1.27	2.20	2.64	3.11	4.14	1.77	.80	1.25	.71
IN.	.21	.87	.75	1.47	2.29	3.05	3.47	4.78	1.98	.92	1.44	.79

CAL YR 1988 TOTAL 109200 MEAN 298 MAX 4470 MIN 37 CFSM .65 IN. 8.85
WTR YR 1989 TOTAL 271522 MEAN 744 MAX 7080 MIN 45 CFSM 1.62 IN. 22.01

HOCKING RIVER BASIN

107

03159510 HOCKING RIVER BELOW ATHENS, OH

NATIONAL STREAM-QUALITY ACCOUNTING NETWORK STATION

LOCATION.--Lat 39°19'39", long 82°00'18", Athens County, Hydrologic Unit 05030204, at downstream side of Harmony Lane Bridge, 3.5 mi east of Athens, 1.1 mi downstream from Strouds Run, and 2.8 mi upstream from Scott Creek.

DRAINAGE AREA.--957 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1976 to current year.

GAGE.--Water-stage recorder. Datum of gage is 600.00 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 17, 1931, nonrecording gage at site 5.3 mi upstream at datum 11.26 ft higher, Aug. 18, 1931 to June 18, 1970, at datum 14.81 ft higher, and Oct. 1, 1971 to Sept. 30, 1976, at datum 11.26 ft higher.

REMARKS.--Estimated daily discharges: Dec. 13-21, Feb. 10-12 and Mar. 6-9. Records fair. Some regulation by Burr Oak Reservoir on East Branch Sunday Creek 34.3 mi upstream beginning 1952; by Hocking Lake, capacity 3,080 acre-ft, on Clear Fork 44.7 mi upstream beginning in 1949; by temporary retention in eight retarding basins, combined capacity, 8,710 acre-ft, constructed between 1955 and 1961 upstream from Lancaster, and Dow Lake capacity 1,884 acre-ft, on Strouds Run, 1.1 mi upstream. U.S. Army Corps of Engineers Satellite Telemeter at station.

AVERAGE DISCHARGE.--13 years, 1,088 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,600 ft³/s Feb. 27, 1979, gage height, 25.45 ft; minimum daily, 52 ft³/s Sept. 19, 1986.

EXTREMES OUTSIDE PERIOD RECORD.--Flood of Mar. 11, 1964 reached a stage of 24.18 ft at site and datum then in use, discharge, 32,900 ft³/s. Flood in March 1907 reached a stage of 27 ft, site and datum then in use, discharge 50,000 ft³/s, estimated by U.S. Army Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,000 ft³/s May 28, gage height, 23.06 ft; minimum daily, 67 ft³/s Oct. 7-10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	74	103	334	1010	801	1540	8910	9560	1720	901	2140	1290
2	71	100	310	1080	775	1410	7710	5840	1300	669	882	971
3	71	99	287	978	822	1270	4030	4720	1160	548	635	735
4	75	114	258	841	1330	1270	3990	3750	1020	920	535	574
5	71	226	245	719	1170	2010	4960	3550	1410	881	3110	474
6	68	726	230	1390	965	8000	3670	4100	1450	752	6890	413
7	67	927	222	3630	826	5800	2620	3530	1080	575	6830	374
8	67	580	218	3210	677	4000	2150	2690	861	503	2300	345
9	67	448	208	2860	591	3400	1980	2380	749	712	1500	321
10	67	397	198	1900	560	3370	1730	5090	843	471	1170	297
11	71	678	188	1540	520	3510	1470	5210	785	417	805	293
12	71	773	165	1830	500	3290	1310	3660	680	384	606	321
13	72	526	160	2420	501	2670	1220	3090	1060	532	513	254
14	70	522	150	1980	1620	2250	1130	3590	1300	507	449	270
15	70	569	140	3620	5860	2070	1050	3660	2720	360	401	372
16	69	447	140	3360	9790	2070	932	6500	7100	323	368	750
17	68	386	140	2120	10000	1670	852	5160	4140	336	349	588
18	75	333	130	1700	9970	1470	835	3180	2240	330	348	539
19	221	303	130	1500	9670	1390	3000	2470	1620	308	355	400
20	314	1190	130	1160	9000	1300	4980	2030	1380	308	327	337
21	194	3710	150	904	8360	3400	2750	1970	1350	293	328	303
22	146	2150	176	757	8940	5280	2030	1790	1320	278	509	363
23	155	1340	237	710	7700	3220	1620	1690	1500	279	1850	2120
24	177	887	856	671	3620	2300	1380	5210	1320	261	2570	3160
25	159	659	3850	644	2310	1830	1080	5220	979	260	2750	1520
26	158	564	2180	638	1890	1550	3900	6760	777	262	1510	1110
27	146	509	1310	809	1930	1350	7620	10300	665	423	979	842
28	130	457	1200	1060	1710	1220	4470	11600	1590	1420	722	609
29	116	419	2220	883	---	1310	7260	7000	3200	1240	591	508
30	112	380	1940	796	---	4560	10000	3290	1410	676	960	452
31	107	---	1250	792	---	7810	---	2520	---	737	2280	---
TOTAL	3399	20522	19352	47512	102408	87590	100639	141110	48729	16866	45562	20945
MEAN	110	684	624	1533	3657	2825	3355	4552	1624	544	1470	698
MAX	314	3710	3850	3630	10000	8000	10000	11600	7100	1420	6890	3160
MIN	67	99	130	638	500	1220	835	1690	665	260	327	270

CAL YR 1988 TOTAL 245737 MEAN 671 MAX 10700 MIN 56
WTR YR 1989 TOTAL 654634 MEAN 1794 MAX 11600 MIN 67

HOCKING RIVER BASIN
03159510 HOCKING RIVER BELOW ATHENS, OHIO

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966 to current year.

REMARKS.--Water-quality monitor data collected at this site 1966 to 1980. Daily sediment data collected 1978-1982.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE AIR (DEG C)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREP-TOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML)
DEC 28...	0930	1140	430	7.1	7.0	4.0	18	12.2	97	1900	990
MAR 14...	1430	2230	425	7.3	18.0	7.5	28	11.4	98	750	150
JUN 20...	0845	1530	470	7.6	20.0	18.5	36	8.9	98	M	9700
JUL 25...	0845	335	833	8.0	26.0	24.5	4.1	7.9	97	240	110

DATE	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3	ALKA-LINITY WAT WH TOT FET MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
DEC 28...	180	95	45	16	18	2.3	100	0	84	98	30
MAR 14...	170	97	42	15	15	2.1	85	0	70	98	24
JUN 20...	54	0	11	6.4	6.6	2.3	122	0	99	98	22
JUL 25...	320	170	82	28	41	3.3	183	0	149	190	66

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)
DEC 28...	0.1	7.5	262	0.02	1.30	0.13	0.13	0.60	0.08	<0.01	<0.01
MAR 14...	0.2	8.9	262	0.01	1.80	0.09	0.07	1.3	0.01	<0.01	0.01
JUN 20...	0.2	39	300	0.02	1.20	0.05	0.05	0.40	0.03	0.02	0.01
JUL 25...	0.2	6.3	507	<0.01	0.630	0.01	0.01	2.2	0.07	0.01	0.01

DATE	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)
DEC 28...	10	<1	35	<0.5	<1	<1	<3	4	12	<5	10
MAR 14...	<10	<1	37	<0.5	<1	<1	4	8	44	<5	13
JUN 20...	40	<1	3	<0.5	<1	<1	<3	4	4	1	<4
JUL 25...	40	<1	55	<0.5	<1	2	<3	3	8	<1	20

03159510 HOCKING RIVER BELOW ATHENS, OHIO

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)
DEC 28...	330	<0.1	<10	10	<1	<1.0	240	<6	8	42
MAR 14...	350	<0.1	<10	10	<1	<1.0	200	<6	16	68
JUN 20...	2	<0.1	<10	4	<1	<1.0	68	<6	150	84
JUL 25...	120	<0.1	<10	4	<1	<1.0	380	<6	33	42

M Presence of material verified but not quantified

SHADE RIVER BASIN

03159540 SHADE RIVER NEAR CHESTER, OH

LOCATION.--Lat 39°03'49", long 81°52'55", in NE 1/4 sec. 10, T.3N., R.12 W., Meigs County, Hydrologic Unit 05030202, on right bank at downstream side of bridge on Oak Hill Road, 200 ft upstream from Sugar Run, 2.8 mi southeast of Chester, and 8.5 mi northeast of Pomeroy.

DRAINAGE AREA.--156 mi², includes that of Sugar Run.

PERIOD OF RECORD.--Water years 1956, 1962-64 (Occasional low-flow measurements), June 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 576.91 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 8-13. Records good except for estimated daily discharges, which are fair. Water-quality data collected at this site 1965-77, 1979-81. Sediment data collected 1970-74. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--24 years, 166 ft³/s, 14.45 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,170 ft³/s May 25, 1968, gage height, 27.39 ft; minimum, 0.17 ft³/s Sept. 28, 29, 1987.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,400 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 16	1000	*5,010	*22.62	Mar. 7	0700	3,120	18.51
Feb. 22	0300	2,440	16.58				

Minimum discharge, 0.36 ft³/s Oct. 14-18.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.93	.64	16	113	61	169	1010	488	75	106	86	189
2	.84	.72	14	184	54	142	431	543	62	74	56	244
3	.76	.75	11	108	432	127	319	357	52	61	41	153
4	.68	.79	9.3	81	739	124	309	235	58	100	31	105
5	.62	20	8.7	54	279	480	688	387	100	101	77	76
6	.57	35	7.6	138	182	2350	431	444	492	75	306	59
7	.54	20	6.8	286	134	2490	299	265	126	70	152	49
8	.52	9.2	6.0	281	91	447	242	197	80	46	84	41
9	.48	7.6	5.4	360	77	271	245	308	71	36	54	26
10	.46	5.6	4.7	145	79	219	212	1390	99	33	36	30
11	.49	4.6	4.2	97	60	191	162	524	70	64	26	37
12	.50	3.7	3.7	553	55	160	136	346	55	423	21	29
13	.45	4.4	3.2	707	53	133	119	283	148	211	17	24
14	.39	3.7	3.3	367	959	121	105	286	153	208	14	47
15	.36	4.0	4.2	1770	2900	115	98	618	155	80	12	157
16	.36	4.5	5.1	554	4640	104	99	805	368	48	15	264
17	.36	3.7	6.3	208	1860	88	89	375	218	34	41	445
18	4.6	3.4	5.0	137	406	95	82	231	116	27	81	161
19	1.8	4.8	4.3	107	261	159	440	168	84	128	176	97
20	1.9	492	4.3	89	199	139	340	143	320	187	110	67
21	2.4	460	19	76	1690	1070	178	203	276	82	93	48
22	2.2	117	61	56	1640	604	134	148	155	45	333	89
23	1.7	75	91	51	407	265	110	265	165	30	1040	1780
24	1.4	49	653	56	223	194	95	495	101	26	1520	1370
25	.95	33	1030	55	155	165	85	264	92	38	508	284
26	.96	24	184	54	168	138	635	479	378	24	229	183
27	.75	21	92	64	196	119	542	886	138	374	144	131
28	.72	24	87	65	174	106	667	244	1240	1750	106	101
29	.66	26	175	56	---	103	2060	152	481	286	85	86
30	.63	21	108	60	---	1310	1250	118	151	133	1250	74
31	.64	---	76	68	---	1660	---	104	---	103	571	---
TOTAL	30.62	1479.10	2709.1	7000	18174	13858	11612	11741	6079	4997	7309	6456
MEAN	.99	49.3	87.4	226	649	447	387	379	203	161	236	215
MAX	4.6	492	1030	1770	4640	2490	2060	1390	1240	1750	1520	1780
MIN	.36	.64	3.2	51	53	88	82	94	52	24	12	24
CFSM	.01	.32	.56	1.45	4.16	2.87	2.48	2.43	1.30	1.03	1.51	1.38
IN.	.01	.35	.65	1.67	4.33	3.30	2.77	2.80	1.45	1.19	1.74	1.54

CAL YR 1988 TOTAL 20179.70 MEAN 55.1 MAX 1590 MIN .30 CFSM .35 IN. 4.81
WTR YR 1989 TOTAL 91444.82 MEAN 251 MAX 4640 MIN .36 CFSM 1.61 IN. 21.81

LEADING CREEK BASIN

111

03160007 LEADING CREEK BELOW CARPENTER, OH

LOCATION.--Lat 39°09'45", long 82°13'12", Meigs County, Hydrologic Unit 05030202, on left bank 150 ft downstream of St Rt 143 bridge over Leading Creek at Carpenter, Ohio, 300 ft east of intersection of St Rt 143 and Meigs Co Rd 10, and 0.95 mi east of intersection St Rt 143 and Columbia Twp Rd 13.

DRAINAGE AREA.--13.3 mi².

PERIOD OF RECORD.--October 1987 to current year, no winter records (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 620 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 9-Dec. 14 and May 11-26. Records fair, except for periods of estimated daily discharges, which are poor. Record not collected Dec. 15 to Mar. 31. Data collected for Surface-Water Effects of Longwall Mining project, additional data in Volume 2 of this report.

EXTREMES FOR CURRENT YEAR.--Maximum recorded discharge, 394 ft³/s, May 26, gage height, 19.00 ft; minimum daily recorded discharge, .24 ft³/s, on Dec. 14.

REVISIONS.--The maximum discharge for the water year 1988 has been revised to 340 ft³/s, March 3, gage height, 18.49 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	5.4	1.3	---	---	---	46	43	4.8	6.0	1.2	12
2	2.5	5.1	1.1	---	---	---	23	36	3.9	4.0	.68	12
3	2.3	4.7	1.0	---	---	---	23	24	3.6	4.7	.63	4.9
4	2.0	4.6	.90	---	---	---	71	18	3.6	6.9	.60	2.9
5	1.7	20	.80	---	---	---	57	43	75	6.3	28	1.9
6	1.4	35	.70	---	---	---	24	24	31	5.0	28	1.5
7	1.3	19	.60	---	---	---	18	19	9.7	3.0	5.5	1.3
8	1.1	14	.54	---	---	---	16	16	5.8	2.2	2.8	1.1
9	.99	6.0	.46	---	---	---	17	100	6.3	1.6	1.6	1.0
10	.89	3.2	.40	---	---	---	12	62	8.6	1.3	.98	.77
11	.82	1.7	.36	---	---	---	9.6	48	4.3	1.2	.64	.82
12	.74	.98	.31	---	---	---	8.1	33	6.4	59	.50	.80
13	.64	1.2	.27	---	---	---	7.0	22	45	17	.38	.65
14	.55	.98	.24	---	---	---	6.2	21	38	8.4	.38	.83
15	.49	1.1	---	---	---	---	6.6	40	62	3.4	.33	2.3
16	.42	1.2	---	---	---	---	6.6	29	39	2.1	.30	4.5
17	.40	.90	---	---	---	---	5.3	21	19	1.5	.29	16
18	.51	.60	---	---	---	---	6.7	17	11	1.1	.62	3.3
19	.49	2.5	---	---	---	---	62	13	7.7	3.4	1.1	2.1
20	.42	7.0	---	---	---	---	17	11	58	6.8	.60	1.6
21	.51	5.5	---	---	---	---	11	19	19	2.5	20	1.1
22	.66	5.0	---	---	---	---	8.0	12	12	1.6	6.1	22
23	.66	2.7	---	---	---	---	6.5	27	8.7	1.1	124	133
24	.88	2.0	---	---	---	---	5.6	33	5.8	.85	90	24
25	4.4	1.5	---	---	---	---	6.5	14	4.2	.79	25	9.4
26	6.9	1.7	---	---	---	---	135	139	13	.62	9.7	6.2
27	6.5	1.8	---	---	---	---	75	30	5.0	1.5	5.3	3.4
28	6.0	2.0	---	---	---	---	152	18	222	11	3.6	2.6
29	5.5	1.7	---	---	---	---	134	10	24	2.6	3.0	2.1
30	5.4	1.5	---	---	---	---	46	8.6	10	1.2	57	2.0
31	5.4	---	---	---	---	---	---	6.3	---	1.7	8.3	---
TOTAL	65.27	160.56	---	---	---	---	1021.7	956.9	766.4	170.36	427.13	278.07
MEAN	2.11	5.35	---	---	---	---	34.1	30.9	25.5	5.50	13.8	9.27
MAX	6.9	35	---	---	---	---	152	139	222	59	124	133
MIN	.40	.60	---	---	---	---	5.3	6.3	3.6	.62	.29	.65
CFSM	.16	.40	---	---	---	---	2.56	2.32	1.92	.41	1.04	.70
IN.	.18	.45	---	---	---	---	2.86	2.68	2.14	.48	1.19	.78

RACoon CREEK BASIN

03201929 ZINNS RUN NEAR RADCLIFF, OH

LOCATION.--Lat 39°07'39", long 82°21'08", Vinton County, Hydrologic Unit 05090101, on right bank 1200 ft southwest of intersection of Co Rd 28 and Twp Rd 18, 2800 ft upstream from mouth, 1.2 mi east-southeast of intersection of St Rt 160 and Vinton Co Rd 28, and 1.5 mi southeast of Radcliff.

DRAINAGE AREA.--3.41 mi².

PERIOD OF RECORD.--October 1987 to current year, no winter records.

GAGE.--Water-stage recorder. Elevation of gage is 650 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair, except discharges above 60 ft³/s, which are poor. Record not collected Nov. 7 to Mar. 20. Data collected for Surface-Water Effects of Longwall Mining project, additional data in Volume 2 of this report.

EXTREMES FOR CURRENT YEAR.--Maximum recorded discharge, 465 ft³/s, gage height, 18.75 ft on May 2; minimum daily recorded discharge, 0.00 ft³/s, many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	---	---	---	---	201	310	1.4	1.3	.0	1.4
2	.00	.00	---	---	---	---	201	412	1.8	1.1	.0	1.3
3	.00	.00	---	---	---	---	117	162	1.3	3.7	.0	.74
4	.00	.00	---	---	---	---	29	6.8	1.2	2.9	.0	.49
5	.00	.00	---	---	---	---	15	12	8.8	2.5	.0	.38
6	.00	.00	---	---	---	---	7.4	7.1	3.4	1.6	3.8	.29
7	.00	---	---	---	---	---	6.0	5.4	1.9	1.2	55	.23
8	.00	---	---	---	---	---	5.7	4.4	1.4	.88	94	.21
9	.00	---	---	---	---	---	5.8	25	1.7	.67	50	.12
10	.00	---	---	---	---	---	4.2	19	1.2	.56	.29	.09
11	.00	---	---	---	---	---	3.5	12	.98	.45	.0	.11
12	.00	---	---	---	---	---	2.9	7.3	1.3	.41	.0	.08
13	.00	---	---	---	---	---	2.2	5.8	1.5	.83	.0	.03
14	.00	---	---	---	---	---	1.9	5.5	1.3	.47	.0	.12
15	.00	---	---	---	---	---	2.0	11	7.5	.21	.0	.37
16	.00	---	---	---	---	---	1.7	8.0	5.3	.15	.0	.44
17	.00	---	---	---	---	---	1.5	5.6	2.9	.09	.0	.52
18	.00	---	---	---	---	---	2.7	4.3	1.7	.04	.0	.26
19	.00	---	---	---	---	---	19	3.4	1.5	.46	.0	.16
20	.00	---	---	---	---	---	5.5	3.0	34	.53	.0	.11
21	.00	---	---	---	---	31	3.8	5.3	6.0	.20	.43	.06
22	.00	---	---	---	---	9.9	2.8	3.2	7.5	.10	.78	.57
23	.00	---	---	---	---	5.2	2.1	7.0	3.8	.03	3.5	13
24	.00	---	---	---	---	4.0	1.8	8.3	2.5	.0	2.0	3.7
25	.00	---	---	---	---	3.3	2.2	4.9	1.7	.0	1.3	1.8
26	.00	---	---	---	---	2.7	83	26	1.3	.0	.67	1.2
27	.00	---	---	---	---	2.1	116	65	2.0	.0	.43	.79
28	.00	---	---	---	---	1.9	87	102	8.6	.09	.28	.66
29	.00	---	---	---	---	13	195	77	2.7	.0	.20	.57
30	.00	---	---	---	---	28	285	6.6	1.7	.0	3.8	.51
31	.00	---	---	---	---	106	---	1.9	---	.0	.79	---
TOTAL	0.00	---	---	---	---	---	1413.7	1336.8	119.88	20.47	217.27	30.31
MEAN	.00	---	---	---	---	---	47.1	43.1	4.00	.66	7.01	1.01
MAX	.00	---	---	---	---	---	285	412	34	3.7	94	13
MIN	.00	---	---	---	---	---	1.5	1.9	.98	.00	.00	.03
CFSM	.00	---	---	---	---	---	13.8	12.6	1.17	.19	2.06	.30
IN.	.00	---	---	---	---	---	15.42	14.58	1.31	.22	2.37	.33

RACCOON CREEK BASIN

113

03201947 STRONGS RUN NEAR EWINGTON, OH

LOCATION.--Lat 39°01'35", long 82°20'16", Gallia County, Hydrologic Unit 05090101, on right bank 15 ft downstream of Strongs Run Rd Bridge, 1000 ft of Gallia-Vinton County line, 0.65 mi south-southeast of intersection of St Rt 160 and Strongs Run Rd, 0.85 mi northeast of intersection of St Rt 160 and Adney Rd, and 1.75 mi north-east of Ewington.

DRAINAGE AREA.--15.8 mi².

PERIOD OF RECORD.--October 1987 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 620 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 29-Dec. 22, Jan. 18-Mar. 12, July 22-Aug. 4 and Sept. 24-30. Records fair except for period of estimated daily discharges, which are poor. Record after July 5 also poor, due to construction of a beaver dam 1,000 ft below gage. Data collected as part of Surface-Water Effects of Longwall Mining project, additional data in Volume 2 of this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,300 ft³/s, gage height, 8.34 on April 28, 1989, minimum daily discharge, 0.00 ft³/s, many days 1987, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s and maximum (*).

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 16		unknown	unknown	Apr. 28	2100	*1,300	*8.34
Mar. 5		unknown	unknown	June 20	0815	553	6.57
Apr. 26	0930	1,250	8.26	Jul. 5	0045	872	7.50

Minimum daily discharge, 0.00 ft³/s many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.50	15	5.7	19	84	104	6.1	6.5	.18	3.3
2	.00	.00	.34	15	5.4	15	37	81	4.9	5.2	.15	5.2
3	.00	.00	.28	10	80	13	36	50	4.6	6.3	.14	1.9
4	.00	.00	.25	8.4	56	12	89	30	6.5	28	.14	1.2
5	.00	.01	.22	7.3	30	345	107	64	127	153	.20	1.0
6	.00	.02	.18	20	17	300	36	36	32	16	.28	.95
7	.00	.02	.13	19	11	80	28	25	14	9.4	.21	.98
8	.00	.02	.11	61	9.9	40	25	19	9.1	6.7	.18	1.0
9	.00	.00	.09	22	7.4	25	28	126	11	5.1	.17	1.1
10	.00	.00	.09	12	6.4	20	19	122	9.4	3.4	.17	1.1
11	.00	.00	.09	9.4	5.8	17	15	40	6.5	2.6	.12	1.1
12	.00	.00	.09	151	5.2	13	12	27	7.4	2.4	.10	1.1
13	.00	.00	.09	63	5.0	12	11	23	10	2.3	.10	1.1
14	.00	.00	.09	23	4.8	10	9.3	51	8.9	1.9	.10	1.3
15	.00	.00	.09	74	4.5	9.8	9.7	154	17	1.4	.10	2.7
16	.00	.00	.09	46	600	8.1	9.2	56	21	1.0	.10	2.1
17	.00	.00	.13	35	300	7.6	8.0	30	13	.74	.10	3.8
18	.00	.00	.10	25	60	9.2	8.6	20	8.0	.64	.15	2.1
19	.00	.07	.09	17	20	9.5	104	15	6.9	1.5	.19	1.5
20	.00	40	.08	11	18	21	26	12	214	3.3	.19	1.2
21	.00	25	.09	7.6	195	155	17	12	33	1.2	.66	1.1
22	.00	4.9	.50	5.4	54	37	13	9.0	24	.70	.29	6.2
23	.00	1.8	3.8	5.0	25	22	10	13	16	.45	11	158
24	.00	1.1	108	5.7	18	17	8.8	16	10	.34	19	134
25	.00	.84	43	5.4	15	14	9.0	23	7.3	.29	9.5	25
26	.00	.75	11	5.2	18	11	745	187	6.2	.19	3.3	10
27	.00	.68	8.2	7.8	24	10	198	42	4.6	.15	1.4	5.4
28	.00	.68	15	6.4	20	9.0	542	19	87	.40	1.7	4.3
29	.00	.90	16	5.6	---	16	593	14	16	.23	4.7	3.7
30	.00	.68	9.7	5.6	---	200	371	11	8.8	.17	115	3.2
31	.00	---	7.8	7.0	---	251	---	7.8	---	.24	5.8	---
TOTAL	0.00	77.47	226.22	710.8	1621.1	1728.2	3208.6	1438.8	750.2	261.74	175.42	386.63
MEAN	.00	2.58	7.30	22.9	57.9	55.7	107	46.4	25.0	8.44	5.66	12.9
MAX	.00	40	108	151	600	345	745	187	214	153	115	158
MIN	.00	.00	.08	5.0	4.5	7.6	8.0	7.8	4.6	.15	.10	.95
CFSM	.00	.16	.46	1.45	3.66	3.53	6.77	2.94	1.58	.53	.36	.82
IN.	.00	.18	.53	1.67	3.82	4.07	7.55	3.39	1.77	.62	.41	.91

CAL YR 1988	TOTAL	1824.81	MEAN	4.99	MAX	246	MIN	.00	CFSM	.32	IN.	4.30
WTR YR 1989	TOTAL	10585.18	MEAN	29.0	MAX	745	MIN	.00	CFSM	1.84	IN.	24.92

SCIOTO RIVER BASIN

03219500 SCIOTO RIVER NEAR PROSPECT, OH

LOCATION.--Lat 40°25'10", long 83°11'50", Delaware County, Hydrologic Unit 05060001, on right bank at downstream side of Hoskins Bridge, 1.5 mi upstream from Ottawa Creek, 2.0 mi south of Prospect, and 2.5 mi downstream from Patton Run.

DRAINAGE AREA.--567 mi².

PERIOD OF RECORD.--July 1925 to October 1932, October 1939 to current year. Published as "at Prospect" 1925-32. Gage-height records collected in this vicinity since 1915 are contained in reports of National Weather Service.

REVISED RECORDS.--WSP 1908: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 886.9 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). July 24, 1925, to Oct. 31, 1932, nonrecording gage at site 2.5 mi upstream at datum 4.8 ft higher. Oct. 16 to Dec. 5, 1939, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharges: Feb. 8-14, May 9-10. Records good except for estimated daily discharges, which are fair. Water-quality data collected at this site 1964 to 1977. Sediment data collected 1951 to 1953. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--57 years, 456 ft³/s, 10.92 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,100 ft³/s Mar. 22, 1927, gage-height, 15.0 ft, from graph based on gage readings at site and datum then in use, and Jan. 21, 1959, gage height, 15.30 ft; minimum, 3.5 ft³/s Sept. 13, 1953.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 25, 1913, reached a stage of 21.1 ft, discharge, 27,000 ft³/s, computed by Franklin County Conservancy District, at site and datum used 1925-32.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,600 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 6	1300	4,010	9.22	May 28	2200	*6,330	*12.03

Minimum discharge 8.9 ft³/s Oct. 4

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	10	75	431	252	253	2150	550	1180	449	308	35
2	11	11	68	295	226	211	2820	435	659	314	240	58
3	9.9	12	64	224	205	184	2370	378	656	247	180	47
4	9.1	14	59	190	180	180	3030	335	1130	209	144	53
5	9.5	33	52	195	159	211	3440	338	1660	183	139	49
6	10	70	49	256	132	453	3920	414	1810	162	132	40
7	11	49	45	760	123	565	3230	485	1210	149	116	34
8	10	47	41	1720	110	385	2060	451	681	146	169	29
9	11	51	38	1890	100	358	1380	600	487	127	183	25
10	9.5	81	35	1950	92	347	1020	800	393	110	140	24
11	9.6	162	37	1300	88	382	786	676	329	100	106	24
12	10	162	33	629	82	440	626	576	288	163	79	23
13	10	179	32	543	80	458	541	473	291	601	63	24
14	10	169	31	520	100	420	478	615	381	663	50	29
15	11	133	27	461	141	405	427	887	470	407	46	95
16	11	108	33	421	249	406	384	722	492	257	49	120
17	10	97	28	389	305	369	348	539	820	182	63	156
18	13	81	26	353	294	308	328	433	624	146	56	115
19	17	64	26	338	274	276	371	360	382	123	41	82
20	14	79	26	343	253	269	479	330	592	353	37	60
21	13	167	26	333	392	447	484	337	786	975	41	45
22	16	178	26	291	855	748	402	332	693	808	39	37
23	16	216	30	239	960	660	342	694	488	585	58	31
24	15	207	40	227	568	461	305	1970	355	398	66	25
25	15	151	49	213	399	380	374	2150	288	293	77	21
26	15	113	55	197	394	334	766	4210	245	234	82	21
27	14	102	54	199	352	299	946	4990	267	204	86	21
28	16	93	262	302	301	269	660	6130	454	670	63	20
29	16	82	745	359	---	403	657	5900	975	756	50	19
30	14	77	862	308	---	1090	699	4490	862	499	41	18
31	11	---	617	275	---	1780	---	2710	---	377	32	---
TOTAL	378.6	2998	3591	16151	7666	13751	35823	44310	19948	10890	2976	1380
MEAN	12.2	99.9	116	521	274	444	1194	1429	665	351	96.0	46.0
MAX	17	216	862	1950	960	1780	3920	6130	1810	975	308	156
MIN	9.1	10	26	190	80	180	305	330	245	100	32	18
CFSM	.02	.18	.20	.92	.48	.78	2.11	2.52	1.17	.62	.17	.08
IN.	.02	.20	.24	1.06	.50	.90	2.35	2.91	1.31	.71	.20	.09

CAL YR 1988 TOTAL 70732.1 MEAN 193 MAX 2320 MIN 9.1 CFSM .34 IN. 4.64
WTR YR 1989 TOTAL 159862.6 MEAN 438 MAX 6130 MIN 9.1 CFSM .77 IN. 10.49

SCIOTO RIVER BASIN

115

03219590 BOKES CREEK NEAR WARRENSBURG, OH

LOCATION.--Lat 40°19'20", long 83°10'30", Delaware County, Hydrologic Unit 05060001, on right bank at downstream side of bridge on State Highway 257, 3.4 mi downstream from Fulton Creek, 0.7 mi upstream from Moors Run, and 1.2 mi north of Warrensburg.

DRAINAGE AREA.--83.2 mi².

PERIOD OF RECORD.--May 1982 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 870 ft above National Geodetic Vertical Datum of 1929 from topographic map.

REMARKS.--Estimated daily discharges: Dec. 3-Jan. 3, Jan. 26 to Feb. 14. Records fair except for periods of estimated record, which are poor.

AVERAGE DISCHARGE.--7 years, 68.8 ft³/s, 11.23 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,420 ft³/s July 3, 1987, gage height 13.54 ft; minimum, no flow many days during 1982-1989.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft³/s and maximum (*).

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 8	1145	880	9.36	May 27	1830	*2,400	*11.49
Mar. 30	0715	1,160	9.86	July 28	0145	1,500	10.38
Apr. 4	0545	1,370	10.18				

Minimum, no flow many days during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.13	.48	18	45	20	44	415	90	51	19	31	4.3
2	.04	.48	17	26	19	38	401	64	41	14	23	5.1
3	.00	.52	16	21	18	34	321	54	33	12	17	4.4
4	.00	1.2	14	43	17	34	827	48	102	11	24	3.7
5	.00	2.7	13	42	16	90	302	46	262	9.9	65	6.0
6	.00	7.4	12	99	15	186	288	68	166	9.4	32	6.6
7	.00	18	11	281	15	107	247	87	104	9.3	19	4.8
8	.00	17	10	631	14	73	190	64	59	11	15	3.6
9	.00	17	9.6	528	14	70	152	58	41	9.3	14	2.8
10	.00	32	8.8	229	13	116	127	161	32	8.2	11	2.4
11	.00	51	8.2	108	13	181	92	163	25	16	8.9	2.1
12	.00	38	7.8	91	13	185	75	89	21	40	7.4	1.7
13	.00	44	8.0	132	13	137	65	73	20	30	6.3	1.4
14	.00	54	8.4	110	16	97	58	150	45	21	5.3	1.9
15	.00	37	8.6	87	25	108	51	152	85	19	4.8	3.1
16	.00	28	8.4	85	72	103	46	93	94	12	5.3	26
17	.01	21	8.0	82	99	72	41	68	62	8.2	4.3	43
18	.35	17	7.4	74	90	58	41	52	40	5.9	3.8	23
19	.40	15	6.2	73	60	50	108	43	29	4.9	3.5	14
20	.48	73	8.0	73	46	63	125	39	347	74	3.6	9.5
21	.61	147	7.7	68	160	206	83	36	487	380	3.8	6.9
22	.72	73	7.6	56	293	182	62	34	164	154	5.1	5.3
23	.74	45	8.0	42	181	101	50	165	82	78	8.1	4.1
24	.80	34	8.5	39	90	75	42	697	53	45	7.6	3.3
25	.73	28	30	35	92	63	137	412	37	28	6.3	2.8
26	.66	24	25	32	69	54	231	1180	28	30	5.1	2.4
27	.57	27	21	30	59	47	168	2090	23	73	4.7	2.0
28	.62	32	350	27	54	42	97	1350	38	727	5.0	1.9
29	.56	25	430	24	---	128	210	320	45	125	4.9	1.5
30	.50	21	250	23	---	397	150	122	29	63	4.6	1.2
31	.48	---	100	21	---	391	---	73	---	51	3.8	---
TOTAL	8.40	930.78	1446.2	3257	1606	3532	5202	8141	2645	2098.1	363.2	200.8
MEAN	.27	31.0	46.7	105	57.4	114	173	263	88.2	67.7	11.7	6.69
MAX	.80	147	430	631	293	397	827	2090	487	727	65	43
MIN	.00	.48	6.2	21	13	34	41	34	20	4.9	3.5	1.2
CFSM	.00	.37	.56	1.26	.69	1.37	2.08	3.16	1.06	.81	.14	.08
IN.	.00	.42	.65	1.46	.72	1.58	2.33	3.64	1.18	.94	.16	.09

CAL YR 1988 TOTAL 12624.13 MEAN 34.5 MAX 700 MIN .00 CFSM .41 IN. 5.64
WTR YR 1989 TOTAL 29430.48 MEAN 80.6 MAX 2090 MIN .00 CFSM .97 IN. 13.16

SCIOTO RIVER BASIN

03220000 MILL CREEK NEAR BELLEPOINT, OH

LOCATION.--Lat 40°14'54", long 83°10'26", Delaware County, Hydrologic Unit 05060001, on left bank at upstream side of county road bridge, 1.2 mi west of Bellepoint, 1.5 mi upstream from mouth, and 2.3 mi downstream from Blues Creek.

DRAINAGE AREA.--178 mi².

PERIOD OF RECORD.--October 1942 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 1908: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 865.14 ft above National Geodetic Vertical Datum of 1929 (levels by students of Ohio State University, City of Columbus bench mark). Prior to Jan. 1, 1948, nonrecording gage, at same site and datum.

REMARKS.--Estimated daily discharges: Feb. 2-12. Records fair. Water-quality data collected at this site 1965 to 1977. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--47 years, 154 ft³/s, 11.75 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,300 ft³/s Jan. 21, 1959, gage height, 13.85 ft, from rating curve extended above 14,000 ft³/s; no flow Sept. 25, 26, 1944, Sept. 19, 1948.

EXTREMES OUTSIDE PERIOD OF RECORD.--A stage of 18.0 ft occurred in March 1913.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 30	0945	3,430	7.34	May 26	1245	3,600	7.49
Apr. 4	0730	*4,000	*7.81	July 28	0315	2,670	6.62

Minimum daily discharge, 3.8 ft³/s Oct. 5, 11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	4.9	40	105	51	85	1480	205	65	39	29	16
2	5.5	4.5	32	80	46	71	617	110	56	30	23	24
3	6.4	6.6	27	64	40	64	858	83	48	27	21	17
4	6.0	12	25	56	35	63	3170	76	132	25	18	12
5	3.8	88	23	55	32	443	1780	84	309	25	86	14
6	4.9	157	22	460	29	722	590	186	222	21	209	12
7	5.6	63	22	1100	27	211	764	190	143	23	170	12
8	5.8	52	21	2050	26	117	416	111	75	21	57	10
9	6.7	49	19	922	23	131	378	123	54	18	33	10
10	4.8	248	19	249	22	342	251	645	46	14	22	9.6
11	3.8	235	17	142	21	739	155	367	38	14	17	9.6
12	3.9	121	15	258	21	639	115	152	32	73	16	9.2
13	5.1	221	16	404	27	315	98	168	43	54	15	8.6
14	8.0	176	17	202	43	204	85	325	502	25	12	11
15	5.5	101	17	224	90	267	73	229	513	26	10	24
16	5.8	70	16	228	305	256	65	134	434	18	11	83
17	6.8	51	16	187	222	140	56	91	217	15	11	43
18	4.9	37	16	151	125	111	65	65	98	13	13	23
19	4.3	31	12	155	91	92	460	54	66	14	11	19
20	11	490	14	143	80	186	324	52	757	141	11	15
21	8.9	581	18	96	835	960	146	48	943	196	13	14
22	7.8	215	16	71	964	420	98	45	256	64	13	11
23	7.3	111	18	61	341	187	70	497	126	38	33	11
24	9.1	72	32	59	141	132	57	1930	77	26	85	10
25	5.3	54	53	56	117	103	80	602	54	23	65	11
26	5.4	44	45	53	102	88	346	2540	42	100	23	9.4
27	6.6	47	43	61	115	75	315	2750	38	103	16	9.1
28	5.4	68	899	63	107	72	200	825	248	913	15	8.0
29	6.1	54	1080	61	---	193	346	204	134	83	11	8.9
30	4.1	45	492	58	---	2650	268	126	59	43	20	9.0
31	6.6	---	152	51	---	2310	---	89	---	43	19	---
TOTAL	187.0	3509.0	3254	7925	4078	12388	13726	13156	5827	2268	1108	483.4
MEAN	6.03	117	105	256	146	400	458	424	194	73.2	35.7	16.1
MAX	11	581	1080	2050	964	2650	3170	2750	943	913	209	83
MIN	3.8	4.5	12	51	21	63	56	45	32	13	10	8.0
CFSM	.03	.66	.59	1.44	.82	2.25	2.57	2.38	1.09	.41	.20	.09
IN.	.04	.73	.68	1.66	.85	2.59	2.87	2.75	1.22	.47	.23	.10
CAL YR 1988	TOTAL 33900.93	MEAN 92.6	MAX 2520	MIN .93	CFSM .52	IN. 7.08						
WTR YR 1989	TOTAL 67909.4	MEAN 186	MAX 3170	MIN 3.8	CFSM 1.05	IN. 14.19						

SCIOTO RIVER BASIN

117

03221000 SCIOTO RIVER BELOW O'SHAUGHNESSY DAM, NEAR DUBLIN, OH

LOCATION.--Lat 40°08'36", long 83°07'14", Delaware County, Hydrologic Unit 05060001, on left bank, 0.2 mi north of county line, 0.8 mi downstream from O'Shaughnessy Dam, and 3.0 mi north of Dublin.

DRAINAGE AREA.--980 mi².

PERIOD OF RECORD.--April 1921 to current year.

REVISED RECORDS.--WSP 803: 1924-35. WSP 1725: 1924. WSP 1908: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 775.00 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 26, 1921, nonrecording gage at site 0.8 mi upstream at same datum. Aug. 26, 1921, to Oct. 13, 1924, nonrecording gage at site 100 ft downstream at same datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since 1924 by O'Shaughnessy Reservoir 0.8 mi upstream (see station 03220500). Water-quality data collected at this site 1965 to 1977. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--68 years, 790 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 55,200 ft³/s Jan. 22, 1959, gage height, 22.04 ft, from flood-mark; minimum daily, 0.4 ft³/s Nov. 8, 1924.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 25, 1913 reached a stage of 24.6 ft, discharge, 74,500 ft³/s at Griggs Dam, 9 mi downstream from gage, computed by C.E. Sherman, Ohio State University.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,600 ft³/s May 27, gage height, 10.97 ft; minimum daily, 14 ft³/s Oct. 14-16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58	69	183	779	399	567	5640	1220	1840	727	248	82
2	58	70	171	567	284	351	4340	1010	1090	414	303	78
3	54	70	168	392	345	299	4090	897	1010	423	271	75
4	54	51	167	273	236	317	8820	433	1460	359	203	72
5	52	24	141	295	229	848	7080	650	2250	283	875	72
6	53	40	132	824	220	1620	5120	812	2380	239	995	72
7	53	81	124	2140	179	1120	4680	868	1920	322	390	72
8	52	88	116	5340	172	710	3240	901	1250	195	237	71
9	47	85	105	4020	156	751	2380	864	896	259	211	69
10	49	136	98	2690	158	958	1860	1400	549	173	188	68
11	54	294	86	2040	155	1490	1440	1490	442	171	141	65
12	51	370	77	1380	148	1440	1110	1190	443	242	116	60
13	34	472	73	1400	150	1240	974	1020	405	840	102	57
14	14	539	70	1170	173	975	683	1080	1850	887	95	57
15	14	362	67	1090	273	979	778	1480	1680	648	90	61
16	14	277	59	848	794	996	658	1270	1550	416	82	72
17	15	235	60	813	667	778	386	1080	1350	301	73	98
18	17	204	58	697	548	716	558	412	1180	280	72	129
19	15	189	60	763	529	288	986	620	816	212	72	293
20	15	517	168	706	470	581	1210	718	1430	181	71	111
21	17	1210	252	564	1480	1890	978	534	3240	1260	69	79
22	19	676	210	499	2350	1670	784	417	1840	1330	71	71
23	20	450	122	421	1880	1200	666	766	1110	978	71	97
24	21	376	115	331	1170	970	500	4760	791	673	104	77
25	21	305	125	530	607	700	630	3650	715	387	92	70
26	30	249	127	193	676	578	1770	8520	291	305	101	66
27	55	236	111	312	666	541	1950	10700	133	484	94	58
28	72	236	361	330	600	488	1580	8590	595	4740	91	55
29	75	215	2210	525	---	777	1610	6590	1140	1740	91	51
30	74	195	1620	475	---	5560	1570	5070	1350	1020	87	43
31	71	---	1110	423	---	6340	---	3410	---	903	81	---
TOTAL	1248	8321	8546	32830	15714	37738	68071	72422	36996	21392	5787	2401
MEAN	40.3	277	276	1059	561	1217	2269	2336	1233	690	187	80.0
MAX	75	1210	2210	5340	2350	6340	8820	10700	3240	4740	995	293
MIN	14	24	58	193	148	288	386	412	133	171	69	43

CAL YR 1988 TOTAL 130038 MEAN 355 MAX 5520 MIN 14
WTR YR 1989 TOTAL 311466 MEAN 853 MAX 10700 MIN 14

SCIOTO RIVER BASIN

03223000 OLENTANGY RIVER AT CLARIDON, OH

LOCATION.--Lat 40°34'58", long 82°59'20", in NW 1/4 sec. 26, T.5 S., R.16 E., Marion County, Hydrologic Unit 05060001, on left bank 900 ft downstream from bridge on State Highway 95, 0.5 mi east of Claridon, 0.8 mi downstream from Otter Creek, and 1.4 mi upstream from Beaver Run.

DRAINAGE AREA.--157 mi².

PERIOD OF RECORD.--October 1946 to current year.

REVISED RECORDS.--WSP 1235: 1947, 1948(P). WSP 1908: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 961.72 ft above National Geodetic Vertical Datum of 1929. (Levels by U.S. Army Corps of Engineers). Prior to Aug. 18, 1969 water-stage recorder at site 1,000 ft upstream at same datum.

REMARKS.--Estimated daily discharges: Dec. 6-22. Records good except estimated daily discharges, which are fair. Small diversion at gage for irrigation of golf course. Water-quality data collected at this site 1965 to 1977. Sediment data collected 1969 to 1974. Water Year 1986 stream flow records published in 1987 Water Year data report. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--43 years, 154 ft³/s, 13.32 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,900 ft³/s Jan. 22, 1959, gage height, 16.77 ft, from rating curve extended above 4,700 ft³/s on basis of contracted-opening measurement of peak flow; no flow Oct. 2-26, 1953, Sept. 14-22, 1955.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 1,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 4	2330	2,200	9.85	May 27	0300	*2,930	*10.93

Minimum discharge, 1.3 ft³/s Oct. 2, 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	3.2	15	76	61	57	983	77	169	73	36	5.1
2	2.0	3.4	13	55	51	51	525	71	220	59	21	6.8
3	2.0	3.7	12	52	46	57	666	63	259	47	13	9.7
4	2.2	4.6	11	41	40	51	1590	57	879	42	10	8.5
5	2.7	6.9	10	38	37	171	1840	59	867	38	14	6.2
6	2.6	12	9.6	85	36	440	1140	84	461	33	19	5.0
7	1.8	32	9.2	382	38	182	440	124	276	32	17	4.4
8	1.8	19	8.8	981	33	108	304	134	185	27	11	3.9
9	1.9	15	8.4	769	29	102	278	113	130	24	8.2	3.7
10	2.8	28	8.0	236	26	108	232	175	111	22	7.5	4.4
11	2.9	56	7.8	113	28	119	179	185	92	17	6.6	4.9
12	2.7	56	7.6	98	29	134	148	145	81	16	5.5	4.3
13	2.5	32	7.2	121	29	119	133	223	89	18	5.4	5.8
14	2.7	30	7.0	98	37	102	128	460	101	18	5.4	6.2
15	3.1	38	6.8	97	93	116	115	274	163	15	5.0	13
16	3.5	25	6.6	114	275	126	96	165	179	13	5.6	28
17	3.3	17	6.4	100	229	98	84	117	152	11	8.1	18
18	5.6	13	6.4	86	130	79	78	90	120	10	9.1	11
19	4.4	11	6.2	85	93	72	84	76	88	11	6.8	10
20	7.5	17	6.2	90	72	76	84	72	324	15	6.6	7.5
21	7.7	79	6.6	76	274	251	75	77	459	23	6.8	6.1
22	6.0	112	9.0	57	716	237	71	72	209	16	6.3	5.6
23	4.4	54	12	56	338	131	64	441	128	12	7.3	4.5
24	3.6	32	16	53	147	101	58	1590	93	11	8.0	4.1
25	3.9	24	30	44	124	85	75	1400	74	9.3	6.6	3.8
26	4.9	20	31	43	103	74	125	1870	60	27	6.1	3.8
27	4.5	18	29	117	74	66	98	2750	51	22	5.7	3.5
28	5.2	17	171	152	65	61	85	1810	313	38	5.2	3.9
29	4.5	17	423	94	---	133	92	423	261	36	5.2	3.1
30	4.0	16	197	77	---	748	84	254	112	22	4.3	3.2
31	3.5	---	145	69	---	1210	---	186	---	28	3.6	---
TOTAL	112.4	811.8	1242.8	4555	3253	5465	9954	13637	6706	785.3	285.9	208.0
MEAN	3.63	27.1	40.1	147	116	176	332	440	224	25.3	9.22	6.93
MAX	7.7	112	423	981	716	1210	1840	2750	879	73	36	28
MIN	1.8	3.2	6.2	38	26	51	58	57	51	9.3	3.6	3.1
CFSM	.02	.17	.26	.94	.74	1.12	2.11	2.80	1.42	.16	.06	.04
IN.	.03	.19	.29	1.08	.77	1.29	2.36	3.23	1.59	.19	.07	.05

CAL YR 1988 TOTAL 26660.28 MEAN 72.8 MAX 1390 MIN .90 CFSM .46 IN. 6.32
WTR YR 1989 TOTAL 47016.2 MEAN 129 MAX 2750 MIN 1.8 CFSM .82 IN. 11.14

SCIOTO RIVER BASIN

03225500 OLENTANGY RIVER NEAR DELAWARE, OH

LOCATION.--Lat 40°21'18", long 83°04'02", in NE 1/4 T.5 N., R.19 W., Delaware County, Hydrologic Unit 05060001, on left bank 500 ft upstream from highway bridge, 1,000 ft downstream from Delaware Dam, 1.3 ft upstream from Norfolk and Western Railway bridge, and 4.0 mi north of Delaware.

DRAINAGE AREA.--393 mi².

PERIOD OF RECORD.--October 1923 to September 1934, April 1938 to current year. Monthly discharge only for some periods, published in WSP 1305.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 878.00 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Oct. 1, 1950, water-stage recorder at this site 500 ft downstream at datum 1.72 ft lower. Oct. 1, 1950 to Sept. 30, 1985, at datum 78.42 ft lower.

REMARKS.--No estimated daily discharges. Records good. Flow completely regulated by Delaware Lake since 1951. Water-quality data collected at this site 1965 to 1977. Water-temperature data collected 1946 to 1961. U.S. Army Corps of Engineers Satellite Telemeter at station.

AVERAGE DISCHARGE.--23 years (water years 1924-34, 1939-50), 358 ft³/s; 39 years (water years 1951-89), 352 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,100 ft³/s Mar. 21, 1927, gage-height, 16.9 ft, site and datum then in use; minimum daily, 0.1 ft³/s Sept. 14-29, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,570 ft³/s May 30, gage height, 8.64 ft; minimum daily, 7.6 ft³/s Nov. 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	16	126	384	260	132	2060	441	4400	126	62	26
2	17	10	111	294	168	132	2050	378	4330	126	62	21
3	18	11	104	123	123	132	2200	281	3120	125	62	20
4	21	13	104	122	122	131	2540	184	1740	111	48	19
5	20	14	92	138	120	147	2960	139	1210	63	41	20
6	20	12	74	330	120	792	3850	139	1560	44	41	19
7	21	13	74	426	87	878	4090	143	853	45	41	19
8	20	14	74	475	70	429	1580	497	232	44	41	19
9	21	14	74	1770	70	270	846	683	226	43	41	19
10	20	15	74	2480	70	181	922	695	270	43	41	19
11	20	8.6	74	1630	70	217	486	684	202	46	37	19
12	18	7.6	94	699	70	211	181	513	195	46	36	20
13	19	9.6	119	516	70	634	102	431	181	45	36	19
14	18	12	126	374	71	613	176	773	209	44	36	20
15	18	12	126	374	73	338	292	1210	531	43	36	18
16	18	11	126	370	353	495	292	1460	717	43	36	18
17	19	10	126	722	505	317	292	846	660	43	36	18
18	19	76	123	381	503	198	293	348	631	35	36	18
19	21	114	123	217	286	197	297	303	367	25	36	20
20	21	124	123	259	130	277	291	303	393	24	36	20
21	22	663	94	255	427	875	287	303	846	25	33	19
22	21	560	74	255	1320	732	602	300	612	25	32	20
23	22	301	74	167	1590	284	281	466	222	25	32	20
24	22	226	75	123	547	54	218	695	126	25	32	20
25	23	115	75	123	132	53	289	1510	126	25	32	19
26	22	108	74	123	134	52	861	613	127	25	32	18
27	21	107	180	123	510	52	731	70	126	25	32	19
28	21	121	458	123	321	52	448	699	223	28	32	19
29	21	126	1170	123	---	953	446	1630	436	28	32	19
30	21	126	777	306	---	1750	445	3040	293	28	32	19
31	21	---	388	332	---	1940	---	4420	---	50	32	---
TOTAL	626	2969.8	5506	14137	8322	13518	30408	24197	25164	1473	1194	583
MEAN	20.2	99.0	178	456	297	436	1014	781	839	47.5	38.5	19.4
MAX	23	663	1170	2480	1590	1940	4090	4420	4400	126	62	26
MIN	17	7.6	74	122	70	52	102	70	126	24	32	18

CAL YR 1988 TOTAL 66934.0 MEAN 183 MAX 3560 MIN 5.7
WTR YR 1989 TOTAL 128097.8 MEAN 351 MAX 4420 MIN 7.6

SCIOTO RIVER BASIN

03227200 SCIOTO RIVER ABOVE BROAD STREET AT COLUMBUS, OH

LOCATION.--Lat 39°57'54", long 83°00'30", Franklin County, Hydrologic Unit 05060001, on left bank 50 ft upstream from Conrail RR bridge, 1,500 ft above Broad Street bridge, 0.5 mi downstream from Olentangy River, and 7.3 mi upstream from Scioto Big Run.

DRAINAGE AREA.--1,613 mi².

PERIOD OF RECORD.--October 1988 to September 1989.

GAGE.--Water-stage recorder. Datum of gage is 700.03 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Nov. 20-25, Dec. 28-Jan. 4, 7-11, Mar. 11, 12, 21-31, Apr. 1-15, May 15, 16, 26. Records poor. Flow regulated by Griggs Reservoir 5.5 mi upstream (see station 03220500), O'Shaughnessy Reservoir 15.5 mi upstream (see station 03220500), and Delaware Lake 30 mi upstream from station.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 15,800 ft³/s May 26, gage height 8.28 ft; minimum daily, 36 ft³/s Oct. 15, 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	51	396	1500	841	801	7800	1600	4170	1200	743	408
2	55	42	395	1200	741	618	7000	1430	3720	799	442	289
3	45	65	352	1000	592	594	7600	1300	3470	751	457	154
4	42	267	346	720	473	528	10500	1060	3060	709	430	124
5	40	599	330	485	395	921	9400	859	2470	528	813	107
6	38	540	304	1230	407	901	8600	1110	2730	476	2530	98
7	39	299	235	2700	352	1130	7400	1080	2550	294	860	101
8	40	269	202	6600	284	1020	5400	1120	1560	551	525	93
9	38	210	214	4800	227	1060	3500	1560	1250	290	384	88
10	44	817	192	3800	226	1130	3100	2030	1030	320	332	89
11	79	761	166	3000	253	1300	2800	1900	801	228	270	89
12	42	636	139	2230	241	1500	1800	1630	866	456	219	81
13	40	875	152	1910	295	1210	1500	1520	889	719	194	81
14	39	1000	209	1670	571	1630	1200	1460	3270	975	169	533
15	36	713	222	1740	789	1300	1000	2000	2300	878	165	349
16	36	522	181	1480	1060	1190	1160	2300	2250	625	159	223
17	42	419	183	1390	958	1250	764	1900	1880	442	152	172
18	223	333	167	1530	1000	982	1170	1120	1690	336	120	154
19	55	316	186	1090	1150	632	1330	947	1400	430	117	218
20	43	1900	226	1030	890	653	1460	1130	1400	289	130	295
21	76	1500	433	790	1810	1500	1300	1140	4000	587	151	121
22	71	1200	402	747	1200	2800	1270	936	3000	1300	498	113
23	55	1100	448	751	515	1900	1130	1200	1610	1110	402	133
24	53	880	701	664	891	1500	971	3520	1180	927	376	109
25	46	700	541	672	680	900	963	3660	1050	716	284	103
26	43	553	370	646	942	868	1990	11000	841	504	196	89
27	42	514	318	482	842	735	2310	8400	914	680	192	72
28	52	471	1000	596	928	726	1930	5810	1550	6110	153	53
29	50	455	2100	673	---	1170	2060	5440	1290	1960	204	61
30	44	444	3100	767	---	6000	1880	4890	1520	1290	751	50
31	46	---	2200	896	---	9400	---	5340	---	1030	196	---
TOTAL	1644	18451	16410	48789	19553	47849	100288	80392	59711	27510	12614	4650
MEAN	53.0	615	529	1574	698	1544	3343	2593	1990	887	407	155
MAX	223	1900	3100	6600	1810	9400	10500	11000	4170	6110	2530	533
MIN	36	42	139	482	226	528	764	859	801	228	117	50

WTR YR 1989 TOTAL 437861 MEAN 1200 MAX 11000 MIN 36

SCIOTO RIVER BASIN

121

03227500 SCIOTO RIVER AT COLUMBUS, OH

LOCATION.--Lat 39°54'34", long 83°00'33", Franklin County, Hydrologic Unit 05060001, on right bank at sewage-treatment plant of city of Columbus, 0.4 mi downstream from bridge on Frank Road, 2.8 mi upstream from Scioto Big Run, and 5 mi downstream from Olentangy River.

DRAINAGE AREA.--1,629 mi².

PERIOD OF RECORD.--October 1920 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 743: 1927(M). WSP 803: 1922-24, 1926-30, 1932-33. WSP 1908: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 680.00 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1924, nonrecording gage at site 200 ft upstream at same datum.

REMARKS.--Estimated daily discharges: Nov. 5-23. Records good except for estimated daily discharges, which are fair. Flow regulated by Griggs Reservoir 10.4 mi upstream (see station 03221500), O'Shaughnessy Reservoir 20.4 mi upstream (see station 03220500), and Delaware Lake 35 mi upstream from station. Records include sewage return flow from Frank Road Treatment Plant. Shadeville Treatment Plant flow enters downstream. Water supply for city of Columbus is obtained from Scioto River downstream from Griggs Dam and Big Walnut Creek downstream from Central College. For statement on diversions from Big Walnut Creek, see REMARKS for station 03229500. Water-quality data collected at this site 1965 to 1977. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--69 years, 1,397 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 68,200 ft³/s Jan. 22, 1959, gage height, 27.22 ft, from high-water mark in well, from rating curve extended above 46,000 ft³/s; minimum daily, 47 ft³/s Sept. 6, 1930.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 25, 1913 reached a stage of 25.9 ft, discharge, 138,000 ft³/s, estimated by Franklin County Conservancy District.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 17,000 ft³/s May 26, gage height, 18.49 ft; minimum daily, 116 ft³/s Oct. 9, 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	137	134	424	1490	877	987	9440	1960	6570	1430	859	535
2	140	129	412	1250	812	760	7190	1710	5730	864	527	457
3	136	136	385	928	716	704	6840	1530	5230	860	520	272
4	137	304	379	662	613	613	12600	1240	4920	770	547	225
5	129	320	355	527	469	1430	11200	986	3670	593	1140	210
6	125	400	336	1600	474	2410	9210	1340	4010	550	3550	190
7	126	660	294	3020	432	2670	9510	1290	3810	387	942	194
8	122	490	265	7330	388	1670	6950	1290	2090	628	592	190
9	116	360	282	5800	341	1480	3500	1960	1560	395	442	179
10	129	1200	259	5360	336	1590	3160	2710	1190	433	414	177
11	188	1100	247	4400	340	2090	2570	2370	891	354	373	179
12	142	980	229	3030	332	2210	1760	1990	1010	562	315	170
13	124	1100	230	2450	368	1820	1430	1920	1010	832	287	164
14	123	1400	281	2130	665	2120	1190	1820	4290	1080	259	686
15	118	1100	283	2250	905	1700	1020	2620	3600	949	248	582
16	116	940	261	1820	1440	1710	1310	2770	3290	683	235	316
17	129	800	271	1580	1580	1570	882	2630	2650	502	221	268
18	342	660	265	1860	1320	1190	1420	1390	2280	411	201	235
19	165	640	272	1170	1300	903	1660	993	1790	561	196	267
20	130	2000	297	1250	962	1000	1810	1210	1780	404	210	387
21	168	1700	449	1070	3050	2910	1540	1280	5570	725	221	235
22	187	1300	432	962	3980	3140	1420	956	5730	1500	728	274
23	147	1100	538	896	3930	2130	1340	1360	2330	1210	584	245
24	151	908	799	721	2740	1520	1070	4890	1440	969	603	207
25	136	732	604	665	1310	1080	993	5410	1220	733	403	194
26	133	550	411	747	1120	954	2500	11000	973	655	298	177
27	131	504	372	513	1160	794	3000	12300	1060	775	269	173
28	140	492	1940	626	1460	787	2450	9720	2540	9310	245	152
29	132	463	3200	678	---	1220	2700	8330	1590	2740	314	150
30	124	449	3400	803	---	8800	2370	7590	1940	1590	1110	142
31	129	---	1930	935	---	10000	---	8120	---	1150	334	---
TOTAL	4452	23051	20102	58523	33420	63962	114035	106685	85764	34605	17187	7832
MEAN	144	768	648	1888	1194	2063	3801	3441	2859	1116	554	261
MAX	342	2000	3400	7330	3980	10000	12600	12300	6570	9310	3550	686
MIN	116	129	229	513	332	613	882	956	891	354	196	142

CAL YR 1988 TOTAL 288070 MEAN 787 MAX 10900 MIN 80
WTR YR 1989 TOTAL 569618 MEAN 1561 MAX 12600 MIN 116

SCIOTO RIVER BASIN

03228300 BIG WALNUT CREEK AT SUNBURY, OH

LOCATION.--Lat 40°14'10", long 82°51'05", Delaware County, Hydrologic Unit 05060001, on left bank 200 ft downstream from bridge on State Highway 37, 0.1 mi downstream from Rattlesnake Creek, 0.6 mi east of Sunbury, and 0.9 mi upstream from Prairie Run.

DRAINAGE AREA.--101 mi².

PERIOD OF RECORD.--October 1988 to September 1989.

GAGE.--Water-stage recorder. Elevation of gage is 945 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Dec. 12-16 and Aug. 5 to Sept. 30. Records good except for estimated daily discharges which are fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,290 ft³/s June 14, 1989, gage height, 10.85 ft; minimum, 0.12 ft³/s Oct. 6, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 30	1230	2,520	9.34	June 14	1730	*4,290	*10.85
May 26	1500	3,960	10.60	June 28	0030	4,080	10.69

Minimum discharge, 0.12 ft³/s Oct. 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.48	1.7	27	81	42	39	750	142	40	59	22	8.0
2	.38	1.7	24	69	38	34	489	98	41	42	20	20
3	.31	1.8	22	54	39	35	664	86	58	34	11	12
4	.31	11	22	50	37	50	1320	69	786	31	9.9	7.0
5	.34	200	20	49	34	603	480	92	182	27	30	9.0
6	.38	340	19	457	29	368	231	205	106	23	66	7.0
7	.61	136	18	875	30	122	190	143	64	20	25	8.4
8	.62	135	17	1530	23	85	139	114	44	21	10	7.0
9	.94	101	15	402	19	114	188	185	37	16	4.7	6.2
10	1.3	668	14	144	19	268	121	560	35	11	2.8	5.8
11	2.2	396	13	90	19	358	86	200	28	9.0	1.2	5.6
12	1.5	127	12	215	20	293	72	123	27	19	3.3	5.2
13	1.4	352	12	323	18	149	73	411	53	24	2.9	5.0
14	.46	256	11	130	39	119	69	409	2050	14	2.4	5.0
15	.33	114	10	302	119	182	60	173	960	9.9	3.6	20
16	.39	74	9.4	206	306	115	53	137	711	7.8	8.5	80
17	.52	54	8.8	132	135	79	48	83	300	6.3	6.4	45
18	1.2	41	8.5	92	83	71	53	59	126	5.4	5.5	25
19	1.2	34	9.5	98	64	77	195	49	83	6.8	6.2	15
20	1.7	569	14	82	53	152	108	60	222	10	6.8	8.6
21	1.8	386	16	56	1240	716	73	63	282	8.2	7.8	7.8
22	2.1	140	22	47	702	220	58	44	419	4.2	9.0	7.0
23	2.7	81	50	42	200	123	50	811	120	2.7	25	6.4
24	3.5	59	216	39	96	93	45	859	67	2.4	78	5.8
25	3.9	47	222	37	82	77	436	324	56	4.2	40	8.4
26	3.7	41	87	44	63	64	885	2310	230	4.0	20	7.4
27	2.8	38	60	88	50	56	264	888	815	65	10	6.6
28	2.4	36	1030	66	43	52	240	210	1850	135	8.0	5.8
29	2.1	32	563	54	---	555	366	110	242	65	6.0	6.6
30	1.9	29	179	49	---	1630	289	74	100	30	17	7.4
31	1.8	---	115	44	---	870	---	51	---	27	12	---
TOTAL	45.27	4502.2	2866.2	5947	3642	7769	8095	9142	10134	743.9	481.0	374.0
MEAN	1.46	150	92.5	192	130	251	270	295	338	24.0	15.5	12.5
MAX	3.9	668	1030	1530	1240	1630	1320	2310	2050	135	78	80
MIN	.31	1.7	8.5	37	18	34	45	44	27	2.4	1.2	5.0
CFSM	.01	1.49	.92	1.90	1.29	2.48	2.67	2.92	3.34	.24	.15	.12
IN.	.02	1.66	1.06	2.19	1.34	2.86	2.98	3.37	3.73	.27	.18	.14

WTR YR 1989 TOTAL 53741.57 MEAN 147 MAX 2310 MIN .31 CFSM 1.46 IN. 19.79

SCIOTO RIVER BASIN

123

03228500 BIG WALNUT CREEK AT CENTRAL COLLEGE, OH

LOCATION.--Lat 40°06'13", long 82°53'03", T.2 N., R.17 W., Franklin County, Hydrologic Unit 05060001, on right bank at upstream side of county road bridge, 0.2 mi east of Central College, 0.4 mi downstream from Hoover Dam, and 3 mi southeast of Westerville.

DRAINAGE AREA.--190 mi².

PERIOD OF RECORD.--July 1938 to current year.

REVISED RECORDS.--WSP 873: 1938. WSP 1435: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 815.16 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Feb. 21-24 and Mar. 5-15. Records good except for periods of estimated record which are fair. Flow completely regulated by Hoover Reservoir since September 1954. (See station 03228400). Water-quality data collected at this site 1965 to 1977. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--51 years, 190 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,800 ft³/s Jan. 21, 1959, gage height, 19.75 ft, from rating curve extended above 7,200 ft³/s on basis of computation of peak flow over Hoover Dam; no flow for many days in 1944 and 1955.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,600 ft³/s June 27, gage height, 11.04 ft; minimum daily, 83 ft³/s Dec. 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	113	109	110	93	117	152	2160	345	154	157	125	132
2	114	123	110	98	117	134	1090	193	144	147	116	97
3	126	123	106	114	116	133	110	180	160	149	157	100
4	100	106	107	109	113	116	1900	139	243	139	135	93
5	131	134	107	89	121	640	2170	144	1380	124	130	121
6	103	104	107	107	119	1320	887	367	337	139	127	116
7	132	120	107	107	119	540	122	359	176	144	125	110
8	107	128	107	127	119	240	96	259	153	147	125	116
9	124	120	107	123	119	210	107	293	176	139	134	119
10	108	102	107	125	118	350	102	1200	177	141	140	115
11	110	120	106	106	107	590	102	469	161	138	134	106
12	105	105	106	153	129	730	118	223	148	131	140	119
13	107	106	108	223	123	490	96	419	146	135	140	122
14	113	107	100	227	123	360	106	869	1420	135	134	112
15	106	107	128	228	122	270	106	401	2630	134	128	110
16	122	101	89	225	110	113	105	279	2120	137	126	87
17	110	119	118	209	110	101	113	193	1190	139	131	115
18	111	109	103	148	119	119	117	158	265	140	114	115
19	114	108	112	137	118	114	106	133	183	124	113	102
20	119	114	118	138	118	1100	108	134	382	114	107	121
21	111	104	106	135	600	740	107	126	634	119	108	102
22	104	111	125	131	1300	134	105	148	1350	124	120	110
23	103	108	102	117	600	129	110	827	367	142	107	95
24	112	108	112	117	300	100	119	1900	187	141	103	106
25	129	88	93	116	149	111	477	1560	146	149	104	106
26	113	115	90	126	139	108	1700	2630	149	154	108	100
27	109	104	109	123	138	100	648	1950	779	123	114	103
28	122	117	135	118	125	101	410	1430	2680	143	130	126
29	106	110	83	113	---	639	905	765	1590	140	110	100
30	113	101	125	113	---	2570	694	129	278	139	95	112
31	113	---	103	117	---	2340	---	137	---	132	118	---
TOTAL	3510	3331	3346	4212	5708	14894	15096	18359	19905	4259	3798	3288
MEAN	113	111	108	136	204	480	503	592	663	137	123	110
MAX	132	134	135	228	1300	2570	2170	2630	2680	157	157	132
MIN	100	88	83	89	107	100	96	126	144	114	95	87
CAL YR 1988	TOTAL 46989	MEAN 128	MAX 2230	MIN 83								
WTR YR 1989	TOTAL 99706	MEAN 273	MAX 2680	MIN 83								

SCIOTO RIVER BASIN

03228805 ALUM CREEK AT AFRICA, OH

LOCATION.--Lat 40°11'00", long 82°57'47", in SE 1/4 sec. 1, T.3 N., R.18 W., Delaware County, Hydrologic Unit 05060001, on right bank 400 ft upstream of bridge on Lewis Center Road, 1,200 ft downstream from outlet of Alum Creek Dam, 0.3 mi west of Africa, 2.8 mi upstream from Westerville Reservoir outlet, and 4.2 mi northwest of Westerville.

DRAINAGE AREA.--122 mi².

PERIOD OF RECORD.--Water year 1962 (occasional low-flow measurements) June 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 822.00 ft above National Geodetic Vertical Datum of 1929. (levels by U.S. Army Corps of Engineers). July 9, 1974 to Sept. 30, 1985, at datum 22.00 ft lower. Oct. 17, 1973 to July 9, 1974 nonrecording gage at bridge 400 ft downstream at datum 22.00 ft lower. Prior to Oct. 17, 1973 water-stage recorder 600 ft downstream at datum 4.63 ft lower.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Alum Creek Lake since August 1973. Water-quality data collected at this site 1965 to 1977. Sediment data collected 1969 to 1974. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--9 years (water years 1964-72), 115 ft³/s, 16 years (water years 1974-89), 106 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,160 ft³/s Mar. 10, 1964, gage height, 13.95 ft, from graph based on gage readings, site and datum then in use; no flow at times 1963-65.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 5, 1963 reached a stage of 14.2 ft, from floodmarks, discharge, 6,460 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,580 ft³/s May 30 gage height, 5.21 ft; minimum daily, 3.6 ft³/s Dec. 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.8	3.9	5.7	56	49	36	9.2	548	1040	13	8.1	9.0
2	7.8	5.0	5.7	56	47	61	8.3	205	347	13	8.4	9.0
3	9.0	4.9	5.4	203	44	79	470	22	151	12	8.4	9.0
4	9.4	4.4	4.9	286	44	79	555	19	167	11	8.7	7.9
5	8.8	5.7	4.5	207	44	82	280	17	353	10	10	7.4
6	8.7	5.4	4.2	172	44	192	838	49	411	11	9.5	7.7
7	7.3	4.9	5.1	206	44	356	928	141	144	11	9.9	7.7
8	7.8	4.0	7.1	218	36	352	922	189	13	12	8.4	7.7
9	6.8	4.1	7.2	563	14	228	598	192	13	11	7.8	7.7
10	6.6	9.3	7.4	776	14	127	360	330	13	11	9.5	7.8
11	7.8	5.8	7.7	760	14	90	155	477	13	11	9.1	8.1
12	8.2	5.4	7.4	756	14	89	49	262	14	11	9.2	8.4
13	7.4	5.8	7.2	572	12	137	48	206	15	10	9.2	8.7
14	6.4	5.2	7.2	273	10	162	48	316	378	9.7	8.8	10
15	5.7	4.7	7.2	280	11	255	48	388	1040	9.5	9.5	10
16	5.7	4.2	7.6	278	40	301	48	277	1030	9.5	9.4	9.3
17	5.7	4.6	7.7	375	79	208	47	80	1030	9.5	7.9	8.8
18	5.7	5.7	7.7	344	79	74	47	17	677	9.5	7.8	8.5
19	5.4	6.0	7.5	193	79	74	128	17	176	9.7	8.3	8.5
20	5.4	7.9	5.4	89	79	74	242	18	96	9.8	7.7	14
21	5.4	6.7	3.7	88	423	155	184	18	152	9.5	7.7	17
22	5.4	6.2	3.6	88	736	195	48	18	269	9.5	8.2	13
23	5.6	5.9	3.9	67	736	125	47	357	311	9.5	8.5	9.2
24	5.5	5.6	7.3	49	349	39	47	785	99	9.5	8.4	8.8
25	4.9	4.8	7.5	49	31	12	48	792	15	10	8.4	8.1
26	4.8	4.3	7.2	49	31	12	262	322	15	10	8.1	8.1
27	4.7	4.5	7.1	49	34	9.4	472	16	26	10	8.1	8.1
28	4.1	5.4	11	49	36	7.3	544	232	243	9.3	8.4	7.9
29	4.3	5.7	398	49	---	9.5	544	817	327	8.1	8.5	7.7
30	4.1	5.7	472	49	---	15	544	1340	133	8.1	8.5	7.7
31	3.9	---	57	49	---	12	---	1530	---	8.1	8.9	---
TOTAL	196.1	161.7	1108.1	7298	3173	3647.2	8568.5	9997	8711	315.8	267.3	270.8
MEAN	6.33	5.39	35.7	235	113	118	286	322	290	10.2	8.62	9.03
MAX	9.4	9.3	472	776	736	356	928	1530	1040	13	10	17
MIN	3.9	3.9	3.6	49	10	7.3	8.3	16	13	8.1	7.7	7.4

CAL YR 1988 TOTAL 10221.1 MEAN 27.9 MAX 701 MIN 3.6
WTR YR 1989 TOTAL 43714.5 MEAN 120 MAX 1530 MIN 3.6

03229000 ALUM CREEK AT COLUMBUS, OH

LOCATION.--Lat 39°56'42", long 82°56'28", in NW 1/4 sec. 24, T.5 N., R.22 W., Franklin County, Hydrologic Unit 05060001, on left bank 0.2 mi downstream from Livingston Avenue bridge in Columbus, and 6 mi upstream from mouth.

DRAINAGE AREA.--189 mi².

PERIOD OF RECORD.--July 1923 to December 1935, January 1938 to current year.

REVISED RECORDS.--WSP 758: 1933. WSP 1305: 1928(M). WSP 1908: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 733.69 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 7-22, March 26-28. Records good. Flow regulated by Alum Creek Lake 19 mi upstream, since Aug. 1973. Water-quality data collected at this site 1960 to 1977. Sediment data collected 1960 to 1965. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--63 years, 173 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,400 ft³/s Jan. 22, 1959, gage height, 19.59 ft (from high-water mark in well), from rating curve extended above 17,000 ft³/s on basis of contracted-opening measurement of peak flow; no flow Sept. 21-29, 1959.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,950 ft³/s July 28, gage height, 9.45 ft; minimum daily, 12 ft³/s Oct. 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	14	23	90	62	77	371	645	1360	90	70	342
2	13	14	22	85	65	72	168	506	512	55	60	176
3	13	15	21	122	104	110	499	106	476	76	53	81
4	13	117	20	349	72	109	1750	82	720	59	89	65
5	13	342	19	328	64	326	290	176	419	44	367	66
6	14	204	19	554	61	327	916	164	496	37	637	62
7	14	85	18	471	59	449	1070	212	366	35	101	53
8	14	75	17	701	59	464	1040	294	63	136	74	56
9	14	54	17	496	55	460	933	461	97	63	61	61
10	16	431	16	878	34	350	440	644	64	48	52	60
11	33	179	16	841	27	242	374	614	47	35	45	57
12	24	65	16	946	24	196	92	459	132	201	41	61
13	16	242	15	890	25	157	98	458	118	164	39	59
14	14	103	15	455	137	228	84	426	551	55	36	570
15	13	57	15	566	183	293	80	522	1170	38	35	246
16	13	45	15	435	313	403	77	443	1190	31	42	70
17	16	40	14	446	155	386	98	233	1070	27	46	66
18	83	33	14	496	127	171	212	66	964	25	40	43
19	30	29	14	326	118	107	235	57	305	144	42	42
20	16	446	14	139	114	132	284	113	331	72	49	43
21	22	169	14	114	910	476	343	66	838	78	64	51
22	41	66	14	109	1110	337	96	55	776	48	394	101
23	23	50	75	104	860	275	79	443	511	33	257	186
24	23	40	277	70	752	145	77	1020	258	28	194	64
25	22	34	129	63	101	68	147	900	86	44	84	41
26	15	30	53	72	104	49	285	1860	59	290	65	33
27	13	28	41	76	115	41	528	276	428	145	53	28
28	15	29	671	64	82	37	741	120	1300	1840	47	26
29	20	26	316	63	---	280	895	686	563	140	110	31
30	17	23	830	65	---	1060	693	1120	339	109	517	31
31	14	---	143	62	---	550	---	1490	---	86	120	---
TOTAL	619	3085	2903	10476	5892	8377	12995	14717	15609	4276	3884	2871
MEAN	20.0	103	93.6	338	210	270	433	475	520	138	125	95.7
MAX	83	446	830	946	1110	1060	1750	1860	1360	1840	637	570
MIN	12	14	14	62	24	37	77	55	47	25	35	26

CAL YR 1988 TOTAL 33174.6 MEAN 90.6 MAX 2020 MIN 6.1
WTR YR 1989 TOTAL 85704 MEAN 235 MAX 1860 MIN 12

SCIOTO RIVER BASIN

03229500 BIG WALNUT CREEK AT REES, OH

LOCATION.--Lat 39°51'24", long 82°57'26", in NE 1/4 sec. 26, T.4 N., R.22 W., Franklin County, Hydrologic Unit 05060001, on right bank at downstream side of bridge on Reese Road, 0.5 mi southwest of Rees, 4.2 mi downstream from Alum Creek, and 10.5 mi upstream from mouth.

DRAINAGE AREA.--544 mi².

PERIOD OF RECORD.--August 1921 to December 1935, October 1938 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 1053: 1929, 1933(M), 1945. WSP 1305: 1923(M), 1925-26(M).

GAGE.--Water-stage recorder. Datum of gage is 698.20 ft above National Geodetic Vertical Datum of 1929. Aug. 18, 1921, to Oct. 23, 1927, nonrecording gage at site 0.3 mi upstream at datum 2.00 ft higher prior to Oct. 1, 1924, at present datum thereafter.

REMARKS.--No estimated daily discharges. Record good. Flow regulated by Hoover Reservoir 26 mi upstream (see station 03228400) and Alum Creek Lake 30 mi upstream since August 1973. Beginning June 15, 1956, diversion at Morse Road Treatment Plant, 21 mi upstream from station, for municipal water supply for the city of Columbus. Water-quality data collected at this site 1964 to 1977. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--65 years, 525 ft³/s (adjusted for diversion).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 59,800 ft³/s Jan. 22, 1959, gage height, 22.03 ft (from high-water mark in well), from rating curve extended above 13,000 ft³/s on basis of contracted-opening measurement of peak flow; minimum, 5 ft³/s Sept. 4, 5, 10-12, 1925; minimum daily since 1956, 9.4 ft³/s Sept. 13, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 25, 1913 reached a stage of 20.5 ft, present datum, at site 0.3 mi upstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,040 ft³/s June 22, gage height, 12.61 ft; minimum daily, 33 ft³/s October 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	44	90	279	173	261	3290	1200	1550	467	249	275
2	51	39	85	257	177	254	2340	978	804	290	206	375
3	46	40	78	232	324	269	991	476	508	338	174	173
4	40	204	75	421	266	304	4040	346	1580	318	188	118
5	36	676	71	417	198	1070	3370	572	1240	239	855	160
6	37	910	68	1130	177	1780	2580	727	1370	188	1310	91
7	39	354	68	1150	153	1100	1480	742	706	168	392	86
8	36	278	70	2460	144	802	1350	733	289	573	239	82
9	37	248	65	959	131	761	1370	863	276	249	181	83
10	38	655	65	1080	127	800	714	2320	311	304	165	76
11	78	805	65	998	108	936	659	1540	219	171	150	80
12	60	275	63	1200	106	1040	311	981	361	305	141	74
13	40	506	67	1360	103	737	331	1110	485	794	129	70
14	36	485	69	862	452	678	265	1430	907	275	124	472
15	33	235	78	1340	706	642	244	1310	3730	170	122	765
16	34	171	73	879	1280	614	229	1100	3230	145	103	207
17	39	148	75	741	512	554	215	677	2840	124	103	150
18	202	119	65	744	356	335	579	369	1410	116	92	111
19	119	118	65	551	307	267	928	275	643	332	92	92
20	57	992	70	365	283	625	540	330	866	424	98	86
21	53	754	69	291	2280	2420	539	276	1810	774	111	84
22	128	291	80	260	3400	726	336	204	6990	392	314	85
23	78	197	243	254	2280	534	226	917	1570	185	541	220
24	77	158	781	207	1190	361	207	3600	801	148	495	128
25	69	132	737	182	396	249	261	2110	443	128	209	89
26	50	121	272	207	373	213	1870	5260	308	566	129	76
27	43	111	177	289	373	190	1490	3980	542	1290	103	69
28	47	112	1710	230	278	175	1170	1700	5320	3580	93	65
29	66	103	1160	203	---	684	2200	1740	2750	715	101	62
30	53	93	1010	200	---	4690	1720	1280	1160	417	1050	61
31	50	---	468	187	---	4120	---	1580	---	376	245	---
TOTAL	1819	9374	8132	19935	16653	28191	35845	40726	45019	14561	8504	4505
MEAN	58.7	312	262	643	595	909	1195	1314	1501	470	274	150
MAX	202	992	1710	2460	3400	4690	4040	5260	6990	3580	1310	765
MIN	33	39	63	182	103	175	207	204	219	116	92	61
(+)	123	112	112	114	113	115	109	111	122	133	134	128

CAL YR 1988 TOTAL 94813 MEAN 259 MAX 5520 MIN 22 (+) 128

WTR YR 1989 TOTAL 233264 MEAN 639 MAX 6990 MIN 33 (+) 119

(+) Average diversions to City of Columbus Municipal Water Supply.

SCIOTO RIVER BASIN

127

03230500 BIG DARBY CREEK AT DARBYVILLE, OH

LOCATION.--Lat 39°42'02", long 83°06'37", Pickaway County, Hydrologic Unit 05060001, on left bank 150 ft downstream from bridge on State Highway 316, 0.4 mi northeast of Darbyville, 0.4 mi upstream from Lizzard Run, and 3.0 mi downstream from Greenbrier Creek.

DRAINAGE AREA.--534 mi².

PERIOD OF RECORD.--October 1921 to December 1935, January 1938 to current year. Prior to October 1959, published as Darby Creek at Darbyville.

REVISED RECORDS.--WSP 1083: 1922(M), 1924(M), 1927(M), 1933(M), 1938(M). WSP 1305: 1928-31(M), 1934(M), 1945(M). WSP 1505: 1932(M). WSP 1908: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 713.69 ft above National Geodetic Vertical Datum of 1929. Prior to Mar. 17, 1940, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Dec. 11-22, Feb. 8-12. Records fair. Water-quality data collected at this site 1964 to 1977. Sediment data collected 1969 to 1974. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--65 years, 454 ft³/s, 11.55 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 49,000 ft³/s Jan. 22, 1959, gage height, 17.94 ft from rating curve extended above 22,000 ft³/s on basis of contracted-opening measurement of peak flow; minimum observed, 1.4 ft³/s Sept. 17, 1932.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 4,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 1	0300	5,850	10.16	June 15	1500	5,000	9.33
Apr. 5	1800	*6,690	*10.75	June 22	0930	4,560	8.86
May 28	0200	6,130	10.37				

Minimum discharge, 20 ft³/s Oct. 7, 9, 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	35	241	692	300	514	5200	751	634	564	131	300
2	24	36	215	566	284	456	3370	644	543	457	118	251
3	24	35	190	477	292	422	2410	573	568	430	106	198
4	21	37	171	420	277	409	4000	500	1330	406	101	174
5	22	59	162	353	260	708	6080	554	1470	362	97	145
6	22	159	149	614	249	1830	3850	680	950	316	116	118
7	20	325	143	1490	222	1250	2080	754	825	286	451	100
8	21	309	139	3200	210	750	1750	635	632	266	414	87
9	20	228	129	3890	205	689	1470	679	538	252	257	80
10	21	238	120	1850	200	859	1210	1540	481	236	193	72
11	21	537	115	952	195	1410	953	1630	430	207	150	68
12	21	762	110	858	190	1620	818	963	402	202	124	65
13	20	553	105	1220	200	1200	731	813	402	192	104	62
14	22	544	100	1100	278	857	647	855	701	172	95	80
15	22	639	98	1000	507	792	594	893	4390	166	87	131
16	21	475	96	998	972	791	546	789	3120	149	81	99
17	23	358	94	939	973	651	503	609	1960	134	76	111
18	30	278	92	823	687	579	638	530	1170	121	70	129
19	30	228	90	723	559	512	1050	472	841	121	67	101
20	29	452	88	667	490	526	1310	456	786	120	68	85
21	32	1080	86	581	1480	1160	901	434	1180	151	67	73
22	34	1200	86	481	2810	1620	713	398	3790	157	80	68
23	39	712	105	427	1660	922	608	665	1710	149	108	63
24	39	531	197	387	873	723	539	1860	1000	170	191	59
25	38	417	356	362	670	616	493	2130	736	149	192	55
26	36	345	408	350	597	552	646	3040	587	285	186	53
27	33	309	335	348	571	491	715	5100	557	279	146	51
28	33	286	729	339	547	451	728	4550	1560	230	112	49
29	34	310	2200	330	---	486	1080	1570	1410	210	95	49
30	34	281	1770	317	---	2360	939	1010	775	165	164	47
31	34	---	918	308	---	5080	---	798	---	151	252	---
TOTAL	847	11758	9837	27062	16758	31286	46572	36875	35478	7255	4499	3023
MEAN	27.3	392	317	873	598	1009	1552	1190	1183	234	145	101
MAX	39	1200	2200	3890	2810	5080	6080	5100	4390	564	451	300
MIN	20	35	86	308	190	409	493	398	402	120	67	47
CFSM	.05	.73	.59	1.63	1.12	1.89	2.91	2.23	2.21	.44	.27	.19
IN.	.06	.82	.69	1.89	1.17	2.18	3.24	2.57	2.47	.51	.31	.21

CAL YR 1988 TOTAL 97699 MEAN 267 MAX 4690 MIN 13 CFSM .50 IN. 6.81
WTR YR 1989 TOTAL 231250 MEAN 634 MAX 6080 MIN 20 CFSM 1.19 IN. 16.11

SCIOTO RIVER BASIN

03230900 DEER CREEK NEAR PANCOASTBURG, OH

LOCATION.--Lat 39°37'14", long 83°12'47", Pickaway County, Hydrologic Unit 05060002, on left bank 200 ft downstream from bridge on Crownover Mill Road, 1,200 ft downstream from Deer Creek Dam, and 2.8 mi east of Pancoastburg.

DRAINAGE AREA.--277 mi².

PERIOD OF RECORD.--Water years 1964-66 (Occasional low-flow measurements and annual maximums), July 1966 to current year.

REVISED RECORDS.--WRD Ohio 1972: 1971.

GAGE.--Water-stage recorder. Datum of gage is 768.00 ft above National Geodetic Vertical Datum of 1929, U.S. Army Corps of Engineers bench mark. Oct. 23, 1963, to June 30, 1966, crest-stage gage at site 200 ft upstream at datum 8.16 ft lower. July 1, 1966 to Sept. 30, 1983 at datum 68.00 ft lower.

REMARKS.--No estimated daily discharges. Records good. Flow completely regulated by Deer Creek Lake (capacity 26,440 acre-ft) since April 1, 1968. Water-quality data collected at this site 1965 to 1977. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--23 years 257 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,500 ft³/s (estimated) Mar. 10, 1964, gage height, 12.93 ft, present datum; no flow May 25-27, 1968, result of dam closure.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,990 ft³/s May 24, gage height, 5.81 ft; minimum daily, 14 ft³/s Aug. 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	82	18	230	368	137	359	20	1070	1700	413	170	375
2	81	18	216	367	137	312	21	1060	1650	173	110	374
3	78	19	216	507	153	231	459	787	1280	231	81	292
4	78	19	216	473	174	206	767	384	708	278	61	163
5	78	20	214	263	174	208	722	384	596	249	54	144
6	78	19	198	281	174	826	1350	384	410	213	54	96
7	78	63	191	316	174	970	1780	452	346	180	540	73
8	80	201	189	330	148	495	1730	554	199	166	575	73
9	80	275	188	914	265	487	1300	554	166	166	233	62
10	80	362	188	1200	68	611	631	658	166	166	142	46
11	79	428	187	1160	67	691	425	943	166	128	97	46
12	77	426	170	1130	67	690	306	1140	166	80	77	46
13	77	424	151	831	120	597	274	690	166	80	78	46
14	77	611	145	691	144	400	274	423	166	80	79	46
15	77	704	145	686	379	342	274	478	627	80	38	175
16	77	475	145	685	1060	363	222	532	972	80	14	231
17	78	259	143	682	759	317	191	561	677	81	39	116
18	78	215	142	554	378	296	297	379	408	81	51	51
19	76	152	142	414	373	296	624	268	264	81	50	51
20	76	154	142	397	371	187	738	264	264	80	50	51
21	76	234	70	378	942	744	734	250	197	80	50	51
22	40	460	60	181	1310	756	529	180	966	80	50	51
23	17	541	74	99	1310	491	320	412	1860	80	57	51
24	17	535	74	199	827	302	243	1310	1350	80	87	51
25	17	530	75	226	363	216	223	1170	579	81	391	51
26	17	523	78	225	361	216	339	22	165	81	537	51
27	18	521	422	224	363	283	506	23	166	514	95	51
28	18	403	964	223	361	312	635	792	947	601	139	32
29	18	217	1250	223	---	275	751	1820	1870	352	139	17
30	19	226	772	163	---	136	955	1780	1330	171	130	17
31	18	---	372	137	---	19	---	1740	---	171	266	---
TOTAL	1840	9052	7769	14527	11159	12634	17640	21464	20527	5377	4534	2980
MEAN	59.4	302	251	469	399	408	588	692	684	173	146	99.3
MAX	82	704	1250	1200	1310	970	1780	1820	1870	601	575	375
MIN	17	18	60	99	67	19	20	22	165	80	14	17

CAL YR 1988 TOTAL 49229.0 MEAN 135 MAX 1410 MIN 9.5
WTR YR 1989 TOTAL 129503 MEAN 355 MAX 1870 MIN 14

SCIOTO RIVER BASIN

129

03231000 DEER CREEK AT WILLIAMSPORT, OH

LOCATION.--Lat 39°35'09", long 83°07'22", Pickaway County, Hydrologic Unit 05060002, on left bank at downstream side of bridge on U.S. Highway 22 at west edge of Williamsport, 2.0 mi downstream from Dry Run, and 7.6 mi upstream from Hay Run.

DRAINAGE AREA.--333 mi².

PERIOD OF RECORD.--August 1926 to December 1935, January 1938 to September 1956, water years 1959, 1961-62, annual maximum. July 1962 to current year.

REVISED RECORDS.--WSP 1083: 1929. WSP 1908: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 718.66 ft above National Geodetic Vertical Datum of 1929. Prior to Feb. 29, 1940, nonrecording gage, and Feb. 29, 1940, to Aug. 24, 1954, water-stage recorder, same site at datum 3.00 ft higher. Aug. 24, 1954 to Sept. 30, 1956, nonrecording gage at same site and datum. Oct. 1, 1958, to June 1962, crest-stage gage at site 120 ft downstream at same datum. U.S. Army Corps of Engineers satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Deer Creek Lake 9.0 mi upstream beginning in 1968. Water-quality data collected at this site 1965 to 1977.

AVERAGE DISCHARGE.--54 years (1926-35, 1938-56, 1962-89), 300 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 39,600 ft³/s Jan. 22, 1959, gage height, 17.6 ft (from flood-marks), from rating curve extended above 25,000 ft³/s on basis of contracted-opening measurement of peak flow; minimum daily, 1.8 ft³/s July 25, 1934, Oct. 1-4, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,970 ft³/s May 26, gage height, 12.34 ft; minimum daily, 25 ft³/s Oct. 27-29, 30, 31, Nov. 1-3 and Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	81	25	255	458	161	415	297	1380	1870	531	266	496
2	81	25	229	475	155	370	177	1380	1820	227	199	518
3	79	25	229	571	182	287	546	1140	1530	265	124	434
4	77	27	226	585	213	247	2040	507	752	326	106	232
5	78	36	223	338	206	399	968	558	677	314	256	215
6	77	56	214	506	199	983	1570	665	471	265	356	142
7	77	60	202	526	192	1410	2290	582	401	250	470	100
8	78	188	196	785	180	634	2210	689	256	271	710	96
9	79	298	192	1030	128	737	1800	814	200	206	323	87
10	79	357	192	1490	120	873	840	1060	198	219	215	57
11	80	472	190	1420	103	926	526	1150	193	196	148	57
12	75	464	185	1500	130	856	386	1420	200	113	105	55
13	75	476	157	1170	111	759	329	1010	203	121	102	54
14	76	628	148	855	206	526	321	575	213	111	100	64
15	75	786	146	960	715	406	318	973	539	106	86	218
16	77	612	143	908	1600	425	279	861	1020	104	32	326
17	77	278	141	851	1220	385	215	756	784	100	36	186
18	112	250	147	729	493	344	478	545	491	100	62	68
19	92	167	141	507	464	326	1070	355	306	103	62	64
20	82	405	142	480	456	305	955	338	306	106	64	64
21	63	379	106	430	1560	1000	889	331	260	114	67	62
22	73	508	50	287	1840	1130	691	238	761	109	65	64
23	31	638	80	117	1690	620	399	863	2010	117	79	65
24	29	616	155	210	1200	447	304	1710	1580	309	146	62
25	28	602	168	252	441	284	266	2800	735	163	430	60
26	26	592	118	261	440	271	592	3240	211	140	617	61
27	25	587	361	260	435	313	717	369	257	479	123	60
28	26	482	1330	255	425	365	1020	665	896	769	176	52
29	25	281	1560	253	---	352	1770	2030	2040	475	176	26
30	25	222	1120	210	---	596	1320	1980	1670	243	231	25
31	25	---	458	161	---	487	---	1930	---	401	331	---
TOTAL	1983	10542	9204	18840	15265	17478	25583	32914	22850	7353	6263	4070
MEAN	64.0	351	297	608	545	564	853	1062	762	237	202	136
MAX	112	786	1560	1500	1840	1410	2290	3240	2040	769	710	518
MIN	25	25	50	117	103	247	177	238	193	100	32	25

CAL YR 1988 TOTAL 61010.7 MEAN 167 MAX 1930 MIN 9.1
WTR YR 1989 TOTAL 172345 MEAN 472 MAX 3240 MIN 25

SCIOTO RIVER BASIN

03231500 SCIOTO RIVER AT CHILLICOTHE, OH

LOCATION.--Lat 39°20'29", long 82°58'16", Ross County, Hydrologic Unit 05060002, on right bank at north end of Chillicothe, 1,400 ft downstream from Bridge Street bridge, 7.4 mi upstream from Paint Creek, and 15.4 mi downstream from Deer Creek.

DRAINAGE AREA.--3,849 mi².

PERIOD OF RECORD.--December 1913 to September 1914 (gage heights and discharge measurements only). October 1920 to current year. Monthly discharge only for some periods, published in WSP 1305. Gage-height records collected in this vicinity since 1907 are contained in reports of the National Weather Service.

REVISED RECORDS.--WSP 803: 1929(M). WSP 1908: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 594.05 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 30, 1914, nonrecording gage at site 1,300 ft upstream of different datum. Apr. 1, 1921, to Aug. 6, 1930, nonrecording gage, at site 1,400 ft upstream at present datum. Aug. 7, 1930, to Sept. 30, 1969, water-stage recorder 900 ft upstream at same datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by 6 reservoirs 36 mi to 91 mi upstream from station. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--69 years, 3,462 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 144,000 ft³/s Jan. 23, 1959, gage height, 32.5 ft, (from high-water mark in well); minimum daily, 166 ft³/s Sept. 27, 1944.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 26, 1913 reached a stage of 39.8 ft, discharge, 260,000 ft³/s (estimated by Franklin County Conservancy District).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 27,700 ft³/s Apr. 6, gage height, 12.68 ft; minimum daily, 688 ft³/s Nov. 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	748	697	1820	5020	2590	4100	24500	9320	14200	6450	3550	2550
2	758	695	1700	4320	2460	3470	24800	7650	12600	4360	2730	2760
3	750	688	1620	3820	2480	3090	19300	7110	10600	3480	2170	2630
4	743	709	1570	3420	2860	2920	18000	5350	10300	4070	1960	1900
5	742	918	1490	2980	2600	3650	22200	4920	11600	3580	2580	1610
6	725	2330	1460	3590	2220	9890	26900	6150	9250	3110	7540	1480
7	707	3040	1400	7740	2080	10900	24000	5760	8560	2760	7110	1360
8	707	2200	1340	10500	1900	7840	18900	5430	7000	2750	4330	1290
9	702	2070	1290	16000	1700	6520	15300	5460	4850	3680	3070	1250
10	692	1970	1280	14700	1590	7530	10300	10100	4210	2590	2350	1210
11	696	3080	1260	11100	1630	7600	7870	11400	3690	3060	2020	1140
12	765	3670	1220	9400	1600	8200	6580	9050	3190	2260	1790	1120
13	802	2950	1190	9180	1570	7540	5200	7430	3590	2530	1640	1110
14	727	3360	1190	8030	2190	6210	4630	8100	3730	3270	1520	1130
15	708	3740	1240	8210	4700	5850	4080	9280	9750	2730	1460	2680
16	700	3170	1240	8610	11000	5280	3800	11000	14300	2370	1400	2920
17	703	2410	1190	6800	9200	5050	3750	8420	12100	2020	1340	1880
18	776	1990	1140	6020	5870	4530	3990	6690	9080	1810	1300	1580
19	1240	1740	1140	5540	4650	3770	9210	4560	6520	1710	1290	1390
20	1100	2300	1170	4430	4200	3350	8090	3970	5230	2090	1270	1310
21	902	6870	1210	4070	8300	7680	6610	4320	5700	2120	1300	1350
22	892	6720	1240	3570	15600	11600	5630	3840	12000	2980	1330	1300
23	991	5270	1300	3020	15400	7930	4660	6150	18600	3140	2390	2150
24	873	3730	1860	2850	11000	5910	3980	11700	10400	2750	3080	3080
25	842	3160	4690	2650	6770	4520	3510	16200	6080	2410	3400	1750
26	824	2800	3540	2560	4460	3710	5280	19900	4340	2080	2820	1450
27	778	2520	2350	2710	4290	3330	9520	26100	3530	3190	1950	1290
28	739	2350	3180	2840	4110	3150	8900	26800	8400	6480	1600	1190
29	719	2110	10500	2610	---	3450	13800	25400	15200	13700	1490	1130
30	718	1850	10400	2560	---	10400	13400	18300	10000	6180	2360	1060
31	707	---	7780	2550	---	18900	---	14600	---	4440	4020	---
TOTAL	24476	81107	75000	181400	139020	197870	336690	320460	258600	110150	78160	50050
MEAN	790	2704	2419	5852	4965	6383	11220	10340	8620	3553	2521	1668
MAX	1240	6870	10500	16000	15600	18900	26900	26800	18600	13700	7540	3080
MIN	692	688	1140	2550	1570	2920	3510	3840	3190	1710	1270	1060

CAL YR 1988 TOTAL 863666 MEAN 2360 MAX 23700 MIN 488
WTR YR 1989 TOTAL 1852983 MEAN 5077 MAX 26900 MIN 688

SCIOTO RIVER BASIN

03231500 SCIOTO RIVER AT CHILLICOTHE, OH--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1950-51, 1965-1981, November 1985 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: May 1965 to October 1981, November 1985 to current year.

pH: June 1971 to October 1981, November 1985 to current year.

WATER TEMPERATURES: October 1950 to September 1951, October 1953 to October 1981, November 1985 to current year.

DISSOLVED OXYGEN: May 1965 to October 1981, November 1985 to current year.

INSTRUMENTATION.--Water-quality monitor. Digital recorder set for one-hour-interval punch since Feb. 1977.

REMARKS.--Interruptions in the water-quality record were due to malfunction of the instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 1,210 micromhos Jan. 13, 1976; minimum, 150 micromhos June 29, 1972.

pH: Maximum, 9.3 units Aug. 24-26, 1981, May 1, 1988; minimum, 6.3 units Mar. 6, 1979.

WATER TEMPERATURES: Maximum, 32.5°C July 17, Aug. 18, 1988; minimum 0.0°C on many days during winters.

DISSOLVED OXYGEN: Maximum, >20.0 mg/L on several days during 1978 thru 1988; minimum, 0.0 mg/L April 27, Aug. 12, Sept. 22, 1966.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 920 microsiemens Dec. 23; minimum, 274 micromhos May 26.

pH: Maximum recorded, 8.8 units Aug. 17; minimum recorded, 7.5 units May 28, 29, June 28.

WATER TEMPERATURES: Maximum, 29°C July 10, 11, 13, 25, 26; minimum, 0.0°C Feb. 9.

DISSOLVED OXYGEN: Maximum, 16.4 mg/L Aug. 17; minimum, 4.5 mg/L July 25.

SCIOTO RIVER BASIN

03231500 SCIOTO RIVER AT CHILLICOTHE OH--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	800	786	793	882	856	867	786	780	783	710	674	687
2	810	800	805	900	884	889	798	782	787	730	712	725
3	832	812	816	900	886	896	802	796	798	746	730	739
4	838	824	829	884	876	880	804	800	803	748	738	742
5	848	838	843	884	850	868	816	804	811	758	738	747
6	848	840	845	894	810	876	818	814	815	750	660	720
7	846	840	844	798	602	685	824	816	822	660	636	652
8	840	830	835	666	602	624	826	816	822	672	474	637
9	832	820	825	686	668	679	824	816	819	554	468	519
10	830	824	828	676	652	667	824	816	820	592	556	571
11	838	830	833	692	632	665	828	822	824	586	578	582
12	840	834	837	696	602	632	834	826	830	582	574	577
13	864	840	852	650	626	643	836	820	829	576	564	568
14	866	850	857	658	636	645	838	830	833	588	572	580
15	854	844	848	658	616	629	848	838	843	582	562	570
16	848	838	845	660	634	648	852	844	848	572	564	568
17	838	816	825	700	660	675	862	850	857	616	576	597
18	816	796	808	714	700	705	878	862	871	642	618	631
19	830	794	820	740	714	724	884	856	870	656	640	648
20	804	746	775	740	646	694	870	858	864	676	656	663
21	820	806	812	640	566	605	876	866	870	694	678	686
22	818	782	800	620	558	588	902	878	887	706	694	700
23	782	770	774	658	622	643	920	900	914	736	708	723
24	798	770	782	658	646	651	914	846	882	744	734	738
25	840	800	817	688	660	675	854	664	767	744	740	742
26	854	842	850	708	690	700	650	578	602	758	742	746
27	842	830	836	712	706	708	674	612	641	768	756	762
28	846	830	837	724	712	718	686	628	672	764	746	754
29	850	844	846	754	724	739	620	590	602	748	738	741
30	848	840	844	782	754	767	644	602	630	756	748	750
31	858	846	851	---	---	---	680	648	669	772	756	764
MONTH	866	746	826	900	558	713	920	578	796	772	468	672
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	774	766	769	794	746	776	482	432	465	---	---	---
2	774	766	771	780	762	776	480	460	467	---	---	---
3	770	764	767	762	748	758	486	462	474	---	---	---
4	770	760	764	764	746	752	486	414	459	634	598	619
5	758	744	748	766	600	709	422	408	416	644	626	638
6	764	744	750	630	508	562	432	412	425	630	580	600
7	778	764	768	606	508	551	458	432	445	---	---	---
8	790	778	784	730	618	696	464	456	458	---	---	---
9	808	788	793	704	652	675	506	466	480	---	---	---
10	828	808	813	690	624	646	546	508	529	---	---	---
11	844	800	831	654	644	650	568	548	561	---	---	---
12	844	832	838	664	652	658	588	568	578	---	---	---
13	844	814	836	656	636	645	622	590	607	---	---	---
14	818	744	782	652	636	640	652	624	637	---	---	---
15	748	566	685	672	654	663	672	652	663	---	---	---
16	552	484	509	682	662	669	694	672	682	---	---	---
17	600	534	553	722	684	705	706	694	702	---	---	---
18	670	604	641	722	696	709	700	660	694	---	---	---
19	698	672	687	700	692	696	660	468	541	---	---	---
20	718	698	710	716	694	709	548	496	516	---	---	---
21	706	468	577	688	574	614	618	552	589	---	---	---
22	516	486	502	606	560	576	642	618	631	---	---	---
23	570	492	525	634	608	617	672	642	658	---	---	---
24	622	574	593	660	634	646	692	674	686	---	---	---
25	658	624	644	690	662	677	692	668	688	532	518	526
26	670	656	661	720	688	700	680	600	647	498	274	427
27	702	674	688	730	700	724	---	---	---	386	276	350
28	742	704	726	732	710	723	---	---	---	394	380	387
29	---	---	---	712	472	603	---	---	---	396	380	387
30	---	---	---	---	---	---	---	---	---	424	396	415
31	---	---	---	---	---	---	---	---	---	438	422	431
MONTH	844	468	704	794	472	673	706	408	565	644	274	478

03231500 SCIOTO RIVER AT CHILLICOTHE OH--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	448	434	440	602	514	562	614	526	569	576	506	537
2	466	446	452	670	605	637	648	618	638	655	580	612
3	470	458	462	698	667	679	684	648	663	690	643	670
4	474	454	468	698	682	689	724	686	706	639	623	631
5	478	414	446	702	682	692	728	572	655	659	639	649
6	498	474	485	722	706	712	648	438	544	678	659	672
7	560	500	532	729	718	723	476	358	392	722	706	714
8	592	562	576	745	718	731	548	412	495	753	722	738
9	634	590	607	753	580	661	600	573	583	776	753	764
10	666	636	651	678	655	666	647	600	620	784	749	771
11	688	668	676	702	596	664	686	655	669	801	782	787
12	688	674	682	682	600	642	722	690	704	792	788	791
13	694	684	688	737	682	707	737	725	731	808	794	802
14	688	654	672	757	674	725	753	737	743	812	742	793
15	652	458	598	682	651	664	769	749	757	796	736	775
16	450	418	426	722	682	702	769	761	764	786	574	668
17	494	438	471	737	706	719	780	765	772	614	572	588
18	520	494	504	737	729	733	792	772	786	676	616	645
19	578	522	554	752	733	741	800	768	790	746	680	717
20	622	578	596	750	726	735	800	788	794	758	748	752
21	638	622	630	760	734	753	837	792	804	770	758	764
22	620	418	579	730	666	692	812	792	805	784	694	757
23	436	390	400	668	628	642	820	730	809	744	604	676
24	538	436	491	676	644	662	729	577	680	648	410	516
25	600	542	570	698	650	674	608	502	560	634	440	549
26	656	602	626	698	688	693	620	576	594	696	638	663
27	672	656	665	724	682	697	663	588	618	722	696	708
28	672	466	591	728	458	554	698	667	682	748	726	737
29	464	392	421	436	344	387	714	690	704	764	748	755
30	518	467	497	542	420	483	746	688	727	794	766	778
31	---	---	---	586	528	563	659	506	589	---	---	---
MONTH	694	390	549	760	344	664	837	358	676	812	410	699
YEAR	920	274	681									

PH (STANDARD UNITS), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	---	---	---	8.5	8.2	8.3	8.3	8.3	8.3	8.3	8.2	8.3
2	---	---	---	8.6	8.2	8.3	8.3	8.3	8.3	8.3	8.3	8.3
3	---	---	---	8.5	8.2	8.3	8.4	8.3	8.3	8.3	8.3	8.3
4	8.3	8.1	8.2	8.5	8.2	8.3	8.4	8.3	8.3	8.3	8.3	8.3
5	8.3	8.2	8.2	8.3	8.1	8.2	8.4	8.3	8.3	8.4	8.3	8.3
6	8.4	8.2	8.2	8.1	7.9	8.0	8.4	8.3	8.3	8.3	8.1	8.2
7	8.4	8.2	8.3	7.9	7.8	7.9	8.4	8.3	8.4	8.1	8.0	8.0
8	8.4	8.2	8.3	8.0	7.9	7.9	8.4	8.3	8.4	8.0	7.8	8.0
9	8.5	8.2	8.4	8.1	8.0	8.0	8.4	8.3	8.4	7.9	7.8	7.9
10	8.5	8.3	8.4	8.1	8.0	8.1	8.5	8.3	8.4	8.0	7.9	8.0
11	8.5	8.2	8.3	8.1	8.0	8.0	8.5	8.4	8.4	8.1	8.0	8.0
12	8.4	8.2	8.3	8.1	7.9	8.0	8.5	8.4	8.5	8.1	8.0	8.0
13	8.3	8.2	8.3	8.1	8.1	8.1	8.5	8.4	8.5	8.0	8.0	8.0
14	8.4	8.2	8.3	8.1	8.1	8.1	8.5	8.4	8.4	8.1	8.0	8.1
15	8.3	8.2	8.2	8.2	8.1	8.1	8.5	8.4	8.4	8.1	8.0	8.1
16	8.4	8.1	8.2	8.2	8.2	8.2	8.5	8.4	8.5	8.0	8.0	8.0
17	8.3	8.1	8.2	8.2	8.2	8.2	8.5	8.4	8.5	8.1	8.0	8.1
18	8.4	8.1	8.2	8.3	8.2	8.2	8.6	8.5	8.5	8.1	8.1	8.1
19	8.2	8.0	8.1	8.3	8.2	8.2	8.6	8.5	8.5	8.1	8.1	8.1
20	8.1	7.9	8.0	8.2	8.1	8.2	8.6	8.4	8.5	8.1	8.1	8.1
21	8.0	8.0	8.0	8.1	7.9	8.0	8.4	8.3	8.4	8.1	8.1	8.1
22	8.1	8.0	8.1	8.1	7.9	8.0	8.5	8.3	8.4	8.2	8.1	8.1
23	8.1	8.1	8.1	8.2	8.1	8.1	8.5	8.3	8.4	8.1	8.1	8.1
24	8.2	8.0	8.1	8.2	8.2	8.2	8.4	8.2	8.3	8.1	8.1	8.1
25	8.2	8.1	8.1	8.3	8.2	8.3	8.3	8.0	8.2	8.1	8.1	8.1
26	8.3	8.1	8.2	8.3	8.2	8.3	8.1	8.0	8.1	8.1	8.1	8.1
27	8.3	8.1	8.2	8.3	8.3	8.3	8.2	8.1	8.2	8.1	8.1	8.1
28	8.3	8.1	8.2	8.3	8.3	8.3	8.3	8.2	8.3	8.1	8.1	8.1
29	8.4	8.2	8.3	8.3	8.3	8.3	8.3	8.0	8.1	8.1	8.1	8.1
30	8.4	8.2	8.3	8.3	8.3	8.3	8.2	8.1	8.2	8.1	8.1	8.1
31	8.4	8.2	8.3	---	---	---	8.2	8.2	8.2	8.1	8.1	8.1
MONTH	8.5	7.9	8.2	8.6	7.8	8.2	8.6	8.0	8.4	8.4	7.8	8.1

SCIOTO RIVER BASIN

03231500 SCIOTO RIVER AT CHILLICOTHE OH--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	8.2	8.1	8.1	8.1	8.1	8.1	7.8	7.7	7.8	---	---	---
2	8.1	8.1	8.1	8.1	8.1	8.1	7.8	7.8	7.8	---	---	---
3	8.2	8.1	8.1	8.1	8.1	8.1	7.8	7.8	7.8	---	---	---
4	8.2	8.2	8.2	8.1	8.0	8.1	7.8	7.7	7.8	7.9	7.9	7.9
5	8.2	8.2	8.2	8.1	8.0	8.0	7.7	7.7	7.7	7.9	7.9	7.9
6	8.2	8.2	8.2	8.1	7.9	8.0	7.8	7.7	7.8	7.9	7.9	7.9
7	8.2	8.2	8.2	8.1	7.9	8.0	7.9	7.8	7.8	---	---	---
8	8.2	8.2	8.2	8.1	8.1	8.1	7.9	7.8	7.9	---	---	---
9	8.2	8.2	8.2	8.1	8.1	8.1	7.9	7.9	7.9	---	---	---
10	8.2	8.2	8.2	8.1	8.0	8.0	7.9	7.9	7.9	---	---	---
11	8.2	8.1	8.2	8.1	8.0	8.0	7.9	7.9	7.9	---	---	---
12	8.2	8.2	8.2	8.1	8.0	8.1	7.9	7.9	7.9	---	---	---
13	8.2	8.2	8.2	8.1	8.1	8.1	7.9	7.9	7.9	---	---	---
14	8.2	8.2	8.2	8.1	8.0	8.1	7.9	7.8	7.9	---	---	---
15	8.2	8.1	8.1	8.1	8.0	8.0	7.9	7.8	7.9	---	---	---
16	8.0	7.9	8.0	8.1	8.0	8.1	7.9	7.9	7.9	---	---	---
17	8.1	8.0	8.0	8.1	8.0	8.0	7.9	7.9	7.9	---	---	---
18	8.1	8.1	8.1	8.1	8.0	8.0	7.9	7.9	7.9	---	---	---
19	8.1	8.1	8.1	8.1	8.0	8.1	8.0	7.8	7.9	---	---	---
20	8.2	8.1	8.1	8.1	8.0	8.1	7.8	7.8	7.8	---	---	---
21	8.2	8.0	8.1	8.1	8.0	8.1	7.9	7.8	7.9	---	---	---
22	8.0	7.9	8.0	8.1	8.0	8.0	7.9	7.9	7.9	---	---	---
23	8.1	8.0	8.0	8.1	8.0	8.1	8.0	7.9	7.9	---	---	---
24	8.2	8.1	8.2	8.0	7.9	8.0	8.1	8.0	8.0	---	---	---
25	8.2	8.1	8.2	8.0	7.9	8.0	8.1	8.0	8.0	---	---	---
26	8.1	8.1	8.1	8.0	7.9	8.0	8.0	7.8	7.9	7.8	7.6	7.7
27	8.1	8.0	8.1	8.1	8.0	8.1	---	---	---	7.6	7.6	7.6
28	8.1	8.1	8.1	8.1	8.0	8.1	---	---	---	7.6	7.5	7.5
29	---	---	---	8.1	7.8	8.0	---	---	---	7.6	7.5	7.6
30	---	---	---	---	---	---	---	---	---	7.7	7.6	7.7
31	---	---	---	---	---	---	---	---	---	7.7	7.7	7.7
MONTH	8.2	7.9	8.1	8.1	7.8	8.1	8.1	7.7	7.9	7.9	7.5	7.7
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	7.7	7.7	7.7	8.3	8.2	8.2	7.9	7.8	7.8	8.0	7.8	7.9
2	7.8	7.7	7.7	8.3	8.2	8.3	7.9	7.9	7.9	8.1	8.0	8.0
3	7.7	7.7	7.7	8.4	8.3	8.3	8.0	7.9	7.9	8.1	8.0	8.1
4	7.7	7.6	7.7	8.4	8.3	8.4	8.1	7.9	8.0	8.2	8.0	8.1
5	7.6	7.6	7.6	8.3	8.3	8.3	8.1	7.9	8.0	8.3	8.0	8.2
6	7.7	7.6	7.7	8.5	8.3	8.4	8.0	7.6	7.8	8.5	8.1	8.3
7	7.8	7.7	7.7	8.7	8.4	8.5	7.7	7.6	7.7	8.6	8.3	8.4
8	7.8	7.8	7.8	8.7	8.5	8.6	8.0	7.7	7.9	8.5	8.2	8.4
9	7.8	7.7	7.8	8.7	8.1	8.3	8.2	8.1	8.1	8.6	8.2	8.4
10	7.8	7.8	7.8	8.3	8.2	8.2	8.2	8.1	8.1	8.5	8.3	8.4
11	7.8	7.8	7.8	8.3	8.2	8.3	8.2	8.1	8.2	8.6	8.2	8.4
12	7.8	7.8	7.8	8.3	8.1	8.2	8.3	8.1	8.2	8.5	8.3	8.4
13	7.9	7.8	7.8	8.4	8.2	8.3	8.4	8.2	8.3	8.5	8.3	8.4
14	7.8	7.8	7.8	8.4	8.3	8.4	8.4	8.2	8.3	8.4	8.3	8.4
15	7.8	7.7	7.8	8.4	8.2	8.3	8.6	8.3	8.4	8.3	8.1	8.2
16	7.8	7.7	7.8	8.6	8.3	8.4	8.6	8.3	8.5	8.1	8.0	8.0
17	7.9	7.8	7.8	8.6	8.3	8.5	8.8	8.4	8.6	8.1	8.0	8.1
18	7.9	7.9	7.9	8.7	8.4	8.6	8.7	8.5	8.6	8.2	8.1	8.1
19	7.9	7.9	7.9	8.6	8.4	8.5	8.7	8.3	8.5	8.2	8.1	8.2
20	7.9	7.9	7.9	8.4	8.2	8.3	8.7	8.4	8.5	8.3	8.2	8.2
21	7.9	7.9	7.9	8.3	8.2	8.2	8.5	8.2	8.4	8.4	8.2	8.3
22	7.9	7.7	7.9	8.2	8.1	8.2	8.4	8.2	8.3	8.3	8.2	8.3
23	7.7	7.6	7.6	8.1	8.0	8.1	8.3	8.0	8.2	8.3	8.2	8.2
24	7.8	7.7	7.7	8.2	8.1	8.1	8.0	7.9	7.9	8.2	8.0	8.1
25	7.8	7.8	7.8	8.1	8.0	8.1	7.9	7.8	7.9	8.1	8.0	8.1
26	7.9	7.8	7.8	8.3	8.1	8.2	8.1	7.9	8.0	8.2	8.1	8.2
27	7.9	7.8	7.9	8.3	8.1	8.2	8.1	8.0	8.1	8.3	8.2	8.3
28	7.9	7.5	7.7	8.0	7.7	7.9	8.4	8.0	8.2	8.4	8.3	8.3
29	8.1	7.6	7.9	7.7	7.6	7.7	8.6	8.2	8.4	8.4	8.3	8.3
30	8.2	8.1	8.2	7.8	7.7	7.7	8.5	8.1	8.3	8.4	8.3	8.4
31	---	---	---	7.8	7.7	7.8	8.0	7.8	7.8	---	---	---
MONTH	8.2	7.5	7.8	8.7	7.6	8.2	8.8	7.6	8.2	8.6	7.8	8.2
YEAR	8.8	7.5	8.1									

SCIOTO RIVER BASIN

135

03231500 SCIOTO RIVER AT CHILLICOTHE OH--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	22.9	21.4	22.1	10.5	9.0	9.5	6.5	5.5	6.0	3.0	2.0	2.5
2	22.5	21.4	22.1	10.0	9.0	9.5	6.0	5.5	6.0	3.5	3.0	3.0
3	21.2	19.7	20.6	10.0	8.0	9.0	6.5	5.0	5.5	3.0	2.5	3.0
4	19.5	17.4	18.5	12.5	10.0	11.5	6.5	5.0	6.0	2.5	2.0	2.5
5	17.3	15.6	16.4	13.0	12.5	13.0	5.5	4.5	5.0	2.5	1.0	2.0
6	16.0	14.0	15.0	12.5	11.5	12.0	6.0	4.5	5.5	4.0	2.5	3.5
7	15.0	14.0	14.5	11.5	9.5	10.5	6.5	5.5	6.0	5.5	4.0	4.5
8	15.0	13.5	14.5	10.5	9.0	9.5	6.0	5.5	6.0	6.5	5.5	5.5
9	15.5	14.0	14.5	10.0	9.0	9.5	5.5	4.5	5.0	6.5	4.0	5.0
10	15.5	14.0	14.5	11.5	10.0	11.0	4.5	3.0	4.0	3.5	2.5	3.0
11	14.5	13.0	14.0	11.0	10.0	10.5	3.0	2.0	2.5	3.0	2.5	3.0
12	13.0	12.0	12.5	11.0	9.0	9.5	2.0	.5	1.0	4.5	3.5	4.0
13	12.0	10.5	11.5	10.0	9.0	9.5	2.0	1.0	1.5	4.5	4.0	4.5
14	12.5	10.5	11.5	10.5	8.5	9.5	3.5	2.0	2.5	4.0	3.0	3.5
15	13.5	11.5	12.5	10.0	9.0	10.0	4.0	3.5	3.5	3.5	3.0	3.5
16	13.5	12.0	13.0	11.5	10.0	11.0	3.5	2.0	3.0	3.5	3.0	3.5
17	15.0	13.5	14.0	11.0	10.0	10.5	2.5	1.5	2.0	4.0	3.0	3.5
18	15.5	15.0	15.5	9.5	8.5	9.0	1.5	1.0	1.0	4.5	3.5	4.0
19	15.0	14.5	15.0	9.0	9.0	9.0	3.0	1.0	1.5	5.0	4.5	4.5
20	15.0	13.5	14.0	10.5	9.5	10.0	5.5	3.0	4.0	5.0	4.5	5.0
21	14.5	13.5	14.0	10.5	9.5	10.0	6.5	5.5	6.0	4.5	3.5	4.0
22	13.5	12.0	13.0	9.5	8.5	9.0	6.0	5.0	5.5	4.0	2.5	3.5
23	12.0	11.0	11.5	8.0	7.5	8.0	8.0	6.0	7.0	4.5	3.0	3.5
24	11.0	10.5	10.5	7.5	7.0	7.5	8.0	7.0	7.5	5.5	4.0	4.5
25	10.5	9.5	10.0	8.0	6.5	7.5	8.0	6.0	7.0	6.5	5.5	6.0
26	10.0	9.0	9.5	9.0	7.5	8.0	5.5	4.0	5.0	7.5	6.5	7.0
27	10.0	8.5	9.0	10.5	9.5	10.0	6.0	4.0	4.5	7.5	6.5	7.0
28	10.5	10.0	10.0	10.0	7.5	9.0	6.0	4.5	5.5	7.0	5.5	6.5
29	10.0	9.0	10.0	7.5	6.5	7.0	4.0	3.0	4.0	7.5	6.5	7.0
30	10.0	9.0	9.5	7.0	6.5	6.5	3.0	2.0	2.5	7.5	7.0	7.5
31	9.5	8.0	9.0	---	---	---	2.5	2.0	2.0	8.0	6.5	7.0
MONTH	22.9	8.0	13.5	13.0	6.5	9.5	8.0	.5	4.5	8.0	1.0	4.5
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	9.5	7.5	8.5	4.5	3.5	4.0	9.0	8.0	8.5	---	---	---
2	9.0	8.5	9.0	5.0	3.5	4.0	8.0	7.5	8.0	---	---	---
3	8.0	6.0	7.0	6.5	4.0	5.0	10.5	8.0	9.0	---	---	---
4	6.0	4.5	5.0	9.0	6.5	7.5	12.0	10.5	11.5	---	---	---
5	4.5	3.5	4.0	9.0	7.0	8.5	12.0	10.5	11.5	15.0	14.5	15.0
6	3.5	3.0	3.5	7.5	4.5	5.5	11.0	10.0	10.5	15.0	13.0	14.0
7	3.0	2.0	2.5	4.0	3.0	3.5	10.5	10.0	10.0	---	---	---
8	2.5	1.0	2.0	3.5	2.5	3.0	10.0	9.0	9.5	---	---	---
9	1.0	.0	.5	4.5	3.0	3.5	9.5	8.5	9.0	---	---	---
10	1.5	.5	1.0	5.5	4.0	5.0	9.5	8.5	9.0	---	---	---
11	3.0	1.0	2.0	7.0	5.5	6.0	9.5	8.0	9.0	---	---	---
12	3.5	2.0	2.5	7.5	6.5	7.0	10.5	8.0	9.5	---	---	---
13	4.0	3.0	3.5	7.0	6.0	6.5	11.5	9.5	10.5	---	---	---
14	4.5	4.0	4.0	8.5	6.5	7.5	12.5	10.0	11.0	---	---	---
15	4.5	4.0	4.5	9.5	8.5	9.0	12.5	12.0	12.0	---	---	---
16	4.0	3.0	3.5	9.0	7.5	8.5	14.0	11.0	12.5	---	---	---
17	3.5	3.0	3.5	10.0	8.0	9.0	14.5	12.5	13.5	---	---	---
18	3.5	3.0	3.5	10.5	9.5	10.0	14.5	13.5	14.0	---	---	---
19	3.5	3.0	3.5	9.0	8.0	9.0	13.5	11.0	12.0	---	---	---
20	4.0	3.5	3.5	8.5	7.5	8.0	13.5	11.5	12.5	---	---	---
21	5.0	4.0	4.5	7.5	6.0	6.5	15.0	13.0	13.5	---	---	---
22	5.0	4.0	4.5	6.5	5.5	6.0	15.0	14.0	14.5	---	---	---
23	4.0	2.5	3.0	7.5	6.0	6.5	15.0	13.5	14.5	---	---	---
24	2.5	1.5	2.0	10.0	7.5	8.5	15.5	14.0	14.5	---	---	---
25	2.5	1.5	2.0	11.5	9.5	10.5	16.0	14.0	15.0	18.0	16.5	17.0
26	3.0	2.5	3.0	14.0	10.5	12.0	17.0	15.5	16.0	20.5	18.0	19.0
27	3.5	3.0	3.5	14.5	12.5	14.0	---	---	---	20.5	19.5	20.0
28	4.5	3.0	3.5	16.5	15.0	16.5	---	---	---	20.0	19.0	19.5
29	---	---	---	16.5	14.5	15.5	---	---	---	20.0	19.5	20.0
30	---	---	---	---	---	---	---	---	---	20.5	19.5	20.0
31	---	---	---	---	---	---	---	---	---	21.5	20.5	21.0
MONTH	9.5	.0	3.5	16.5	2.5	8.0	17.0	7.5	11.5	21.5	13.0	18.5

SCIOTO RIVER BASIN

03231500 SCIOTO RIVER AT CHILLICOTHE OH--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE				JULY			AUGUST			SEPTEMBER		
1	22.0	21.0	21.5	24.5	24.0	24.0	25.0	23.5	24.0	26.0	24.5	25.5
2	22.0	21.5	22.0	25.0	24.5	24.5	26.5	23.5	25.0	25.0	24.0	24.5
3	22.0	21.5	22.0	24.5	24.0	24.0	27.0	24.5	25.5	25.0	23.5	24.0
4	22.5	21.5	22.0	24.0	23.5	23.5	28.0	25.5	26.5	24.5	22.5	23.5
5	22.0	20.5	21.0	25.0	23.5	24.0	28.0	26.5	27.0	25.0	22.5	23.5
6	21.0	19.5	20.5	27.0	24.0	25.0	27.0	25.5	26.0	26.0	23.0	24.5
7	22.0	20.0	21.0	28.0	25.5	26.5	25.5	23.0	24.5	26.0	24.5	25.5
8	22.5	21.5	22.0	28.0	26.0	27.0	23.5	21.5	22.5	27.0	24.5	26.0
9	22.5	21.0	22.0	27.5	26.5	27.0	24.5	22.5	23.5	27.5	25.5	26.5
10	22.0	21.0	21.5	29.0	26.5	27.5	25.0	22.5	23.5	27.0	25.5	26.5
11	22.0	20.0	21.0	29.0	27.5	28.5	25.5	23.0	24.5	25.5	24.5	25.0
12	22.0	20.0	21.0	28.0	27.0	27.5	26.0	23.5	24.5	25.0	23.5	24.5
13	22.5	21.0	21.5	29.0	27.0	28.0	26.0	24.0	25.0	25.0	23.0	24.0
14	22.0	21.5	21.5	28.0	27.0	27.5	26.0	24.0	25.0	24.5	23.0	24.0
15	21.5	20.5	21.0	27.5	25.5	26.5	27.0	24.5	26.0	23.0	22.0	22.5
16	20.5	20.0	20.5	27.5	25.5	26.5	27.0	25.0	26.0	22.5	21.0	21.5
17	20.5	19.5	20.0	26.5	24.5	25.5	27.0	25.0	26.0	22.0	20.0	21.0
18	20.5	19.5	20.0	27.0	24.5	25.5	26.0	24.0	24.5	22.0	20.0	21.0
19	20.5	20.0	20.0	26.0	24.5	25.0	24.5	23.5	24.0	22.0	20.0	21.0
20	21.5	20.0	20.5	25.5	23.5	24.5	24.5	23.0	23.5	22.5	20.0	21.5
21	23.0	21.0	21.5	27.0	24.0	25.5	24.5	23.5	24.0	24.0	21.5	22.5
22	22.5	22.0	22.0	27.0	25.0	26.0	25.5	24.0	25.0	24.0	23.0	23.5
23	23.5	22.0	22.5	27.5	25.5	26.5	26.5	24.5	25.5	23.0	20.0	21.0
24	24.5	23.0	23.5	28.5	26.5	27.5	26.0	24.5	25.0	19.5	18.0	19.0
25	25.0	23.5	24.0	29.0	27.0	28.0	25.5	23.5	24.5	18.5	17.0	17.5
26	26.5	24.5	25.0	29.0	27.5	28.5	26.0	24.5	25.5	18.0	16.5	17.0
27	26.5	25.0	26.0	28.5	27.0	28.0	26.5	25.0	25.5	17.5	15.5	16.5
28	25.5	24.5	25.0	27.5	25.5	26.5	27.5	25.5	26.5	17.5	15.5	16.5
29	25.0	24.0	24.5	25.5	24.0	25.0	28.0	26.5	27.0	18.0	16.5	17.0
30	25.0	23.5	24.5	24.5	24.0	24.5	28.0	26.0	27.0	19.0	17.5	18.0
31	---	---	---	24.5	23.5	24.0	27.0	25.5	26.0	---	---	---
MONTH	26.5	19.5	22.0	29.0	23.5	26.0	28.0	21.5	25.0	27.5	15.5	22.0
YEAR	29.0	.0	14.0									

OXYGEN, DISSOLVED (MG/L), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER				NOVEMBER			DECEMBER			JANUARY		
1	9.8	7.8	8.7	12.8	10.7	11.5	12.5	11.9	12.1	13.6	13.3	13.5
2	9.4	7.4	8.4	13.9	10.7	11.8	12.7	12.1	12.4	13.3	13.1	13.2
3	9.6	7.5	8.4	13.9	10.6	11.7	12.6	12.2	12.4	13.3	13.1	13.2
4	9.7	8.0	8.8	12.9	10.7	11.6	12.9	12.1	12.5	13.5	13.2	13.4
5	10.1	8.4	9.2	11.1	9.3	10.3	13.1	12.4	12.7	13.6	13.4	13.5
6	11.0	8.9	9.7	9.3	8.4	8.8	12.9	12.4	12.6	13.5	12.1	12.8
7	11.2	9.4	10.2	9.1	8.4	8.8	12.9	12.2	12.6	12.2	11.6	11.8
8	12.0	9.7	10.7	9.8	9.2	9.6	13.2	12.1	12.6	11.8	11.0	11.6
9	12.8	9.8	11.0	10.5	9.8	10.2	13.5	12.4	12.9	12.0	10.9	11.4
10	12.3	9.9	10.8	10.4	10.2	10.3	13.9	12.8	13.2	12.7	12.0	12.5
11	11.6	9.7	10.5	10.1	9.7	10.0	14.5	13.0	13.6	12.9	12.7	12.8
12	11.8	9.9	10.8	10.6	9.7	10.1	14.8	13.8	14.2	12.8	12.4	12.5
13	11.3	10.3	10.8	10.8	10.6	10.7	14.8	13.8	14.2	12.4	12.2	12.3
14	12.0	10.4	11.0	10.8	10.6	10.7	14.6	13.4	13.9	12.7	12.3	12.5
15	11.8	10.2	10.8	10.9	10.6	10.8	14.7	13.3	13.9	12.6	12.3	12.5
16	12.0	10.0	10.5	10.8	10.6	10.7	15.1	13.4	14.1	12.5	12.3	12.4
17	11.0	9.4	10.0	10.9	10.5	10.7	14.9	13.5	14.2	12.4	12.1	12.3
18	11.1	8.9	9.7	11.4	10.8	11.1	15.7	14.0	14.6	12.3	11.9	12.2
19	9.6	8.7	9.2	11.5	11.1	11.3	15.6	14.1	14.7	12.1	11.7	11.9
20	9.4	8.0	8.6	11.2	10.6	10.9	14.7	13.4	14.2	11.9	11.6	11.8
21	9.4	8.8	9.0	10.6	10.1	10.3	14.0	12.4	13.1	12.1	11.8	12.0
22	9.9	8.8	9.2	11.3	10.4	10.8	14.3	12.4	13.2	12.3	12.1	12.3
23	10.0	9.3	9.6	11.7	11.3	11.6	13.9	12.2	13.0	12.3	12.0	12.1
24	10.4	9.1	9.6	11.9	11.7	11.9	12.8	11.8	12.2	12.1	11.8	11.9
25	10.7	9.4	9.9	12.0	11.9	12.0	11.9	11.2	11.5	11.7	11.1	11.5
26	11.1	9.8	10.3	11.9	11.5	11.7	12.0	11.2	11.7	11.1	8.8	10.4
27	11.5	10.3	10.8	11.4	11.1	11.2	12.4	12.0	12.2	8.9	8.7	8.8
28	11.8	10.4	10.9	11.6	10.9	11.2	12.6	12.3	12.4	9.1	8.8	9.0
29	12.8	10.4	11.2	12.2	11.5	11.8	12.5	12.2	12.3	9.0	8.7	8.9
30	12.5	10.5	11.2	12.1	11.9	12.0	13.4	12.6	13.1	8.7	8.5	8.6
31	12.6	10.7	11.4	---	---	---	13.5	13.3	13.4	8.8	8.6	8.7
MONTH	12.8	7.4	10.0	13.9	8.4	10.9	15.7	11.2	13.1	13.6	8.5	11.8

OXYGEN, DISSOLVED (MG/L), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	8.8	8.5	8.6	10.2	9.8	10.0	8.7	8.0	8.3	---	---	---
2	9.0	8.3	8.7	10.1	9.7	9.9	8.9	8.5	8.7	---	---	---
3	9.4	9.0	9.1	9.9	9.6	9.8	8.9	8.1	8.5	---	---	---
4	10.1	9.4	9.8	9.5	9.1	9.4	8.7	7.0	8.0	9.2	7.7	8.6
5	10.4	9.9	10.2	9.1	8.0	8.7	8.6	6.8	7.8	10.9	8.8	9.8
6	10.6	10.1	10.4	9.4	9.0	9.2	8.5	7.9	8.2	10.8	10.5	10.6
7	10.8	10.2	10.5	10.6	9.4	10.0	8.8	8.2	8.5	---	---	---
8	11.0	10.5	10.8	10.6	10.4	10.5	8.7	8.5	8.6	---	---	---
9	11.1	10.6	10.8	10.6	10.2	10.5	8.8	8.6	8.7	---	---	---
10	11.1	10.5	10.8	10.2	9.9	10.1	8.9	8.6	8.8	---	---	---
11	11.2	10.6	10.9	9.9	9.5	9.7	8.9	8.8	8.8	---	---	---
12	11.2	10.6	10.9	9.5	9.3	9.4	8.9	8.6	8.8	---	---	---
13	10.8	10.5	10.6	9.5	9.3	9.4	8.6	8.2	8.5	---	---	---
14	10.5	10.2	10.3	9.4	9.0	9.3	8.3	8.0	8.2	---	---	---
15	10.4	10.2	10.3	9.0	8.7	8.8	8.0	7.8	7.9	---	---	---
16	10.5	10.2	10.3	9.0	8.6	8.9	8.0	7.8	7.9	---	---	---
17	10.4	10.1	10.2	9.3	8.5	8.8	7.9	7.7	7.8	---	---	---
18	10.3	10.1	10.2	8.9	8.6	8.7	7.7	7.5	7.6	---	---	---
19	10.3	10.2	10.3	9.1	8.6	8.8	8.1	7.7	7.9	---	---	---
20	10.6	10.2	10.3	9.4	8.7	9.1	7.9	7.7	7.8	---	---	---
21	10.4	9.7	10.0	9.4	9.3	9.3	7.8	7.7	7.7	---	---	---
22	9.8	9.6	9.7	9.9	9.3	9.6	7.8	7.6	7.7	---	---	---
23	10.4	9.7	10.0	9.7	9.4	9.6	8.0	7.6	7.8	---	---	---
24	10.9	10.4	10.7	9.4	8.6	9.2	8.7	7.7	8.1	---	---	---
25	10.9	10.6	10.7	8.6	7.4	8.1	8.4	7.7	8.1	8.0	7.7	7.9
26	10.7	10.0	10.4	8.8	6.9	7.6	7.8	6.9	7.4	7.6	6.6	7.2
27	10.1	9.6	9.9	9.0	7.7	8.4	---	---	---	6.6	6.4	6.5
28	10.1	9.8	10.0	8.5	7.0	7.7	---	---	---	6.6	6.5	6.5
29	---	---	---	8.0	6.8	7.3	---	---	---	7.0	6.5	6.7
30	---	---	---	---	---	---	---	---	---	7.4	7.0	7.2
31	---	---	---	---	---	---	---	---	---	7.4	7.3	7.3
MONTH	11.2	8.3	10.2	10.6	6.8	9.2	8.9	6.8	8.2	10.9	6.4	7.8
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	7.3	7.2	7.3	6.9	6.7	6.8	6.6	6.3	6.5	6.7	5.6	6.2
2	7.3	7.1	7.2	7.4	6.9	7.1	7.7	6.4	7.0	7.5	6.6	7.0
3	7.1	7.0	7.1	8.0	7.2	7.5	8.3	7.1	7.6	8.3	6.8	7.4
4	7.1	6.3	6.9	7.8	7.2	7.5	9.3	7.1	8.0	8.7	7.1	7.8
5	6.6	6.0	6.3	7.5	7.0	7.3	8.1	6.5	7.2	10.1	7.4	8.5
6	7.1	6.6	6.9	9.3	7.0	8.0	7.1	5.4	6.5	11.7	7.8	9.7
7	7.3	7.1	7.2	10.7	7.4	8.8	6.8	5.1	6.1	12.4	8.7	10.1
8	7.1	7.0	7.1	11.1	7.8	9.0	7.7	6.8	7.4	11.7	7.9	9.8
9	7.0	6.8	7.0	9.5	6.0	6.9	8.9	7.5	8.3	12.2	7.6	9.7
10	7.1	6.8	7.0	6.9	5.9	6.3	8.9	8.5	8.7	9.9	7.5	8.8
11	7.2	7.0	7.1	6.7	5.8	6.3	9.7	8.3	8.9	10.1	7.2	8.5
12	7.4	7.0	7.2	6.6	5.8	6.2	11.0	8.5	9.5	10.8	7.2	8.9
13	7.4	7.0	7.2	8.2	6.3	7.0	11.8	8.7	10.1	11.1	7.3	9.0
14	7.1	6.8	7.0	7.7	6.7	7.1	12.0	8.9	10.4	9.2	7.5	8.1
15	7.1	6.5	6.9	8.0	6.3	7.0	14.0	9.4	11.4	7.5	6.4	6.9
16	7.4	7.1	7.3	9.5	6.7	7.9	13.9	9.0	11.3	6.5	6.1	6.3
17	7.8	7.4	7.6	10.4	7.2	8.6	16.4	9.5	12.5	7.1	6.3	6.7
18	7.8	7.6	7.7	11.2	7.4	9.2	12.8	10.0	11.3	7.7	6.8	7.2
19	7.8	7.7	7.7	9.1	7.6	8.3	14.0	9.2	11.5	8.3	7.0	7.6
20	7.8	7.6	7.7	8.9	6.8	7.7	14.3	10.2	12.2	8.9	7.3	7.9
21	7.6	7.3	7.5	8.8	6.7	7.5	11.2	8.7	9.7	9.4	7.3	8.1
22	7.4	6.4	7.1	6.9	6.0	6.5	10.2	7.4	8.9	8.1	7.1	7.6
23	6.4	6.1	6.3	6.2	5.5	5.9	8.7	6.2	7.8	7.4	7.0	7.2
24	6.7	6.1	6.4	6.1	5.3	5.7	6.1	5.8	6.0	7.1	6.8	7.0
25	6.7	6.5	6.6	5.6	4.5	5.0	6.5	6.0	6.3	7.7	7.0	7.4
26	7.0	6.6	6.7	---	---	---	7.2	6.3	6.7	8.3	7.6	7.9
27	7.5	6.6	7.0	---	---	---	8.4	6.7	7.4	9.0	7.9	8.4
28	7.0	4.7	6.1	---	---	---	10.8	7.1	8.6	9.4	8.2	8.7
29	6.3	4.9	5.8	---	---	---	12.1	7.5	9.4	9.9	8.3	9.1
30	6.9	6.3	6.7	---	---	---	11.6	6.7	8.7	10.2	8.4	9.2
31	---	---	---	7.0	6.3	6.7	6.3	5.6	5.8	---	---	---
MONTH	7.8	4.7	7.0	11.2	4.5	7.2	16.4	5.1	8.6	12.4	5.6	8.1
YEAR	16.4	4.5	9.5									

SCIOTO RIVER BASIN

03232470 PAINT CREEK BELOW PAINT CREEK DAM, NEAR BAINBRIDGE, OH

LOCATION.--Lat 39°15'08", long 83°20'58", Highland County, Hydrologic Unit 05060003, on right bank, 400 ft downstream from Paint Creek dam, 700 ft upstream from Cliff Creek, and 4.5 mi northwest of Bainbridge.

DRAINAGE AREA.--570 mi².

PERIOD OF RECORD.-- Water years 1962-67, (occasional low-flow measurements), water years 1963-67 (annual maximums). Published as "at damsite near Bainbridge" 1963-67, October 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 746.00 ft above National Geodetic Vertical Datum of 1929. (Levels by U.S. Army Corps of Engineers). Prior to Oct. 1, 1984, datum 46.00 ft lower. Prior to May 3, 1968, water-stage recorder and crest-stage gage at partial-record site 1,000 ft downstream at datum 3.04 ft lower.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Paint Creek Lake. Water-quality data collected at this site 1965 to 1977. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--22 years, 559 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 45,000 ft³/s Mar. 10, 1964, gage height, 27.3 ft, site and datum then in use; minimum daily, 4.7 ft³/s Sept. 1, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,380 ft³/s Apr. 2, gage height, 7.81 ft; minimum daily, 27 ft³/s Oct. 26.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	36	290	1180	342	735	3930	4440	4960	346	274	100
2	40	36	275	1170	367	597	4840	5060	3730	349	199	451
3	39	36	259	1160	367	598	4760	5010	857	350	122	342
4	39	36	214	999	367	596	3020	4550	528	349	68	200
5	38	345	195	662	368	1010	1960	2300	528	351	53	153
6	38	342	229	786	436	2230	3350	1890	528	447	396	134
7	38	36	247	1200	471	2310	4870	2010	528	489	690	134
8	38	38	247	1590	373	1510	3000	1350	528	830	378	111
9	38	153	215	2090	216	1270	1300	876	528	1030	173	101
10	38	276	153	2280	149	1650	1090	1800	433	879	133	103
11	38	309	130	2200	150	1800	859	2480	306	360	134	79
12	38	310	130	1480	206	1790	697	2050	307	104	134	49
13	38	310	130	1290	327	1400	375	1250	310	226	99	41
14	37	462	169	1400	744	892	367	985	414	409	56	41
15	37	545	188	1580	1640	967	505	732	696	438	46	148
16	37	548	190	1660	1830	871	598	971	915	266	46	193
17	38	444	188	1650	2410	647	524	1970	819	134	47	194
18	39	286	141	1160	2380	595	499	1940	553	134	47	195
19	39	321	116	898	2310	595	874	990	497	134	47	135
20	39	647	116	844	2220	498	1770	808	495	134	47	83
21	39	875	121	629	1840	1340	2370	735	334	136	47	72
22	356	999	98	540	2370	2170	2480	449	549	434	47	73
23	353	1100	114	459	3420	2230	1450	1170	1260	408	47	409
24	44	1090	195	419	3730	1520	848	2240	1340	176	205	338
25	36	769	383	418	1690	969	671	2440	928	256	345	75
26	27	367	629	419	767	723	2280	1250	601	306	171	75
27	28	484	705	421	809	723	2670	42	519	653	127	53
28	33	461	1130	419	998	525	2260	947	402	840	87	42
29	36	370	1540	418	---	605	834	2670	345	836	69	42
30	36	327	1430	332	---	667	1550	4260	345	570	70	41
31	36	---	1190	290	---	2270	---	5050	---	311	70	---
TOTAL	1789	12358	11357	32043	33297	36303	56601	64715	25083	12685	4474	4207
MEAN	57.7	412	366	1034	1189	1171	1887	2088	836	409	144	140
MAX	356	1100	1540	2280	3730	2310	4870	5060	4960	1030	690	451
MIN	27	36	98	290	149	498	367	42	306	104	46	41

CAL YR 1988 TOTAL 131835 MEAN 360 MAX 2800 MIN 17
WTR YR 1989 TOTAL 294912 MEAN 808 MAX 5060 MIN 27

SCIOTO RIVER BASIN

03234000 PAINT CREEK NEAR BOURNEVILLE, OH

LOCATION.--Lat 39°15'49", long 83°10'01", Ross County, Hydrologic Unit 05060003, on upstream side of left abutment of highway bridge, 0.2 mi downstream from Sulfur Lick, 1.2 mi southwest of Bourneville, and 1.2 mi upstream from Upper Twin Creek.

DRAINAGE AREA.--807 mi².

PERIOD OF RECORD.--October 1921 to January 1937, January 1938 to current year. Monthly discharge only for some periods, published in WSP 1305. Published as "at Bainbridge" October 1921 to September 1923 and as "near Bainbridge" January 1938 to May 1939.

REVISED RECORDS.--WRD Ohio 1972: 1971.

GAGE.--Water-stage recorder. Datum of gage is 665.56 ft above National Geodetic Vertical Datum of 1929. See WSP 1725 for history of changes prior to May 3, 1939.

REMARKS.--No estimated daily discharges. Records good prior to May 15, fair thereafter. Flow regulated by Paint Creek Lake 17 mi upstream since 1971, capacity 145,000 acre-ft and Rocky Fork Lake 23 mi upstream since 1952, capacity, 34,100 acre-ft. Water-quality data collected at this site 1965 to 1977. Sediment data 1956 to 1962. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--66 years (1921-36, 1939-89), 803 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 56,900 ft³/s Mar. 10, 1964, gage height, 20.50 ft, from rating curve extended above 30,000 ft³/s on basis of contracted-opening measurement at gage height 20.08 ft; minimum daily, 5 ft³/s Oct. 29, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,300 ft³/s Apr. 29, gage height, 11.14 ft; minimum daily, 34 ft³/s Oct. 28, 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	37	419	1860	515	1210	6450	6200	5560	630	530	166
2	41	37	370	1920	561	912	5650	6710	5130	621	472	297
3	41	38	356	1850	622	894	5900	5820	1860	634	359	704
4	41	41	318	1680	706	884	6220	5720	935	679	260	537
5	41	219	260	1210	672	1750	4110	4110	982	693	177	429
6	41	427	266	1340	691	4300	3930	3490	1110	687	238	341
7	40	260	310	2090	736	3890	5760	3570	851	764	1010	287
8	40	66	309	2790	657	3070	4790	2410	824	1400	971	261
9	40	57	296	3250	463	2290	2410	1970	820	1540	609	227
10	41	259	237	3240	325	2620	1920	2940	796	1450	377	205
11	40	388	175	3080	304	2890	1590	4100	593	935	299	201
12	40	384	170	2630	317	2730	1150	3370	588	442	274	177
13	40	393	166	2050	434	2400	894	2300	621	315	256	148
14	40	465	174	2210	2190	1610	676	1840	654	613	203	125
15	40	698	225	2970	4690	1490	733	1780	912	691	148	118
16	40	677	225	2860	5470	1440	972	2250	1420	657	124	206
17	43	704	223	2640	4670	1160	826	2720	1400	358	116	262
18	47	346	225	2160	3660	963	808	3410	1030	296	111	282
19	45	400	152	1450	3190	922	1620	1690	789	288	110	281
20	43	991	149	1390	3030	904	2200	1340	839	289	107	229
21	46	1730	159	1100	4770	2410	3120	1320	801	283	105	174
22	272	1600	143	848	4850	3250	3350	1030	656	363	104	148
23	427	1740	142	774	4700	3280	2590	2350	1550	808	104	174
24	217	1660	327	668	4900	2610	1300	4620	1960	506	110	306
25	63	1450	749	654	2520	1700	1160	3620	1550	351	446	290
26	50	591	905	655	1310	1180	2520	3360	1080	494	470	161
27	36	617	1060	677	1140	1110	4090	1290	809	730	332	133
28	34	704	1660	662	1450	965	3900	1210	869	1160	262	110
29	34	555	2950	654	---	1310	6690	3190	707	1240	198	91
30	38	465	2640	605	---	4320	5280	4510	653	1190	181	84
31	37	---	1960	498	---	4530	---	5630	---	735	152	---
TOTAL	2081	17999	17720	52465	59543	64994	92609	99870	38349	21842	9215	7154
MEAN	67.1	600	572	1692	2127	2097	3087	3222	1278	705	297	238
MAX	427	1740	2950	3250	5470	4530	6690	6710	5560	1540	1010	704
MIN	34	37	142	498	304	884	676	1030	588	283	104	84

CAL YR 1988 TOTAL 179960 MEAN 492 MAX 4990 MIN 25
WTR YR 1989 TOTAL 483841 MEAN 1326 MAX 6710 MIN 34

03234300 PAINT CREEK AT CHILLICOTHE, OH

LOCATION.--Lat 39°19'14", long 82°58'42", Ross County, Hydrologic Unit 05060003, on left bank at downstream side of bridge on State Highway 772, 4.3 mi downstream from North Fork Paint Creek and 3.8 mi upstream from mouth.

DRAINAGE AREA.--1,136 mi².

WATER DISCHARGE RECORDS

PERIOD OF RECORD.--October 1985 to current year.

REVISED RECORDS.--WRD-OH-88-1: 1986(M), 1987(M).

GAGE.--Water-stage recorder. Elevation of gage is 600 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 5-7, Apr. 22-25. Records good. Flow regulated by Paint Creek Lake, 35 mi upstream, capacity 145,000 acre-ft and Rocky Fork Lake 41 mi upstream, capacity 34,100 acre-ft.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,700 ft³/s Nov. 28, 1985 and Feb. 16 1989, gage height 17.66 ft and 17.20 ft; minimum daily, 43 ft³/s Oct. 22-25, 1987.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,700 ft³/s Feb. 16, gage height, 17.20 ft; minimum daily, 56 ft³/s Oct. 12-15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	66	434	1890	553	1640	7360	6240	5070	760	614	220
2	63	65	383	2040	589	1390	5870	6840	4900	728	560	307
3	60	64	362	1850	694	1350	6270	5680	2360	754	446	746
4	59	70	329	1660	857	1340	9360	5370	1420	801	327	568
5	59	82	275	1280	776	2640	4670	4480	1420	806	253	422
6	57	100	263	1970	732	5590	4270	4300	1520	769	497	336
7	57	120	295	2650	757	4090	5520	3800	1290	833	1160	278
8	57	139	296	3370	703	3350	4490	2840	1180	1370	1010	254
9	57	222	290	3690	523	3020	2520	2700	1140	1550	624	219
10	59	471	250	3320	451	3390	2020	4110	1110	1490	433	198
11	58	427	203	3060	357	3390	1740	4340	891	1120	355	199
12	56	412	182	3040	336	3020	1350	3580	839	854	316	159
13	56	462	217	2490	408	2640	1310	2670	885	545	290	118
14	56	611	184	2410	2510	2010	1170	2220	939	665	228	126
15	56	645	208	3760	6280	1840	1210	2760	1380	741	169	211
16	60	640	217	3320	8650	1790	1340	3260	1690	715	135	393
17	59	511	213	2840	5260	1590	1220	2840	1580	483	121	372
18	65	356	217	2470	3880	1430	2210	3500	1330	375	116	346
19	72	914	253	1590	3280	1370	3200	2100	1080	350	114	305
20	101	2530	171	1510	3030	1570	2830	1760	1110	348	111	199
21	94	1760	168	1250	7760	3900	3210	1730	1080	337	106	151
22	90	1600	171	955	5980	3540	2200	1530	1270	376	106	217
23	325	1540	162	893	4600	3350	1600	4620	1930	800	111	609
24	357	1440	500	757	4900	2790	1100	6190	1970	590	113	237
25	122	1170	1040	727	2860	2010	1700	4020	1690	586	442	155
26	101	634	929	711	1910	1620	3040	6350	1330	605	504	133
27	85	653	1020	736	1580	1520	4550	5520	1000	801	334	102
28	75	679	1910	729	1750	1430	4310	1940	1220	1400	257	91
29	69	560	3430	709	---	2520	4740	3010	959	1420	192	85
30	65	480	2610	693	---	8320	7070	3960	821	1290	179	87
31	65	---	1980	575	---	7730	---	5140	---	781	201	---
TOTAL	2680	19423	19162	58945	71966	87180	103450	119400	46404	25043	10424	7843
MEAN	86.5	647	618	1901	2570	2812	3448	3852	1547	808	336	261
MAX	357	2530	3430	3760	8650	8320	9360	6840	5070	1550	1160	746
MIN	56	64	162	575	336	1340	1100	1530	821	337	106	85

CAL YR 1988 TOTAL 211914 MEAN 579 MAX 7710 MIN 48
WTR YR 1989 TOTAL 571920 MEAN 1567 MAX 9360 MIN 56

SCIOTO RIVER BASIN

03234300 PAINT CREEK AT CHILLICOTHE, OH--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years October 1985 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1985 to current year.

pH: October 1985 to current year.

WATER TEMPERATURES: October 1985 to current year.

DISSOLVED OXYGEN: October 1985 to current year.

INSTRUMENTATION.--Water-quality monitor since Oct. 1985. Digital recorder set for one-hour-interval punch.

REMARKS.--Interruptions in the water-quality record were due to malfunction of the instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 822 microsiemens Jan. 11, 1988; minimum, 188 microsiemens May 21, June 22, 1987.

pH: Maximum, 9.0 units May 24, 1986; minimum, 7.4 units on several days in water year 1988.

WATER TEMPERATURES: Maximum, 31.5°C July 17, Aug. 18, 1988; minimum 0.0°C on many days during winter in water year 1988.

DISSOLVED OXYGEN: Maximum, 19.2 mg/L Feb. 11, 13, 1987; minimum recorded, 3.8 mg/L Aug. 16, 1986.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 880 microsiemens Dec. 12; minimum, 228 microsiemens May 27.

pH: Maximum, 8.6 units on several days; minimum 7.5 units April 29.

WATER TEMPERATURE: Maximum, 28.0°C July 25, Aug. 5; minimum, 0.0°C on several days during winter.

DISSOLVED OXYGEN: Maximum, 17.8 mg/L Oct. 14; minimum, 5.3 mg/L Aug. 22.

SCIOTO RIVER BASIN

143

03234300 PAINT CREEK AT CHILLICOTHE, OH--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	584	560	570	714	666	692	758	732	746	698	676	692
2	582	562	573	712	686	699	772	746	756	704	684	692
3	610	576	591	712	638	676	768	716	746	710	664	691
4	632	598	611	674	632	657	766	724	747	738	710	724
5	644	608	626	642	634	638	796	754	771	746	736	741
6	662	610	637	---	---	---	778	734	756	744	512	611
7	662	612	637	---	---	---	748	730	740	578	542	553
8	664	604	635	694	666	679	774	742	760	598	502	575
9	650	608	629	728	690	708	786	764	778	612	490	545
10	652	614	630	714	628	681	806	786	796	628	596	610
11	644	616	629	704	592	637	846	802	825	622	552	595
12	670	640	654	682	634	660	880	812	846	556	496	523
13	688	630	660	654	622	638	834	784	812	558	532	547
14	686	620	656	680	618	655	788	744	772	604	562	584
15	662	610	638	650	610	631	774	746	767	590	546	560
16	654	624	639	640	610	615	774	760	770	612	568	587
17	628	602	619	694	646	675	768	760	765	612	568	593
18	618	600	606	698	668	679	798	764	770	606	580	592
19	654	616	634	676	660	671	792	752	776	624	600	612
20	738	638	703	660	436	562	774	746	762	650	616	632
21	710	686	698	618	546	581	786	748	766	670	642	652
22	686	666	679	664	622	645	790	752	774	688	648	670
23	680	594	626	710	666	690	760	718	743	698	650	679
24	610	588	597	728	680	708	760	560	691	714	668	695
25	644	606	623	722	666	699	680	558	629	756	646	682
26	676	632	654	712	682	694	722	650	680	674	654	659
27	712	656	682	690	666	676	750	720	731	718	678	695
28	682	652	668	734	692	720	754	570	685	720	676	699
29	726	674	698	752	720	738	694	616	654	702	680	692
30	720	688	703	738	728	731	720	696	710	710	680	688
31	746	678	714	---	---	---	708	660	682	730	670	702
MONTH	746	560	643	752	436	669	880	558	749	756	490	638
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	678	636	660	614	592	603	454	376	435	446	416	433
2	684	654	672	628	604	617	450	388	423	462	440	447
3	676	636	658	636	594	618	406	280	370	504	440	473
4	648	624	636	636	590	612	404	280	334	474	420	450
5	634	618	627	616	442	517	452	408	432	486	436	463
6	634	624	628	524	454	479	442	422	431	506	456	475
7	660	632	645	542	512	532	---	---	---	526	502	515
8	664	650	659	532	506	516	---	---	---	586	524	552
9	662	646	655	522	484	506	---	---	---	582	440	551
10	678	652	664	504	456	470	---	---	---	508	436	453
11	684	666	677	530	500	515	---	---	---	556	514	535
12	672	658	662	556	512	533	---	---	---	600	558	586
13	658	638	650	580	550	566	---	---	---	602	582	593
14	630	382	468	580	552	568	---	---	---	596	558	581
15	464	362	398	586	556	563	---	---	---	620	418	511
16	364	334	354	612	578	596	---	---	---	470	424	447
17	494	470	481	624	564	595	---	---	---	532	482	513
18	484	414	467	632	576	594	---	---	---	566	518	544
19	500	482	489	640	616	630	---	---	---	582	540	570
20	530	500	514	654	544	623	---	---	---	584	538	567
21	532	348	393	544	418	444	---	---	---	562	536	551
22	510	394	470	588	490	556	---	---	---	574	554	565
23	508	446	466	592	504	552	---	---	---	574	296	422
24	478	412	451	528	502	516	---	---	---	464	350	412
25	532	480	504	562	524	543	---	---	---	518	470	501
26	568	532	545	582	524	552	514	350	463	510	246	383
27	582	564	574	640	546	598	526	452	503	416	228	287
28	596	556	573	676	604	630	522	430	488	508	426	481
29	---	---	---	676	488	593	428	276	310	532	486	505
30	---	---	---	476	264	322	410	298	353	492	396	458
31	---	---	---	354	306	333	---	---	---	398	330	363
MONTH	684	334	559	676	264	545	526	276	413	620	228	490

SCIOTO RIVER BASIN

03234300 PAINT CREEK AT CHILLICOTHE, OH--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	356	318	338	568	528	547	526	502	515	565	510	545
2	366	332	351	550	536	542	534	498	519	565	471	536
3	462	368	420	544	534	539	536	510	523	471	439	457
4	516	462	495	542	522	534	550	528	539	502	447	481
5	578	522	536	538	520	529	570	446	548	510	471	494
6	522	492	510	544	504	528	562	454	516	518	471	492
7	528	502	515	530	498	516	558	460	517	518	486	504
8	540	514	527	548	314	494	526	488	512	525	486	508
9	574	536	561	512	302	444	540	502	520	533	486	513
10	604	576	591	530	506	518	554	516	533	541	463	513
11	628	590	608	534	502	523	566	528	547	541	510	532
12	618	590	604	556	484	515	564	524	546	533	510	526
13	602	574	591	541	486	505	566	524	546	557	518	537
14	594	570	583	580	525	554	568	528	549	565	518	542
15	586	534	565	557	510	533	582	544	563	612	533	559
16	568	536	551	541	510	526	592	560	579	604	541	579
17	588	562	575	573	525	554	610	574	591	557	510	543
18	614	574	594	604	565	581	616	580	603	557	518	532
19	622	586	610	588	573	582	620	572	605	549	502	527
20	624	594	610	592	564	581	618	592	605	549	502	523
21	610	578	597	594	564	580	606	580	593	533	494	517
22	660	342	586	596	566	581	610	562	594	541	439	516
23	524	342	459	590	520	559	604	572	589	557	510	536
24	560	526	544	570	536	552	598	566	589	541	510	524
25	556	520	541	602	544	577	610	502	568	541	502	525
26	558	526	541	558	500	527	520	496	504	549	518	535
27	568	534	553	540	486	518	546	496	530	596	549	572
28	554	512	539	512	410	485	550	522	536	604	557	583
29	558	510	539	510	488	499	548	480	532	596	557	578
30	570	530	553	518	498	508	564	514	532	596	565	579
31	---	---	---	514	496	503	568	506	540	---	---	---
MONTH	660	318	540	604	302	533	620	446	551	612	439	530
YEAR	880	228	580									

PH (STANDARD UNITS), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	8.3	8.0	8.2	8.5	8.2	8.4	8.3	8.3	8.3	8.3	8.2	8.3
2	8.3	8.0	8.2	8.4	8.1	8.3	8.4	8.3	8.3	8.2	8.2	8.2
3	8.3	8.1	8.2	8.4	8.2	8.3	8.4	8.3	8.3	8.3	8.2	8.2
4	8.3	8.1	8.2	8.4	8.1	8.3	8.4	8.3	8.3	8.3	8.3	8.3
5	8.4	8.1	8.3	8.3	8.0	8.1	8.4	8.3	8.3	8.3	8.3	8.3
6	8.4	8.2	8.3	---	---	---	8.4	8.3	8.3	8.3	8.2	8.2
7	8.4	8.2	8.3	---	---	---	8.4	8.3	8.3	8.2	8.1	8.2
8	8.5	8.2	8.3	8.4	8.3	8.4	8.4	8.3	8.3	8.2	8.1	8.2
9	8.5	8.2	8.3	8.4	8.2	8.3	8.5	8.3	8.4	8.2	8.1	8.2
10	8.5	8.2	8.4	8.3	8.1	8.2	8.5	8.3	8.4	8.2	8.1	8.2
11	8.4	8.2	8.3	8.2	8.1	8.1	8.5	8.4	8.4	8.2	8.0	8.1
12	8.5	8.2	8.4	8.5	8.2	8.3	8.5	8.3	8.4	8.2	7.9	8.1
13	8.5	8.3	8.4	8.5	8.2	8.4	8.4	8.3	8.4	8.1	8.1	8.1
14	8.5	8.2	8.4	8.5	8.2	8.3	8.5	8.3	8.4	8.1	7.8	8.0
15	8.5	8.2	8.4	8.5	8.2	8.3	8.5	8.3	8.4	7.9	7.8	7.9
16	8.5	8.2	8.4	8.4	8.2	8.3	8.5	8.4	8.5	8.3	7.9	8.2
17	8.4	8.1	8.3	8.5	8.2	8.3	8.6	8.4	8.5	8.2	8.2	8.2
18	8.3	8.0	8.2	8.6	8.3	8.4	8.6	8.4	8.5	8.2	8.2	8.2
19	8.4	8.1	8.2	8.4	8.3	8.4	8.6	8.4	8.5	8.2	8.2	8.2
20	8.5	8.2	8.3	8.3	7.9	8.1	8.5	8.3	8.4	8.2	8.2	8.2
21	8.4	8.2	8.3	8.2	7.9	8.0	8.5	8.2	8.4	8.2	8.2	8.2
22	8.4	8.1	8.2	8.3	8.1	8.2	8.6	8.3	8.5	8.2	8.2	8.2
23	8.3	8.1	8.2	8.3	8.3	8.3	8.6	8.3	8.5	8.2	8.0	8.1
24	8.5	8.1	8.3	8.3	8.3	8.3	8.6	8.2	8.3	8.1	7.9	8.0
25	8.6	8.2	8.4	8.3	8.2	8.3	8.3	8.1	8.2	8.4	7.9	8.2
26	8.6	8.3	8.4	8.2	8.2	8.2	8.5	8.3	8.4	8.2	8.2	8.2
27	8.6	8.3	8.4	8.2	8.2	8.2	8.6	8.5	8.5	8.3	8.2	8.3
28	8.6	8.2	8.4	8.3	8.2	8.2	8.5	8.3	8.4	8.3	8.2	8.3
29	8.6	8.2	8.4	8.3	8.2	8.3	8.4	8.2	8.3	8.3	8.2	8.3
30	8.6	8.3	8.4	8.3	8.2	8.3	8.4	8.3	8.4	8.2	8.2	8.2
31	8.6	8.3	8.5	---	---	---	8.3	8.3	8.3	8.3	8.2	8.2
MONTH	8.6	8.0	8.3	8.6	7.9	8.3	8.6	8.1	8.4	8.4	7.8	8.2

SCIOTO RIVER BASIN

03234300 PAINT CREEK AT CHILLICOTHE, OH--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	21.6	19.5	20.7	9.5	6.5	8.0	5.5	4.5	5.0	3.5	3.0	3.0
2	21.7	20.0	20.7	8.5	7.5	8.0	4.5	3.5	4.0	3.5	3.0	3.0
3	20.3	17.9	19.1	8.5	6.0	7.5	5.0	3.5	4.0	2.5	2.5	2.5
4	17.6	15.2	16.4	12.0	8.5	10.0	5.0	4.0	4.5	2.5	1.5	2.0
5	15.4	13.4	14.4	12.0	11.5	12.0	4.0	2.5	3.5	2.5	1.0	1.5
6	14.0	11.5	13.0	---	---	---	5.0	3.0	4.0	3.5	2.5	3.0
7	14.0	11.0	12.5	---	---	---	5.5	4.0	4.5	5.5	4.0	4.5
8	13.5	10.5	12.5	10.0	8.5	9.5	5.0	4.5	5.0	6.0	5.5	6.0
9	14.0	11.5	12.5	9.0	7.5	8.5	4.5	3.0	4.0	5.0	3.5	4.0
10	13.5	11.5	12.5	11.0	8.5	10.0	2.5	2.0	2.5	5.5	3.5	4.5
11	13.5	11.5	12.5	10.0	8.5	9.5	2.0	.5	1.0	8.0	5.5	6.5
12	11.5	10.0	10.5	8.0	7.0	7.5	1.0	.0	.0	9.5	5.5	7.0
13	11.0	8.0	9.5	9.5	7.5	8.5	.5	.0	.0	7.0	5.0	6.0
14	11.0	7.5	9.5	9.0	7.5	8.5	2.5	.0	1.0	8.5	5.0	6.5
15	12.0	9.0	10.5	9.0	8.0	8.5	3.0	2.0	2.5	10.0	8.0	9.0
16	12.0	10.0	11.0	11.0	9.5	10.0	2.5	1.0	1.5	10.5	3.5	5.0
17	14.0	12.0	13.0	10.5	8.0	9.0	1.0	.0	.5	3.5	2.5	3.0
18	15.5	14.0	14.5	8.0	6.5	7.5	2.5	.0	.5	4.5	3.5	4.0
19	14.0	12.0	13.0	8.0	7.0	7.5	1.5	.0	.5	5.5	4.5	5.0
20	12.0	10.5	11.5	10.0	8.0	9.0	5.0	1.0	3.0	5.0	4.5	5.0
21	11.5	10.5	11.0	9.5	8.0	9.0	5.5	5.0	5.5	5.0	3.5	4.0
22	11.0	10.0	10.5	8.0	7.0	7.5	5.0	4.0	4.5	5.5	3.5	4.5
23	10.0	9.0	9.5	7.0	6.5	7.0	6.5	5.0	5.5	10.0	4.5	7.0
24	10.0	9.0	9.5	7.0	6.0	6.5	6.5	5.0	6.0	15.5	8.0	12.0
25	9.5	8.0	9.0	8.0	6.5	7.0	6.5	4.5	5.5	16.0	6.0	10.0
26	9.0	7.0	8.0	9.0	7.5	8.0	4.0	2.5	3.0	8.0	7.0	7.5
27	8.5	6.0	7.5	10.0	9.0	9.5	5.0	2.5	3.5	7.0	5.5	6.5
28	11.0	8.5	9.5	9.5	6.5	8.0	5.5	3.5	5.0	6.5	4.5	5.5
29	9.0	7.0	8.0	6.0	5.0	5.5	3.5	2.5	3.0	7.5	6.0	6.5
30	9.0	7.0	8.0	5.5	5.0	5.5	3.0	2.5	2.5	7.5	6.5	7.5
31	8.0	5.5	7.0	---	---	---	3.0	2.5	3.0	9.0	6.0	7.5
MONTH	21.7	5.5	12.0	12.0	5.0	8.5	6.5	.0	3.0	16.0	1.0	5.5
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	11.0	8.5	9.5	13.5	7.5	9.5	10.5	8.5	9.5	16.0	14.0	14.5
2	10.0	7.0	8.5	14.0	7.5	10.0	10.0	9.0	9.5	14.5	13.5	14.0
3	7.0	4.0	6.0	18.5	8.5	14.0	13.0	9.0	10.0	15.0	14.0	14.5
4	4.0	3.0	3.5	17.0	7.5	11.5	11.5	10.5	11.0	15.5	14.0	15.0
5	3.5	2.5	3.0	9.5	4.5	7.5	10.5	9.5	10.0	15.0	14.0	14.5
6	3.5	2.5	3.0	4.5	2.5	3.5	10.5	10.0	10.5	14.0	12.5	13.0
7	3.5	2.0	2.5	4.0	3.0	3.5	---	---	---	13.5	12.0	12.5
8	3.0	1.5	2.5	4.0	3.0	3.5	---	---	---	14.5	12.5	13.5
9	2.0	.5	1.5	5.0	3.0	4.0	---	---	---	14.5	11.5	13.0
10	2.0	1.0	1.5	5.5	4.0	5.0	---	---	---	12.0	11.0	11.5
11	4.0	1.0	2.5	7.5	5.0	6.0	---	---	---	14.0	12.0	13.0
12	4.5	2.0	3.0	8.0	6.5	7.5	---	---	---	13.5	12.0	12.5
13	4.5	3.0	3.5	9.0	6.5	7.5	---	---	---	13.0	12.0	12.5
14	4.5	2.5	3.0	12.5	9.0	10.5	---	---	---	14.5	12.5	13.5
15	3.0	2.5	3.0	13.0	12.0	12.5	---	---	---	14.5	13.5	14.0
16	3.0	3.0	3.0	13.5	10.0	11.5	---	---	---	14.5	12.5	13.5
17	3.0	2.5	2.5	11.5	8.0	10.0	---	---	---	16.0	13.0	14.5
18	3.5	2.5	3.0	11.5	9.0	10.5	---	---	---	16.5	14.0	15.5
19	4.0	3.0	3.5	9.5	7.5	8.5	---	---	---	16.5	15.0	15.5
20	4.5	3.5	4.0	9.0	7.0	8.0	---	---	---	17.5	15.0	16.0
21	5.5	4.5	5.0	7.0	5.5	6.0	---	---	---	19.0	16.0	17.5
22	5.0	4.0	4.5	8.5	6.0	7.0	---	---	---	18.0	16.0	17.0
23	4.0	3.5	4.0	8.0	6.5	7.5	---	---	---	16.0	14.5	15.0
24	4.0	3.0	3.5	10.5	7.5	9.0	---	---	---	17.0	14.0	15.5
25	8.5	3.0	5.0	13.0	10.5	11.5	---	---	---	19.5	16.0	17.0
26	9.5	7.0	8.0	13.0	12.0	12.5	16.0	14.5	15.0	20.5	18.0	19.0
27	11.0	7.5	8.5	---	---	---	17.5	14.5	15.5	21.0	19.0	20.5
28	13.5	6.0	9.5	---	---	---	16.5	15.0	15.5	19.0	16.5	18.0
29	---	---	---	---	---	---	15.5	14.0	15.0	18.5	16.5	17.5
30	---	---	---	12.5	11.5	12.0	16.5	14.5	15.5	20.5	17.5	19.0
31	---	---	---	9.0	8.0	8.5	---	---	---	21.5	19.5	20.5
MONTH	13.5	.5	4.5	18.5	2.5	8.5	17.5	8.5	12.5	21.5	11.0	15.8

03234300 PAINT CREEK AT CHILLICOTHE, OH--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	21.5	20.0	21.0	24.0	21.5	23.0	25.0	22.5	23.5	26.0	23.5	24.5
2	21.5	20.5	21.0	23.0	22.5	23.0	26.0	23.0	24.5	23.5	22.0	23.0
3	22.5	20.5	21.5	22.0	21.5	22.0	26.5	23.5	25.0	23.0	21.5	22.0
4	22.0	20.5	21.0	22.0	21.0	21.5	27.5	24.5	26.0	23.5	21.0	22.0
5	21.0	18.5	19.5	23.0	21.5	22.0	28.0	25.5	26.5	24.5	21.0	22.5
6	20.0	17.0	18.5	25.5	22.5	23.5	26.0	24.0	25.0	25.0	22.0	23.0
7	21.0	18.5	19.5	26.5	24.0	25.0	25.0	22.0	23.5	25.5	22.0	23.5
8	21.0	19.0	20.0	25.5	23.5	24.5	22.5	20.5	21.5	26.5	22.5	24.5
9	21.5	19.5	20.5	25.0	23.0	24.0	23.5	20.5	22.0	26.5	23.0	25.0
10	20.5	19.0	20.0	26.0	24.0	25.0	24.0	20.5	22.5	26.0	23.5	24.5
11	21.0	18.0	19.5	27.5	25.0	26.0	24.5	21.0	22.5	24.5	22.5	23.5
12	21.0	19.0	20.0	26.0	24.5	25.0	25.0	21.0	23.0	24.0	21.0	22.5
13	21.5	20.0	20.5	26.5	23.5	25.0	25.0	21.0	23.0	24.0	20.5	22.5
14	21.5	20.5	21.0	25.5	23.0	24.5	25.5	21.5	23.5	24.0	21.5	22.5
15	20.5	19.0	19.5	24.5	22.5	23.5	25.5	22.0	24.0	22.0	20.0	21.0
16	19.5	18.5	19.0	24.5	22.5	23.5	25.0	22.5	24.0	20.0	19.0	19.5
17	21.0	18.5	19.5	25.0	22.0	23.5	25.0	22.5	23.5	21.5	18.0	19.5
18	20.5	19.0	20.0	25.0	21.5	23.0	23.5	21.5	22.0	21.5	18.0	20.0
19	20.0	19.0	19.5	23.5	22.0	22.5	22.5	20.5	21.5	21.5	18.0	20.0
20	21.0	19.0	20.0	24.0	21.5	22.5	22.0	20.5	21.5	22.5	18.5	20.5
21	22.5	20.0	21.5	26.0	21.5	23.5	22.5	21.5	22.0	23.5	20.0	21.5
22	23.0	21.5	22.5	26.5	23.5	25.0	24.0	21.5	22.5	23.0	21.5	22.0
23	23.0	22.0	23.0	27.0	24.5	25.5	25.5	22.5	24.0	21.0	17.5	19.5
24	24.0	22.0	23.0	27.5	24.5	26.0	24.5	22.5	23.5	18.0	16.0	17.0
25	24.0	22.5	23.5	28.0	25.5	26.5	24.0	21.5	23.0	17.0	15.5	16.5
26	25.5	23.0	24.0	27.5	25.5	26.5	25.5	23.5	24.0	18.0	15.5	16.5
27	25.0	23.5	24.0	26.5	25.0	26.0	26.0	23.5	24.5	17.0	14.0	15.5
28	25.0	22.5	24.0	26.0	24.0	25.0	26.5	23.5	25.0	17.0	13.5	15.0
29	24.0	22.0	23.0	25.5	23.5	24.5	26.5	24.0	25.0	17.0	15.5	16.0
30	24.0	21.5	22.5	25.0	23.5	24.0	27.0	23.5	25.5	18.5	16.5	17.0
31	---	---	---	24.0	23.0	23.5	26.5	22.5	24.5	---	---	---
MONTH	25.5	17.0	21.0	28.0	21.0	24.0	28.0	20.5	23.5	26.5	13.5	20.5
YEAR	28.0	.0	13.5									

OXYGEN, DISSOLVED (MG/L), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER				NOVEMBER			DECEMBER			JANUARY		
1	11.7	8.5	10.0	14.0	11.7	12.9	11.7	10.8	11.1	11.7	11.5	11.7
2	11.9	8.3	9.9	13.2	9.9	11.6	11.9	11.0	11.4	11.7	11.5	11.6
3	12.5	8.5	10.3	13.6	10.4	12.0	12.1	11.3	11.6	11.8	11.6	11.7
4	12.8	9.3	10.9	13.1	9.6	11.4	12.1	11.1	11.5	12.1	11.6	11.9
5	14.7	10.1	12.0	10.8	7.5	8.9	12.3	11.3	11.7	12.3	11.7	12.0
6	16.0	11.1	13.0	---	---	---	12.2	11.3	11.7	11.7	10.6	11.2
7	16.7	11.4	13.7	---	---	---	12.0	11.1	11.5	11.0	10.1	10.5
8	16.6	11.7	14.0	12.2	10.1	11.1	12.3	10.9	11.5	11.0	10.7	10.8
9	16.7	12.1	14.2	12.0	9.1	10.3	12.6	11.1	11.8	11.7	10.9	11.4
10	15.5	11.2	13.4	10.6	8.6	9.5	12.6	11.5	12.0	11.5	9.8	10.8
11	15.4	11.2	13.2	9.9	8.5	9.0	13.2	11.6	12.4	9.7	8.3	9.4
12	16.8	11.9	14.2	11.8	9.7	10.6	13.3	11.8	12.6	11.1	7.5	9.7
13	17.7	13.2	15.3	11.9	9.9	10.6	13.0	12.0	12.5	9.9	9.3	9.6
14	17.8	13.4	15.3	12.1	10.0	10.7	13.4	12.0	12.6	10.3	6.6	8.8
15	17.6	13.0	15.2	11.6	9.9	10.6	13.2	11.6	12.4	10.0	8.7	9.6
16	16.1	12.8	14.4	10.5	9.4	9.9	13.7	11.8	12.6	11.8	9.4	11.3
17	15.6	11.6	13.4	11.6	9.2	10.1	13.7	12.1	12.8	11.9	11.7	11.8
18	14.2	9.8	12.1	12.7	10.1	11.1	13.8	11.9	12.9	11.7	10.9	11.4
19	14.5	9.9	12.0	11.4	10.2	10.7	14.0	12.3	13.0	10.8	10.4	10.6
20	15.9	10.6	12.8	10.2	9.1	9.6	13.2	11.8	12.5	10.6	10.3	10.5
21	13.6	10.9	12.5	10.1	9.1	9.6	13.2	10.7	11.7	10.9	10.4	10.6
22	15.2	11.1	12.8	10.8	10.0	10.4	14.4	11.0	12.4	10.6	10.0	10.4
23	13.6	12.0	12.6	11.0	10.4	10.7	14.7	11.0	12.5	10.1	6.0	9.2
24	14.2	11.3	12.7	11.2	10.5	10.7	12.0	10.5	11.1	10.8	6.1	8.1
25	15.0	12.4	13.4	10.8	10.3	10.6	11.3	10.4	10.9	10.8	9.3	10.2
26	15.5	11.5	13.2	10.5	9.9	10.2	12.6	11.2	11.9	10.1	9.9	10.0
27	16.2	11.9	13.6	10.0	9.5	9.7	13.4	11.8	12.4	10.7	10.1	10.4
28	16.0	11.3	13.3	10.4	9.5	9.9	11.8	11.0	11.3	10.9	10.2	10.6
29	16.7	11.2	13.6	11.5	10.3	10.9	12.2	11.4	11.9	10.5	9.9	10.3
30	16.9	11.8	14.1	11.3	10.7	11.0	12.1	11.8	12.0	9.9	9.7	9.8
31	16.9	12.0	14.2	---	---	---	11.8	11.7	11.7	10.2	9.7	9.9
MONTH	17.8	8.3	13.1	14.0	7.5	10.5	14.7	10.4	12.0	12.3	6.0	10.5

SCIOTO RIVER BASIN

03234300 PAINT CREEK AT CHILLICOTHE, OH--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	9.6	9.2	9.4	8.7	6.7	7.5	9.1	8.8	9.0	11.3	10.0	10.8
2	10.5	9.0	9.8	8.4	6.8	7.5	9.5	8.9	9.1	11.2	11.0	11.2
3	11.2	10.3	10.7	9.2	7.1	8.1	9.5	8.5	9.2	11.4	11.0	11.2
4	12.0	11.2	11.6	9.2	7.6	8.5	8.9	8.3	8.6	11.1	10.6	10.9
5	12.0	11.4	11.7	10.2	7.7	8.4	9.2	8.8	9.1	11.4	9.0	9.9
6	12.0	11.3	11.6	11.2	10.0	10.7	9.1	8.9	9.0	10.5	9.0	9.6
7	12.1	11.4	11.7	11.1	10.2	10.8	---	---	---	10.0	9.5	9.7
8	12.0	11.3	11.7	11.4	10.8	11.1	---	---	---	10.9	10.1	10.4
9	12.2	10.8	11.7	10.9	10.5	10.7	---	---	---	11.3	10.2	10.6
10	12.2	10.6	11.0	10.5	9.9	10.3	---	---	---	11.7	11.3	11.5
11	11.0	10.1	10.5	9.9	9.1	9.6	---	---	---	12.0	11.0	11.4
12	11.1	9.9	10.4	9.4	8.9	9.1	---	---	---	12.0	11.2	11.5
13	10.5	9.7	10.0	8.9	7.6	8.5	---	---	---	12.1	11.4	11.6
14	11.7	10.3	11.1	7.4	6.1	6.8	---	---	---	11.8	11.4	11.6
15	11.6	10.7	11.1	6.4	5.5	5.8	---	---	---	11.8	11.1	11.6
16	10.9	10.7	10.8	7.2	5.5	6.4	---	---	---	12.2	11.8	12.0
17	12.0	11.8	11.9	9.9	6.8	8.5	---	---	---	12.5	11.4	12.0
18	11.8	10.6	11.0	9.2	8.6	8.8	---	---	---	11.3	10.0	10.7
19	11.5	10.2	10.5	9.7	9.0	9.3	---	---	---	10.1	9.5	9.7
20	10.2	10.0	10.1	10.4	8.7	9.6	---	---	---	9.5	8.9	9.3
21	10.2	9.3	9.8	10.3	9.7	10.1	---	---	---	9.1	8.5	8.8
22	9.6	9.3	9.5	10.1	9.6	9.9	---	---	---	9.1	8.5	8.8
23	9.5	9.4	9.4	10.0	9.5	9.8	---	---	---	9.4	9.1	9.2
24	9.4	9.0	9.3	9.7	8.3	9.3	---	---	---	9.8	9.2	9.4
25	10.1	6.0	8.1	8.2	7.5	7.9	---	---	---	9.4	8.8	9.1
26	7.9	6.0	6.9	7.8	7.3	7.5	10.9	10.4	10.7	8.9	7.8	8.4
27	7.8	6.2	7.0	---	---	---	11.2	10.0	10.7	8.1	7.5	7.9
28	8.6	6.2	7.0	---	---	---	10.4	9.8	10.2	8.5	8.2	8.3
29	---	---	---	---	---	---	10.3	9.9	10.1	8.7	8.3	8.5
30	---	---	---	8.5	8.0	8.2	10.3	10.0	10.1	8.4	7.7	8.1
31	---	---	---	9.2	9.0	8.1	---	---	---	7.9	7.4	7.7
MONTH	12.2	6.0	10.2	11.4	5.5	8.8	11.2	8.3	9.6	12.5	7.4	10.0
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE				JULY			AUGUST			SEPTEMBER		
1	7.6	7.3	7.5	8.9	8.0	8.4	8.6	8.1	8.3	9.5	7.3	8.1
2	7.7	7.1	7.3	8.7	7.9	8.2	8.8	8.1	8.3	9.9	7.7	8.5
3	7.2	6.8	7.0	8.6	8.1	8.3	8.7	7.9	8.2	9.1	8.1	8.5
4	7.1	6.9	7.0	8.7	8.1	8.4	8.7	7.6	8.0	9.7	8.2	8.7
5	9.4	6.9	7.9	8.7	8.2	8.4	8.6	7.2	7.7	10.0	8.2	8.8
6	9.4	8.9	9.2	8.9	8.0	8.3	7.4	7.2	7.3	10.1	8.0	8.8
7	9.2	8.7	9.0	8.6	7.6	8.0	8.0	7.3	7.6	10.1	7.8	8.8
8	9.2	8.6	8.9	7.8	7.2	7.6	9.1	8.0	8.6	10.4	7.7	8.8
9	9.2	8.6	8.9	7.7	7.2	7.6	10.3	8.4	9.2	10.8	7.4	8.8
10	9.7	8.7	9.2	7.8	7.5	7.7	10.5	9.0	9.6	9.5	7.3	8.3
11	10.0	9.0	9.5	8.1	7.4	7.8	10.3	8.8	9.4	9.6	7.6	8.4
12	9.7	8.7	9.2	7.5	7.3	7.4	10.9	8.7	9.6	10.6	8.0	8.9
13	9.8	8.5	9.1	8.1	7.4	7.6	11.4	8.7	9.8	10.8	8.0	9.1
14	9.7	8.4	8.9	8.3	7.6	7.9	11.6	8.6	9.8	9.6	7.7	8.6
15	9.0	8.6	8.8	8.4	7.5	7.9	11.6	8.2	9.6	9.2	8.0	8.5
16	9.0	8.8	8.9	8.2	7.5	7.9	11.1	7.9	9.4	9.2	8.5	8.9
17	9.3	8.6	9.0	8.4	7.6	8.0	12.1	8.0	9.8	10.3	8.9	9.3
18	9.3	8.6	8.9	8.8	7.8	8.3	10.7	8.1	9.3	10.1	8.9	9.4
19	9.1	8.6	8.9	9.0	7.7	8.3	11.3	8.5	9.8	10.3	8.9	9.4
20	9.2	8.4	8.8	9.5	8.3	8.8	11.4	8.5	9.9	11.0	8.8	9.5
21	8.8	7.9	8.4	9.6	8.3	8.8	9.8	7.9	8.8	11.0	8.3	9.3
22	8.5	7.1	7.9	9.5	8.0	8.6	9.6	5.3	7.6	8.7	7.8	8.3
23	8.7	6.7	7.8	8.9	7.9	8.3	10.3	7.2	8.5	10.6	8.1	9.2
24	9.0	8.5	8.7	9.1	7.6	8.2	8.4	7.0	7.7	10.6	9.3	9.8
25	8.8	8.2	8.5	8.8	7.6	8.1	9.9	7.6	8.5	11.1	9.3	10.0
26	8.8	8.0	8.3	8.3	7.5	7.8	9.1	7.3	8.1	11.5	9.3	10.2
27	8.8	7.8	8.2	8.1	7.5	7.8	10.0	7.5	8.5	12.0	9.5	10.5
28	8.3	7.8	8.0	7.9	7.5	7.8	10.4	7.5	8.6	12.4	9.6	10.7
29	8.5	7.7	8.1	8.1	7.7	7.9	10.5	7.2	8.5	12.4	9.3	10.6
30	8.9	8.0	8.4	8.1	7.8	7.9	11.2	7.2	8.8	12.2	9.1	10.3
31	---	---	---	8.3	7.9	8.1	11.4	7.5	9.0	---	---	---
MONTH	10.0	6.7	8.5	9.6	7.2	8.1	12.1	5.3	8.8	12.4	7.3	9.2
YEAR	17.8	5.3	10.0									

SCIOTO RIVER BASIN

149

03234500 SCIOTO RIVER AT HIGBY, OH
(National Stream Quality Accounting Network Station)

LOCATION.--Lat 39°12'44", long 82°51'50", in sec. 6, T.7 N., R.20 W., Ross County, Hydrologic Unit 05060002, on left bank at downstream side of highway bridge, 0.8 mi downstream from Walnut Creek, 1.2 mi north of Higby, 3 mi northwest of Richmondale and 5.0 mi upstream from Salt Creek.

DRAINAGE AREA.--5,131 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1930 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 893: 1937(M). WSP 1908: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 567.28 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 7, 1930, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good. Flow slightly regulated by 8 reservoirs 45 mi to 105 mi upstream from station. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--59 years, 4,583 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 177,000 ft³/s Jan. 23, 1937, from rating curve extended above 112,000 ft³/s; maximum gage height, 26.4 ft Jan. 23, 1937, from floodmarks, and Jan. 23, 1959; minimum daily discharge, 244 ft³/s Oct. 23, 1930.

EXTREMES OUTSIDE PERIOD OF RECORD.--A stage of 31.6 ft occurred Mar. 26, 1913, and has not been exceeded since.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 32,600 ft³/s May 27, gage height, 15.69 ft; minimum daily, 532 ft³/s Nov. 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	632	544	2240	7100	2900	5520	31700	16000	18800	6710	3960	2630
2	639	549	2100	6450	2850	4500	30100	14700	17100	4660	3180	2570
3	620	532	1970	5810	2920	4070	26400	12900	12900	3880	2510	3120
4	619	543	1850	5140	3400	3880	25800	10900	10400	4270	2230	2420
5	618	651	1720	4220	3220	5510	27300	9750	12500	3960	2450	1920
6	611	1970	1640	5020	2790	16000	28900	10500	9970	3530	5590	1740
7	594	3390	1610	9460	2680	15900	29000	9620	9200	3260	8330	1570
8	585	2260	1570	12400	2510	11800	24700	8240	7840	3530	4810	1460
9	589	2050	1510	18400	2180	9480	18900	7820	5630	4630	3620	1400
10	592	2050	1460	18000	1930	11100	12500	13200	4760	3610	2720	1360
11	579	2920	1380	14000	1910	11100	9770	15300	4280	3810	2310	1290
12	586	3980	1290	12600	1870	11200	7980	12600	3710	2980	2070	1230
13	669	3240	1270	11500	1850	10300	6320	10100	3920	2800	1870	1180
14	616	3420	1270	10500	4890	8180	5370	9740	4170	3490	1730	1160
15	570	4080	1310	11600	11200	7370	4810	11600	9150	3170	1600	2060
16	569	3680	1360	12100	21300	6770	4550	14300	14900	2860	1510	3120
17	565	2980	1300	9850	16200	6290	4550	11400	12900	2450	1390	2170
18	582	2390	1220	8420	10400	5600	4320	10600	10000	2140	1340	1810
19	978	2060	1180	7150	8100	4770	11100	7030	7260	2020	1310	1570
20	1090	3250	1170	5940	7260	4520	10700	5540	5830	2070	1290	1410
21	857	8380	1180	5280	15700	10900	9530	5830	5850	2470	1300	1350
22	784	8120	1220	4460	21600	15000	8720	5150	10200	2680	1330	1380
23	1080	6790	1280	3920	20300	11700	7630	10100	19000	3540	1750	2130
24	1120	5320	2080	3460	16400	9010	5530	18100	13000	3080	2940	3260
25	804	4570	4960	3230	10300	6580	4750	19300	7580	2830	3400	2160
26	730	3630	4750	3060	6450	5420	7780	23800	5130	2570	3000	1580
27	678	2970	3330	3290	5530	4780	13500	30900	4110	2720	2370	1360
28	617	2870	4110	3330	5630	4510	13500	27000	7640	5650	1800	1220
29	581	2610	12300	3100	---	5720	26000	27400	14400	12600	1650	1140
30	569	2370	12700	2990	---	18400	24300	23100	10000	8210	1710	1040
31	559	---	9960	2940	---	25800	---	19700	---	4570	4030	---
TOTAL	21282	94169	88290	234720	214270	281680	446010	432220	282130	120750	81100	53810
MEAN	687	3139	2848	7572	7652	9086	14870	13940	9404	3895	2616	1794
MAX	1120	8380	12700	18400	21600	25800	31700	30900	19000	12600	8330	3260
MIN	559	532	1170	2940	1850	3880	4320	5150	3710	2020	1290	1040

CAL YR 1988 TOTAL 1021312 MEAN 2790 MAX 26600 MIN 430
WTR YR 1989 TOTAL 2350431 MEAN 6440 MAX 31700 MIN 532

SCIOTO RIVER BASIN

03234500 SCIOTO RIVER AT HIGBY, OH--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1954 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: March 1967 to current year.

pH: March 1967 to current year.

WATER TEMPERATURES: March 1967 to current year.

DISSOLVED OXYGEN: March 1967 to current year.

INSTRUMENTATION.--Water-quality monitor since March 1967. Digital recorder set for one-hour-interval punch since May 1972.

REMARKS.--Samples were collected each month as part of the National Stream Quality Accounting Network.

Interruptions in the water-quality record were due to malfunction of the instrument. Daily Sediment data collected 1954-1974, 1979-1982.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 1,070 microsiemens Sept. 29, 1984; minimum, 113 microsiemens Sept. 16, 1975.

pH: Maximum, 9.3 units July 21, 1982, July 19, Aug. 21, 1984; minimum, 5.9 units Mar. 8, 1980.

WATER TEMPERATURES: Maximum, 34.0°C June 29, 1966; minimum, 0.0°C on many days during winter.

DISSOLVED OXYGEN: Maximum, >20.0 mg/L on several days from 1982 to 1989; minimum, 0.0 mg/L on many days during 1968, Sept. 13, 1969.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 996 microsiemens Nov. 3; minimum, 240 microsiemens Apr. 29.

pH: Maximum, 8.8 units March 3; minimum, 7.3 units Apr. 21, June 7, 8.

WATER TEMPERATURES: Maximum, 27.5°C July 11, 25, 26; minimum, 0.5°C Feb. 18, 19.

DISSOLVED OXYGEN: Maximum recorded, >20.0 mg/L Jan. 8; minimum recorded, 5.1 mg/L July 29.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE AIR (DEG C)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MP (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
DEC 06...	1030	1760	825	7.6	9.0	4.5	6.0	11.7	94	K1300	180
MAR 23...	1400	10900	574	7.9	12.0	7.5	65	11.2	96	3400	2500
JUN 28...	0915	5200	650	8.2	24.0	23.5	17	7.0	85	2500	2200
AUG 14...	0945	1750	760	8.3	21.0	22.0	17	7.9	93	250	860

DATE	HARD- NESS TOTAL (MG/L AS CACO3)	HARD- NESS NONCARB WAT TOT FLD MG/L AS CACO3	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3	ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, RIF, DIS- SOLVED (MG/L AS CL)
DEC 06...	370	180	89	35	45	4.4	239	0	194	110	61
MAR 23...	270	110	66	25	21	2.8	193	0	158	66	36
JUN 28...	310	52	79	26	22	3.1	310	0	254	67	30
AUG 14...	320	90	83	27	37	4.6	278	0	230	90	39

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHOROUS TOTAL (MG/L AS P)	PHOS- PHOROUS DIS- SOLVED (MG/L AS P)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P)
DEC 06...	0.4	5.6	519	0.02	4.30	0.01	0.02	1.2	0.36	0.31	0.26
MAR 23...	0.3	5.3	360	0.03	5.70	0.08	0.08	1.2	0.14	0.08	0.06
JUN 28...	0.3	8.0	377	0.03	4.50	0.02	0.02	0.60	0.14	0.13	0.16
AUG 14...	0.4	8.0	457	<0.01	3.00	0.02	0.01	0.80	0.33	0.21	0.17

SCIOTO RIVER BASIN

151

03234500 SCIOTO RIVER AT HIGBY, OH--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	880	870	873	970	948	959	---	---	---	372	298	333
2	888	882	883	990	972	977	---	---	---	426	328	364
3	898	888	895	996	988	991	---	---	---	606	354	460
4	912	898	901	994	968	985	---	---	---	416	374	394
5	932	914	925	970	944	959	---	---	---	424	378	401
6	942	932	938	972	822	903	832	816	826	624	388	495
7	944	932	939	868	672	779	828	812	819	576	382	494
8	950	932	943	668	632	643	852	824	835	616	432	571
9	954	946	950	718	654	687	852	846	849	---	---	---
10	946	926	936	720	704	711	846	836	840	---	---	---
11	962	922	937	704	640	679	842	838	839	---	---	---
12	962	950	956	690	622	660	870	844	851	---	---	---
13	956	942	948	660	620	640	874	860	865	---	---	---
14	952	942	945	662	652	658	868	858	862	---	---	---
15	956	950	954	672	630	654	872	866	868	---	---	---
16	950	936	943	660	630	645	868	860	864	---	---	---
17	940	930	936	674	662	668	876	866	871	---	---	---
18	938	926	929	710	676	691	888	872	877	---	---	---
19	936	888	903	720	710	716	908	886	892	---	---	---
20	916	846	892	720	476	611	906	878	889	642	620	636
21	878	836	852	598	526	563	896	880	890	642	628	635
22	890	880	885	572	528	557	906	888	896	662	638	652
23	902	756	852	---	---	---	912	892	902	686	652	667
24	802	722	763	---	---	---	906	526	778	708	684	696
25	820	726	773	---	---	---	724	604	675	710	704	707
26	878	824	850	684	666	674	668	398	539	712	704	708
27	896	880	890	---	---	---	630	400	492	730	714	721
28	904	896	899	---	---	---	652	480	602	730	722	727
29	920	906	914	---	---	---	584	512	564	726	716	722
30	922	918	919	---	---	---	576	306	384	736	720	729
31	948	922	931	---	---	---	362	300	326	748	734	741
MONTH	962	722	905	996	476	740	912	300	765	748	298	593
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	756	748	751	716	646	687	452	370	416	466	412	441
2	770	718	745	718	710	714	454	428	447	466	448	458
3	744	688	725	712	704	707	454	432	443	498	472	485
4	718	682	700	710	700	704	456	406	435	496	482	488
5	722	712	717	710	412	594	408	380	397	504	462	486
6	726	716	721	462	382	430	426	406	416	512	468	482
7	744	728	738	524	466	506	434	402	427	506	472	494
8	768	742	757	624	528	579	440	434	436	558	504	527
9	772	760	768	646	554	610	460	438	451	562	462	536
10	804	770	787	560	524	548	498	458	483	476	422	451
11	826	804	816	584	544	567	532	492	511	470	460	466
12	826	820	824	608	582	591	560	530	548	514	466	493
13	822	798	815	612	598	603	592	556	573	554	516	536
14	794	352	486	612	596	603	622	592	603	574	548	560
15	454	316	370	634	596	623	640	618	629	550	388	487
16	436	320	379	646	620	635	650	634	641	478	394	428
17	480	438	468	682	640	660	674	646	662	526	474	495
18	550	452	502	694	674	685	670	652	663	566	524	546
19	578	534	555	674	664	670	658	430	496	602	564	584
20	598	568	582	676	604	664	500	436	474	610	600	605
21	598	312	451	580	406	474	560	494	526	612	518	569
22	478	400	452	554	512	532	570	556	564	614	578	602
23	518	472	489	576	536	567	588	570	577	614	268	430
24	532	518	526	594	572	583	646	584	618	454	264	362
25	590	532	551	624	588	608	648	630	641	508	450	476
26	610	588	597	654	622	640	630	370	466	512	326	438
27	644	608	624	668	656	661	534	462	496	370	278	316
28	666	612	646	676	658	671	502	410	472	394	372	383
29	---	---	---	686	358	555	438	240	319	400	388	391
30	---	---	---	380	332	359	414	328	366	426	400	414
31	---	---	---	420	334	381	---	---	---	416	408	412
MONTH	826	312	626	718	332	594	674	240	507	614	264	479

SCIOTO RIVER BASIN

03234500 SCIOTO RIVER AT HIGBY, OH--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	416	400	412	566	496	525	590	552	572	600	545	564
2	426	418	422	628	568	597	656	594	629	611	573	590
3	462	428	447	642	602	631	682	656	670	643	612	626
4	480	462	472	646	604	633	730	684	704	647	631	646
5	468	410	440	654	640	650	740	598	689	---	---	---
6	490	458	473	680	654	666	574	342	495	675	643	657
7	528	490	506	688	680	686	486	396	432	706	679	699
8	576	520	558	696	646	681	534	408	468	733	702	716
9	610	580	590	662	580	635	578	536	560	761	729	746
10	640	600	628	636	580	614	618	580	595	776	745	766
11	668	640	656	676	628	650	664	600	641	800	763	777
12	678	656	670	638	600	611	698	666	681	847	808	830
13	674	650	666	650	600	631	730	700	714	863	843	851
14	674	640	655	716	656	695	748	730	735	848	814	831
15	642	460	534	696	642	662	820	744	783	816	760	785
16	484	414	430	674	640	658	836	822	830	774	658	734
17	488	424	455	696	676	685	830	796	819	652	598	612
18	516	488	501	726	696	711	818	780	791	628	600	609
19	574	518	545	730	720	725	824	804	813	662	624	640
20	606	574	588	734	722	729	820	792	805	700	662	684
21	628	610	620	756	732	742	824	808	813	716	702	707
22	620	510	599	756	686	733	839	824	832	724	668	714
23	483	390	412	690	640	670	839	800	820	656	576	615
24	---	---	---	680	636	654	800	675	743	626	498	587
25	---	---	---	694	670	680	675	533	600	516	438	468
26	632	602	611	708	688	699	616	553	595	642	524	589
27	660	632	648	700	666	687	647	600	616	690	644	668
28	656	476	625	690	470	573	714	651	688	722	698	711
29	500	386	427	492	364	416	722	706	715	745	722	733
30	494	416	464	524	418	466	737	722	731	765	745	757
31	---	---	---	592	528	562	733	627	699	---	---	---
MONTH	678	386	538	756	364	644	839	342	686	863	438	686
YEAR	996	240	646									

PH (STANDARD UNITS), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	8.3	8.1	8.2	8.2	8.1	8.1	---	---	---	7.9	7.8	7.9
2	8.3	8.1	8.2	8.1	8.0	8.1	---	---	---	8.0	7.9	8.0
3	8.2	8.0	8.1	8.1	8.0	8.1	---	---	---	8.1	8.0	8.0
4	8.2	8.1	8.2	8.2	8.0	8.1	---	---	---	8.1	8.0	8.1
5	8.2	8.1	8.2	8.1	8.0	8.1	---	---	---	8.1	8.0	8.1
6	8.2	8.1	8.2	8.0	7.9	8.0	8.2	8.2	8.2	8.0	8.0	8.0
7	8.3	8.1	8.2	7.9	7.9	7.9	8.2	8.2	8.2	8.0	7.8	7.9
8	8.3	8.2	8.2	7.9	7.9	7.9	8.3	8.2	8.2	8.0	7.8	7.9
9	8.3	8.2	8.2	8.0	7.9	7.9	8.3	8.2	8.3	7.8	7.7	7.8
10	8.4	8.2	8.3	8.1	8.0	8.0	8.3	8.2	8.3	7.9	7.7	7.8
11	8.3	8.1	8.2	8.1	8.0	8.1	8.3	8.2	8.3	7.9	7.8	7.8
12	8.3	8.1	8.2	8.0	8.0	8.0	8.3	8.3	8.3	7.7	7.5	7.6
13	8.3	8.2	8.2	8.1	8.0	8.0	8.3	8.2	8.3	7.7	7.6	7.6
14	8.3	8.1	8.2	8.1	8.0	8.1	8.3	8.2	8.3	---	---	---
15	8.2	8.1	8.1	8.1	8.0	8.1	8.3	8.2	8.3	---	---	---
16	8.1	8.1	8.1	8.1	8.1	8.1	8.3	8.3	8.3	---	---	---
17	8.1	8.0	8.1	8.4	8.1	8.2	8.3	8.2	8.3	---	---	---
18	8.0	7.9	8.0	8.3	8.2	8.2	8.2	8.2	8.2	---	---	---
19	8.0	7.9	8.0	8.2	8.2	8.2	8.2	8.2	8.2	---	---	---
20	8.1	7.9	8.0	8.2	7.9	8.1	8.3	8.2	8.2	8.1	8.1	8.1
21	7.9	7.9	7.9	8.0	7.9	8.0	8.2	8.1	8.1	8.1	8.0	8.1
22	7.9	7.8	7.9	8.0	7.9	8.0	8.2	8.1	8.2	8.1	8.0	8.1
23	8.0	7.9	8.0	---	---	---	8.2	8.2	8.2	8.1	7.9	8.0
24	8.0	8.0	8.0	---	---	---	8.2	7.9	8.1	8.0	7.9	8.0
25	8.1	8.0	8.1	---	---	---	8.0	7.9	8.0	8.0	7.9	8.0
26	8.1	8.0	8.1	8.2	8.1	8.1	7.9	7.9	7.9	8.0	8.0	8.0
27	8.1	8.1	8.1	---	---	---	8.1	7.9	8.0	8.1	8.0	8.0
28	8.1	8.0	8.1	---	---	---	8.2	8.1	8.1	8.1	8.0	8.0
29	8.1	8.0	8.1	---	---	---	8.1	7.9	8.0	8.0	8.0	8.0
30	8.2	8.1	8.1	---	---	---	8.0	7.9	7.9	8.1	8.0	8.0
31	8.2	8.1	8.2	---	---	---	7.9	7.7	7.9	8.1	8.0	8.0
MONTH	8.4	7.8	8.1	8.4	7.9	8.1	8.3	7.7	8.2	8.1	7.5	8.0

PH (STANDARD UNITS), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	8.1	8.0	8.0	8.4	8.0	8.2	7.9	7.7	7.8	7.8	7.4	7.6
2	8.1	8.0	8.1	8.4	8.1	8.3	7.9	7.8	7.9	7.8	7.4	7.6
3	8.1	8.1	8.1	8.8	8.0	8.2	7.8	7.7	7.8	7.9	7.4	7.7
4	8.2	8.1	8.1	8.1	7.9	8.0	7.8	7.4	7.6	7.9	7.4	7.6
5	8.2	8.1	8.2	8.0	7.8	7.9	7.7	7.6	7.7	7.9	7.6	7.8
6	8.2	8.1	8.2	8.0	7.8	7.9	7.8	7.6	7.7	7.7	7.5	7.6
7	8.2	8.2	8.2	8.3	7.8	8.0	7.8	7.8	7.8	7.9	7.6	7.8
8	8.2	8.2	8.2	7.9	7.7	7.8	7.8	7.7	7.7	7.9	7.6	7.8
9	8.2	8.2	8.2	7.8	7.5	7.7	7.7	7.6	7.7	7.9	7.7	7.8
10	8.2	8.1	8.2	7.9	7.7	7.8	7.8	7.5	7.7	7.9	7.7	7.8
11	8.1	8.0	8.1	7.8	7.6	7.7	7.6	7.5	7.5	7.8	7.6	7.7
12	8.1	8.1	8.1	7.7	7.5	7.7	7.9	7.5	7.7	7.6	7.5	7.5
13	8.1	8.1	8.1	7.7	7.6	7.7	7.9	7.5	7.7	7.9	7.5	7.6
14	8.1	7.8	7.9	7.8	7.6	7.7	7.9	7.7	7.8	7.9	7.5	7.6
15	8.0	7.8	7.8	7.8	7.4	7.7	7.8	7.6	7.7	7.9	7.6	7.8
16	7.8	7.7	7.8	7.8	7.6	7.7	7.8	7.6	7.7	7.8	7.6	7.7
17	7.9	7.7	7.8	7.9	7.6	7.8	7.9	7.7	7.8	7.7	7.4	7.6
18	7.9	7.6	7.7	7.8	7.7	7.7	8.0	7.7	7.9	8.1	7.4	7.7
19	7.9	7.6	7.8	7.8	7.6	7.7	8.0	7.6	7.8	8.0	7.7	7.8
20	7.8	7.6	7.7	8.0	7.6	7.9	7.9	7.7	7.8	8.0	7.7	7.9
21	7.9	7.6	7.8	7.9	7.8	7.9	8.1	7.3	7.7	7.9	7.5	7.7
22	8.5	7.8	8.1	7.9	7.8	7.8	8.0	7.8	7.9	7.9	7.7	7.8
23	8.4	7.8	8.2	8.0	7.7	7.9	7.9	7.5	7.7	7.9	7.6	7.8
24	7.8	7.4	7.6	7.9	7.6	7.7	8.1	7.6	7.9	7.8	7.7	7.7
25	8.1	7.4	7.6	7.8	7.6	7.7	8.1	7.9	8.0	7.9	7.8	7.8
26	8.1	7.9	8.0	7.9	7.6	7.8	8.1	7.4	7.7	7.9	7.6	7.8
27	8.4	8.0	8.1	8.0	7.8	7.9	7.9	7.6	7.7	7.8	7.6	7.6
28	8.3	7.8	8.1	8.1	7.8	8.0	7.9	7.5	7.7	7.6	7.6	7.6
29	---	---	---	8.0	7.7	7.9	7.8	7.5	7.6	7.6	7.6	7.6
30	---	---	---	7.8	7.6	7.7	7.7	7.3	7.5	7.7	7.7	7.7
31	---	---	---	7.7	7.6	7.7	---	---	---	7.7	7.6	7.7
MONTH	8.5	7.4	8.0	8.8	7.4	7.8	8.1	7.3	7.7	8.1	7.4	7.7
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE				JULY			AUGUST			SEPTEMBER		
1	7.7	7.6	7.7	8.0	8.0	8.0	8.0	7.9	8.0	8.0	7.9	8.0
2	7.7	7.5	7.6	8.1	8.0	8.0	8.1	8.0	8.0	8.2	8.0	8.1
3	7.7	7.6	7.6	8.1	8.0	8.1	8.1	8.0	8.0	8.2	8.1	8.2
4	7.7	7.4	7.6	8.2	8.1	8.1	8.2	8.0	8.1	8.3	8.2	8.2
5	7.7	7.5	7.5	8.2	8.1	8.1	8.2	8.0	8.1	---	---	---
6	7.7	7.5	7.6	8.2	8.0	8.1	8.0	7.8	7.9	8.5	8.2	8.3
7	7.8	7.3	7.5	8.3	8.1	8.2	7.9	7.7	7.8	8.6	8.3	8.4
8	7.8	7.3	7.6	8.4	8.2	8.3	8.1	7.9	8.0	8.6	8.4	8.5
9	7.7	7.5	7.6	8.4	8.0	8.2	8.2	8.1	8.1	8.7	8.3	8.5
10	7.7	7.5	7.6	8.0	7.9	8.0	8.1	8.0	8.1	8.7	8.3	8.5
11	7.7	7.6	7.7	8.1	8.0	8.1	8.2	8.1	8.1	8.5	8.3	8.4
12	7.7	7.7	7.7	8.0	7.9	8.0	8.3	8.1	8.2	8.7	8.3	8.5
13	7.9	7.7	7.8	8.1	7.9	8.0	8.3	8.2	8.2	8.7	8.3	8.5
14	7.9	7.9	7.9	8.3	8.1	8.1	8.4	8.2	8.3	8.5	8.3	8.4
15	8.0	7.8	8.0	8.2	8.1	8.1	8.5	8.2	8.4	8.3	8.2	8.2
16	8.0	7.9	8.0	8.3	8.1	8.2	8.4	8.3	8.3	8.2	8.1	8.1
17	8.1	8.0	8.0	8.4	8.2	8.3	8.4	8.2	8.3	8.1	8.0	8.1
18	8.1	8.0	8.1	8.5	8.2	8.3	8.5	8.4	8.4	8.2	8.1	8.1
19	8.1	8.1	8.1	8.4	8.2	8.3	8.5	8.3	8.4	8.3	8.1	8.2
20	8.1	8.1	8.1	8.3	8.1	8.2	8.6	8.3	8.5	8.3	8.2	8.2
21	8.1	8.1	8.1	8.3	8.1	8.2	8.5	8.4	8.5	8.4	8.2	8.3
22	8.2	7.9	8.1	8.2	8.1	8.2	8.4	8.3	8.4	8.3	8.2	8.2
23	8.1	7.8	7.9	8.1	8.0	8.1	8.5	8.2	8.3	8.2	8.1	8.2
24	---	---	---	8.1	8.0	8.0	8.2	8.0	8.1	8.2	8.1	8.2
25	---	---	---	8.1	8.0	8.0	8.0	8.0	8.0	8.1	8.0	8.1
26	8.1	8.0	8.0	8.1	8.0	8.1	8.1	8.0	8.0	8.1	8.1	8.1
27	8.1	8.0	8.1	8.3	8.1	8.2	8.1	8.0	8.1	8.2	8.1	8.2
28	8.2	7.8	8.1	8.2	7.9	8.0	8.3	8.1	8.2	8.3	8.2	8.3
29	7.8	7.7	7.8	7.9	7.7	7.8	8.5	8.2	8.3	8.3	8.2	8.3
30	8.0	7.8	7.9	7.9	7.8	7.9	8.6	8.3	8.4	8.3	8.2	8.3
31	---	---	---	8.0	7.9	8.0	8.6	8.0	8.3	---	---	---
MONTH	8.2	7.3	7.8	8.5	7.7	8.1	8.6	7.7	8.2	8.7	7.9	8.3
YEAR	8.8	7.3	8.0									

SCIOTO RIVER BASIN

03234500 SCIOTO RIVER AT HIGBY, OH--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	22.6	21.1	21.9	12.0	9.5	10.5	---	---	---	5.5	2.5	4.5
2	22.7	21.4	21.9	11.0	10.0	10.5	---	---	---	6.0	5.0	5.5
3	21.3	19.4	20.5	10.5	8.5	9.5	---	---	---	5.5	4.5	5.0
4	19.2	17.6	18.4	13.5	10.5	12.0	---	---	---	4.5	3.0	4.0
5	17.3	15.5	16.4	13.5	12.5	13.0	---	---	---	6.0	2.0	4.0
6	16.5	14.0	15.0	12.5	10.5	11.5	6.5	5.0	5.5	6.0	3.0	4.5
7	16.0	14.0	15.0	11.0	10.0	10.5	6.5	6.0	6.0	8.0	5.0	6.5
8	15.5	13.5	14.5	11.0	9.5	10.0	6.5	6.0	6.5	7.5	6.0	7.0
9	15.0	13.5	14.5	10.5	9.0	10.0	6.5	5.0	6.0	7.5	5.5	6.5
10	15.5	13.5	14.5	11.5	10.0	10.5	5.0	4.0	4.5	7.5	4.5	5.5
11	15.5	14.0	14.5	11.0	10.0	10.5	4.0	2.5	3.5	6.5	2.5	5.0
12	13.5	12.0	13.0	10.0	9.5	9.5	2.5	1.5	2.0	10.0	6.0	8.5
13	13.0	10.5	12.0	10.0	9.0	9.5	2.5	2.0	2.5	5.5	3.5	4.0
14	13.5	10.5	12.0	10.0	8.5	9.5	4.0	2.5	3.5	---	---	---
15	13.5	11.5	12.5	10.0	9.0	9.5	4.5	4.0	4.5	---	---	---
16	13.5	12.5	13.0	11.5	10.0	10.5	4.0	3.0	3.5	---	---	---
17	15.5	13.5	14.5	11.0	10.0	10.5	3.5	2.5	3.0	---	---	---
18	16.0	15.5	15.5	9.5	8.5	9.0	2.5	2.0	2.0	---	---	---
19	15.5	14.0	14.5	9.0	9.0	9.0	4.0	2.0	2.5	---	---	---
20	15.0	13.0	14.0	10.5	9.0	9.5	6.0	4.0	4.5	6.5	5.0	5.5
21	14.0	13.5	13.5	10.0	9.5	10.0	7.0	6.0	6.5	7.5	4.0	5.5
22	13.5	12.5	13.0	9.5	9.0	9.0	6.5	5.5	6.0	8.0	2.5	5.5
23	12.0	11.0	11.5	---	---	---	8.0	6.5	7.5	9.5	4.0	6.0
24	11.0	10.5	10.5	---	---	---	8.0	7.5	7.5	8.5	5.5	7.0
25	11.0	9.5	10.5	---	---	---	8.0	7.0	7.5	10.5	7.0	8.5
26	11.5	9.0	10.5	9.5	8.0	8.5	6.5	6.0	6.0	10.0	9.0	9.5
27	11.0	8.5	10.0	---	---	---	8.0	5.5	7.0	9.5	8.0	8.5
28	12.5	10.5	11.0	---	---	---	7.5	5.0	6.5	9.5	7.0	8.0
29	11.5	9.5	10.5	---	---	---	5.0	4.0	4.5	9.0	8.0	8.5
30	11.5	9.5	10.5	---	---	---	5.5	3.0	4.5	9.0	8.0	9.0
31	11.5	8.0	9.5	---	---	---	6.0	1.5	4.0	10.0	7.5	8.5
MONTH	22.7	8.0	14.0	13.5	8.0	10.0	8.0	1.5	5.0	10.5	2.0	6.5
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	12.0	9.5	10.5	6.0	3.5	5.0	9.0	8.0	8.5	17.0	14.5	16.0
2	11.0	9.0	9.5	7.5	5.5	6.5	8.5	8.0	8.0	15.0	12.0	13.5
3	8.5	6.0	7.5	11.5	6.0	8.5	13.0	8.5	11.0	16.5	11.5	14.0
4	6.0	5.0	5.5	14.5	10.0	11.5	14.0	12.5	13.0	17.0	11.5	14.5
5	4.5	4.0	4.5	11.5	7.0	10.0	13.0	12.0	12.5	16.5	14.0	16.0
6	4.5	3.5	4.0	7.5	4.5	6.0	12.5	10.0	11.0	15.5	9.5	12.5
7	4.0	3.0	3.5	9.5	5.5	7.5	12.0	9.5	10.5	14.5	8.0	12.5
8	3.5	2.5	3.0	7.5	3.0	5.5	11.5	9.5	11.0	16.0	9.0	12.5
9	2.5	1.0	2.0	8.5	3.5	6.0	11.0	7.5	9.5	15.0	12.5	13.5
10	3.0	1.5	2.0	8.5	3.0	5.5	10.0	5.0	7.0	13.5	11.0	13.0
11	4.5	2.0	3.0	14.0	6.0	9.0	9.0	1.5	5.5	15.0	12.0	13.5
12	5.0	3.0	4.0	10.5	7.0	8.5	12.5	5.0	9.5	14.0	10.5	11.5
13	5.0	4.0	4.5	10.0	5.0	7.5	13.5	7.0	10.5	14.5	10.5	12.0
14	6.0	4.5	5.5	14.0	8.0	10.5	15.5	10.5	13.0	16.5	12.0	14.0
15	6.0	4.5	5.5	14.5	9.0	11.5	14.5	11.0	13.0	15.5	14.0	15.0
16	6.0	4.0	5.0	12.5	3.5	8.0	17.5	6.5	12.5	16.5	13.0	15.0
17	5.5	1.5	3.0	12.5	4.5	8.5	18.5	11.0	15.0	20.0	13.5	16.5
18	5.5	.5	2.0	15.0	9.0	12.0	16.0	13.5	14.5	20.5	15.0	18.5
19	4.5	.5	2.5	11.5	8.0	9.5	15.0	10.5	13.0	20.0	17.5	18.5
20	6.0	2.0	4.0	9.5	7.0	8.5	16.5	12.0	14.0	20.0	17.0	19.0
21	8.5	6.5	7.5	8.5	7.0	8.0	19.0	11.0	14.0	21.5	17.5	20.0
22	7.5	6.0	6.5	9.0	6.0	7.5	17.5	13.5	15.5	20.0	18.0	19.0
23	6.5	5.5	6.0	9.5	3.5	7.0	18.0	11.5	14.5	19.0	14.5	17.0
24	---	---	---	15.5	8.5	11.0	16.5	11.5	14.5	17.5	14.0	15.0
25	4.0	3.0	3.5	14.0	7.5	11.0	18.5	14.0	16.5	18.0	16.0	17.0
26	7.0	4.0	5.5	17.0	8.5	13.0	19.5	16.5	17.5	19.0	17.0	18.0
27	8.0	4.5	6.0	17.0	13.0	15.0	21.0	15.5	18.0	19.5	19.0	19.5
28	6.0	3.0	5.0	18.5	15.0	16.5	18.5	15.0	16.5	19.0	18.0	18.5
29	---	---	---	17.0	14.5	15.5	17.0	14.0	15.0	19.0	18.5	19.0
30	---	---	---	15.5	13.0	13.5	19.5	15.0	17.0	20.5	18.5	19.0
31	---	---	---	13.0	9.0	11.0	---	---	---	22.5	19.5	20.5
MONTH	12.0	.5	5.0	18.5	3.0	9.5	21.0	1.5	12.5	22.5	8.0	16.0

SCIOTO RIVER BASIN

155

03234500 SCIOTO RIVER AT HIGBY, OH--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	22.0	20.5	21.5	23.5	21.5	22.5	24.0	22.0	23.0	24.5	23.0	23.5
2	25.0	21.0	22.0	23.0	22.5	22.5	25.0	22.5	23.5	23.5	22.5	23.0
3	24.0	21.0	22.0	22.5	21.5	22.0	25.5	23.5	24.5	24.0	21.5	22.5
4	23.0	21.0	22.0	22.0	21.5	21.5	26.0	24.0	25.0	23.5	22.0	22.5
5	22.5	20.0	21.0	23.0	21.5	22.0	26.0	24.5	25.5	---	---	---
6	22.0	19.0	20.5	24.5	22.0	23.0	25.0	22.5	24.0	23.5	22.0	22.5
7	24.0	19.5	21.5	26.0	23.5	24.5	24.0	22.0	23.0	24.0	22.5	23.5
8	23.5	20.0	21.5	26.0	24.0	25.0	22.0	20.5	21.5	24.5	23.0	23.5
9	23.5	21.0	22.0	25.5	24.0	25.0	23.0	20.0	21.5	25.0	23.5	24.5
10	23.5	20.5	21.0	26.5	24.0	25.0	23.0	20.5	21.5	25.5	24.0	24.5
11	22.0	19.0	20.5	27.5	25.0	26.0	23.5	21.0	22.5	24.0	23.0	23.5
12	22.0	19.0	20.5	26.0	24.5	25.0	24.0	21.5	22.5	23.5	22.0	23.0
13	21.0	19.5	20.5	26.0	24.0	25.0	24.0	22.0	23.0	23.5	21.5	22.5
14	21.0	20.0	20.5	26.0	24.0	25.0	24.5	22.0	23.5	23.0	22.0	22.5
15	20.5	18.5	19.5	25.0	23.0	24.0	24.0	21.5	22.5	21.5	20.5	21.0
16	19.0	18.5	19.0	25.0	23.0	24.0	23.5	22.0	22.5	20.5	20.0	20.5
17	19.5	18.0	19.0	24.5	22.0	23.5	24.5	23.0	23.5	20.5	18.5	19.5
18	19.5	18.5	19.0	24.5	22.0	23.5	24.0	22.0	23.0	20.5	18.5	19.5
19	19.5	19.0	19.0	24.0	22.5	23.0	22.5	21.5	22.0	20.5	18.5	19.5
20	20.0	18.5	19.5	23.5	22.0	22.5	22.5	21.5	22.0	21.5	19.0	20.0
21	21.5	19.5	20.5	25.0	22.5	23.5	22.5	22.0	22.0	22.0	20.0	21.0
22	21.5	21.0	21.0	26.0	24.0	25.0	23.5	22.0	22.5	22.0	21.0	21.5
23	21.0	21.0	21.0	26.5	24.5	25.5	24.5	22.5	23.5	21.0	18.5	19.5
24	---	---	---	27.0	24.5	26.0	24.0	23.0	23.5	18.5	16.5	17.5
25	---	---	---	27.5	25.5	26.5	23.5	22.0	23.0	17.5	16.0	16.5
26	25.0	23.0	23.5	27.5	26.0	26.5	24.5	22.5	23.5	17.5	16.0	16.5
27	25.0	23.5	24.5	27.0	25.5	26.5	24.5	23.0	24.0	17.0	15.0	16.0
28	25.0	23.5	24.0	26.0	24.0	25.0	25.5	23.5	24.5	17.0	14.5	16.0
29	23.0	22.0	22.5	24.5	23.0	24.0	25.5	24.5	25.0	17.0	16.0	16.5
30	23.5	21.5	22.5	23.5	23.0	23.5	26.5	24.5	25.0	18.0	16.5	17.5
31	---	---	---	23.5	23.0	23.0	26.0	23.5	25.0	---	---	---
MONTH	25.0	18.0	21.0	27.5	21.5	24.0	26.5	20.0	23.5	25.5	14.5	20.5
YEAR	27.5	.5	14.5									

OXYGEN, DISSOLVED (MG/L), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	9.5	7.6	8.5	10.6	9.5	10.1	---	---	---	---	---	---
2	9.4	7.3	8.2	10.2	9.2	9.7	---	---	---	---	---	---
3	9.7	7.4	8.4	10.2	9.0	9.6	---	---	---	---	---	---
4	9.9	8.1	8.9	9.8	8.7	9.3	---	---	---	---	---	---
5	10.2	8.4	9.2	8.6	7.2	7.8	---	---	---	---	---	---
6	10.6	9.3	9.9	7.3	6.7	7.1	---	---	---	16.0	13.6	14.5
7	10.9	9.4	10.1	7.6	6.6	7.1	---	---	---	15.3	12.7	13.8
8	10.9	9.6	10.2	9.0	7.5	8.2	---	---	---	20.0	12.8	16.2
9	10.7	9.7	10.2	9.6	8.8	9.1	---	---	---	16.1	13.3	14.7
10	10.8	9.5	10.1	9.6	9.2	9.4	---	---	---	16.7	13.9	14.5
11	10.4	9.1	9.7	9.5	9.1	9.2	---	---	---	---	---	---
12	10.4	9.0	9.7	9.4	8.7	9.1	---	---	---	---	---	---
13	11.1	9.4	10.1	9.9	9.4	9.6	---	---	---	---	---	---
14	11.0	10.2	10.4	10.1	9.5	9.8	---	---	---	---	---	---
15	10.5	9.7	10.1	10.0	9.5	9.8	---	---	---	---	---	---
16	10.1	9.4	9.7	9.9	9.5	9.6	14.7	13.3	14.1	---	---	---
17	9.5	8.7	9.2	10.6	9.2	9.8	15.6	13.7	14.7	---	---	---
18	8.8	8.0	8.4	10.7	9.8	10.3	14.7	13.5	14.1	---	---	---
19	8.8	7.8	8.3	10.5	10.0	10.2	14.2	13.4	13.8	---	---	---
20	8.6	7.3	7.8	10.1	9.2	9.8	16.5	13.3	15.0	14.9	11.7	13.3
21	7.6	7.3	7.5	12.0	9.1	9.3	17.8	16.0	17.3	14.8	12.1	13.2
22	7.5	7.2	7.3	---	---	---	18.4	17.8	18.1	14.8	12.5	13.6
23	8.7	7.5	8.1	---	---	---	18.4	18.1	18.2	14.2	12.0	13.5
24	9.2	8.6	8.8	---	---	---	---	---	---	15.0	13.4	14.3
25	9.6	9.1	9.3	---	---	---	---	---	---	15.0	13.2	14.3
26	10.0	9.4	9.6	---	---	---	---	---	---	14.0	12.3	13.6
27	10.6	9.6	10.0	---	---	---	---	---	---	14.6	14.0	14.3
28	10.3	9.5	10.0	---	---	---	---	---	---	14.8	14.4	14.6
29	10.4	9.4	9.8	---	---	---	---	---	---	14.7	14.4	14.5
30	10.8	9.9	10.3	---	---	---	---	---	---	14.6	14.3	14.4
31	11.0	10.2	10.6	---	---	---	---	---	---	14.6	14.2	14.5
MONTH	11.1	7.2	9.3	12.0	6.6	9.2	18.4	13.3	15.7	20.0	11.7	14.2

SCIOTO RIVER BASIN

157

03234500 SCIOTO RIVER AT HIGBY, OH--Continued

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM DIS- SOLVED (UG/L AS LI)
DEC 06...	10	1	79	<0.5	2	<1	<3	4	13	<5	14
MAR 23...	<10	1	53	<0.5	<1	<1	<3	41	34	<5	6
JUN 28...	10	1	74	<0.5	<1	<1	<3	9	16	2	7
AUG 14...	10	2	84	<0.5	<1	<1	<3	<1	23	<1	10

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)
DEC 06...	16	<0.1	10	7	3	1.0	2200	<6	12	6
MAR 23...	8	<0.1	<10	3	<1	<1.0	1100	<6	16	89
JUN 28...	5	<0.1	<10	4	<1	<1.0	1200	<6	12	49
AUG 14...	8	<0.1	<10	2	<1	<1.0	1300	<6	12	52

K Results based on colony count outside the acceptable range

SCIOTO RIVER BASIN

RESERVOIRS IN SCIOTO RIVER BASIN

- 03220500 O'SHAUGHNESSY RESERVOIR NEAR DUBLIN.--Lat 40 09'14", long 83 07'33", Delaware County, Hydrologic Unit 05060001, in gate house of dam on Scioto River, 4.0 mi north of Dublin.
DRAINAGE AREA.--979 mi.
PERIOD OF RECORD.--October 1924 to current year.
GAGE.--water-stage recorder. Monthend contents only for some periods published in WSP 1305. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by city of Columbus). Prior to Dec. 2, 1940, nonrecording gage at same site and datum.
REMARKS.--Reservoir is formed by concrete dam; dam completed and storage began in 1924. Usable capacity, 14,500 acre-ft, between elevations, 789.5 ft (sill of outlet gate), and 845 ft (crest of spillway), based on survey made in 1942. Flashboards installed May 8, 1945, additional capacity, 2,480 acre-ft, between elevations 845 ft (crest of spillway), and 847.9 ft (crest of flashboards). Dead storage below elevation 789.5 ft, 55 acre-ft. Figures given herein represent usable contents. Water used for municipal supply of city of Columbus and recreational purposes. Capacity table computed from data furnished by city of Columbus.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 24,240 acre-ft Jan. 22, 1959, elevation, 854.40 ft; minimum, 43 acre-ft Feb. 11, 1945, elevation, 791.97 ft.
EXTREMES FOR CURRENT YEAR.--Maximum contents, 19,510 acre-ft Apr. 4, elevation, 850.38 ft; minimum, 14,650 acre-ft Nov. 3, elevation, 845.19 ft.
- 03221500 GRIGGS RESERVOIR NEAR COLUMBUS.--Lat 40 00'54", long 83 05'38", Franklin County, Hydrologic Unit 05060001, on left abutment of dam on Scioto River, 6.2 mi northwest of State Capitol building in Columbus, and 6.5 mi upstream from Olentangy River.
DRAINAGE AREA.--1,044 mi.
PERIOD OF RECORD.--January 1921 to current year.
GAGE.--Water-stage recorder. Monthend contents only for some periods, published in WSP 1305. Daily readings have been obtained by city of Columbus, Division of Water, since 1908. Datum of gage is 680.38 ft National Geodetic Vertical Datum, adjustment of 1929 (levels by city of Columbus). Prior to Oct. 4, 1940 nonrecording gage at same site and datum.
REMARKS.--Reservoir formed by concrete dam; dam completed and storage began in 1905. Usable capacity, 3,700 acre-ft between elevations, 735.4 ft (lowest outlets), and 753.4 ft (crest of spillway), based on survey made in 1935. Flashboards installed July 28, 1945, additional capacity, 750 acre-ft, between elevations, 753.4 ft (crest of spillway) and 755.6 ft (crest of flashboards). Dead storage below elevation, 735.4 ft, 239 acre-ft. Figures given herein represent usable contents. Water is used for municipal supply of city of Columbus and recreational purposes. Capacity table computed from data furnished by city of Columbus.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 7,490 acre-ft Jan. 22, 1959, elevation, 763.91 ft; minimum, 38 acre-ft Jan. 24, 1945, elevation, 735.78 ft.
EXTREMES FOR CURRENT YEAR.--Maximum contents, 5,610 acre-ft May 26, elevation, 758.85 ft; minimum, 3,870 acre-ft Oct. 27, elevation, 753.90 ft.
- 03228400 HOOVER RESERVOIR AT CENTRAL COLLEGE.--Lat 40 06'30", long 82 52'59", in T.2 N., R.17 W., Franklin County, Hydrologic Unit 05060001, in gate house of dam on Big Walnut Creek, 0.5 mi northeast of Central College, and 12 mi northeast of Columbus.
DRAINAGE AREA.--190 mi.
PERIOD OF RECORD.--March 1955 to current year.
REVISED RECORDS.--WRD OH-78-1: 1975 (M).
GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Sept. 10, 1956, nonrecording gage at same site and datum.
REMARKS.--Reservoir formed by earthfill dam with concrete spillway; dam completed in 1954 and storage began in March 1955. Usable capacity, 60,130 acre-ft between elevations 830.0 ft (lowest outlet), and 890.0 ft (crest of spillway). Additional flood-control storage above elevation 890.0 ft by bascule gates installed in May 1970, 25,750 acre-ft. Dead storage below elevation 830.0 ft, 214 acre-ft. Figures given herein represent usable contents. Reservoir is used for municipal supply of city of Columbus and for recreational purposes. Outflow is controlled mostly by operation of valves in tunnel through dam, but above spillway level bascule gates can be used. Capacity table computed from data furnished by city of Columbus.
EXTREMES FOR PERIOD OF RECORD: Maximum contents, 83,260 acre-ft, Feb. 24, 1975, elevation, 897.26 ft; minimum, 19,010 acre-ft Mar. 1, 1964, elevation, 868.58 ft.
EXTREMES FOR CURRENT YEAR: Maximum contents, 79,500 acre-ft June 15, elevation, 896.20 ft; minimum, 39,190 acre-ft Nov. 3, elevation, 881.52 ft.

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Elevation (feet)	Contents (acre- feet)	Change in contents (acre-feet)	Elevation (feet)	Contents (acre- feet)	Change in contents (acre-feet)	Elevation (feet)	Contents (acre- feet)	Change in contents (acre-feet)
03220500 O'SHAUGHNESSY RESERVOIR				03221500 GRIGGS RESERVOIR			03228400 HOOVER RESERVOIR		
Sept. 30.....	845.68	15,030	--	755.32	4,350	--	883.45	43,410	--
Oct. 31.....	845.38	14,800	-230	754.39	4,030	-320	881.69	39,540	-3,870
Nov. 30.....	847.86	16,940	+2,140	755.39	4,370	+340	887.58	53,700	+14,160
Dec. 31.....	848.25	17,310	+370	756.02	4,590	+220	889.12	57,760	+4,060
CAL YR 1988	-	-	+200	-	-	+120	-	-	+37,230
Jan. 31.....	847.94	17,010	-300	755.74	4,490	-100	893.45	70,110	+12,350
Feb. 28.....	848.15	17,210	+200	755.81	4,520	+30	893.97	71,790	+1,680
Mar. 31.....	849.66	18,740	+1,530	757.84	5,240	+720	894.90	73,250	+1,460
Apr. 30.....	848.28	17,340	-1,400	756.32	4,690	-550	894.71	74,300	+1,050
May. 31.....	847.71	17,770	+430	756.61	4,790	+100	894.37	73,140	-1,160
June 30.....	848.19	17,250	-520	756.25	4,670	-120	894.65	74,100	+960
July 31.....	847.59	16,690	-560	756.00	4,580	-90	892.56	67,340	-6,760
Aug. 31.....	847.75	16,840	+150	755.46	4,400	-180	889.88	59,810	-7,530
Sept. 30.....	847.02	16,160	-680	755.35	4,360	-40	887.20	52,710	-7,100
WTR YR 1989..	--	--	+1,130			+10			+9,300

03237280 UPPER TWIN CREEK AT MCGAW, OH

(HYDROLOGIC BENCH-MARK STATION)

LOCATION.--Lat 38°38'37", long 83°12'57", Scioto County, Hydrologic Unit 05090201, on right bank, 0.3 mi downstream from Brown Run, 0.3 mi upstream from Tucker Run, 0.7 mi upstream from bridge on U.S. Highway 52 at McGaw, 2.7 mi northeast of Buena Vista, and 3.2 mi upstream from mouth.

DRAINAGE AREA.--12.2 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 538.41 ft above National Geodetic Vertical Datum of 1929 (revised). Ohio Department of Highways bench mark. Prior to July 21, 1972 at site 0.7 mi downstream at datum 18.41 ft lower. July 21, 1972 to September 30, 1984 at same site at datum 5.00 ft higher.

REMARKS.--Estimated daily discharges: Dec. 10-19 and Feb. 6-12. Records fair except those for periods of missing record and those below 2 ft³/s and those above 200 ft³/s which are poor.

AVERAGE DISCHARGE.--26 years, 13.4 ft³/s., 14.92 in./yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,500 ft³/s Mar. 4, 1964, gage height, 9.7 ft, in gage well, 10.2 ft, from outside highwater mark from rating curve extended above 300 ft³/s on basis of slope-area measurement of peak flow; no flow for many days most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 3, 1960 reached a stage of 11.62 ft, discharge, 7,230 ft³/s, on basis of contracted-opening and flow over road measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 450 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 14	1900	583	7.08	Feb. 21	0500	674	7.19
Feb. 15	0615	1,210	8.60	June 20	0230	*1,470	*9.15

Minimum daily discharge, 0.00 ft³/s Oct. 1-17, 19-21, 25-31, Nov. 1-4, Dec. 20-21.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.40	3.1	.11	10	70	45	4.2	1.2	1.1	1.8
2	.00	.00	.40	3.9	.11	9.0	38	45	3.8	.91	1.1	4.9
3	.00	.00	.40	2.9	94	8.7	33	33	3.3	1.0	1.0	3.4
4	.00	.00	.40	1.6	50	8.1	38	26	3.1	1.2	.98	1.8
5	.00	.07	.40	.69	18	72	46	42	15	1.0	.93	1.1
6	.00	.06	.40	2.6	7.8	165	33	36	13	.89	2.9	.88
7	.00	.03	.40	6.4	3.7	57	28	29	7.3	.77	1.7	.75
8	.00	.19	.37	62	1.7	27	29	24	5.4	.75	.97	.74
9	.00	.29	.29	22	.70	19	37	54	6.0	.75	.75	.66
10	.00	.36	.25	10	.40	18	30	71	6.1	.75	.75	.60
11	.00	.37	.20	5.3	.20	16	24	42	4.4	.75	.75	.59
12	.00	.40	.17	104	.15	14	19	30	4.0	.89	.75	.52
13	.00	.40	.14	52	11	11	15	24	4.6	23	.75	.50
14	.00	.39	.12	135	224	11	13	19	4.5	7.7	.72	.71
15	.00	.25	.10	108	466	9.3	13	42	21	2.9	.60	1.3
16	.00	.22	.08	26	183	7.7	12	49	31	1.4	.60	11
17	.00	.19	.07	11	59	7.0	10	33	18	.99	.52	17
18	.01	.11	.06	5.1	32	8.0	14	25	9.9	.75	.49	6.3
19	.00	2.9	.05	2.7	22	7.5	62	18	7.8	2.9	.49	3.4
20	.00	65	.00	1.4	16	58	37	15	243	5.7	.69	1.8
21	.00	10	.00	.46	221	163	28	12	70	4.4	1.3	1.2
22	.03	4.6	.13	.28	53	54	22	9.0	30	2.6	1.8	19
23	.01	3.2	2.0	.24	27	32	17	17	22	1.5	1.5	112
24	.03	1.9	83	.21	18	24	14	23	12	1.5	4.6	27
25	.00	1.4	22	.13	14	18	12	17	7.7	1.3	8.5	12
26	.00	1.0	6.0	.11	13	14	40	17	5.3	.92	4.5	7.4
27	.00	.70	2.9	.11	12	12	34	13	3.4	.89	2.2	5.1
28	.00	.58	5.7	.11	11	10	46	9.5	2.4	4.8	1.3	3.1
29	.00	.57	9.4	.11	---	11	124	8.0	1.8	2.9	1.1	2.2
30	.00	.54	5.1	.11	---	52	57	6.6	1.4	1.6	2.1	1.6
31	.00	---	3.1	.11	---	128	---	5.4	---	1.3	1.5	---
TOTAL	0.08	95.72	144.03	567.67	1558.87	1061.3	995	839.5	571.4	79.91	48.94	250.35
MEAN	.003	3.19	4.65	18.3	55.7	34.2	33.2	27.1	19.0	2.58	1.58	8.34
MAX	.03	65	83	135	466	165	124	71	243	23	8.5	112
MIN	.00	.00	.00	.11	.11	7.0	10	5.4	1.4	.75	.49	.50
CFSM	.00	.26	.38	1.50	4.56	2.81	2.72	2.22	1.56	.21	.13	.68
IN.	.00	.29	.44	1.73	4.75	3.24	3.03	2.56	1.74	.24	.15	.76

CAL YR 1988 TOTAL 2502.90 MEAN 6.84 MAX 317 MIN .00 CFSM .56 IN. 7.63
WTR YR 1989 TOTAL 6212.77 MEAN 17.0 MAX 466 MIN .00 CFSM 1.40 IN. 18.94

UPPER TWIN CREEK BASIN

03237280 UPPER TWIN CREEK AT MCGAW, OH--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964 to current year.

PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: March 1985 to current year.

pH: March 1985 to current year.

WATER TEMPERATURES: Water years 1963-66, 1967-70, 1972-1982, 1984 to current year.

SUSPENDED SEDIMENT DISCHARGE: Water years 1964-69 (periodic), 1969 to 1973 (daily), 1974 to current year (periodic).

INSTRUMENTATION.--Water temperature recorder since July 1972.

REMARKS.--Interruptions in the water-quality record were due to malfunctions of the instrument or no flow.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 279 microsiemens Nov. 5, 1988; minimum, 40 microsiemens July 1, 1986.

pH: Maximum recorded, 8.5 units Sept. 6, 1989; minimum recorded, 5.5 units Sept. 3, 1988.

WATER TEMPERATURES: Maximum, 38.5 C July 22, 1986; minimum, 0.0 C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 279 microsiemens Nov. 5; minimum recorded, 60 microsiemens Dec. 24.

pH: Maximum recorded, 8.5 units Sept. 6; minimum recorded, 6.0 units Nov. 5.

WATER TEMPERATURE: Maximum recorded, 32.5 C July 26, 27;; minimum recorded 1.0 C Dec. 12, 13, 18.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE AIR (DEG C)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PFR 100 ML)
OCT 24...	1100	0.01	200	7.2	11.5	8.5	2.3	10.2	90	K29	250
NOV 08...	1140	0.16	220	7.2	22.0	10.5	0.30	9.8	90	45	180
DEC 19...	1030	0.05	140	6.8	3.0	2.0	2.0	13.4	100	K2	K12
JAN 09...	1100	22	105	7.3	-2.0	5.0	2.2	12.6	100	60	72
FEB 28...	1045	11	77	6.4	0.0	3.0	1.7	13.1	100	66	27
MAR 21...	1030	135	72	6.8	1.0	6.5	8.4	12.3	103	36	190
APR 17...	1200	9.8	85	7.2	19.5	13.5	0.50	9.8	97	K6	K14
MAY 16...	1045	46	87	6.9	8.0	11.5	1.5	10.9	103	40	77
JUN 22...	1100	30	85	7.0	27.0	17.0	2.2	9.4	100	120	230
JUL 18...	1030	0.91	113	7.0	22.0	21.0	0.50	8.7	100	70	98
AUG 23...	1215	1.9	120	7.4	25.5	24.0	0.50	8.7	107	62	98
SEP 01...	1015	--	129	6.5	24.0	20.5	0.50	8.5	97	87	200

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

[illegible]

PH (STANDARD UNITS), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

[illegible]

UPPER TWIN CREEK BASIN

03237280 UPPER TWIN CREEK AT MCGAW, OH--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	---	---	---	---	---	---	---	---	---	147	126	142
2	---	---	---	---	---	---	---	---	---	138	135	137
3	---	---	---	---	---	---	---	---	---	139	137	138
4	---	---	---	---	---	---	---	---	---	141	137	138
5	---	---	---	---	---	---	---	---	---	142	137	139
6	---	---	---	---	---	---	---	---	---	141	137	139
7	---	---	---	---	---	---	---	---	---	140	137	139
8	---	---	---	---	---	---	---	---	---	148	139	141
9	---	---	---	---	---	---	---	---	---	143	140	142
10	---	---	---	---	---	---	---	---	---	145	140	142
11	---	---	---	---	---	---	---	---	---	145	141	143
12	---	---	---	---	---	---	---	---	---	145	141	144
13	---	---	---	---	---	---	---	---	---	161	141	145
14	---	---	---	---	---	---	---	---	---	145	113	140
15	---	---	---	---	---	---	---	---	---	145	137	141
16	---	---	---	---	---	---	---	---	---	143	123	136
17	---	---	---	---	---	---	---	---	---	131	124	128
18	---	---	---	---	---	---	---	---	---	135	131	133
19	---	---	---	---	---	---	---	---	---	137	132	134
20	---	---	---	---	---	---	---	---	---	137	133	135
21	---	---	---	---	---	---	---	---	---	138	134	136
22	---	---	---	---	---	---	---	---	---	139	106	128
23	---	---	---	---	---	---	139	134	138	110	90	101
24	---	---	---	---	---	---	138	124	135	113	106	109
25	---	---	---	154	141	145	129	127	129	116	112	115
26	---	---	---	154	141	148	133	129	131	121	116	118
27	---	---	---	155	140	148	133	129	132	125	118	121
28	---	---	---	151	136	143	134	131	133	129	124	126
29	---	---	---	147	135	141	182	107	142	131	129	130
30	---	---	---	148	133	141	141	127	135	134	130	132
31	---	---	---	147	135	136	194	141	150	---	---	---
MONTH	---	---	---	155	133	143	194	107	136	161	90	133
YEAR	279	60	133									

PH (STANDARD UNITS), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	---	---	---	7.2	7.0	7.1	7.4	7.2	7.3
2	---	---	---	---	---	---	7.2	7.0	7.1	7.4	7.3	7.3
3	---	---	---	---	---	---	7.1	6.9	7.0	7.3	7.2	7.3
4	---	---	---	---	---	---	7.2	7.0	7.0	7.3	7.2	7.2
5	---	---	---	7.1	6.0	6.8	7.2	7.0	7.1	7.3	7.2	7.2
6	---	---	---	7.2	6.9	7.1	7.2	7.0	7.1	7.4	7.2	7.3
7	---	---	---	7.2	6.8	7.1	7.3	7.0	7.1	7.6	7.3	7.4
8	---	---	---	7.3	7.0	7.2	7.3	7.0	7.1	7.3	7.2	7.3
9	---	---	---	7.3	7.1	7.2	7.2	7.0	7.1	7.2	7.2	7.2
10	---	---	---	7.2	7.0	7.1	7.2	7.0	7.1	---	---	---
11	---	---	---	7.3	7.1	7.3	7.2	7.0	7.1	---	---	---
12	---	---	---	7.4	7.2	7.3	7.2	7.0	7.1	---	---	---
13	---	---	---	7.3	7.2	7.2	7.3	7.0	7.1	---	---	---
14	---	---	---	7.3	7.1	7.2	7.2	7.0	7.1	---	---	---
15	---	---	---	7.3	7.1	7.2	7.2	7.0	7.0	---	---	---
16	---	---	---	7.2	7.1	7.1	7.1	6.9	7.0	---	---	---
17	---	---	---	7.2	7.1	7.2	7.1	7.0	7.0	---	---	---
18	7.1	6.2	6.8	7.3	7.1	7.2	7.1	7.0	7.0	---	---	---
19	---	---	---	7.4	7.1	7.2	7.1	6.9	7.0	---	---	---
20	---	---	---	7.4	7.1	7.3	---	---	---	---	---	---
21	---	---	---	7.3	7.2	7.3	---	---	---	---	---	---
22	---	---	---	7.3	7.1	7.2	7.4	7.0	7.2	---	---	---
23	---	---	---	7.2	7.1	7.2	7.5	7.3	7.4	---	---	---
24	---	---	---	7.2	7.1	7.1	7.4	7.0	7.3	---	---	---
25	---	---	---	7.2	7.0	7.1	7.3	7.2	7.3	---	---	---
26	---	---	---	7.2	7.0	7.1	7.3	7.2	7.3	---	---	---
27	---	---	---	7.1	7.0	7.0	7.2	7.1	7.1	---	---	---
28	---	---	---	7.2	7.0	7.1	7.4	7.0	7.2	---	---	---
29	---	---	---	7.1	7.1	7.1	7.5	7.3	7.4	---	---	---
30	---	---	---	7.2	7.0	7.1	7.4	7.3	7.3	---	---	---
31	---	---	---	---	---	---	7.3	7.2	7.2	---	---	---
MONTH	7.1	6.2	6.8	7.4	6.0	7.2	7.5	6.9	7.1	7.6	7.2	7.3

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	---	---	---	---	---	---	113	112	112	---	---	---
2	---	---	---	---	---	---	113	112	113	---	---	---
3	---	---	---	---	---	---	113	112	113	---	---	---
4	---	---	---	---	---	---	114	112	113	---	---	---
5	---	---	---	279	176	209	115	113	114	---	---	---
6	---	---	---	228	209	213	117	114	115	---	---	---
7	---	---	---	276	211	221	138	111	122	---	---	---
8	---	---	---	220	193	211	135	113	121	---	---	---
9	---	---	---	193	163	177	134	114	121	---	---	---
10	---	---	---	169	140	153	133	117	125	---	---	---
11	---	---	---	155	144	150	139	126	135	---	---	---
12	---	---	---	145	135	139	141	125	128	---	---	---
13	---	---	---	135	132	133	146	118	135	---	---	---
14	---	---	---	133	130	132	137	117	128	---	---	---
15	---	---	---	131	129	130	131	115	123	---	---	---
16	---	---	---	130	129	130	139	117	123	---	---	---
17	---	---	---	131	129	130	143	127	136	---	---	---
18	211	162	169	130	127	129	142	127	131	---	---	---
19	---	---	---	141	115	127	145	129	135	---	---	---
20	---	---	---	123	68	90	---	---	---	---	---	---
21	---	---	---	105	93	99	---	---	---	---	---	---
22	---	---	---	122	105	110	143	123	136	---	---	---
23	---	---	---	169	109	122	152	106	124	---	---	---
24	---	---	---	111	109	110	110	60	88	---	---	---
25	---	---	---	111	110	111	112	78	92	---	---	---
26	---	---	---	112	111	111	115	91	108	---	---	---
27	---	---	---	113	111	112	---	---	---	---	---	---
28	---	---	---	114	112	113	---	---	---	---	---	---
29	---	---	---	113	112	112	---	---	---	---	---	---
30	---	---	---	129	112	113	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	211	162	169	279	68	138	152	60	120	---	---	---
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

UPPER TWIN CREEK BASIN

03237280 UPPER TWIN CREEK AT MCGAW, OH--Continued

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM DIS- SOLVED (UG/L AS LI)
OCT 24...	<10	<1	31	<0.5	<1	<1	<3	1	17	<5	4
NOV 08...	--	--	--	--	--	--	--	--	--	--	--
DEC 19...	--	--	--	--	--	--	--	--	--	--	--
JAN 09...	20	<1	16	0.8	2	<1	<3	1	33	<5	<4
FEB 28...	--	--	--	--	--	--	--	--	--	--	--
MAR 21...	--	--	--	--	--	--	--	--	--	--	--
APR 17...	20	<1	15	<0.5	<1	<1	<3	1	13	<5	<4
MAY 16...	20	<1	16	<0.5	<1	<1	<3	<4	20	<1	<4
JUN 22...	--	--	--	--	--	--	--	--	--	--	--
JUL 18...	--	--	--	--	--	--	--	--	--	--	--
AUG 23...	--	--	--	--	--	--	--	--	--	--	--
SEP 01...	--	--	--	--	--	--	--	--	--	--	--

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)	SEDI- MENT, SUS- PENDED (MG/L)
OCT 24...	7	<0.1	<10	2	<1	<1.0	79	<6	11	4
NOV 08...	--	--	--	--	--	--	--	--	--	0
DEC 19...	--	--	--	--	--	--	--	--	--	0
JAN 09...	2	<0.1	<10	3	<1	<1.0	38	<6	18	2
FEB 28...	--	--	--	--	--	--	--	--	--	1
MAR 21...	--	--	--	--	--	--	--	--	--	9
APR 17...	<1	<0.1	<10	3	<1	<1.0	36	<6	6	1
MAY 16...	1	<0.1	<10	2	<1	<1.0	33	<6	14	2
JUN 22...	--	--	--	--	--	--	--	--	--	1
JUL 18...	--	--	--	--	--	--	--	--	--	1
AUG 23...	--	--	--	--	--	--	--	--	--	2
SEP 01...	--	--	--	--	--	--	--	--	--	1

K Results based on colony count outside the acceptable range

UPPER TWIN CREEK BASIN

167

03237280 UPPER TWIN CREEK AT MCGAW, OH--Continued

DATE	HARD- NESS TOTAL (MG/L AS CACO3)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3	ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
OCT 24...	71	51	12	10	4.5	2.5	24	0	20	49	5.3
NOV 08...	91	76	15	13	5.5	2.5	18	0	16	82	4.8
DEC 19...	49	36	8.2	6.9	4.3	1.5	16	0	14	40	4.6
JAN 09...	33	22	5.5	4.7	2.4	1.8	14	0	12	15	2.0
FEB 28...	28	20	4.5	4.0	1.8	1.6	10	0	9	25	2.1
MAR 21...	23	19	3.5	3.5	1.7	1.6	5	0	6	21	1.2
APR 17...	29	21	4.7	4.3	2.2	1.7	10	0	10	24	1.8
MAY 16...	28	19	4.3	4.1	2.2	1.7	10	0	9	22	1.3
JUN 22...	30	18	5.2	4.2	2.2	1.9	15	0	14	21	3.5
JUL 18...	38	22	6.5	5.4	2.9	2.3	20	0	18	26	1.8
AUG 23...	44	26	7.7	6.0	3.2	2.5	22	0	17	27	2.1
SEP 01...	43	22	7.5	6.0	3.7	2.2	26	0	21	31	1.6

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHOROUS TOTAL (MG/L AS P)	PHOS- PHOROUS DIS- SOLVED (MG/L AS P)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P)
OCT 24...	0.1	8.3	104	<0.01	0.170	<0.01	<0.01	0.30	0.01	0.01	<0.01
NOV 08...	0.1	8.4	138	<0.01	0.140	<0.01	<0.01	0.40	0.01	0.01	<0.01
DEC 19...	0.1	8.6	76	<0.01	0.390	<0.01	<0.01	0.20	<0.01	<0.01	<0.01
JAN 09...	<0.1	8.6	60	<0.01	0.550	0.01	<0.01	<0.20	<0.01	<0.01	<0.01
FEB 28...	0.1	8.6	47	<0.01	0.200	0.01	<0.01	<0.20	0.02	<0.01	<0.01
MAR 21...	0.1	8.6	60	<0.01	0.210	<0.01	0.02	<0.20	0.01	<0.01	0.02
APR 17...	<0.1	9.9	59	<0.01	<0.100	<0.01	<0.01	0.20	0.01	0.01	<0.01
MAY 16...	0.1	11	53	<0.01	0.110	0.01	<0.01	<0.20	0.01	<0.01	<0.01
JUN 22...	0.1	11	56	<0.01	0.330	0.01	0.01	0.20	<0.01	0.01	<0.01
JUL 18...	0.1	11	61	<0.01	0.120	0.01	0.02	1.1	0.03	0.02	<0.01
AUG 23...	<0.1	11	68	<0.01	0.140	<0.01	<0.01	<0.20	<0.01	<0.01	<0.01
SEP 01...	0.1	12	79	<0.01	0.380	<0.01	0.01	<0.20	<0.01	<0.01	<0.01

OHIO BRUSH CREEK BASIN

03237500 OHIO BRUSH CREEK NEAR WEST UNION, OH

LOCATION.--Lat 38°48'13", long 83°25'16", Adams County, Hydrologic Unit 05090201, on right bank at downstream side of bridge on State Highway 348, 0.3 mi downstream from Cedar Run, 7.0 mi east of West Union, and 7.1 mi upstream from Beasley Fork.

DRAINAGE AREA.--387 mi².

PERIOD OF RECORD.--August 1926 to November 1935, September 1940 to current year.

REVISED RECORDS.--WSP 1908: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 510.6 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 22, 1940, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Feb. 8-13. Records good except those for periods of estimated record, which are fair. Water-quality data collected at this site 1965 to 1977. Sediment data collected 1969 to 1974.

AVERAGE DISCHARGE.--58 years, 449 ft³/s, 15.76 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 59,200 ft³/s Mar. 10, 1964; gage height, 27.91 ft, from rating curve extended above 22,000 ft³/s on basis of slope-area measurement at gage heights 22.70 ft, 26.5 ft, and 27.91 ft; no flow Sept. 13-23, 27, 28, 1955 and for part of each day Sept. 17, 18, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 11,000 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 14	1115	15,100	15.99	Mar. 30	0845	11,400	13.81
Feb. 15	1600	*17,600	*17.07	Apr. 29	1215	11,600	13.96
Feb. 21	1215	14,000	15.51				

Minimum daily discharge, 0.11 ft³/s Oct. 16, 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.90	.93	37	648	135	308	2240	1160	170	78	51	109
2	.80	.93	29	791	126	255	1030	770	154	226	40	561
3	.71	.87	25	373	2180	233	1210	604	133	165	30	213
4	.73	.88	22	262	1420	224	3250	438	128	385	23	102
5	.63	2.0	19	183	587	2670	1650	980	640	258	26	63
6	.51	2.7	16	1080	421	6480	861	1820	755	136	348	43
7	.43	2.2	15	1040	304	1790	671	831	281	91	158	33
8	.38	4.2	14	2620	190	892	643	519	180	81	74	26
9	.31	7.3	13	907	130	920	1120	2090	160	277	43	22
10	.27	15	12	428	110	901	597	2630	148	156	29	19
11	.25	16	11	297	100	644	435	957	120	72	22	18
12	.20	43	10	2660	100	500	361	602	103	109	18	32
13	.17	52	9.4	1480	300	389	311	467	127	2290	15	35
14	.15	35	9.3	1270	8670	344	267	420	139	714	13	146
15	.13	22	9.2	3680	11700	315	243	856	1310	221	11	55
16	.11	16	8.4	1080	7270	288	221	1220	977	123	11	288
17	.11	13	7.9	555	1970	233	195	603	439	85	36	146
18	.28	9.4	8.4	385	960	222	194	397	256	63	35	89
19	.20	23	8.7	305	649	212	786	311	184	59	22	51
20	.20	1720	8.6	248	513	440	489	346	275	65	25	35
21	.44	616	17	205	6920	4330	316	426	381	59	33	27
22	.79	209	33	166	2010	1170	249	269	321	48	32	48
23	.80	117	204	151	934	624	208	3770	846	67	165	204
24	.88	84	3040	144	523	459	182	2160	214	48	181	143
25	.75	62	1310	138	419	373	165	833	135	36	81	82
26	.67	47	400	139	444	316	433	1770	102	46	105	60
27	.80	44	221	190	486	271	1230	1060	83	51	62	43
28	.90	47	1240	207	381	238	1720	475	385	143	38	33
29	.95	49	1120	164	---	501	6330	334	218	126	28	27
30	.95	45	390	153	---	6470	2540	267	116	84	131	24
31	.92	---	257	147	---	4610	---	212	---	65	188	---
TOTAL	16.32	3306.41	8524.9	22096	49952	37622	30147	29597	9480	6427	2074	2777
MEAN	.53	110	275	713	1784	1214	1005	955	316	207	66.9	92.6
MAX	.95	1720	3040	3680	11700	6480	6330	3770	1310	2290	348	561
MIN	.11	.87	7.9	138	100	212	165	212	83	36	11	18
CFSM	.00	.28	.71	1.84	4.61	3.14	2.60	2.47	.82	.54	.17	.24
IN.	.00	.32	.82	2.12	4.80	3.62	2.90	2.84	.91	.62	.20	.27

CAL YR 1988 TOTAL 110749.32 MEAN 303 MAX 11900 MIN .11 CFSM .78 IN. 10.65
WTR YR 1989 TOTAL 202019.63 MEAN 553 MAX 11700 MIN .11 CFSM 1.43 IN. 19.42

WHITEOAK CREEK BASIN

169

03238500 WHITEOAK CREEK NEAR GEORGETOWN, OH

LOCATION.--Lat 38°51'29", long 83°55'43", Brown County, Hydrologic Unit 05090201, on left bank 150 ft upstream from diversion dam for Georgetown water treatment plant, 0.7 mi upstream from Town Run, 1.4 mi southwest of Georgetown, and 7.2 mi upstream from mouth.

DRAINAGE AREA.--218 mi².

PERIOD OF RECORD.--October 1923 to November 1935, October 1939 to current year.

REVISED RECORDS.--WSP 728: 1924-31. WSP 758: 1933. WSP 1908: Drainage area. WRD OH-74-1: 1973 (P)

GAGE.--Water-stage recorder. Datum of gage is 604.20 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 12, 1972 nonrecording gage at a site 1.0 mi downstream at datum 35.24 ft lower. See WSP 2108 for history of changes prior to Dec. 8, 1940.

REMARKS.--Estimated daily discharges: Feb. 6-13. Records good except those below 30 ft³/s and for periods of estimated daily discharges, which are poor. Water-quality data collected at this site 1965 to 1977. Sediment data collected 1970 to 1974. Water supply for city of Georgetown is pumped from gage pool to nearby reservoir. Pumpage from reservoir to water treatment plant during water year 1989 averaged 0.71 ft³/s. Satellite telemeter at this station.

AVERAGE DISCHARGE.--62 years, 256 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,400 ft³/s Mar. 10, 1964; maximum gage height, 20.87 ft May 14, 1933, site and datum then in use; no flow at times in 1930, 1940-41, 1943, 1948, 1951-53, 1959, 1969, 1970, 1976-1978, 1983-1989.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,500 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 15	2130	7,740	6.86	Apr. 4	1830	7,710	6.85
Feb. 21	1430	6,990	6.62	Apr. 29	2300	*9,540	*7.38
Mar. 5	2130	5,560	6.12	May 23	2030	5,970	6.27
Mar. 30	1130	6,000	6.28				

Minimum daily discharge, no flow many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	9.7	30	505	46	111	1290	410	47	19	15	22
2	.06	9.7	20	599	35	96	364	253	38	128	15	380
3	.17	9.2	17	203	984	91	491	212	33	142	15	89
4	.00	8.7	15	128	741	78	5120	146	33	376	11	32
5	.00	11	9.2	105	187	2480	1280	567	231	164	11	18
6	.00	13	8.1	1200	110	2910	370	1150	292	67	196	11
7	.00	14	7.8	809	78	605	274	366	96	35	141	9.6
8	.00	18	7.8	1730	50	359	294	178	57	26	42	6.3
9	.00	18	7.8	489	26	870	762	1040	38	18	21	4.2
10	.00	24	7.8	162	18	501	264	1990	34	15	13	35
11	.00	26	4.6	118	13	277	153	339	30	13	12	34
12	.00	17	2.8	1140	11	194	111	182	28	9.6	8.1	9.4
13	.00	13	4.4	896	170	137	91	131	30	163	6.5	4.7
14	.00	14	4.1	449	5550	111	77	120	66	306	5.4	5.4
15	.00	15	3.6	2320	5240	105	71	1390	68	67	5.3	7.6
16	.00	15	2.6	576	4530	153	64	1570	233	30	5.8	6.4
17	.00	14	3.9	235	892	95	58	338	95	19	36	5.1
18	.00	13	2.7	151	291	80	53	164	54	14	16	3.9
19	.44	16	3.9	131	209	74	220	107	34	13	54	2.4
20	3.3	997	4.4	97	170	335	214	270	31	13	21	.73
21	4.0	649	5.2	84	5190	3550	112	341	30	344	30	.27
22	5.8	137	5.3	77	1280	552	79	118	29	442	24	.12
23	5.9	88	56	64	318	237	63	3080	88	74	18	2.6
24	8.7	51	848	64	129	165	51	1640	68	454	14	4.3
25	9.0	33	742	54	98	124	46	291	30	295	12	3.9
26	9.7	28	158	55	107	103	173	1860	21	91	9.7	.58
27	9.7	30	94	206	198	86	480	783	22	54	9.7	.07
28	9.7	34	1130	135	131	75	690	188	24	56	10	.58
29	9.7	40	941	78	---	539	7270	108	66	26	9.3	.60
30	9.7	37	181	63	---	4800	2620	80	32	21	7.7	.70
31	9.7	---	124	54	---	3610	---	63	---	21	8.0	---
TOTAL	95.57	2402.3	4452.0	12977	26802	23503	23205	19475	1978	3515.6	802.5	700.45
MEAN	3.08	80.1	144	419	957	758	773	628	65.9	113	25.9	23.3
MAX	9.7	997	1130	2320	5550	4800	7270	3080	292	454	196	380
MIN	.00	8.7	2.6	54	11	74	46	63	21	9.6	5.3	.07

CAL YR 1988 TOTAL 50644.41 MEAN 138 MAX 6900 MIN .00
WTR YR 1989 TOTAL 119908.42 MEAN 329 MAX 7270 MIN .00

LITTLE MIAMI RIVER BASIN

03240000 LITTLE MIAMI RIVER NEAR OLDTOWN, OH

LOCATION.--Lat 39°44'54", LONG 83°55'53", in sec.. 34, R.7, T.4, Greene County, Hydrologic Unit 05090202, on right bank at downstream side of bridge on U.S. Highway 68, 0.8 mi downstream from Conner Branch, 0.9 mi upstream from Massies Creek, 1.3 mi northeast of Oldtown, and at mile 82.25.

DRAINAGE AREA.--129 mi².

PERIOD OF RECORD.--July 1952 to current year.

GAGE.--Water-stage recorder. Datum of gage is 816.56 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 16 to Jan. 12 and Feb. 6-13. Records good except for periods of estimated daily discharges, which are fair. Water-quality data collected at this site 1965 to 1977. Sediment data collected 1952 to 1958.

AVERAGE DISCHARGE.--37 years, 118 ft³/s, 12.42 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,800 ft³/s Jan. 21, 1959, gage height, 12.20 ft, from rating curve extended above 4,400 ft³/s on basis of slope area measurements of peak flow; minimum, 2.8 ft³/s Sept. 2, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 800 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 7	unknown	935	4.61	May 24	0900	931	4.60
Apr. 1	0100	855	4.41	May 26	0945	*3,490	*8.88
Apr. 4	0630	1830	6.51	June 14	1130	1,740	6.34
Apr. 26	0800	1080	4.96	June 28	2030	2,740	7.99
Apr. 28	1245	1110	5.02	July 11	2230	2,620	7.83

Minimum discharge, 8.5 ft³/s Oct. 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	17	82	155	98	147	689	315	218	256	118	194
2	18	17	73	135	93	136	414	271	207	384	108	293
3	16	18	68	121	96	131	446	243	253	351	100	168
4	16	46	65	112	99	136	1450	210	597	266	95	122
5	15	152	61	98	93	353	918	235	380	216	101	103
6	13	120	59	232	85	480	476	288	305	181	398	92
7	13	88	58	473	76	269	369	256	242	161	243	83
8	12	82	56	590	71	200	315	214	205	231	144	76
9	12	103	52	321	66	201	293	333	193	182	117	72
10	12	234	48	210	60	286	251	607	176	152	102	70
11	13	159	46	170	56	334	221	375	159	513	94	67
12	11	120	53	260	54	277	201	279	161	500	88	64
13	12	136	46	312	56	221	188	257	178	210	82	60
14	13	120	44	269	112	196	172	239	808	166	78	78
15	13	97	40	256	186	190	163	212	748	143	75	94
16	9.1	83	42	275	388	164	153	192	497	131	72	77
17	11	68	35	239	242	148	145	172	363	121	68	70
18	27	59	40	209	177	141	210	157	266	112	67	62
19	30	61	36	188	150	126	386	148	226	110	66	57
20	28	246	36	174	137	147	278	149	219	123	69	55
21	25	274	34	155	473	304	219	139	198	112	70	52
22	25	174	35	134	511	235	186	129	417	104	79	52
23	23	132	40	126	295	186	165	485	251	135	104	53
24	23	109	50	118	212	164	150	772	195	337	282	48
25	23	94	220	113	178	149	143	436	169	173	166	47
26	22	91	154	114	177	135	652	2270	151	213	114	46
27	20	127	109	119	169	126	458	1350	165	244	94	43
28	20	122	308	115	155	119	574	492	1780	290	83	43
29	18	101	375	109	---	139	487	356	911	185	78	41
30	19	91	217	106	---	499	435	299	338	144	299	40
31	18	---	185	103	---	717	---	251	---	131	177	---
TOTAL	547.1	3341	2767	6111	4565	7056	11207	12131	10976	6577	3831	2422
MEAN	17.6	111	89.3	197	163	228	374	391	366	212	124	80.7
MAX	30	274	375	590	511	717	1450	2270	1780	513	398	293
MIN	9.1	17	34	98	54	119	143	129	151	104	66	40
CFSM	.14	.86	.69	1.53	1.26	1.76	2.90	3.03	2.84	1.64	.96	.63
IN.	.16	.96	.80	1.76	1.32	2.03	3.23	3.50	3.17	1.90	1.10	.70

CAL YR 1988 TOTAL 25514.4 MEAN 69.7 MAX 981 MIN 3.4 CFSM .54 IN. 7.36
WTR YR 1989 TOTAL 71531.1 MEAN 196 MAX 2270 MIN 9.1 CFSM 1.52 IN. 20.63

LITTLE MIAMI RIVER BASIN

171

03241500 MASSIES CREEK AT WILBERFORCE, OH

LOCATION.--Lat 39°43'22", long 83°52'58", Greene County, Hydrologic Unit 05090202, on left bank at bridge on Wilberforce-Clifton Road, 0.5 mi northwest of Wilberforce, 0.6 mi downstream from unnamed right bank tributary and 1.7 mi upstream from Clark Run.

DRAINAGE AREA.--63.2 mi².

PERIOD OF RECORD.--September 1952 to current year. Prior to October 1962, published as Massie Creek at Wilberforce.

REVISIONS.--WSP 1908: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 865.15 ft above National Geodetic Vertical Datum of 1929. Aug. 4, 1972 to Sept. 30, 1979 at site 150 ft downstream at same datum.

REMARKS.--Estimated daily discharges: Feb. 6-13. Records fair except for estimated daily discharges, which are poor. Water-quality data collected at this site 1965 to 1977. Sediment data collected 1952 to 1958. Satellite telemeter at station.

AVERAGE DISCHARGE.--37 years, 63.0 ft³/s, 13.54 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,300 ft³/s Jan. 21, 1959, Mar. 4, 1963, gage height, 11.25 ft, from rating curve extended above 3,100 ft³/s; minimum, 0.3 ft³/s Sept. 3-7, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 31	0900	608	4.88	Apr. 28	1200	840	5.45
Apr. 4	0430	1,330	6.48	May 10	0930	639	4.94
Apr. 26	0600	999	5.81	May 24	0900	638	4.95
				May 26	0700	*4,370	*10.32

Minimum daily 4.1 ft³/s Oct. 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.6	7.5	49	95	44	74	495	298	97	72	30	30
2	6.2	7.2	41	86	40	68	270	204	85	176	25	49
3	5.3	7.1	38	78	42	63	301	161	80	110	22	34
4	4.9	12	35	70	43	64	807	117	119	80	21	22
5	4.9	40	31	54	43	219	494	135	101	63	21	18
6	4.4	104	30	144	34	309	229	191	92	51	54	14
7	4.4	85	30	229	30	157	157	152	79	46	39	12
8	4.5	70	27	334	25	103	126	112	68	69	29	11
9	4.3	68	24	247	22	105	111	247	67	58	22	9.7
10	4.1	87	22	134	21	167	92	559	60	43	18	9.2
11	4.7	92	25	99	20	199	76	290	51	40	16	8.8
12	4.9	70	44	141	20	150	68	170	53	81	14	8.2
13	4.7	70	27	194	25	110	61	135	70	54	13	7.2
14	4.9	76	21	142	64	96	52	116	290	42	12	11
15	5.2	68	19	182	160	113	50	97	224	33	10	13
16	5.6	58	21	168	316	101	45	83	200	29	9.8	15
17	5.9	48	15	139	189	80	41	72	155	27	9.3	12
18	18	37	19	117	119	71	62	64	107	25	8.5	9.5
19	10	34	17	102	92	54	156	58	90	24	8.3	7.7
20	11	121	17	90	83	76	117	58	83	27	11	7.1
21	10	222	17	72	371	230	86	52	80	24	11	6.5
22	9.9	142	15	64	399	153	68	47	112	21	10	6.2
23	9.7	102	20	59	231	101	57	312	92	42	14	5.9
24	9.7	83	101	53	127	81	49	595	74	64	28	5.8
25	9.4	68	169	52	94	68	44	347	64	36	34	5.7
26	8.9	60	98	55	92	59	522	2480	57	88	23	6.0
27	8.8	74	78	59	85	50	500	1690	99	72	16	5.4
28	8.8	76	256	57	78	47	566	426	216	79	13	5.3
29	8.2	63	318	53	---	55	742	211	104	66	11	5.5
30	7.8	56	183	51	---	345	601	152	74	45	20	5.5
31	7.5	---	120	47	---	544	---	119	---	37	31	---
TOTAL	223.2	2107.8	1927	3467	2909	4112	7045	9750	3143	1724	603.9	366.2
MEAN	7.20	70.3	62.2	112	104	133	235	315	105	55.6	19.5	12.2
MAX	18	222	318	334	399	544	807	2480	290	176	54	49
MIN	4.1	7.1	15	47	20	47	41	47	51	21	8.3	5.3
CFSM	.11	1.11	.98	1.77	1.64	2.10	3.72	4.98	1.66	.88	.31	.19
IN.	.13	1.24	1.13	2.04	1.71	2.42	4.15	5.74	1.85	1.01	.36	.22

CAL YR 1988 TOTAL 14884.8 MEAN 40.7 MAX 586 MIN 1.3 CFSM .64 IN. 8.76
WTR YR 1989 TOTAL 37378.1 MEAN 102 MAX 2480 MIN 4.1 CFSM 1.62 IN. 22.00

LITTLE MIAMI RIVER BASIN

03245500 LITTLE MIAMI RIVER AT MILFORD, OH
National Stream-Quality Accounting Network Station

LOCATION.--Lat 39°10'17", long 84°17'53", Clermont County, Hydrologic Unit 05090202, on right bank 500 ft downstream from Wooster Pike Bridge on U.S. Highway 50 in Milford, 1.2 mi upstream from East Fork, 6.4 mi downstream from North Branch Creek, and at mile 12.9.

DRAINAGE AREA.--1,203 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1915 to September 1917, October 1917 to May 1920 (gage heights only), March 1925 to September 1936, October 1938 to current year. Monthly discharge only for some periods, published in WSP 1305, published as "at Miamiville" 1915-20.

REVISED RECORDS.--WSP 728: 1931. WSP 743: 1932. WSP 873: 1925-36. WSP 1908: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 494.35 ft above National Geodetic Vertical Datum of 1929. June 22, 1915 to May 14, 1920, nonrecording gage at site 4 mi upstream at different datum. Mar. 11, 1925 to Aug. 16, 1928, nonrecording gage at bridge 500 ft upstream at datum 5.72 ft higher. Aug. 17, 1928 to Sept. 30, 1977 water-stage recorder at same site at datum 5.00 ft higher.

REMARKS.--Estimated daily discharges: Feb. 8-13. Records good except for periods of estimated daily discharges which are fair. Some regulation since 1948 by Cowan Lake, capacity 12,000 acre-ft, 45 mi upstream on Cowan Creek, tributary to Todd Fork, and Caesar Creek Lake capacity 242,200 acre-ft 41.3 mi upstream on Caesar Creek. National Weather Service gage height telemeter and U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--64 years, (1915-17, 1925-36, 1938-89), 1,245 ft³/s, 14.06 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 84,100 ft³/s Jan. 22, 1959, gage height, 27.30 ft present datum, from rating curve extended above 60,000 ft³/s on basis of slope-area measurement of peak flow; minimum observed, 27 ft³/s, Sept. 18, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1913 reached a stage of 30.5 ft, present datum, from information by U.S. Army Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 15,000 ft³/s and maximum (*).

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 30	0900	18,200	13.97	Apr. 29	0800	*23,500	*15.49
Mar. 31	1700	15,500	13.10	Apr. 30	0100	17,800	13.86
Apr. 4	1100	18,400	14.02				

Minimum daily discharge, 122 ft³/s Oct. 13, 15, 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	146	167	645	2830	704	1410	7720	5600	5020	820	580	977
2	156	163	612	2310	708	1230	4910	4400	2070	907	444	2190
3	153	163	578	1500	1330	919	5010	3930	1430	1330	386	1020
4	147	197	527	1380	1430	866	11900	2580	1580	4800	354	736
5	140	338	497	1270	913	3910	6790	2430	1930	1640	355	607
6	136	972	475	4490	774	5150	5090	4280	2260	1310	545	510
7	134	713	465	3460	665	3480	4610	2910	1510	1110	767	440
8	133	624	458	8640	550	2690	4440	2130	1270	695	613	413
9	133	625	443	3980	440	2920	4560	3800	1000	592	441	353
10	131	1140	424	3060	370	3670	2940	5820	997	572	370	340
11	126	1490	389	2580	350	3220	2430	3850	876	507	329	337
12	123	986	350	3740	350	2810	1630	2810	900	678	304	318
13	122	884	368	3910	540	2060	1210	2000	1040	1660	281	293
14	123	941	363	2930	4080	1540	1070	2070	1900	869	266	341
15	122	811	383	5820	7300	1800	977	2820	3580	658	250	597
16	124	742	384	3320	9150	1760	913	3070	2760	573	242	642
17	144	681	351	2620	3590	1460	849	2140	1740	522	233	514
18	215	630	316	2190	3090	1360	1270	1570	1330	426	224	456
19	757	601	310	1680	2670	1280	7910	1300	1170	499	220	379
20	307	3600	316	1360	2480	3490	3460	1310	1140	672	249	341
21	261	2780	287	1200	10000	9890	2070	1220	1080	533	337	335
22	253	1670	289	1090	6180	4310	1580	922	1020	421	372	336
23	254	1420	345	1050	4080	2950	1140	5900	1290	690	349	358
24	240	1230	1340	1020	3060	2410	963	5960	990	872	839	345
25	218	1130	2140	862	2660	1540	877	3750	835	1050	927	337
26	203	1060	1100	935	2390	1360	2700	8630	696	803	535	326
27	192	1890	855	1010	2350	1250	6680	10200	613	574	383	324
28	191	1760	6380	966	1640	1030	6910	7410	804	940	326	305
29	185	1310	4480	865	---	4110	17400	2930	2310	683	502	279
30	181	926	3190	825	---	14700	11400	4170	1420	647	2770	274
31	174	---	2580	785	---	11500	---	4490	---	905	763	---
TOTAL	5924	31644	31640	73678	73844	102075	131409	116402	46561	28958	15556	15023
MEAN	191	1055	1021	2377	2637	3293	4380	3755	1552	934	502	501
MAX	757	3600	6380	8640	10000	14700	17400	10200	5020	4800	2770	2190
MIN	122	163	287	785	350	866	849	922	613	421	220	274
CFSM	.16	.88	.85	1.98	2.19	2.74	3.64	3.12	1.29	.78	.42	.42
IN.	.18	.98	.98	2.28	2.28	3.16	4.06	3.60	1.44	.90	.48	.46

CAL YR 1988 TOTAL 276496 MEAN 755 MAX 11900 MIN 52 CFSM .63 IN. 8.55
WTR YR 1989 TOTAL 672714 MEAN 1843 MAX 17400 MIN 122 CFSM 1.53 IN. 20.80

03245500 LITTLE MIAMI RIVER AT MILFORD, OH--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1965 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED SEDIMENT DISCHARGE: January 1979 to current year.

REMARKS.--Samples collected as part of the National Stream Quality Accounting Network. Water-quality monitor data collected from May 1975 to September 1986.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 4,850 mg/L Aug. 8, 1984; minimum daily mean, 1 mg/L several days in 1979, 1980, 1982-84.

SEDIMENT LOADS: Maximum daily, 185,000 tons Sept. 14, 1979; minimum daily, 0.85 tons Dec. 15, 1982.

EXTREMES FOR WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,240 mg/L Feb. 2; minimum daily mean, 2 mg/L Nov. 22, 23.

SEDIMENT LOADS: Maximum daily, 30,100 tons Feb. 2; minimum daily, 0.92 tons Nov. 23.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,180 mg/L Apr. 4; minimum daily mean, 2 mg/L Oct. 17, Dec. 8, 10-13.

SEDIMENT LOADS: Maximum daily, 44,200 tons Apr. 4; minimum daily, 0.78 tons Oct. 17.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE AIR (DEG C)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT 12...	1145	125	920	8.2	8.0	11.0	6.0	9.0	84	150	68
JAN 10...	1215	3150	530	8.2	4.0	3.0	87	14.4	109	4900	14000
MAR 08...	1030	2600	632	8.0	-1.0	2.0	34	13.0	95	2500	6400
MAY 17...	1000	2190	535	8.2	7.0	14.5	34	9.6	98	1000	1500
JUL 17...	1000	515	690	8.4	25.0	23.0	40	7.8	93	1100	210
AUG 24...	1000	392	700	8.3	25.0	24.0	27	7.1	87	1100	>10000E

DATE	HARD- NESS TOTAL (MG/L AS CACO3)	HARD- NESS NONCARB WH WAT TOT FLD AS MG/L AS CACO3	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3	ALKA- LITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
OCT 12...	350	110	86	33	65	4.8	295	22	273	68	100
JAN 10...	250	88	62	23	14	3.9	198	0	160	41	31
MAR 08...	260	49	65	24	29	2.8	259	0	210	48	59
MAY 17...	260	70	66	23	14	2.6	232	0	189	36	26
JUL 17...	300	53	74	27	24	3.8	286	5	241	47	40
AUG 24...	300	92	75	27	41	4.6	242	5	206	53	58

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHOROUS TOTAL (MG/L AS P)	PHOS- PHOROUS DIS- SOLVED (MG/L AS P)	PHOS- PHOROUS ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS P)
OCT 12...	0.4	6.1	546	0.06	3.10	0.17	0.17	0.60	1.10	1.00	0.99
JAN 10...	0.2	6.9	316	0.03	5.10	0.15	0.13	1.8	0.240	0.13	0.11
MAR 08...	0.2	5.5	515	0.04	25.0	0.14	0.13	1.2	0.210	0.12	0.10
MAY 17...	0.2	4.9	310	0.03	2.80	0.07	0.07	0.80	0.140	0.12	0.10
JUL 17...	0.3	7.5	410	0.03	4.10	0.04	0.06	1.3	0.380	0.38	0.31
AUG 24...	0.3	6.4	429	0.03	3.90	0.07	0.07	1.3	0.630	0.61	0.57

LITTLE MIAMI RIVER BASIN

03245500 LITTLE MIAMI RIVER AT MILFORD, OH--Continued

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM DIS- SOLVED (UG/L AS LI)
OCT 12...	10	2	71	<0.5	<1	1	<3	10	6	<5	9
JAN 10...	120	1	51	<0.5	1	<1	<3	5	110	<5	5
MAR 08...	--	--	--	--	--	--	--	--	--	--	--
MAY 17...	20	1	53	<0.5	<1	<1	<3	<9	17	<1	6
JUL 17...	--	--	--	--	--	--	--	--	--	--	--
AUG 24...	20	1	69	<0.5	<1	<1	<3	12	6	2	7

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)
OCT 12...	12	<0.1	<10	1	<1	1.0	450	<6	13	14
JAN 10...	12	<0.1	<10	3	<1	<1.0	340	<6	8	162
MAR 08...	--	--	--	--	--	--	--	--	--	47
MAY 17...	7	<0.1	<10	1	<1	<1.0	300	<6	7	74
JUL 17...	--	--	--	--	--	--	--	--	--	53
AUG 24...	10	0.1	<10	3	<1	<1.0	350	<6	6	68

E Estimated value

LITTLE MIAMI RIVER BASIN

175

03245500 LITTLE MIAMI RIVER AT MILFORD, OH--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	110	28	8.3	315	18	15	248	5	3.3
2	104	9	2.5	320	15	13	223	5	3.0
3	97	19	5.0	460	25	31	219	14	8.3
4	94	14	3.6	619	24	40	248	4	2.7
5	95	16	4.1	636	24	41	221	5	3.0
6	106	11	3.1	640	17	29	202	4	2.2
7	133	10	3.6	640	34	59	177	8	3.8
8	114	14	4.3	640	20	35	162	20	8.7
9	110	19	5.6	652	9	16	177	9	4.3
10	112	12	3.6	652	24	42	185	4	2.0
11	239	37	24	652	15	26	184	10	5.0
12	313	23	19	652	8	14	163	9	4.0
13	170	11	5.0	652	22	39	155	8	3.3
14	137	17	6.3	423	21	24	156	23	9.7
15	126	11	3.7	332	13	12	254	88	60
16	119	16	5.1	240	12	7.8	271	10	7.3
17	116	12	3.8	212	3	1.7	250	5	3.4
18	196	29	15	196	4	2.1	210	3	1.7
19	281	15	11	185	6	3.0	184	4	2.0
20	139	8	3.0	178	4	1.9	204	12	6.6
21	114	16	4.9	178	3	1.4	195	4	2.1
22	111	7	2.1	174	2	.94	205	6	3.3
23	129	10	3.5	171	2	.92	189	6	3.1
24	222	17	10	174	9	4.2	186	5	2.5
25	315	12	10	206	19	11	231	12	7.5
26	292	70	55	235	48	30	689	70	130
27	162	12	5.2	307	36	30	580	20	31
28	141	10	3.8	274	9	6.7	469	10	13
29	149	4	1.6	355	9	8.6	413	8	8.9
30	184	9	4.5	272	11	8.1	355	6	5.8
31	210	12	6.8	---	---	---	299	8	6.5
TOTAL	4940	---	247.0	11642	---	554.36	7904	---	358.0
JANUARY			FEBRUARY			MARCH			
1	250	4	2.7	2500	360	2430	577	11	17
2	210	5	2.8	9000	1240	30100	501	13	18
3	180	5	2.4	6400	320	5530	2250	493	6180
4	170	5	2.3	4700	100	1270	11900	635	20400
5	160	5	2.2	3600	75	729	4580	250	3090
6	150	5	2.0	2800	50	378	3170	130	1110
7	145	5	2.0	2100	44	249	2220	75	450
8	150	5	2.0	1600	28	121	1600	37	160
9	145	5	2.0	1250	26	88	1380	33	123
10	140	4	1.5	1000	24	65	1250	36	121
11	140	4	1.5	880	28	67	1100	26	77
12	140	4	1.5	740	56	112	945	21	54
13	150	4	1.6	740	19	38	1040	4	11
14	150	4	1.6	750	36	73	973	18	47
15	145	4	1.6	1000	30	81	1230	9	30
16	140	4	1.5	1400	42	159	912	10	25
17	145	4	1.6	1100	104	309	844	11	25
18	160	4	1.7	1300	42	147	817	10	22
19	885	338	2810	2100	54	306	850	10	23
20	5510	834	13700	3000	58	470	836	30	68
21	1530	240	991	2000	69	373	779	8	17
22	894	58	140	1370	26	96	729	35	69
23	684	66	122	1980	18	96	697	24	45
24	500	35	47	2340	14	88	678	33	60
25	250	16	11	2070	14	78	1430	61	371
26	230	12	7.5	1770	12	57	2560	200	1380
27	220	10	5.9	1330	10	36	1570	92	390
28	200	8	4.3	1300	6	21	1300	75	263
29	190	5	2.6	1210	18	59	1260	60	204
30	180	12	5.8	---	---	---	1240	50	167
31	450	10	12	---	---	---	1180	40	127
TOTAL	14593	---	17893.6	63330	---	43626	52398	---	35144

LITTLE MIAMI RIVER BASIN

03245500 LITTLE MIAMI RIVER AT MILFORD, OH--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	1100	27	80	357	13	13	200	10	5.4
2	1080	25	73	348	19	18	193	2	1.0
3	1040	30	84	334	28	25	181	22	11
4	6440	860	15000	322	37	32	177	14	6.7
5	4710	420	5340	314	11	9.3	174	14	6.6
6	3620	225	2200	312	17	14	171	12	5.5
7	4290	133	1540	310	15	13	167	20	9.0
8	2910	71	558	299	19	15	161	11	4.8
9	1930	56	292	296	34	27	161	16	7.0
10	1550	40	167	298	17	14	152	12	4.9
11	1340	45	163	348	25	23	148	14	5.6
12	1180	72	229	297	8	6.4	145	13	5.1
13	918	24	59	284	21	16	142	11	4.2
14	830	22	49	379	20	20	138	11	4.1
15	705	22	42	491	16	21	133	10	3.6
16	615	13	22	348	26	24	128	12	4.1
17	563	13	20	294	10	7.9	137	9	3.3
18	713	25	48	267	14	10	150	10	4.0
19	777	40	84	259	7	4.9	142	11	4.2
20	632	14	24	252	5	3.4	127	12	4.1
21	553	68	102	247	8	5.3	131	14	5.0
22	1070	37	107	243	26	17	128	15	5.2
23	987	12	32	315	22	19	122	15	4.9
24	682	17	31	324	21	18	116	15	4.7
25	552	9	13	349	18	17	112	15	4.5
26	490	14	19	299	10	8.1	109	14	4.1
27	447	12	14	260	11	7.7	108	14	4.1
28	420	9	10	241	4	2.6	103	14	3.9
29	410	11	12	226	12	7.3	100	14	3.8
30	386	10	10	217	8	4.7	102	14	3.9
31	---	---	---	210	12	6.8	---	---	---
TOTAL	42940	---	26424	9340	---	430.4	4258	---	148.3
JULY			AUGUST			SEPTEMBER			
1	102	12	3.3	204	6	3.3	132	7	2.5
2	112	12	3.6	191	6	3.1	132	7	2.5
3	104	12	3.4	152	6	2.5	203	6	3.3
4	99	11	2.9	140	6	2.3	328	6	5.3
5	98	11	2.9	136	6	2.2	290	6	4.7
6	92	11	2.7	220	5	3.0	230	6	3.7
7	89	11	2.6	243	5	3.3	200	5	2.7
8	89	10	2.4	225	5	3.0	180	5	2.4
9	89	10	2.4	154	5	2.1	156	5	2.1
10	83	10	2.2	139	5	1.9	144	5	1.9
11	85	10	2.3	128	5	1.7	136	5	1.8
12	97	9	2.4	143	5	1.9	206	5	2.8
13	93	9	2.3	166	6	2.7	853	30	69
14	89	9	2.2	115	6	1.9	676	15	27
15	89	9	2.2	96	6	1.6	519	20	28
16	89	9	2.2	83	6	1.3	331	30	27
17	104	10	2.8	73	6	1.2	1160	54	169
18	88	11	2.6	72	6	1.2	750	23	47
19	119	15	4.8	52	7	.98	354	20	19
20	467	20	25	560	10	15	280	20	15
21	1010	44	120	370	9	9.0	268	18	13
22	663	15	27	77	9	1.9	238	18	12
23	282	14	11	69	9	1.7	210	16	9.1
24	258	12	8.4	108	8	2.3	200	16	8.6
25	186	10	5.0	200	8	4.3	215	14	8.1
26	199	8	4.3	131	8	2.8	200	14	7.6
27	553	7	10	81	7	1.5	183	12	5.9
28	385	7	7.3	79	7	1.5	169	12	5.5
29	228	7	4.3	96	7	1.8	160	12	5.2
30	187	6	3.0	112	7	2.1	153	12	5.0
31	187	5	2.5	143	7	2.7	---	---	---
TOTAL	6415	---	280.0	4758	---	87.78	9256	---	516.7
YEAR	231774		125710.14						

LITTLE MIAMI RIVER BASIN

03245500 LITTLE MIAMI RIVER AT MILFORD, OH--Continued

177

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	146	25	9.9	167	5	2.3	645	25	44
2	156	25	11	163	8	3.5	612	25	41
3	153	25	10	163	16	7.0	578	12	19
4	147	30	12	197	24	13	527	5	7.1
5	140	30	11	338	50	46	497	3	4.0
6	136	30	11	972	100	262	475	5	6.4
7	134	30	11	713	32	62	465	3	3.8
8	133	32	11	624	50	84	458	2	2.5
9	133	36	13	625	40	67	443	3	3.6
10	131	26	9.2	1140	301	1350	424	2	2.3
11	126	20	6.8	1490	274	1190	389	2	2.1
12	123	12	4.0	986	108	288	350	2	1.9
13	122	14	4.6	884	57	136	368	2	2.0
14	123	15	5.0	941	55	140	363	9	8.8
15	122	14	4.6	811	51	112	383	14	14
16	124	6	2.0	742	40	80	384	10	10
17	144	2	.78	681	22	40	351	4	3.8
18	215	32	19	630	22	37	316	4	3.4
19	757	194	459	601	34	55	310	8	6.7
20	307	85	70	3600	535	7080	316	11	9.4
21	261	63	44	2780	291	2440	287	17	13
22	253	17	12	1670	170	767	289	10	7.8
23	254	22	15	1420	130	498	345	10	9.3
24	240	14	9.1	1230	118	392	1340	558	3040
25	218	8	4.7	1130	108	330	2140	630	4130
26	203	7	3.8	1060	23	66	1100	200	594
27	192	13	6.7	1890	202	1120	855	70	162
28	191	12	6.2	1760	117	586	6380	1070	24700
29	185	11	5.5	1310	54	191	4480	444	6470
30	181	10	4.9	926	52	130	3190	110	947
31	174	15	7.0	---	---	---	2580	116	808
TOTAL	5924	---	803.78	31644	---	17574.8	31640	---	41076.9
JANUARY			FEBRUARY			MARCH			
1	2830	40	306	704	14	27	1410	22	84
2	2310	36	225	708	22	42	1230	20	66
3	1500	35	142	1330	265	1250	919	20	50
4	1380	30	112	1430	384	1590	866	20	47
5	1270	30	103	913	120	296	3910	321	4130
6	4490	548	7690	774	70	146	5150	122	1800
7	3460	220	2060	665	60	108	3480	80	752
8	8640	1070	28500	550	50	74	2690	70	508
9	3980	130	1400	440	40	48	2920	60	473
10	3060	37	306	370	30	30	3670	90	892
11	2580	25	174	350	30	28	3220	50	435
12	3740	25	252	350	30	28	2810	29	220
13	3910	23	243	540	70	102	2060	31	172
14	2930	14	111	4080	560	6840	1540	25	104
15	5820	8	126	7300	949	23000	1800	68	330
16	3320	6	54	9150	629	18200	1760	10	48
17	2620	14	99	3590	210	2040	1460	6	24
18	2190	18	106	3090	120	1000	1360	3	11
19	1680	12	54	2670	100	721	1280	55	190
20	1360	20	73	2480	50	335	3490	456	9840
21	1200	32	104	10000	943	29100	9890	594	17300
22	1090	20	59	6180	278	5450	4310	410	4770
23	1050	22	62	4080	74	815	2950	75	597
24	1020	20	55	3060	102	843	2410	50	325
25	862	20	47	2660	80	575	1540	42	175
26	935	20	50	2390	87	561	1360	32	118
27	1010	20	55	2350	43	273	1250	30	101
28	966	64	167	1640	32	142	1030	33	92
29	865	21	49	---	---	---	4110	886	12700
30	825	30	67	---	---	---	14700	701	28400
31	785	14	30	---	---	---	11500	788	24900
TOTAL	73678	---	42881	73844	---	93664	102075	---	109654

LITTLE MIAMI RIVER BASIN

03245500 LITTLE MIAMI RIVER AT MILFORD, OH--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	7720	395	8230	5600	630	9530	5020	99	1340
2	4910	210	2780	4400	200	2380	2070	100	559
3	5010	200	2710	3930	120	1270	1430	79	305
4	11900	1180	44200	2580	220	1530	1580	82	350
5	6790	384	7640	2430	270	1770	1930	130	677
6	5090	90	1240	4280	210	2430	2260	350	2140
7	4610	62	772	2910	160	1260	1510	95	387
8	4440	59	707	2130	110	633	1270	76	261
9	4560	60	739	3800	408	6300	1000	40	108
10	2940	58	460	5820	220	3460	997	56	151
11	2430	43	282	3850	143	1490	876	51	121
12	1630	33	145	2810	214	1620	900	72	175
13	1210	14	46	2000	44	238	1040	181	508
14	1070	44	127	2070	36	201	1900	206	1310
15	977	28	74	2820	55	419	3580	280	2710
16	913	37	91	3070	136	1130	2760	349	2600
17	849	28	64	2140	159	919	1740	143	672
18	1270	184	1660	1570	154	653	1330	88	316
19	7910	673	16500	1300	44	154	1170	109	344
20	3460	200	1870	1310	44	156	1140	60	185
21	2070	28	156	1220	26	86	1080	160	467
22	1580	43	183	922	4	10	1020	182	501
23	1140	38	117	5900	933	18900	1290	222	773
24	963	43	112	5960	289	5160	990	220	588
25	877	48	114	3750	115	1160	835	90	203
26	2700	426	5840	8630	806	24600	696	116	218
27	6680	1050	18900	10200	668	18400	613	68	113
28	6910	740	13800	7410	570	11400	804	72	156
29	17400	648	32700	2930	500	3960	2310	811	4890
30	11400	460	14200	4170	230	2590	1420	400	1530
31	---	---	---	4490	99	1200	---	---	---
TOTAL	131409	---	176459	116402	---	125009	46561	---	24658
JULY			AUGUST			SEPTEMBER			
1	820	360	797	580	208	326	977	346	1410
2	907	200	490	444	150	180	2190	454	3000
3	1330	272	1270	386	168	175	1020	210	578
4	4800	1220	19300	354	87	83	736	180	358
5	1640	510	2260	355	84	81	607	138	226
6	1310	380	1340	545	176	259	510	113	156
7	1110	400	1200	767	125	259	440	160	190
8	695	366	687	613	112	185	413	60	67
9	592	170	272	441	25	30	353	43	41
10	572	169	261	370	106	106	340	46	42
11	507	94	129	329	140	124	337	92	84
12	678	190	476	304	68	56	318	181	155
13	1660	459	2220	281	100	76	293	62	49
14	869	250	587	266	60	43	341	56	52
15	658	680	1210	250	45	30	597	77	124
16	573	664	1030	242	46	30	642	104	180
17	522	150	211	233	34	21	514	76	105
18	426	100	115	224	42	25	456	61	75
19	499	82	110	220	36	21	379	86	88
20	672	50	91	249	51	34	341	51	47
21	533	152	219	337	48	44	335	52	47
22	421	174	198	372	82	82	336	86	78
23	690	291	737	349	101	95	358	53	51
24	872	320	753	839	267	1020	345	39	36
25	1050	320	907	927	253	732	337	38	35
26	803	280	607	535	120	173	326	38	33
27	574	190	294	383	73	75	324	37	32
28	940	255	647	326	84	74	305	42	35
29	683	280	516	502	160	217	279	31	23
30	647	216	377	2770	396	4900	274	30	22
31	905	208	508	763	240	494	---	---	---
TOTAL	28958	---	39819	15556	---	10050	15023	---	7419
YEAR	672714		689068.48						

LITTLE MIAMI RIVER BASIN

179

03247050 EAST FORK LITTLE MIAMI RIVER NEAR BATAVIA, OH

LOCATION.--Lat 39°03'36", long 84°10'32", Clermont County, Hydrologic Unit 05090202, on right bank on Elk Lick Road, 230 ft upstream from unnamed right bank tributary, 1,400 ft upstream from Lucy Run, 1.3 mi south of Batavia, and at mile 15.7.

DRAINAGE AREA.--352 mi², includes that of unnamed tributary.

PERIOD OF RECORD.--July 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 571.68 ft above National Geodetic Vertical Datum of 1929. Prior to July 17, 1968, nonrecording gage 1,100 ft downstream at same datum.

REMARKS.--No estimated daily discharges. Records good except those prior to Jan. 1 which are fair. Flow regulated by William H. Harsha reservoir, formerly East Fork Lake, since 1977. Water-quality data collected at this site 1965 to 1977. Satellite telemeter at station operated for U.S. Army Corps of Engineers.

AVERAGE DISCHARGE.--11 years (water years 1966-76), 432 ft³/s, 13 years (water years 1977-89) 406 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,700 ft³/s Apr. 2, 1970, gage height, 20.31 ft; minimum daily, 0.14 ft³/s Sept. 23, 27, 1967. Maximum discharge since start of construction of East Fork Dam 31,000 ft³/s Aug. 30, 1974, gage height, 20.80 ft in gage well, 21.8 ft from floodmarks, result of failure of cofferdam.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1964 reached a stage of 21.46 ft at site 1,100 ft downstream from information by local resident, discharge, about 32,000 ft³/s, from flood study.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,520 ft³/s Apr. 29, gage height, 13.11 ft; minimum daily, 25 ft³/s Oct. 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	36	62	1320	141	990	2450	2530	157	37	301	92
2	32	36	61	1310	157	779	2780	3420	71	36	195	98
3	32	36	61	1300	249	366	2770	3600	71	56	73	184
4	32	36	61	814	395	110	2420	3550	73	133	73	243
5	32	41	61	268	477	150	2210	3250	94	233	60	243
6	25	39	61	343	477	509	2840	2670	243	288	51	198
7	32	38	61	713	477	918	3230	2630	358	288	143	119
8	33	37	60	944	449	920	3200	1490	230	291	297	108
9	33	37	59	1110	256	921	3150	453	148	182	214	73
10	33	40	59	1290	88	1430	2640	1140	112	44	105	89
11	33	39	59	1290	88	1970	1290	1950	59	44	62	160
12	33	37	59	1310	71	1770	267	1470	46	45	44	124
13	32	40	59	1290	85	1330	75	785	47	80	41	124
14	32	49	59	1340	556	1080	67	289	71	158	34	135
15	32	59	51	1320	1120	643	50	355	110	202	34	130
16	32	94	37	1300	1580	295	50	698	189	202	34	186
17	33	119	37	1290	2040	127	49	1380	222	202	34	243
18	36	118	36	1040	2430	186	51	993	151	202	34	241
19	35	119	36	643	2790	192	65	466	115	150	37	239
20	34	190	36	402	2470	203	252	477	65	46	36	193
21	35	370	36	343	1900	550	652	481	66	46	36	114
22	35	538	36	187	2510	1350	824	313	67	46	39	117
23	35	538	37	104	2970	1850	570	280	66	49	40	125
24	35	537	47	104	2920	1870	240	806	66	54	40	122
25	35	532	61	104	2880	1370	109	1560	59	91	49	119
26	35	496	138	107	2400	586	133	1460	44	148	49	119
27	35	439	180	173	1860	247	573	860	44	207	57	118
28	36	436	225	239	1460	136	871	850	46	498	71	116
29	36	430	754	239	---	166	1090	851	43	656	79	92
30	36	267	1330	194	---	702	1070	665	36	661	80	39
31	36	---	1320	127	---	1720	---	334	---	457	64	---
TOTAL	1037	5823	5239	22558	35296	25436	36038	42056	3169	5832	2506	4243
MEAN	33.5	194	169	728	1261	821	1201	1357	106	188	80.8	141
MAX	36	538	1330	1340	2970	1970	3230	3600	358	661	301	243
MIN	25	36	36	104	71	110	49	280	36	36	34	39

CAL YR 1988 TOTAL 85170 MEAN 233 MAX 3070 MIN 25
WTR YR 1989 TOTAL 189233 MEAN 518 MAX 3600 MIN 25

LITTLE MIAMI RIVER BASIN

03247500 EAST FORK LITTLE MIAMI RIVER AT PERINTOWN, OH

LOCATION.--Lat 39°08'14", long 84°14'17", Clermont County, Hydrologic Unit 05090202, on right bank at upstream wingwall of highway bridge at Perintown, 0.2 mi downstream from Sugarcamp Run, 5 mi upstream from mouth, and at mile 6.4.

DRAINAGE AREA.--476 mi².

PERIOD OF RECORD.--May 1915 to September 1917, October 1917 to May 1920 (gage heights only), January 1925 to current year.

GAGE.--Water-stage recorder. Datum of gage is 507.03 ft above National Geodetic Vertical Datum of 1929. Prior to Feb. 6, 1940, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Jan. 4-13. Records good except those for period of estimated record, which are fair. Occasional regulation by Stonelick Lake 14 mi upstream. Surface area at spillway level, 171 acres. Flow regulated by William H. Harsha Reservoir, formerly East Fork Lake, since 1977. Water-quality data collected at this site 1964 to 1977. U.S. Army Corps of Engineers Satellite telemeter at station.

AVERAGE DISCHARGE.--66 years (1915-17, 1925-89), 548 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 42,400 ft³/s Mar. 10, 1964, gage height, 23.84 ft; minimum daily, 0.4 ft³/s July 24, 1930, Sept. 11, 12, 23, 1939; minimum gage height, -0.18 ft Oct. 3-7, 1917. Maximum discharge since start of construction of East Fork Dam 23,200 ft³/s Aug. 30, 1974, gage height, 19.52 ft, result of failure of cofferdam.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13,500 ft³/s Apr. 29, gage height, 14.94 ft; minimum daily, 27 ft³/s Oct. 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	40	92	1630	156	1250	2920	2780	267	59	333	132
2	34	39	83	1630	186	1050	3030	3500	123	63	267	150
3	34	39	78	1630	609	535	3170	3640	115	67	90	164
4	34	41	76	1000	646	190	4520	3590	114	605	84	244
5	33	54	74	480	648	1490	2840	3820	147	356	80	240
6	33	88	73	650	601	1560	3150	3370	253	334	80	230
7	27	83	71	1000	571	1360	3460	3040	473	318	89	123
8	33	66	71	1300	537	1350	3530	2100	312	308	286	119
9	34	58	71	1600	361	1570	3520	1790	197	256	255	79
10	34	82	71	1800	105	1850	3020	1900	182	71	122	119
11	34	141	70	1800	103	2390	1840	2430	96	66	79	118
12	34	84	68	1800	99	2230	510	2000	114	64	52	123
13	34	66	68	1900	113	1720	174	1250	120	217	48	118
14	34	71	68	1910	2650	1490	157	554	349	177	38	189
15	33	77	69	2470	3350	1010	131	972	283	217	36	193
16	34	85	51	1810	3140	534	121	1590	273	211	35	175
17	36	124	47	1670	2530	187	115	1720	330	210	34	250
18	44	129	45	1420	2530	238	129	1550	199	208	34	242
19	39	131	46	862	2960	272	1180	688	181	211	42	240
20	35	906	46	486	2810	1000	405	721	123	80	39	226
21	39	701	49	428	4180	2250	841	682	133	66	42	121
22	42	696	48	267	2960	1660	1060	561	110	61	51	121
23	39	643	54	128	3130	2230	830	1530	105	134	64	139
24	39	621	441	126	3040	2190	378	1380	94	232	50	130
25	38	606	357	123	3000	1780	168	1910	90	83	54	123
26	38	596	189	143	2740	854	199	2610	71	160	61	120
27	38	614	236	273	2220	354	777	1340	70	180	55	118
28	40	628	1520	321	1880	205	1760	1150	81	694	73	116
29	40	511	1010	297	---	1570	5780	1100	93	686	85	116
30	40	410	1690	281	---	3090	2420	942	68	675	100	51
31	40	---	1640	157	---	3670	---	489	---	592	77	---
TOTAL	1120	8430	8572	31392	47855	43129	52135	56659	5166	7661	2835	4629
MEAN	36.1	281	277	1013	1709	1391	1738	1829	172	247	91.5	154
MAX	44	906	1690	2470	4180	3670	5780	3820	473	694	333	250
MIN	27	39	45	123	99	187	115	489	68	59	34	51

CAL YR 1988 TOTAL 121449 MEAN 332 MAX 5060 MIN 27
WTR YR 1989 TOTAL 269623 MEAN 739 MAX 5780 MIN 27

MILL CREEK BASIN

181

03255500 MILL CREEK AT READING, OH

LOCATION.--Lat 39°13'14", long 84°26'49", in sec. 32, R.1, T.4, Hamilton County, Hydrologic Unit 05090203, on right bank at upstream side of Koehler Street Bridge at Reading, 1.0 mi upstream from West Fork Mill Creek, and 13.0 mi upstream from mouth.

DRAINAGE AREA.--73.0 mi².

PERIOD OF RECORD.--October 1938 to April 1939, June 1939 to current year.

REVISED RECORDS.--WSP 1908: Drainage area. WRD OH-83-1: 1980-82 (P).

GAGE.--Water-stage recorder. Datum of gage is 527.00 ft above Ohio River datum. Prior to Oct. 1, 1951, water-stage recorder or nonrecording gage at same site at datum 4.00 ft higher. Oct. 1, 1951, to Apr. 25, 1954, nonrecording gage at present site and datum.

REMARKS.--No estimated daily discharges. Records good. Some diversion and ground water pumpage from Mill Creek and Great Miami River basin by industrial plants of the greater Cincinnati area upstream from station. Water-quality data collected at this site 1965 to 1977.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,780 ft³/s Mar. 6, 1945, gage height, 20.00 ft present datum; no flow for many days in 1940-41, 1944, 1951.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,700 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 8	0130	2,200	10.90	May 23	0730	2,350	11.29
Mar. 20	1700	1,860	10.02	July 4	0300	2,360	11.31
Mar. 29	1600	2,150	10.77	July 30	2130	1,850	9.79
Apr. 4	0330	2,600	11.90	Aug. 30	0300	1,980	10.33
Apr. 29	0430	*2,780	*12.35				

Minimum daily 9.9 ft³/s Oct. 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	14	19	104	27	45	324	232	47	16	30	388
2	14	15	18	69	49	42	202	122	61	26	24	176
3	13	15	17	49	165	40	310	93	51	122	21	94
4	13	82	14	37	62	39	1330	107	49	519	21	64
5	13	152	14	86	41	443	283	195	188	54	116	56
6	14	44	16	298	34	242	178	136	68	32	95	58
7	13	35	17	109	28	131	128	91	42	25	28	40
8	12	33	15	671	26	158	201	75	35	21	22	37
9	9.9	24	15	124	20	204	141	493	145	19	21	30
10	12	126	14	82	22	167	94	244	43	20	21	94
11	14	33	12	69	23	123	80	122	28	21	19	39
12	14	19	13	220	22	86	68	89	116	22	17	32
13	16	51	15	108	123	72	67	100	46	123	15	28
14	16	22	15	301	428	66	53	122	286	28	16	109
15	14	19	15	329	791	136	45	284	115	21	17	79
16	19	24	14	125	527	66	40	155	70	18	19	37
17	39	21	13	84	173	56	42	90	44	17	17	28
18	71	17	13	64	109	55	281	68	32	30	18	26
19	20	23	13	53	75	38	405	61	49	98	18	23
20	17	421	14	44	112	811	102	126	63	31	50	26
21	52	75	18	31	626	785	76	57	35	22	40	22
22	31	36	15	29	197	191	55	60	31	29	121	23
23	22	27	78	30	114	125	45	1120	25	54	63	42
24	23	21	224	29	82	89	43	234	22	31	327	21
25	15	17	63	28	71	69	42	120	19	27	77	21
26	13	42	34	39	109	54	81	634	19	23	30	20
27	14	162	36	34	73	59	235	171	31	23	20	22
28	30	43	1050	29	57	57	297	90	51	21	27	18
29	16	27	136	25	---	800	1870	68	19	17	120	15
30	12	21	71	28	---	1120	882	61	17	289	769	18
31	13	---	51	23	---	1120	---	50	---	237	160	---
TOTAL	607.9	1661	2072	3351	4186	7489	8000	5670	1847	2036	2359	1686
MEAN	19.6	55.4	66.8	108	149	242	267	183	61.6	65.7	76.1	56.2
MAX	71	421	1050	671	791	1120	1870	1120	286	519	769	388
MIN	9.9	14	12	23	20	38	40	50	17	16	15	15

CAL YR 1988 TOTAL 24152.4 MEAN 66.0 MAX 2210 MIN 6.3
WTR YR 1989 TOTAL 40964.9 MEAN 112 MAX 1870 MIN 9.9

GREAT MIAMI RIVER BASIN

183

03260325 NORTH FORK GREAT MIAMI RIVER, NEAR INDIAN LAKE, OH

LOCATION.--Lat 40°31'26", long 83°48'02", Logan County, Hydrologic Unit 05080001, on left bank at Dunn Rd, 3.4 mi upstream of Indian Lake.

DRAINAGE AREA.--15.0 mi².

PERIOD OF RECORD.--July 1, 1988 to June 30, 1989 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 1,010 ft above National Geodetic Vertical Datum of 1929 from topographic map.

REMARKS.--Estimated daily discharges: July 21-23, 31, Aug. 11-13, Nov. 1-Dec. 20, Dec. 28-Jan. 1, Jan. 6-10, 12, 13, 26, 27, Feb. 21, and June 24-27. Records fair except those for periods of estimated daily discharge, which are poor. Data collected in support of Ohio Environmental Protection Agency project of Indian Lake.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period July 1988 to June 1989, 1,400 ft³/s May 26, 1989, gage height 7.04 ft from rating curve extended above 675 ft³/s; minimum daily discharge 0.00 ft³/s many days.

DISCHARGE, CUBIC FEET PER SECOND, YEAR JULY 1988 TO JUNE 1989.
MEAN VALUES

DAY	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
1	.00	.64	.00	.00	.00	.01	15	5.8	2.0	48	8.0	9.6
2	.00	.00	.00	.00	.00	.00	3.8	4.5	1.2	28	6.6	9.9
3	.00	.00	.00	.00	.00	.00	3.6	4.0	1.4	88	5.3	35
4	.00	.00	.00	.00	.03	.00	2.2	3.1	1.9	186	4.3	67
5	.00	.00	.00	.00	.07	.00	1.4	2.9	21	62	13	21
6	.00	.00	.00	.00	.06	.00	30	2.7	34	40	28	14
7	.00	.00	.00	.00	.06	.00	50	1.9	34	31	13	9.5
8	.00	.00	.00	.00	.05	.00	60	1.8	29	23	8.3	7.0
9	.00	.00	.00	.00	.04	.00	35	1.8	18	23	8.8	5.6
10	.00	.52	.00	.00	.25	.00	15	1.8	9.6	17	24	4.0
11	.00	15	.00	.00	.20	.00	9.2	2.0	14	13	12	2.9
12	.00	1.0	.00	.00	.14	.00	30	2.1	17	11	8.4	3.4
13	.00	.00	.00	.00	.11	.00	20	1.8	12	9.7	19	6.0
14	.00	.00	.00	.00	.11	.00	9.9	4.3	13	8.1	31	4.2
15	.00	.00	.00	.00	.09	.00	9.7	7.2	14	7.3	17	6.6
16	.00	.00	.00	.00	.08	.00	8.0	11	7.6	6.2	15	87
17	.00	.00	.00	.00	.07	.00	7.3	7.1	6.5	5.5	9.4	25
18	.00	.00	.00	.00	.06	.00	7.2	5.7	6.5	7.3	6.9	10
19	.00	.00	.00	.00	.06	.00	10	5.3	5.0	21	5.8	7.0
20	2.7	.00	.00	.00	4.5	.00	9.1	4.9	16	12	6.6	7.6
21	30	.00	.00	.00	8.0	.00	5.9	50	33	8.8	5.8	5.9
22	10	.00	.00	.00	2.0	.00	5.2	25	15	6.9	4.5	4.4
23	9.0	.00	.00	.00	.70	1.0	4.5	16	9.7	5.7	64	3.4
24	1.5	.00	.00	.00	.20	3.1	4.0	16	7.9	4.8	50	2.5
25	.00	.00	.00	.00	.12	4.4	3.7	12	6.7	10	74	2.0
26	.00	.00	.00	.00	.11	1.1	10	5.8	5.5	13	656	1.8
27	.00	.00	.00	.00	.12	3.1	16	4.3	4.8	7.8	101	45
28	.00	.00	.00	.00	.08	60	11	3.1	4.8	14	45	64
29	.00	.00	.00	.00	.04	90	8.7	---	16	13	26	16
30	.00	.00	.00	.00	.02	100	7.9	---	124	13	16	8.9
31	10	.00	---	.00	---	20	6.6	---	74	---	12	---
TOTAL	63.20	17.16	0.00	0.00	17.37	282.71	419.9	213.9	565.1	744.1	1304.7	496.2
MEAN	2.04	.55	.00	.00	.58	9.12	13.5	7.64	18.2	24.8	42.1	16.5
MAX	30	15	.00	.00	8.0	100	60	50	124	186	656	87
MIN	.00	.00	.00	.00	.00	.00	1.4	1.8	1.2	4.8	4.3	1.8
CFSM	.14	.04	.00	.00	.04	.61	.90	.51	1.22	1.65	2.81	1.10
IN.	.16	.04	.00	.00	.04	.70	1.04	.53	1.40	1.85	3.24	1.23

JUL YR 1989 TOTAL 4124.34 MEAN 11.3 MAX 656 MIN .00 CFSM .75 IN. 10.23

GREAT MIAMI RIVER BASIN

03260450 SOUTH FORK GREAT MIAMI RIVER, NEAR HUNTSVILLE, OH

LOCATION.--Lat 40°28'43", long 82°48'43", Logan County, Hydrologic Unit 05080001, on right bank at bridge on State Route 117, 2.5 mi north of Huntsville and 3.3 mi upstream from Indian Lake.

DRAINAGE AREA.--47.5 mi².

PERIOD OF RECORD.--July 1, 1988 to June 30, 1989 (discontinued). Prior to July 1988 periodic low flow measurements only.

GAGE.--Water-stage recorder. Elevation of gage is 1,010 ft above National Geodetic Vertical Datum of 1929 from topographic map.

REMARKS.--Estimated daily discharges: Dec. 28 to Feb. 21 and May 26. Records fair except those for periods of estimated record, which are poor.

EXTREMES FOR CURRENT YEAR.--Maximum estimated daily discharge during period July 1988 to June 1989, 2,500 ft³/s May 26, 1989; minimum daily, 1.4 ft³/s July 16, 1988.

DISCHARGE, CUBIC FEET PER SECOND, YEAR JULY 1988 TO JUNE 1989
MEAN VALUES

DAY	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
1	2.6	10	2.3	3.3	3.3	9.1	260	50	13	176	28	61
2	2.6	6.3	2.2	3.6	3.1	8.5	220	45	12	94	25	61
3	3.0	4.7	2.7	3.8	2.9	8.0	180	38	12	257	22	173
4	2.8	4.2	2.8	3.6	4.3	7.4	160	33	13	631	20	393
5	2.0	4.2	2.8	3.2	7.2	7.2	150	29	103	164	30	94
6	1.6	4.2	3.0	3.7	6.1	7.5	600	25	59	122	58	66
7	1.9	3.7	2.8	4.0	5.1	7.3	400	20	25	117	35	56
8	1.8	3.5	2.8	3.2	5.0	7.1	270	19	20	80	26	41
9	1.8	3.2	2.7	2.9	4.1	7.1	160	18	21	88	30	36
10	1.7	4.8	2.5	3.3	25	7.3	110	18	39	55	111	31
11	1.8	37	2.2	3.4	18	7.0	90	18	66	42	42	28
12	1.8	10	2.9	3.3	11	6.2	300	18	67	35	29	29
13	1.8	5.5	4.4	2.9	11	6.6	250	18	38	33	81	32
14	1.5	4.0	3.6	2.9	11	6.8	170	30	37	29	92	33
15	1.5	3.2	3.1	3.0	8.9	8.1	120	70	67	26	66	62
16	1.4	3.0	3.3	3.3	8.1	6.8	80	110	33	24	57	230
17	1.5	2.7	3.5	3.5	7.3	5.6	70	70	24	22	33	65
18	3.0	3.0	3.3	4.1	6.5	5.8	60	56	22	32	26	37
19	3.1	3.9	2.6	3.2	6.2	6.0	100	50	19	108	22	43
20	52	3.0	3.0	3.2	40	6.8	90	250	53	44	35	305
21	118	2.5	2.9	3.3	59	6.5	74	200	113	32	26	63
22	23	2.3	2.9	3.3	25	5.7	60	89	42	25	20	37
23	29	2.8	2.9	3.1	17	10	50	33	29	22	341	30
24	12	2.5	2.8	3.4	14	18	40	22	24	20	190	26
25	7.5	2.0	2.8	3.5	12	22	35	19	21	38	226	24
26	7.4	2.3	3.1	3.4	11	14	80	19	19	39	2500	22
27	6.0	1.9	3.0	2.8	13	16	150	17	17	26	353	55
28	4.7	4.2	2.8	3.3	12	520	100	15	18	79	92	64
29	4.2	3.6	3.1	2.9	10	700	84	---	256	67	63	29
30	4.2	2.8	3.0	2.8	9.8	500	80	---	683	40	61	23
31	24	2.5	---	3.3	---	370	74	---	293	---	61	---
TOTAL	331.2	153.5	87.8	102.5	376.9	2324.4	4667	1399	2258	2567	4801	2249
MEAN	10.7	4.95	2.93	3.31	12.6	75.0	151	50.0	72.8	85.6	155	75.0
MAX	118	37	4.4	4.1	59	700	600	250	683	631	2500	393
MIN	1.4	1.9	2.2	2.8	2.9	5.6	35	15	12	20	20	22

JUL YR 1989 TOTAL 21317.3 MEAN 58.4 MAX 2500 MIN 1.4

03260502 GREAT MIAMI RIVER BELOW INDIAN LAKE NEAR RUSSLES POINT, OH

LOCATION.--Lat 40°27'52", long 83°52'37", Logan County, Hydrologic Unit 05080001, on right bank, 200 feet below spillway of Indian Lake.

DRAINAGE AREA.--99.9 mi².

PERIOD OF RECORD.--July 1, 1988 to June 30, 1989 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 990 ft above National Geodetic Vertical Datum of 1929 from topographic map.

REMARKS.--Estimated daily discharges: May 26 to June 5. Records good except those for periods of estimated daily discharge, which are fair. Data collected in support of Ohio Environmental Protection Agency project of Indian Lake.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period July 1988 to June 1989; 3,750 ft³/s, gage height 12.93 ft on May 26, 1989, from rating curve extended above 2,000 ft³/s; minimum daily discharge 0.00 ft³/s many days.

DISCHARGE, CUBIC FEET PER SECOND, YEAR JULY 1988 TO JUNE 1989
MEAN VALUES

DAY	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
1	.00	.00	.00	.00	.01	.00	.00	75	56	599	121	110
2	.00	.00	.00	.0	.10	.00	.00	79	25	312	55	100
3	.00	.00	.00	.00	.11	.73	.00	109	22	444	39	300
4	.00	.00	.00	.00	.29	.36	.00	29	20	999	15	900
5	.00	.00	.00	.00	.46	.00	.00	13	179	826	33	500
6	.00	.00	.00	.00	.27	.00	.46	13	237	560	93	283
7	.00	.00	.00	.00	.21	.00	32	12	19	407	111	186
8	.00	.00	.00	.00	.24	.0	263	12	17	243	47	113
9	.00	.00	.00	.00	.14	.00	223	11	22	183	68	119
10	.00	.00	.00	.00	.24	.00	152	11	28	159	165	84
11	.00	.00	.00	.01	.00	.00	130	11	43	111	142	43
12	.00	.00	.00	.00	.00	.00	140	11	73	69	65	24
13	.00	.00	.00	.00	.00	.00	121	13	66	106	46	41
14	.00	.00	.00	.00	.00	.00	97	19	45	56	73	44
15	.00	.30	.00	.00	.00	.00	104	28	109	71	91	53
16	.00	.00	.00	.00	.00	.00	78	40	50	50	116	102
17	.00	.00	.00	.0	.00	.00	53	42	43	57	82	103
18	.02	.02	.00	.02	.00	.00	54	39	135	89	58	84
19	.00	.03	.00	.00	.00	.00	47	35	56	109	40	81
20	.67	.00	.00	.00	.98	.00	172	40	49	89	66	279
21	.03	.00	.00	.00	.00	.00	29	105	167	92	86	192
22	.00	.00	.00	.00	.00	.00	12	146	80	70	36	137
23	.00	.00	.00	.03	.00	.0	14	129	62	54	238	103
24	.00	.00	.00	.00	.00	.04	17	101	53	31	241	86
25	.00	.00	.00	.00	.00	.01	23	68	45	35	189	70
26	.00	.00	.00	.00	.00	.00	54	83	40	69	2900	34
27	.00	.00	.00	.00	.00	.07	54	62	31	66	1700	76
28	.00	.03	.00	.02	.00	4.6	40	51	35	69	800	225
29	.00	.00	.00	.00	.00	.00	45	---	164	79	400	158
30	.02	.00	.00	.00	.00	.00	59	---	643	109	250	67
31	.03	.00	---	.00	---	.00	23	---	794	---	150	---
TOTAL	0.77	0.38	0.00	0.08	3.05	5.81	2036.46	1387	3408	6213	8516	4697
MEAN	.025	.012	.00	.003	.10	.19	65.7	49.5	110	207	275	157
MAX	.67	.30	.00	.03	.98	4.6	263	146	794	999	2900	900
MIN	.00	.00	.00	.00	.00	.00	.00	11	17	31	15	24

JUL YR 1989 TOTAL 26267.55 MEAN 72.0 MAX 2900 MIN .00

GREAT MIAMI RIVER BASIN

03260700 BOKENGEHALAS CREEK NEAR DE GRAFF, OH

LOCATION.--Lat 40°20'50", long 83°53'28", in E. 1/2 sec. 3, R.14, T.2, Logan County, Hydrologic Unit 05080001, on right bank at downstream side of county road bridge, 2 mi downstream from Bluejacket Creek, 2.8 mi northeast of De Graff, and 4 mi upstream from mouth.

DRAINAGE AREA.--36.3 mi².

PERIOD OF RECORD.--October 1957 to current year. Prior to October 1962, published as Buckongahalas Creek near Degraff.

REVISED RECORDS.--WSP 1908: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,008.76 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 11-14, 19, 20, and Feb. 3-15. Records fair except those for periods of estimated record, which are poor. Diurnal fluctuation caused by municipal plant operation in Bellefontaine, 9.8 mi upstream. Since storage capacity is small, daily flows are not affected appreciably. Water-quality data collected at this site 1965 to 1973.

COOPERATION.--Gage-height tapes and 8 discharge measurements furnished by Miami Conservancy District.

AVERAGE DISCHARGE.--32 years, 33.4 ft³/s, 12.49 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,780 ft³/s Jan. 21, 1959, gage height, 6.83 ft; minimum daily, 2.2 ft³/s Sept. 29, 30, Oct. 7, 1963.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 30	1230	371	3.82	June 4	0330	371	3.82
Apr. 4	0815	391	3.96	June 20	0630	429	4.23
May 23	2000	316	3.44	Aug. 6	0200	459	4.44
May 26	1245	*668	5.80				

Minimum daily discharge, 4.4 ft³/s Oct. 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.1	5.5	10	22	20	21	154	37	63	38	24	41
2	5.3	5.5	9.3	20	19	20	98	43	56	35	22	29
3	4.9	5.5	8.5	19	19	20	146	47	79	37	21	21
4	5.3	8.9	7.5	18	16	22	278	40	235	33	36	21
5	5.3	27	7.8	27	14	72	145	52	114	29	96	21
6	5.3	12	8.2	94	12	65	100	56	84	27	280	20
7	5.5	8.7	8.2	121	10	43	104	46	62	33	82	20
8	5.3	10	7.8	163	9.6	33	81	41	51	63	49	20
9	4.4	8.2	7.8	73	8.4	37	77	48	48	33	36	16
10	4.9	59	7.4	50	7.8	53	63	75	41	30	31	26
11	5.4	25	7.5	38	7.6	65	56	53	38	31	28	20
12	5.2	15	7.5	45	8.0	62	51	46	47	51	25	20
13	5.0	16	7.5	42	9.0	49	51	67	58	45	23	19
14	5.1	14	7.5	35	13	45	46	58	51	32	22	54
15	5.0	12	7.6	46	25	50	43	56	52	27	26	51
16	4.5	11	11	36	32	40	40	65	52	25	28	29
17	6.3	11	6.4	32	25	35	40	52	40	23	22	23
18	9.2	9.4	5.7	29	21	34	47	46	35	21	22	20
19	5.7	8.7	6.0	28	20	29	86	44	41	75	22	19
20	5.5	23	6.4	27	20	40	57	49	325	59	25	19
21	5.9	28	7.0	23	69	65	49	42	145	38	22	19
22	6.2	17	6.5	21	62	47	44	40	82	30	25	19
23	5.0	15	12	20	39	39	40	174	60	25	24	19
24	6.6	12	14	20	39	34	37	175	46	24	23	18
25	5.6	11	12	20	24	30	45	117	39	24	22	18
26	5.4	9.9	9.3	25	26	27	51	599	37	25	21	17
27	5.3	16	11	29	23	27	42	409	77	30	20	16
28	5.6	13	119	24	22	28	50	203	139	29	20	15
29	5.2	12	68	22	---	144	47	138	63	23	21	15
30	4.8	11	40	21	---	273	41	103	46	31	23	15
31	4.9	---	28	20	---	207	---	77	---	29	20	---
TOTAL	168.7	440.3	482.4	1210	620.4	1756	2209	3098	2306	1055	1161	682
MEAN	5.44	14.7	15.6	39.0	22.2	56.6	73.6	99.9	76.9	34.0	37.5	22.7
MAX	9.2	59	119	163	69	273	278	599	325	75	280	54
MIN	4.4	5.5	5.7	18	7.6	20	37	37	35	21	20	15
CFSM	.15	.40	.43	1.08	.61	1.56	2.03	2.75	2.12	.94	1.03	.63
IN.	.17	.45	.49	1.24	.64	1.80	2.26	3.17	2.36	1.08	1.19	.70

CAL YR 1988 TOTAL 6135.2 MEAN 16.8 MAX 179 MIN 3.2 CFSM .46 IN. 6.29
WTR YR 1989 TOTAL 15188.8 MEAN 41.6 MAX 599 MIN 4.4 CFSM 1.15 IN. 15.57

03261500 GREAT MIAMI RIVER AT SIDNEY, OH

LOCATION.--Lat 40°17'13", long 84°09'00", Shelby County, Hydrologic Unit 05080001, on right bank 50 ft upstream from North Street Bridge in Sidney, and 0.5 mi downstream from Tawawa Creek.

DRAINAGE AREA.--541 mi².

PERIOD OF RECORD.--February 1914 to current year. Prior to October 1962, published as Miami River at Sidney.

REVISED RECORDS.--WSP 1305: 1914(M), 1922(M). WSP 1908: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 924.70 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 18, 1919, nonrecording gage at site 50 ft downstream at datum 1.76 ft higher. September 18, 1919 to August, 1925, nonrecording gage at site 50 ft downstream at present datum.

REMARKS.--Estimated daily discharges: Feb. 6-14. Records fair. Water supply for city of Sidney is pumped from the Great Miami River 1,200 ft upstream and from wells adjacent to Great Miami River upstream from station. The pumpage averaged 4.54 ft³/s in 1989 and is returned as sewage 1.2 mi downstream from the station. Some regulation by Indian Lake, 28 mi upstream, capacity, 45,900 acre-ft; water diverted into Miami and Erie Canal at Port Jefferson, 2.8 mi upstream, prior to 1926; amount of diversion not published. Sediment data collected at this site 1967 to 1975.

COOPERATION.--Gage-height tapes, and 9 discharge measurements furnished by Miami Conservancy District.

AVERAGE DISCHARGE.--64 years, (1925-89) 478 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,700 ft³/s Mar. 20, 1927, gage height 14.4 ft, from rating curve extended above 8,700 ft³/s on basis of velocity-area studies; maximum gage height, 15.91 ft Jan. 21, 1959; minimum discharge, 1.5 ft³/s Aug. 13, 1963, result of temporary storage behind dam upstream; minimum daily discharge, 8.0 ft³/s Sept. 23, 1935.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 25, 1913 reached a stage of 19.6 ft, present datum, discharge, 44,000 ft³/s, computed by Miami Conservancy District.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft³/s and maximum (*).

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 4	1000	4,310	7.58	May 26	1530	*6,690	*9.58

Minimum daily discharge 26 ft³/s Oct. 7, 11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	35	100	294	245	300	3200	543	1110	382	240	440
2	28	37	88	230	282	267	2350	469	717	320	192	900
3	29	38	81	192	274	232	2540	403	729	285	160	585
4	28	59	76	163	276	227	3900	350	2360	261	146	353
5	27	100	72	164	189	608	3390	388	2060	246	415	237
6	27	135	70	623	140	1350	2590	623	1630	219	2390	185
7	26	100	68	1730	120	793	2120	636	1090	192	1450	157
8	27	85	66	2590	110	411	1750	507	669	256	678	139
9	27	80	63	1930	100	374	1490	462	490	250	384	132
10	27	239	60	1190	96	529	1140	1140	439	210	276	173
11	26	309	54	699	100	822	834	1010	360	288	223	244
12	27	180	62	634	110	827	664	672	326	820	243	199
13	27	149	58	835	120	650	576	571	560	640	228	155
14	27	134	61	615	140	543	530	634	517	395	194	458
15	27	114	63	569	223	538	459	571	479	271	149	1520
16	28	103	55	526	414	504	442	999	477	205	164	907
17	37	90	57	463	415	378	389	805	453	184	225	538
18	41	77	57	419	336	357	431	551	380	125	172	353
19	41	74	55	442	294	419	1030	438	357	182	145	247
20	41	109	61	436	270	346	905	397	1010	1200	139	198
21	41	270	64	492	713	815	653	426	1350	1550	181	171
22	40	238	64	292	1270	777	538	367	1060	1470	204	156
23	42	169	75	244	810	514	455	1210	581	1100	313	175
24	40	130	104	223	509	428	392	2360	428	590	361	248
25	39	109	145	213	427	376	346	1690	360	398	406	137
26	40	103	136	234	390	334	488	5570	310	363	294	109
27	38	145	130	390	392	301	502	5620	654	355	221	121
28	39	159	1010	406	338	289	444	4500	2070	338	179	103
29	39	138	1270	333	---	806	533	3320	1070	327	182	91
30	36	117	668	311	---	3100	551	2360	555	246	696	87
31	37	---	405	299	---	3660	---	1680	---	262	401	---
TOTAL	1029	3825	5398	18181	9103	21875	35632	41272	24651	13930	11651	9518
MEAN	33.2	127	174	586	325	706	1188	1331	822	449	376	317
MAX	42	309	1270	2590	1270	3660	3900	5620	2360	1550	2390	1520
MIN	26	35	54	163	96	227	346	350	310	125	139	87

CAL YR 1988 TOTAL 69949 MEAN 191 MAX 2360 MIN 14
WTR YR 1989 TOTAL 196065 MEAN 537 MAX 5620 MIN 26

GREAT MIAMI RIVER BASIN

03261950 LORAMIE CREEK NEAR NEWPORT, OH

LOCATION.--Lat 40°18'25", long 84°23'02", in SE 1/4 sec, 24, T.11 N., R.4 E., Shelby County, Hydrologic Unit 05080001, right bank at downstream side of bridge on Cardo Roman Road, 1.1 mi northwest of Newport, 3 mi south of Fort Loramie, 3 mi downstream from Mile Creek, and at mile 16.5.

DRAINAGE AREA.--152 mi².

PERIOD OF RECORD.--October 1964 to current year.

REVISED RECORDS.--WRD Ohio 1971: 1966(M). WRD Ohio 1985-1: 1984 (M).

GAGE.--Water-stage recorder. Datum of gage is 926.57 ft above National Geodetic Vertical Datum of 1929. October 1, 1964 to September 30, 1980 water-stage recorder at same site at datum 0.43 ft higher.

REMARKS.--No estimated daily discharges. Records fair. Some regulation by Lake Loramie 5 mi upstream, capacity, 13,000 acre-ft. Sediment data collected at this site 1967 to 1975.

COOPERATION.--Gage-height tapes and 7 discharge measurements furnished by Miami Conservancy District.

AVERAGE DISCHARGE.--25 years, 129 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,600 ft³/s June 14, 1981, maximum gage height, 14.08 ft Feb. 24, 1975; minimum daily, 0.10 ft³/s Aug. 15, 16, 1965, Sept. 10-12, 14, 15, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 25, 1913 reached a stage of 17.0 ft and flood of Jan. 21, 1959 a stage of 14.2 ft, from flood profile furnished by Miami Conservancy District.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 30	2330	1,590	10.53	May 26	2330	1,970	11.26
Apr. 4	1530	1,710	10.81	July 21	0400	*2,690	*12.24

Minimum daily discharge 0.69 ft³/s Oct. 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	3.2	12	83	51	50	1100	128	100	24	95	275
2	1.1	3.6	9.5	55	49	43	595	92	79	16	57	483
3	2.1	3.1	6.3	42	43	42	920	69	70	49	37	230
4	1.8	5.2	7.4	34	31	40	1530	54	396	82	28	109
5	1.5	12	5.0	25	27	220	1290	102	240	37	51	55
6	1.1	6.8	3.7	278	22	394	670	128	198	22	230	34
7	.79	5.2	3.7	714	23	179	395	101	115	15	180	23
8	.77	4.3	3.7	1230	18	109	275	78	73	11	88	17
9	.84	2.9	3.6	830	14	79	252	113	52	8.1	45	13
10	.69	7.1	3.1	336	13	119	200	411	36	6.4	27	36
11	.84	6.3	2.8	178	13	187	151	249	26	7.0	18	45
12	1.2	4.7	2.6	177	14	185	116	153	26	111	13	30
13	.92	5.0	2.2	233	15	138	103	123	46	46	9.5	20
14	.70	3.5	2.2	163	28	114	81	108	45	20	7.3	240
15	.72	2.4	2.8	140	61	92	75	90	36	11	5.8	934
16	1.0	1.5	2.3	108	147	71	63	79	29	7.3	8.5	494
17	1.9	1.9	2.1	97	125	59	51	66	24	5.5	14	80
18	4.9	1.1	2.1	93	94	58	68	54	17	4.4	11	31
19	3.1	.89	2.1	106	76	44	301	47	15	130	6.9	19
20	1.1	7.9	2.4	108	63	64	211	50	28	1720	8.3	15
21	.90	38	3.2	77	270	235	148	47	36	2490	17	14
22	5.2	29	2.9	64	389	173	104	39	31	1570	15	13
23	5.6	17	4.8	53	216	124	76	309	23	774	22	17
24	6.2	13	8.2	44	129	94	57	529	16	357	26	10
25	5.2	10	9.0	39	95	76	47	366	13	246	17	7.0
26	4.6	8.5	8.4	43	88	63	784	1420	11	194	11	5.8
27	3.8	13	16	86	76	55	471	1750	21	182	8.0	5.3
28	3.9	17	351	83	64	64	210	979	246	346	5.8	4.1
29	4.5	21	429	72	---	332	183	389	107	188	13	3.6
30	4.4	17	237	62	---	1150	150	248	41	127	227	3.6
31	3.4	---	135	55	---	1450	---	153	---	142	90	---
TOTAL	75.77	272.09	1286.1	5708	2254	6103	10677	8524	2196	8948.7	1392.1	3266.4
MEAN	2.44	9.07	41.5	184	80.5	197	356	275	73.2	289	44.9	109
MAX	6.2	38	429	1230	389	1450	1530	1750	396	2490	230	934
MIN	.69	.89	2.1	25	13	40	47	39	11	4.4	5.8	3.6

CAL YR 1988 TOTAL 14630.56 MEAN 40.0 MAX 928 MIN .57
WTR YR 1989 TOTAL 50703.16 MEAN 139 MAX 2490 MIN .69

GREAT MIAMI RIVER BASIN

189

03262000 LORAMIE CREEK AT LOCKINGTON, OH

LOCATION.--Lat 40°12'35", long 84°14'32", in NE 1/4 sec. 30, T.7 N., R.6 E., Shelby County, Hydrologic Unit 05080001, on left bank at downstream side of county road bridge, 1,300 ft downstream from Lockington Dam, 0.5 mi northwest of Lockington, and at mile 1.9.

DRAINAGE AREA.--257 mi².

PERIOD OF RECORD.--October 1915 to current year.

REVISED RECORDS.--WSP 923: 1916. WSP 1908: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 800.03 ft above National Geodetic Vertical Datum of 1929. Prior to July 3, 1924, nonrecording gage at same site at datum 75.96 ft higher. July 3, 1924, to Aug. 17, 1926, nonrecording gage, and Aug. 18 to Sept. 30, 1926, water-stage recorder, at same site at datum 74.96 ft higher.

REMARKS.--Estimated daily discharges: Dec. 30-Jan. 5, Feb. 4-14. Records good except those for periods of estimated discharge which are poor. Slight regulation by Lake Loramie 18 mi upstream, capacity, 13,000 acre-ft. Flood flow regulated by Lockington retarding basin beginning in 1921.

COOPERATION.--Gage-height tapes and 8 discharge measurements furnished by Miami Conservancy District.

AVERAGE DISCHARGE.--74 years, 209 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,400 ft³/s May 7, 1916, gage height, 86.4 ft, present datum, from rating curve extended above 5,400 ft³/s; minimum daily, 1.4 ft³/s Sept. 20, 1983.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 25, 1913 reached a stage of 91.6 ft, present datum, discharge, 25,600 ft³/s, at site upstream from Turtle Creek, drainage area, 211 mi², computed by Miami Conservancy District.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,960 ft³/s May 26, gage height, 82.96 ft; minimum daily, 4.7 ft³/s Oct. 11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.6	6.3	28	150	98	108	1780	265	187	68	150	417
2	5.9	6.1	22	100	117	90	1020	216	159	50	112	710
3	6.2	6.1	20	78	102	85	1490	180	152	55	87	317
4	6.2	7.9	17	60	80	84	2470	147	509	125	70	165
5	6.1	19	16	48	62	500	1970	245	402	87	60	104
6	5.8	27	15	523	54	763	1090	314	345	61	334	70
7	5.6	18	13	1250	52	329	661	250	213	51	239	56
8	5.6	16	12	1890	45	203	469	188	152	35	147	42
9	5.5	14	12	1200	33	171	464	373	122	29	97	34
10	5.3	47	12	497	30	281	347	987	100	32	72	132
11	4.7	43	10	256	29	482	272	462	83	32	50	152
12	4.8	26	9.8	335	31	415	223	283	81	111	38	99
13	5.1	23	9.9	417	34	277	193	246	120	111	33	77
14	5.0	21	10	252	50	229	171	222	128	58	35	721
15	5.0	20	10	238	115	212	156	193	117	42	35	1670
16	5.5	16	9.3	200	261	157	145	173	101	33	33	878
17	6.7	13	9.7	179	226	130	125	150	83	24	33	249
18	8.6	12	9.0	172	173	124	148	126	61	22	33	119
19	11	11	9.0	212	147	108	686	115	59	46	29	81
20	10	20	9.9	188	127	138	397	118	71	1870	38	62
21	9.1	80	10	141	610	502	270	115	94	3050	58	51
22	8.0	68	10	109	718	324	206	97	82	2230	64	48
23	7.2	39	12	100	368	227	166	1060	67	1080	105	50
24	6.6	28	14	85	334	182	137	1030	56	508	67	45
25	6.6	23	22	78	306	152	119	664	44	307	61	32
26	6.9	20	21	80	154	130	2290	3360	45	246	40	27
27	7.0	40	23	139	151	114	1260	2440	46	325	34	27
28	6.8	48	739	137	131	117	447	1350	459	510	27	29
29	6.4	35	697	120	---	875	425	607	204	296	30	23
30	6.2	34	500	109	---	2540	383	397	107	179	210	20
31	6.2	---	250	100	---	2610	---	261	---	188	151	---
TOTAL	201.2	787.4	2561.6	9443	4638	12659	19980	16634	4449	11861	2572	6507
MEAN	6.49	26.2	82.6	305	166	408	666	537	148	383	83.0	217
MAX	11	80	739	1890	718	2610	2470	3360	509	3050	334	1670
MIN	4.7	6.1	9.0	48	29	84	119	97	44	22	27	20

CAL YR 1988 TOTAL 29385.9 MEAN 80.3 MAX 1590 MIN 3.7
WTR YR 1989 TOTAL 92293.2 MEAN 253 MAX 3360 MIN 4.7

GREAT MIAMI RIVER BASIN

03262700 GREAT MIAMI RIVER AT TROY, OH

LOCATION.--Lat 40°02'25", long 84°11'52", Miami County, Hydrologic Unit 05080001, 400 ft downstream from B & O Railroad bridge, 1,300 ft downstream from bridge on State Highway 55 at Troy, 1.2 mi upstream from small left bank tributary, 2.3 mi downstream from Spring Creek, and at mile 105.

DRAINAGE AREA.--926 mi².

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1961, 1962 (published as Miami River at Troy). October 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is 810.67 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Feb. 5-14. Records good except those for estimated discharges which are fair. Flood flow regulated by retarding basin on Loramie Creek, 18 mi upstream. Low and medium flow slightly regulated by Indian Lake; capacity, 45,900 acre-ft, 54 mi upstream. Water supply for city of Troy is pumped from wells adjacent to the Great Miami River upstream from the station. The pumpage averaged 4.8 ft³/s in 1989 and is returned as sewage 1 mi downstream from the station. Water quality data collected at this site 1965 to 1974. Sediment data collected 1970 to 1974.

COOPERATION.--Gage-height tapes and 10 discharge measurements furnished by Miami Conservancy District.

AVERAGE DISCHARGE.--27 years, 802 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,300 ft³/s Mar. 6, 1963, gage height, 14.66 ft; minimum, 0.50 ft³/s July 12, 13, 1963, result of temporary storage during repair of dam upstream; minimum daily discharge, 4.3 ft³/s July 17, 1977 result of dam closure upstream.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 11, 1958 reached a stage of 16.4 ft, discharge, 21,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,300 ft³/s May 26, gage height, 11.86 ft; minimum daily, 34 ft³/s Oct. 12-15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	39	164	536	404	482	5560	941	1350	639	462	800
2	37	42	138	401	361	434	3190	819	1010	517	374	1540
3	39	42	128	316	424	386	3680	703	801	463	299	1050
4	39	62	123	271	389	368	6630	622	2370	466	264	633
5	39	151	116	212	280	701	5830	707	2290	441	243	454
6	39	144	100	732	230	1940	3470	968	1870	373	1700	334
7	39	148	95	2310	200	1270	2520	972	1380	334	1710	275
8	37	119	92	4300	190	726	2050	819	987	289	911	241
9	37	103	94	3030	170	618	1810	811	782	375	572	209
10	37	235	96	1740	160	805	1490	1970	671	315	410	285
11	36	376	89	1090	170	1290	1180	1570	593	340	324	419
12	34	276	74	903	180	1300	959	1080	532	782	296	364
13	34	216	82	1230	190	1030	839	900	714	883	283	278
14	34	180	93	994	210	860	787	881	831	611	272	795
15	34	157	92	870	313	807	703	820	791	428	236	3320
16	35	144	83	815	583	740	655	964	721	322	206	1910
17	39	132	78	726	686	603	607	1020	688	256	229	1010
18	61	118	76	655	569	554	612	754	606	233	257	633
19	55	106	78	678	493	560	1460	638	542	223	209	466
20	50	153	96	694	450	542	1390	582	798	1750	202	363
21	51	227	85	664	934	1060	1000	567	1330	4490	246	308
22	53	353	84	533	1840	1200	825	549	1480	3380	369	279
23	53	269	104	429	1270	844	698	1960	834	2100	417	268
24	57	197	125	376	817	698	616	3430	643	1160	497	311
25	47	166	146	346	664	619	562	2250	530	750	485	274
26	41	150	178	345	618	551	4400	10200	458	629	434	205
27	41	196	173	440	606	487	2420	9550	528	725	325	173
28	47	228	1040	597	549	467	1180	6270	2590	870	269	193
29	44	214	1890	507	---	1130	1080	3630	1520	730	244	173
30	40	186	1140	468	---	5160	1130	2510	904	525	922	156
31	39	---	711	450	---	7180	---	1840	---	473	774	---
TOTAL	1306	5129	7663	27658	13950	35412	59333	61297	31144	25872	14441	17719
MEAN	42.1	171	247	892	498	1142	1978	1977	1038	835	466	591
MAX	61	376	1890	4300	1840	7180	6630	10200	2590	4490	1710	3320
MIN	34	39	74	212	160	368	562	549	458	223	202	156

CAL YR 1988 TOTAL 111123 MEAN 304 MAX 4110 MIN 21
WTR YR 1989 TOTAL 300924 MEAN 824 MAX 10200 MIN 34

GREAT MIAMI RIVER BASIN

191

03263000 GREAT MIAMI RIVER AT TAYLORSVILLE, OH

LOCATION.--Lat 39°52'27", long 84°09'45", in SW 1/4 sec. 36, R.8, T.2, Montgomery County, Hydrologic Unit 05080001, on right upstream face of Taylorsville Dam, 0.8 mi north of Taylorsville, 2.1 mi east of Vandalia, 9.5 mi upstream from Stillwater River, and at mile 90.9.

DRAINAGE AREA.--1,149 mi².

PERIOD OF RECORD.--January 1914 to September 1917 (published as Miami River at Tadmor), October 1921 to current year (published as Miami River at Taylorsville). Monthly discharge only for some periods, published in WSP 1305. Gage-height records collected at site at Tadmor, January 1914 to July 1920, are contained in reports of the National Weather Service.

REVISED RECORDS.--WSP 743: 1924(M). WSP 853: 1930, 1937. WSP 923: 1922-24. WSP 1385: 1916. WSP 1908: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 760.11 ft above National Geodetic Vertical Datum of 1929, levels by Miami Conservancy District. Prior to October 1921, nonrecording gage at site 1.7 mi upstream at different datum. Jan. 1, 1922, to Nov. 11, 1925, nonrecording gage at site 50 ft downstream at outlet works of Taylorsville Dam at datum 60.03 ft lower, October 1921 to September 1978 at site 650 ft downstream at datum 60.03 ft lower.

REMARKS.--Estimated daily discharges Feb. 7-12, Aug. 6-9. Records good except those for periods of estimated record which are fair. Flood flow regulated by retarding basins on Great Miami River, just downstream from station and on Loramie Creek 28 mi upstream from station beginning in 1921. Low and medium flow slightly regulated by Indian Lake 64 mi upstream from station, and by Lake Loramie 47 mi upstream from station on Loramie Creek; combined capacity, 58,900 acre-ft.

COOPERATION.--Base data furnished by Miami Conservancy District.

AVERAGE DISCHARGE.--71 years, 1,000 ft³/s, 11.82 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,400 ft³/s Jan. 22, 1959, gage height, 75.44 ft at site and datum then in use; minimum daily, 25 ft³/s July 18, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1913 reached a stage of 25.4 ft at site at Tadmor, discharge, 127,000 ft³/s computed by Miami Conservancy District.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 17,200 ft³/s May 27, gage height, 20.16 ft; minimum daily, 64 ft³/s Oct. 8, 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	75	263	802	567	707	8300	1610	2170	1060	607	972
2	68	80	231	596	493	634	5180	1410	1740	847	515	1990
3	65	85	194	480	565	584	5110	1230	1380	785	422	1510
4	66	106	182	411	508	554	8220	1070	2900	731	366	897
5	65	244	171	345	473	987	8730	1170	3410	695	337	610
6	65	275	160	889	386	2740	5510	1570	2860	599	1370	464
7	65	256	147	2980	320	1980	3940	1600	2120	531	1920	372
8	64	218	140	5580	290	1190	3170	1350	1570	466	1040	332
9	64	183	139	4510	280	962	2740	1420	1270	510	736	295
10	65	584	142	2630	270	1290	2290	3030	1070	479	536	370
11	65	639	137	1630	260	2050	1840	2570	950	451	430	488
12	65	478	128	1340	280	2060	1530	1790	868	1270	370	474
13	65	408	118	1750	314	1650	1340	1500	1020	1370	368	371
14	66	336	138	1490	343	1360	1220	1430	1450	957	345	844
15	66	283	140	1350	434	1300	1100	1320	1360	663	316	4460
16	68	244	133	1240	766	1150	1010	1370	1180	524	282	2870
17	78	222	121	1120	966	983	940	1550	1080	425	281	1600
18	135	194	120	1010	814	879	991	1180	939	386	326	962
19	107	174	119	981	699	820	2020	1010	832	381	287	687
20	88	322	132	1010	631	878	2150	917	971	1420	267	531
21	89	370	135	903	1270	1550	1580	850	1690	4760	300	445
22	96	495	123	806	2600	1820	1280	822	1990	4210	398	402
23	95	411	154	623	1920	1350	1080	3690	1250	2940	511	383
24	101	318	229	556	1250	1100	945	5940	949	1700	763	376
25	92	265	253	517	992	961	855	3670	773	1090	675	407
26	79	239	257	515	932	847	6980	10600	670	838	577	316
27	74	352	263	570	881	758	5640	15500	648	863	428	274
28	87	361	1130	776	808	719	2330	9570	4470	1160	349	276
29	90	338	2700	702	---	1230	2000	5690	2610	1060	311	269
30	79	297	1740	634	---	4990	1950	3980	1500	740	844	245
31	74	---	1110	603	---	9100	---	2910	---	623	1070	---
TOTAL	2413	8852	11149	39349	20312	49183	91971	93319	47690	34534	17347	24492
MEAN	77.8	295	360	1269	725	1587	3066	3010	1590	1114	560	816
MAX	135	639	2700	5580	2600	9100	8730	15500	4470	4760	1920	4460
MIN	64	75	118	345	260	554	855	822	648	381	267	245
CFSM	.07	.26	.31	1.10	.63	1.38	2.67	2.62	1.38	.97	.49	.71
IN.	.08	.29	.36	1.27	.66	1.59	2.98	3.02	1.54	1.12	.56	.79

CAL YR 1988 TOTAL 148106 MEAN 405 MAX 4760 MIN 38 CFSM .35 IN. 4.80
WTR YR 1989 TOTAL 440611 MEAN 1207 MAX 15500 MIN 64 CFSM 1.05 IN. 14.27

GREAT MIAMI RIVER BASIN

03264000 GREENVILLE CREEK NEAR BRADFORD, OH

LOCATION.--Lat 40°06'08", LONG 84°25'48", in NW 1/4 sec. 34, T.9 N., R.4 E., Miami County, Hydrologic Unit 05080001, on left bank at downstream side of bridge on State Highway 721, 0.8 mi downstream from small left bank tributary, 1.8 mi south of Bradford, and 6 mi upstream from mouth.

DRAINAGE AREA.--193 mi².

PERIOD OF RECORD.--October 1930 to current year. Prior to April 1931, monthly discharge only, published in WSP 1305.

REVISED RECORDS.--WSP 803: 1933(M). WSP 1235: 1936, 1937(M). WSP 1908: Drainage area. WRD-OH-82-1: 1980.

GAGE.--Water-stage recorder. Datum of gage is 948.9 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1942, nonrecording gage at same site and datum. Apr. 6, 1962 to Nov. 13, 1963, water-stage recorder at site 200 ft downstream at same datum.

REMARKS.--Estimated daily discharges: Apr. 13-28. Records fair except for estimated daily discharges which are poor. Some diurnal fluctuation caused by mill 8 mi up-stream from station; daily flows are not affected appreciably. Sediment data collected at this site 1970 to 1974.

COOPERATION.--Gage-height tapes and 9 discharge measurements furnished by Miami Conservancy District.

AVERAGE DISCHARGE.--59 years, 173 ft³/s, 12.17 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,320 ft³/s May 14, 1933, gage height, 9.2 ft; maximum gage height, 10.31 ft Mar. 5, 1963, from high-water mark in well (ice jam); minimum discharge, 4.8 ft³/s Sept. 17, 1963.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1913 reached a stage of 12.1 ft, discharge, 18,200 ft³/s, at site with drainage area of 213 mi², computed by Miami Conservancy District.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 29	1530	2,470	6.32	May 27	1130	*3,760	*7.88
Apr. 4	0430	1,870	5.47	Sept. 2	1230	1,750	5.29
Apr. 25	----	2,700	--	Sept. 16	0030	2,470	6.33
May 24	1530	2,050	5.74				

Minimum daily discharge 8.5 ft³/s Oct. 12-14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	20	60	119	101	108	856	538	341	75	77	597
2	11	19	53	100	92	253	1250	393	318	75	67	1630
3	10	19	49	87	90	528	1660	316	281	122	60	720
4	15	29	47	79	83	280	1560	268	461	180	57	370
5	9.8	67	44	79	80	210	811	342	382	123	53	230
6	11	62	44	256	75	164	593	511	453	100	56	157
7	11	43	44	629	82	252	487	415	312	88	49	122
8	9.1	33	40	1110	88	509	421	319	248	78	46	101
9	12	31	37	612	73	478	399	433	219	71	43	86
10	12	108	37	310	80	332	335	943	187	69	41	189
11	9.2	129	33	217	73	270	289	555	165	70	38	384
12	8.5	76	36	274	72	243	259	374	164	83	38	226
13	8.5	67	37	351	69	213	240	310	174	86	39	150
14	8.5	66	36	250	75	177	220	266	164	73	39	782
15	9.1	60	37	225	91	165	200	237	155	57	38	2290
16	10	57	34	194	151	151	190	222	149	59	36	1840
17	21	49	32	186	157	131	180	206	151	52	35	751
18	29	43	28	177	133	212	560	193	132	51	35	454
19	34	40	33	178	122	345	450	187	123	67	34	308
20	30	69	34	173	113	250	350	198	123	538	35	230
21	25	132	35	143	245	206	300	185	124	778	44	182
22	33	134	34	129	344	182	260	170	174	316	78	158
23	27	92	39	121	220	164	230	992	141	345	117	144
24	23	73	47	112	160	146	200	1920	117	286	78	119
25	23	63	52	106	153	137	2500	1050	102	234	81	106
26	23	58	53	108	138	139	1300	3000	94	151	61	101
27	24	70	53	117	135	270	800	3580	91	114	51	90
28	24	74	271	120	122	1410	700	2000	101	163	46	83
29	26	76	370	115	---	2270	926	779	90	111	52	82
30	25	68	228	111	---	1700	889	575	80	102	216	81
31	32	---	162	106	---	982	---	437	---	92	97	---
TOTAL	564.7	1927	2139	6894	3417	12877	19415	21914	5816	4809	1837	12763
MEAN	18.2	64.2	69.0	222	122	415	647	707	194	155	59.3	425
MAX	34	134	370	1110	344	2270	2500	3580	461	778	216	2290
MIN	8.5	19	28	79	69	108	180	170	80	51	34	81
CFSM	.09	.33	.36	1.15	.63	2.15	3.35	3.66	1.00	.80	.31	2.20
IN.	.11	.37	.41	1.33	.66	2.48	3.74	4.22	1.12	.93	.35	2.46

CAL YR 1988 TOTAL 27598.4 MEAN 75.4 MAX 991 MIN 5.9 CFSM .39 IN. 5.32
WTR YR 1989 TOTAL 94372.7 MEAN 259 MAX 3580 MIN 8.5 CFSM 1.34 IN. 18.19

03265000 STILLWATER RIVER AT PLEASANT HILL, OH

LOCATION.--Lat 40°03'28", long 84°21'22", in SW 1/4 sec. 18, T.7 N., R.5 E., Miami County, Hydrologic Unit 05080001, on left bank at downstream side of bridge on Laurer Road, 0.8 mi northwest of Pleasant Hill, 2 mi downstream from Painter Creek, 2 mi upstream from Canyon Run, and at mile 28.35.

DRAINAGE AREA.--503 mi².

PERIOD OF RECORD.--October 1916 to September 1928, October 1934 to current year. Monthly discharge only for some periods, published in WSP 1305. Gage-height records collected at same site March 1922 to December 1963 are contained in reports of the National Weather Service.

REVISED RECORDS.--WSP 523: 1917. WSP 1305: 1920(M). WSP 1908: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 846.73 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 23, 1934, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records fair. Sediment data collected at this site 1963 to 1975.

COOPERATION.--Gage-height tapes and 10 discharge measurements furnished by Miami Conservancy District.

AVERAGE DISCHARGE.--67 years, 445 ft³/s, 12.02 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,400 ft³/s Jan. 14, 1937, from rating curve extended above 14,500 ft³/s on basis of velocity-area study; maximum gage height, 18.46 ft June 29, 1980; minimum discharge observed, 4 ft³/s Oct. 17, 1920, July 12, 22, Aug. 30, 1921.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 25, 1913 reached a stage of 17.5 ft. Discharge, at site about 3 mi upstream, 51,400 ft³/s, computed by Miami Conservancy District. This stage is not comparable with present gage heights because of failure of levee in 1913.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 31	0400	7,040	10.50	May 26	1200	*11,000	*13.53
Apr. 4	1700	5,580	9.13	July 21	0730	5,470	9.02
Apr. 26	1530	10,600	13.30	Sept. 15	0930	7,050	10.51

Minimum daily discharge 12 ft³/s Oct. 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	49	91	231	199	226	4390	1130	609	138	174	960
2	18	32	80	175	180	171	2250	814	596	134	146	3560
3	16	31	72	159	169	164	2980	641	514	169	126	1360
4	16	56	67	129	153	164	5050	518	1260	483	114	626
5	20	104	63	111	140	701	3850	768	972	298	110	376
6	16	109	60	416	133	1530	1790	1220	1140	209	110	262
7	18	78	61	1730	111	612	1240	923	692	167	105	200
8	15	56	57	3780	105	407	966	672	502	143	91	163
9	13	44	53	1960	88	345	966	975	419	130	84	143
10	16	139	52	798	96	690	786	2910	352	122	75	260
11	15	195	43	501	103	1490	639	1400	300	134	69	499
12	12	132	36	548	104	1180	547	847	301	842	70	329
13	14	102	55	929	119	738	485	669	339	711	74	219
14	21	98	51	589	115	566	421	546	381	323	70	1670
15	22	89	52	509	148	530	394	462	330	208	64	6420
16	21	81	36	432	349	404	355	409	329	150	61	3530
17	28	73	51	414	356	347	324	359	359	121	61	1490
18	36	62	40	404	269	317	363	324	279	106	58	835
19	50	56	47	446	249	271	1640	306	250	104	57	546
20	58	78	51	430	235	305	1090	318	238	3090	59	389
21	52	160	53	328	728	940	695	296	219	4930	141	305
22	42	251	51	269	1110	701	524	265	286	3170	283	264
23	51	162	59	250	536	486	426	2380	250	1430	559	245
24	36	118	68	224	338	394	367	4090	202	854	286	204
25	34	97	80	205	368	347	348	2310	178	635	192	174
26	33	86	83	206	322	303	7740	9320	161	436	137	165
27	32	103	88	248	322	271	5260	7440	161	320	105	149
28	35	111	532	268	244	266	1960	3490	232	487	89	138
29	33	111	1020	237	---	903	2040	1440	216	339	92	133
30	39	105	486	223	---	4750	1950	1050	158	233	388	131
31	37	---	352	213	---	6690	---	790	---	224	327	---
TOTAL	868	2968	3990	17362	7389	27209	51836	49082	12225	20840	4377	25745
MEAN	28.0	98.9	129	560	264	878	1728	1583	407	672	141	858
MAX	58	251	1020	3780	1110	6690	7740	9320	1260	4930	559	6420
MIN	12	31	36	111	88	164	324	265	158	104	57	131
CFSM	.06	.20	.26	1.11	.52	1.74	3.44	3.15	.81	1.34	.28	1.71
IN.	.06	.22	.30	1.28	.55	2.01	3.83	3.63	.90	1.54	.32	1.90

CAL YR 1988 TOTAL 60337.1 MEAN 165 MAX 3220 MIN 7.4 CFSM .33 IN. 4.46
WTR YR 1989 TOTAL 223891 MEAN 613 MAX 9320 MIN 12 CFSM 1.22 IN. 16.56

GREAT MIAMI RIVER BASIN

03266000 STILLWATER RIVER AT ENGLEWOOD, OH

LOCATION.--Lat 39°52'10", long 84°16'57", in NW 1/4 sec. 23, T.5 N., R.5 E., Montgomery County, Hydrologic Unit 05080001, on right bank 1,000 ft downstream from Englewood Dam, 1 mi southeast of Englewood, and at mile 8.9.

DRAINAGE AREA.--650 mi².

PERIOD OF RECORD.--October 1925 to current year (monthly discharge only, October 1925, published in WSP 1305).

REVISED RECORDS.--WSP 1908: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 699.97 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Flood flow regulated by Englewood retarding basin.

COOPERATION.--Gage-height tapes and 8 discharge measurements furnished by Miami Conservancy District.

AVERAGE DISCHARGE.--64 years, 580 ft³/s, 12.12 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,980 ft³/s June 15, 1958, gage height, 80.88 ft; minimum, 3.7 ft³/s Sept. 30, Oct. 1, 1944, gage height, 71.36 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1913 reached a discharge of 85,400 ft³/s at site 1 mi downstream, computed by Miami Conservancy District.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,190 ft³/s May 27, gage height, 79.10 ft; minimum daily, 19 ft³/s Oct. 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	30	125	355	264	343	5520	1960	1060	216	255	447
2	32	31	109	261	251	296	5080	1350	959	204	208	2950
3	27	33	99	203	244	278	4100	1120	913	224	178	2340
4	25	38	89	189	220	276	4380	934	1260	429	157	970
5	22	82	84	154	204	562	4910	1000	1500	522	146	590
6	21	115	80	321	196	2060	4200	1530	1510	329	145	386
7	24	114	78	1570	180	1180	2170	1410	1170	253	135	279
8	25	94	76	3240	172	673	1450	1100	876	214	127	224
9	24	75	74	3520	164	517	1350	1190	750	189	114	198
10	23	145	70	1400	157	854	1220	2790	625	173	106	241
11	21	194	67	801	174	1870	1020	2590	513	169	97	490
12	23	175	59	662	171	1840	899	1370	486	460	93	538
13	24	155	59	1160	176	1260	816	1110	558	1210	92	326
14	21	132	68	977	194	942	711	941	704	608	93	686
15	19	120	68	803	217	848	658	805	711	362	88	4340
16	20	111	64	675	373	657	600	704	592	252	83	4980
17	24	100	58	607	530	502	542	618	594	198	79	3490
18	57	87	60	572	418	461	593	540	501	170	77	1300
19	38	79	59	565	357	398	1500	489	423	173	77	896
20	34	124	62	584	325	386	1640	489	391	1310	79	645
21	45	155	69	463	762	1110	1100	473	361	3950	81	480
22	52	209	67	366	1680	1250	867	412	431	4080	235	388
23	43	212	76	332	1020	878	712	1970	422	2320	492	333
24	41	156	100	303	554	810	610	4170	337	1190	509	288
25	42	130	121	280	462	703	555	4140	290	926	273	245
26	35	116	112	274	470	603	2780	5090	262	699	205	222
27	33	149	110	283	453	520	5650	6990	262	459	154	205
28	34	155	353	325	406	491	5430	6960	306	477	127	189
29	31	142	1370	307	---	688	4450	6160	336	554	114	179
30	30	135	802	286	---	2410	3330	4790	264	338	161	174
31	29	---	442	273	---	4700	---	2040	---	288	501	---
TOTAL	942	3593	5130	22111	10794	30366	68843	67245	19367	22946	5281	29019
MEAN	30.4	120	165	713	385	980	2295	2169	646	740	170	967
MAX	57	212	1370	3520	1680	4700	5650	6990	1510	4080	509	4980
MIN	19	30	58	154	157	276	542	412	262	169	77	174
CFSM	.05	.18	.25	1.10	.59	1.51	3.53	3.34	.99	1.14	.26	1.49
IN.	.05	.21	.29	1.27	.62	1.74	3.94	3.85	1.11	1.31	.30	1.66

CAL YR 1988 TOTAL 76720 MEAN 210 MAX 3500 MIN 11 CFSM .32 IN. 4.39
WTR YR 1989 TOTAL 285627 MEAN 783 MAX 6990 MIN 19 CFSM 1.20 IN. 16.35

GREAT MIAMI RIVER BASIN

195

03267000 MAD RIVER NEAR URBANA, OH

LOCATION.--Lat 40°06'27", long 83°47'57", on west line of sec. 35, T.5 E., R. 11 N., Champaign County, Hydrologic Unit 05080001, on left bank at downstream side of bridge on U.S. Highway 36, 1.8 mi upstream from Dugan Run, 1.8 mi downstream from Muddy Creek, 2.5 mi west of Urbana, and at mile 39.7.

DRAINAGE AREA.--162 mi².

PERIOD OF RECORD.--September 1925 to September 1931, August 1939 to current year.

REVISED RECORDS.--WSP 1305: 1930(M), WSP 1505: 1956. WSP 1625: 1929. WSP 1908: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 985.22 ft above National Geodetic Vertical Datum of 1929. Prior to May 18, 1930, nonrecording gage at same site and datum. May 18, 1930 to Sept. 30, 1931, nonrecording gage at site 600 ft downstream at datum 0.36 ft lower. Aug. 1 to Sept. 25, 1939, nonrecording gage at present site and datum.

REMARKS.--No estimated daily discharges. Records fair. Sediment data collected at this site 1970 to 1974.

COOPERATION.--Gage-height tapes, and 8 discharge measurements furnished by Miami Conservancy District.

AVERAGE DISCHARGE.--56 years, 146 ft³/s, 12.24 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,000 ft³/s Jan. 22, 1959, gage height 12.05 ft, from rating curve extended above 4,000 ft³/s on basis of estimate of peak flow based on contracted-opening measurement at site 3 mi downstream with drainage area of 235 mi² adjusted to gage site by 0.8 power of the drainage-area ratio; minimum discharge, 2.1 ft³/s Jan. 21, 1963, gage height, 2.33 ft, result of freezeup; minimum daily, 24 ft³/s Feb. 2, 3, 1945, Jan. 13, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,400 ft³/s and maximum (*).

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 4	0800	1,500	5.59	Aug. 6	0130	1,840	6.11
May 26	1500	*2,420	*6.90				

Minimum daily discharge 40 ft³/s Oct. 20-22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	43	59	85	83	91	371	158	244	150	124	172
2	42	43	59	82	78	89	279	156	233	144	120	186
3	42	43	59	78	78	87	344	150	219	144	120	155
4	42	45	57	74	76	90	890	148	304	143	120	145
5	42	51	57	72	75	187	461	155	252	141	294	138
6	42	60	57	100	74	175	357	178	257	137	950	132
7	42	56	57	166	72	118	331	165	222	137	305	129
8	42	53	56	314	72	106	296	155	205	172	229	124
9	42	53	54	169	69	106	289	160	198	144	207	121
10	42	65	53	129	74	131	257	263	188	138	189	123
11	43	71	50	115	71	174	241	209	182	144	172	120
12	43	62	51	112	71	174	230	188	180	195	161	118
13	43	62	51	126	71	141	220	203	281	158	156	115
14	43	62	51	113	73	136	211	211	272	143	147	246
15	43	59	51	112	77	143	203	189	254	138	141	381
16	43	59	50	112	91	129	199	184	236	134	138	229
17	43	55	51	107	85	123	194	172	210	126	134	189
18	45	53	51	101	81	121	187	164	193	123	129	170
19	42	53	49	99	81	116	275	158	187	222	126	157
20	40	58	50	98	82	119	224	163	276	234	129	150
21	40	61	53	93	142	191	201	160	224	159	130	144
22	40	60	51	92	158	149	187	154	195	137	141	141
23	41	57	52	90	112	133	177	391	176	129	156	140
24	43	57	53	87	99	126	171	455	164	128	187	133
25	43	55	55	85	97	125	171	333	154	122	163	132
26	43	55	54	84	97	122	180	1560	146	130	143	130
27	43	62	53	84	95	120	169	671	145	161	134	121
28	44	63	131	84	94	120	164	397	226	144	129	120
29	43	62	134	84	---	173	179	332	173	132	132	120
30	43	62	101	84	---	594	171	302	155	129	285	120
31	43	---	89	84	---	449	---	268	---	129	173	---
TOTAL	1314	1700	1899	3315	2428	4858	7829	8552	6351	4567	5864	4601
MEAN	42.4	56.7	61.3	107	86.7	157	261	276	212	147	189	153
MAX	45	71	134	314	158	594	890	1560	304	234	950	381
MIN	40	43	49	72	69	87	164	148	145	122	120	115
CFSM	.26	.35	.38	.66	.54	.97	1.61	1.70	1.31	.91	1.17	.95
IN.	.30	.39	.44	.76	.56	1.12	1.80	1.96	1.46	1.05	1.35	1.06

CAL YR 1988 TOTAL 30208 MEAN 82.5 MAX 900 MIN 35 CFSM .51 IN. 6.94
WTR YR 1989 TOTAL 53278 MEAN 146 MAX 1560 MIN 40 CFSM .90 IN. 12.23

GREAT MIAMI RIVER BASIN

03267900 MAD RIVER AT ST. PARIS PIKE AT EAGLE CITY, OH

LOCATION.--Lat 39°57'51", long 83°49'54", in W 1/2 sec. 1, R. 10, T.4, Clark County, Hydrologic Unit 05080001, on left bank at downstream side of bridge on St. Paris Pike, 0.8 mi southeast of Eagle City, 1.1 mi downstream from Moore Run, 3.1 mi upstream from Buck Creek, 3.3 mi south of Tremont City, and at mile 29.5.

DRAINAGE AREA.--310 mi².

PERIOD OF RECORD.--October 1965 to current year.

REVISED RECORDS.--WRD-OH-88-1: 1987(P).

GAGE.--Water-stage recorder. Datum of gage is 904.66 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Water supply for city of Springfield is pumped from wells, adjacent to Mad River, just upstream from station. Recharge to the well field is largely by induced infiltration from Mad River and Moore Run. Pumpage, averaging 23.2 ft³/s in 1988, is returned as sewage 1.4 mi upstream from gaging station near Springfield (station 03269500). Water-quality data collected at this site 1966 to 1977. Satellite telemeter at station operated for U.S. Army Corps of Engineers.

AVERAGE DISCHARGE.--24 years, 308 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,700 ft³/s June 26, 1971, gage height, 16.00 ft, from rating curve extended above 3,060 ft³/s; minimum daily, 60 ft³/s Jan. 27, 28, 1977 (result of freezeup).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1913 reached a stage of 19.8 ft, from data furnished by Miami Conservancy District. Flood of Jan. 21, 1959 reached a stage of 15.7 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 4	0430	3,440	10.94	June 28	0200	2,850	10.15
May 26	1000	*6,360	*14.24				

Minimum daily discharge, 77 ft³/s Oct. 1, 9, 15, 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77	90	146	216	196	219	990	317	532	348	227	361
2	78	89	141	201	191	211	674	312	551	323	217	380
3	78	88	138	193	196	209	944	306	505	330	211	291
4	78	105	136	183	185	211	2380	289	630	311	204	262
5	79	139	134	174	184	623	1090	325	629	295	387	249
6	78	136	133	353	179	528	805	436	625	282	1270	240
7	78	126	132	529	176	323	696	354	520	272	519	230
8	78	124	130	1060	172	279	614	313	468	399	405	222
9	77	121	128	502	165	285	580	453	452	296	354	216
10	78	267	126	349	170	440	512	753	422	275	323	234
11	82	202	120	294	168	584	471	472	396	300	302	225
12	80	167	121	355	165	492	439	394	413	402	284	215
13	79	186	125	384	167	375	424	427	545	319	270	209
14	78	169	123	313	189	338	400	414	714	289	260	534
15	77	155	122	340	210	364	382	364	616	270	251	764
16	77	144	119	306	263	317	356	344	548	260	244	420
17	82	136	119	285	227	289	341	316	477	251	236	336
18	99	132	117	269	208	283	383	295	434	243	228	290
19	82	128	118	266	202	265	630	285	420	305	225	266
20	80	207	116	260	201	328	467	290	516	464	227	252
21	86	192	118	235	531	550	401	273	482	309	228	240
22	87	173	113	224	467	382	362	261	446	273	269	237
23	85	163	126	218	308	326	338	1080	396	256	310	233
24	87	154	143	213	253	300	321	1000	365	252	666	224
25	86	146	145	207	243	284	313	694	344	240	363	221
26	87	142	135	215	247	267	500	3970	329	243	282	216
27	88	172	137	217	237	255	404	1510	362	332	255	208
28	91	165	550	211	228	253	361	970	1240	276	241	206
29	87	154	438	207	---	383	373	785	495	245	238	203
30	86	150	287	204	---	1610	352	685	395	244	506	199
31	86	---	240	200	---	1390	---	593	---	239	308	---
TOTAL	2551	4522	4976	9183	6328	12963	17303	19280	15267	9143	10310	8383
MEAN	82.3	151	161	296	226	418	577	622	509	295	333	279
MAX	99	267	550	1060	531	1610	2380	3970	1240	464	1270	764
MIN	77	88	113	174	165	209	313	261	329	239	204	199

CAL YR 1988 TOTAL 60716 MEAN 166 MAX 974 MIN 73
WTR YR 1989 TOTAL 120209 MEAN 329 MAX 3970 MIN 77

GREAT MIAMI RIVER BASIN

197

03269500 MAD RIVER NEAR SPRINGFIELD, OH

LOCATION.--Lat 39°55'23", long 83°52'13", in NW 1/4 sec. 16, R.9, T.4, Clark County, Hydrologic Unit 05080001, on right bank 150 ft downstream from Rock Run, 300 ft downstream from bridge on Lower Valley Pike, 2 mi downstream from Buck Creek, 3 mi west of Springfield, and at mile 24.1.

DRAINAGE AREA.--490 mi².

PERIOD OF RECORD.--January 1904 to March 1906 (fragmentary), February 1914 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 603: 1924. WSP 823: 1929(M). WSP 1305: 1914(M), 1916-17(M), 1922-23(M), 1925(M). WSP 1625: 1924(M). WSP 1908: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 881.42 ft above National Geodetic Vertical Datum of 1929. Jan. 1, 1904 to Mar. 31, 1906, nonrecording gage at site 0.3 mi downstream at different datum. Feb. 1, 1914, to Feb. 29, 1924, nonrecording gage at site 1.8 mi upstream at datum 6.39 ft higher. Mar. 1, 1924, to July 31, 1925, nonrecording gage at site 300 ft upstream at same datum.

REMARKS.--Estimated daily discharges: November 27 to December 22. Records good except those for periods of estimated record which are fair. Some regulation by C.J. Brown Reservoir, 8.3 mi upstream on Buck Creek, since 1972. Occasional low-flow regulation by powerplant 2.3 mi upstream; daily flows are not affected appreciably. Water-quality data collected at this site 1965 to 1973.

COOPERATION.--Gage height charts, tapes, and 9 discharge measurements furnished by Miami Conservancy District.

AVERAGE DISCHARGE.--76 years, (1904-05, 1914-89), 490 ft³/s, 13.58 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,500 ft³/s Jan. 21, 1959, gage height, 15.76 ft, from rating curve extended above 14,000 ft³/s on basis of slope-area and contracted opening measurements of peak flow; minimum daily discharge, 30 ft³/s Sept. 15, 1904.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 25, 1913 reached a stage of 16.9 ft, present datum, discharge, 55,400 ft³/s computed by Miami Conservancy District.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,390 ft³/s May 26 gage height, 9.70 ft; minimum daily, 154 ft³/s Oct. 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	168	183	390	438	316	413	1500	538	750	642	433	702
2	166	182	380	416	314	354	1060	528	734	606	394	647
3	165	184	370	402	332	349	1350	506	809	687	382	513
4	164	238	360	384	303	357	3710	493	985	610	374	468
5	164	385	340	391	299	921	1740	599	957	572	672	449
6	163	358	330	655	293	827	1460	689	913	546	1590	398
7	163	291	310	833	285	520	1200	584	774	533	833	330
8	161	287	280	1900	279	460	1060	524	712	751	835	319
9	158	270	260	903	263	475	1040	845	694	552	763	313
10	163	635	250	647	275	633	1010	1210	648	514	543	342
11	164	470	250	560	270	824	765	827	614	857	364	317
12	156	351	240	708	266	704	720	681	657	848	340	306
13	157	419	240	717	283	557	695	706	746	608	321	298
14	158	361	240	641	342	504	649	684	2300	541	309	649
15	155	321	240	676	424	548	587	638	1290	471	304	908
16	154	340	240	602	503	475	561	570	1200	411	315	520
17	172	317	230	556	398	439	567	534	1270	396	285	430
18	279	303	230	525	356	427	734	505	929	385	279	393
19	193	297	230	511	338	397	1020	492	723	428	277	431
20	182	549	230	493	362	494	786	496	764	593	280	421
21	194	535	240	458	937	786	682	458	821	454	299	409
22	188	411	250	441	766	571	585	431	785	433	319	416
23	185	403	246	424	510	488	551	1790	688	459	383	403
24	190	377	321	347	454	451	527	1540	631	507	927	389
25	185	360	304	342	477	426	560	1090	578	425	649	390
26	183	361	264	365	503	401	1280	5250	526	470	509	384
27	183	520	265	355	474	391	775	2310	650	831	463	374
28	192	470	955	341	458	384	743	1770	2070	566	442	370
29	183	440	735	331	---	516	730	1440	885	493	493	368
30	179	420	553	328	---	2100	638	991	715	494	734	364
31	181	---	478	320	---	1980	---	866	---	471	515	---
TOTAL	5448	11038	10251	17010	11080	19172	29285	30585	26818	17154	15626	13021
MEAN	176	368	331	549	396	618	976	987	894	553	504	434
MAX	279	635	955	1900	937	2100	3710	5250	2300	857	1590	908
MIN	154	182	230	320	263	349	527	431	526	385	277	298
CFSM	.36	.75	.67	1.12	.81	1.26	1.99	2.01	1.82	1.13	1.03	.89
IN.	.41	.84	.78	1.29	.84	1.46	2.22	2.32	2.04	1.30	1.19	.99

CAL YR 1988 TOTAL 106751 MEAN 292 MAX 2790 MIN 130 CFSM .60 IN. 8.10
WTR YR 1989 TOTAL 206488 MEAN 566 MAX 5250 MIN 154 CFSM 1.15 IN. 15.68

GREAT MIAMI RIVER BASIN

03270000 MAD RIVER NEAR DAYTON, OH

LOCATION.--Lat 39°47'50", long 84°05'19", in SW 1/4 sec. 7, R. 8, T.2, Green County, Hydrologic Unit 05080001, on left bank in retarding basin 300 ft upstream from Huffman Dam, 2.3 mi downstream from Mud Run, 6.2 mi northeast of Dayton and at mile 6.1. Water-quality sampling site was on left bank 900 ft downstream.

DRAINAGE AREA.--635 mi².

PERIOD OF RECORD.--October 1914 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 453: 1915. WSP 743: 1929-32. WSP 1305: 1916(M), 1925(M) 1930-32(M). drainage area. WRD-OH-82-1: 1980.

GAGE.--Water-stage recorder. Datum of gage is 777.06 ft above National Geodetic Vertical Datum of 1929. Jan. 21, 1959 to Dec. 14, 1967, at site 900 ft downstream, at datum 77.01 ft lower. See WSP 1725 for history of changes prior to Jan. 21, 1959. Water-quality data collected at this site 1947-1948, 1962-1963, 1966-1980.

REMARKS.--No estimated daily discharges. Records fair. Flood flows affected by backwater from Huffman retarding dam beginning in 1921, some regulation by C. J. Brown Reservoir 26 mi upstream on Buck Creek since 1972. Also see REMARKS for station 03269500.

COOPERATION.--Gage-height tapes and 8 discharge measurements furnished by Miami Conservancy District.

AVERAGE DISCHARGE.--75 years, 629 ft³/s, 13.45 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,200 ft³/s Jan. 22, 1959 (based on Huffman retarding basin outflow records); maximum gage height, 87.9 ft Feb. 26, 1929 at site and datum then in use; minimum daily discharge, 94 ft³/s Aug. 6, 1934, but may have been less during period 1921-24.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 25, 1913 reached a stage of 14.0 ft, original site and datum, discharge 75,700 ft³/s, computed by Miami Conservancy District.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,290 ft³/s May 27, gage height, 14.95 ft; minimum daily, 176 ft³/s Oct. 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	217	216	481	613	417	596	2010	715	664	492	334	612
2	204	220	456	572	407	505	1270	672	624	484	275	680
3	195	217	436	545	454	487	1470	639	574	609	255	426
4	190	308	422	520	413	485	3860	600	975	500	244	344
5	190	535	408	499	398	1140	2410	731	806	427	291	313
6	183	687	401	860	382	1420	1670	880	844	386	1830	286
7	181	529	398	1170	363	843	1310	753	646	353	882	193
8	181	479	314	2660	352	690	1180	661	561	539	865	277
9	181	436	295	1490	335	691	1090	971	530	395	770	382
10	176	986	286	975	344	919	1100	1570	475	341	643	424
11	198	909	275	807	342	1230	846	1060	429	500	319	389
12	184	600	266	924	329	1090	783	847	456	2160	280	374
13	179	662	278	1080	341	853	747	817	546	705	252	365
14	180	623	279	897	478	751	706	799	2790	501	235	586
15	178	512	279	1040	553	796	650	764	2060	398	218	1230
16	179	492	268	909	796	704	619	687	1140	303	229	687
17	195	460	263	821	611	631	607	638	1160	273	200	562
18	450	424	260	757	526	606	785	599	887	253	188	493
19	287	400	261	722	488	572	1160	580	571	268	186	502
20	247	791	261	693	484	653	898	577	602	512	197	500
21	241	908	269	634	1270	1180	770	551	633	349	202	484
22	251	648	261	599	1300	907	670	512	764	316	221	482
23	233	588	299	580	819	741	616	2330	556	391	280	485
24	239	545	425	510	646	672	585	2330	475	568	759	454
25	232	502	468	473	662	623	572	1340	416	352	683	451
26	223	486	380	483	681	585	2440	4470	357	313	393	445
27	222	680	350	497	665	557	1290	4800	356	739	316	433
28	234	604	1250	460	631	542	1140	2020	2080	589	282	422
29	226	538	1230	441	---	663	1000	1510	880	428	269	418
30	218	503	846	432	---	2390	893	950	591	384	583	414
31	216	---	687	426	---	2490	---	795	---	370	401	---
TOTAL	6710	16488	13052	24089	15487	27012	35147	37228	24448	15198	13082	14113
MEAN	216	550	421	777	553	871	1172	1201	815	490	422	470
MAX	450	986	1250	2660	1300	2490	3860	4860	2790	2160	1830	1230
MIN	176	216	260	426	329	485	572	512	356	253	186	193
CFSM	.34	.87	.66	1.22	.87	1.37	1.84	1.89	1.28	.77	.66	.74
IN.	.39	.97	.76	1.41	.91	1.58	2.06	2.18	1.43	.89	.77	.83

CAL YR 1988 TOTAL 134934 MEAN 369 MAX 3650 MIN 112 CFSM .58 IN. 7.90
WTR YR 1989 TOTAL 242054 MEAN 663 MAX 4860 MIN 176 CFSM 1.04 IN. 14.18

GREAT MIAMI RIVER BASIN

199

03270500 GREAT MIAMI RIVER AT DAYTON, OH

LOCATION.--Lat 39°45'55", long 84°11'51", in sec. 10, R.7, T.1, Montgomery County, Hydrologic Unit 05080002, on left bank 1,000 ft downstream from Main Street Bridge in Dayton, 0.7 mi upstream from Wolf Creek, 0.8 mi downstream from Mad River, and at mile 80.0.

DRAINAGE AREA.--2,511 mi².

PERIOD OF RECORD.--April to September 1905, January to September 1906, January 1907 to December 1909 (gage heights only), April 1913 to current year. Monthly discharge only for October 1919 to September 1921, published in WSP 1305. Gage-height records collected at Main Street Bridge since January 1892 are contained in reports of National Weather Service. Prior to October 1962, published as Miami River at Dayton.

REVISED RECORDS.--WSP 1385: 1917. WSP 1908: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 700.00 ft above National Geodetic Vertical Datum of 1929 as requested by cooperators (699.71 ft adjustment of 1929). Prior to Oct. 1, 1921, nonrecording gage at Main Street Bridge at datum 23.73 ft higher. Oct. 1, 1921, to July 24, 1931, nonrecording gage at Main Street Bridge at datum 21.00 ft higher.

REMARKS.--No estimated daily discharge. Records excellent. Flood flow regulated by four retarding basins upstream from station beginning in 1920 on Mad River 6.5 mi upstream, on Stillwater River 10.5 mi upstream, on Great Miami River 11.5 mi upstream, and on Loramie Creek 40 mi upstream. Also see REMARKS for stations 03261500, 03261950 and 03269500. Water is diverted 6 mi upstream from station for use in Dayton; most of return flow from diversions bypasses station in Dayton sewer systems. Sediment data collected at this site 1951 to 1953. U.S. Army Corps of Engineers satellite telemeter at station.

COOPERATION.--Gage-height charts, tapes, and 8 discharge measurements furnished by Miami Conservancy District.

AVERAGE DISCHARGE.--60 years (1929-89). 2,167 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 60,900 ft³/s Jan. 22, 1959, gage height, 35.45 ft in gage well, from graph based on gage readings; 36.0 ft, from outside floodmarks; minimum daily, 109 ft³/s Aug. 8, 1934.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 26, 1913 reached a stage of 29.0 ft, site and datum then in use, discharge, 250,000 ft³/s, computed by Miami Conservancy District.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 29,900 ft³/s May 27, gage height 31.50 ft; minimum daily, 179 ft³/s Oct. 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	232	204	786	1710	1230	1680	17400	5140	4660	2150	1340	2210
2	231	204	723	1370	1170	1450	13400	3760	3910	1860	1180	5220
3	203	206	662	1180	1240	1360	12100	3160	3340	2030	1040	4870
4	185	359	621	1090	1140	1320	17900	2660	5380	1810	932	2390
5	208	691	600	970	1080	2440	18000	2970	6860	1870	974	1650
6	189	842	594	1740	988	6280	13600	4200	6180	1570	2930	1320
7	179	681	561	5230	886	4540	8970	4140	4650	1400	3670	1050
8	190	609	500	11700	846	2800	6750	3340	3500	1460	2500	924
9	193	529	463	10600	751	2260	5890	3960	3000	1350	1810	828
10	193	1550	456	5690	774	2840	5280	8560	2520	1270	1430	965
11	200	1550	439	3470	818	5080	4080	7750	2190	1310	1020	1060
12	193	1150	380	2910	792	5340	3410	4690	2150	3720	893	1260
13	183	1100	400	3860	835	4030	3050	3770	2410	3540	853	1020
14	186	980	426	3580	1080	3190	2720	3390	6160	2310	815	1770
15	193	805	431	3290	1260	3040	2440	3080	4900	1640	788	9870
16	198	715	419	2880	1840	2620	2230	2840	3460	1310	751	9470
17	217	664	396	2540	2110	2210	2120	3060	3320	1120	707	6480
18	662	612	370	2310	1820	2010	2600	2530	2810	1020	696	2860
19	364	570	380	2190	1570	1850	4780	2180	2200	992	690	1960
20	275	1120	398	2190	1500	2050	5540	2070	2230	2570	730	1530
21	262	1290	423	1990	3070	3670	3800	1940	3050	9330	762	1300
22	285	1140	397	1810	5790	4310	2970	1820	3700	9600	849	1170
23	285	1120	479	1520	4110	3140	2490	9880	2730	6710	1280	1080
24	273	925	738	1350	2600	2510	2190	14600	2170	3880	1920	1010
25	250	801	766	1250	2160	2200	2050	11100	1840	2560	1850	1010
26	233	779	685	1220	2100	1960	12900	20700	1630	1950	1380	924
27	219	1100	652	1250	2040	1770	15600	27800	1650	2120	1070	846
28	225	1020	2230	1410	1880	1650	11300	20800	7230	2200	921	785
29	225	933	5120	1430	---	2120	9150	15700	4740	2210	848	782
30	211	820	3440	1310	---	9780	7590	11900	2880	1600	1340	766
31	204	---	2210	1280	---	17500	---	7390	---	1400	2050	---
TOTAL	7346	25069	27145	86320	47480	109000	222300	220880	107450	79862	40019	68380
MEAN	237	836	876	2785	1696	3516	7410	7125	3582	2576	1291	2279
MAX	662	1550	5120	11700	5790	17500	18000	27800	7230	9600	3670	9870
MIN	179	204	370	970	751	1320	2050	1820	1630	992	690	766

CAL YR 1988 TOTAL 349130 MEAN 954 MAX 10600 MIN 111
WTR YR 1989 TOTAL 1041251 MEAN 2853 MAX 27800 MIN 179

GREAT MIAMI RIVER BASIN

03271000 WOLF CREEK AT DAYTON, OH

LOCATION.--Lat 39°46'00", long 84°14'10", Montgomery County, Hydrologic Unit 05080002, on right bank, at West Riverview Avenue Bridge, in Dayton, 1.8 mi upstream from mouth.

DRAINAGE AREA.--68.7 mi².

PERIOD OF RECORD.--September 1938 to September 1950, October 1953 to September 1973 (low flow partial records site), October 1986 to current year.

GAGE.--Water-stage recorder. Datum of gage is 739.83 ft above National Geodetic Vertical Datum of 1929. Prior to 1950, recording gage at same location at datum 39.83 ft lower.

REMARKS.--No estimated daily discharges. Records are good except those for winter periods, and those above 500 ft³/s, which are fair.

COOPERATION.--Gage-height tapes and 8 discharge measurements furnished by Miami Conservancy District.

AVERAGE DISCHARGE.--15 years, 58.4 ft³/s, 11.55 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,950 ft³/s Mar. 19, 1943, gage height, 53.5 ft (at datum then in use), minimum 0.8 ft³/s, Sept. 18, 1948.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge during flood in January 1959, about 12,800 ft³/s gage height, 13.1 ft, computed by Miami Conservancy District.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,400 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 10	0930	1,540	5.72	Apr. 26	0630	2,080	6.41
Jan. 8	0315	1,840	6.12	Apr. 28	1215	1,710	5.59
Mar. 30	0515	1,770	6.03	May 23	0800	*9,280	*11.96
Apr. 4	0400	2,380	6.76	May 26	0745	8,270	11.44

Minimum daily discharge, 6.7 ft³/s Oct. 7, 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	10	24	55	31	50	314	145	90	60	20	159
2	12	10	21	50	34	45	191	114	91	36	19	34
3	8.7	11	20	44	51	44	465	92	111	94	18	18
4	7.4	48	18	36	35	46	1010	84	111	45	19	14
5	7.0	109	17	53	33	437	278	203	141	38	39	14
6	6.9	39	17	393	29	195	176	211	109	33	25	13
7	6.7	23	16	249	25	106	143	145	77	30	16	11
8	6.8	24	15	682	26	85	142	102	65	28	14	11
9	6.7	16	14	165	20	125	131	574	84	27	13	19
10	7.7	362	14	96	21	240	99	371	60	27	13	79
11	8.4	75	13	71	22	253	84	166	52	52	12	24
12	8.1	36	12	157	21	155	72	115	84	80	12	15
13	8.6	102	13	121	35	108	68	108	79	60	12	13
14	8.8	54	14	154	80	90	59	86	568	43	12	276
15	9.0	32	14	194	155	128	55	73	188	30	13	104
16	11	28	11	142	179	79	49	63	129	27	11	43
17	14	24	12	112	92	66	69	55	95	24	11	27
18	119	19	10	91	66	60	219	48	75	22	11	20
19	15	19	12	76	56	48	309	45	68	40	12	16
20	10	152	13	62	83	192	130	54	62	38	33	13
21	12	85	17	47	479	302	92	41	135	27	29	14
22	12	46	13	43	192	131	72	43	81	30	15	13
23	12	33	36	39	107	94	61	2790	55	25	14	13
24	13	27	135	36	77	77	53	425	48	23	15	12
25	11	24	67	41	66	65	66	342	45	22	15	13
26	10	34	38	49	105	54	743	2770	40	22	12	12
27	9.6	119	41	45	84	54	519	417	95	28	12	11
28	15	54	468	39	63	54	631	228	75	41	13	11
29	11	35	161	37	---	116	340	161	41	22	13	10
30	11	29	92	36	---	746	248	128	35	22	13	12
31	11	---	65	33	---	840	---	104	---	22	13	---
TOTAL	443.4	1679	1433	3448	2267	5085	6888	10304	2989	1118	499	1044
MEAN	14.3	56.0	46.2	111	81.0	164	230	332	99.6	36.1	16.1	34.8
MAX	119	362	468	682	479	840	1010	2790	568	94	39	276
MIN	6.7	10	10	33	20	44	49	41	35	22	11	10

CAL YR 1988 TOTAL 15424.1 MEAN 42.1 MAX 1320 MIN 3.9
WTR YR 1989 TOTAL 37197.4 MEAN 102 MAX 2790 MIN 6.7

GREAT MIAMI RIVER BASIN

201

03271500 GREAT MIAMI RIVER AT MIAMISBURG, OH

LOCATION.--Lat 39°38'40", long 84°17'23", in sec. 31, R.6, T.1, Montgomery County, Hydrologic Unit 05080002, on left bank 600 ft downstream from bridge on State Highway 725 at Miamisburg, 0.3 mi downstream from Bear Creek, 3.2 mi upstream from Crains Run, and at mile 66.4.

DRAINAGE AREA.--2,711 mi².

PERIOD OF RECORD.--March 1916 to September 1920 (published as Miami River at Franklin 1916-17), August 1924 to September 1935 (published as Miami River near Miamisburg), October 1952 to current year (published as Miami River at Miamisburg 1952-62). Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 743: 1929(M). WSP 1385: 1926. WSP 1908: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 678.60 ft above National Geodetic Vertical Datum of 1929. Mar. 16, 1916 to Sept. 30, 1920, nonrecording gage at site 6.7 mi downstream at different datum. Aug. 29 to Sept. 16, 1924, nonrecording gage, and Sept. 17, 1924 to Sept. 30, 1935, water-stage recorder, at site 2.2 mi downstream at datum 677.06 ft above National Geodetic Vertical Datum.

REMARKS.--No estimated daily discharges. Records good. Diurnal fluctuation caused by powerplant 0.4 mi upstream from station. Flood flow regulated by retarding dams beginning in 1920 on Mad River 19 mi upstream, on Stillwater River 23 mi upstream, on Great Miami River 23 mi upstream and on Loramie Creek 52 mi upstream. Also see REMARKS for stations 03261500 and 03269500.

COOPERATION.--Gage-height charts, tapes, and 8 discharge measurements furnished by Miami Conservancy District.

AVERAGE DISCHARGE.--52 years, 2,440 ft³/s, 12.22 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 61,800 ft³/s Jan. 21, 22, 1959, gage height, 20.65 ft in gage well, from graph based on gage readings; 21.3 ft, from outside floodmarks; minimum daily, 148 ft³/s Sept. 7, 1925.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 26, 1913 reached a discharge of 257,000 ft³/s, computed by Miami Conservancy District.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 35,800 ft³/s May 26, gage height, 15.59 ft; minimum daily, 293 ft³/s Oct. 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	373	361	936	2020	1390	1870	17200	5450	5050	2650	1680	3070
2	405	353	880	1670	1290	1640	13100	4060	4410	2310	1530	4770
3	333	347	816	1430	1420	1520	11800	3470	4030	2620	1360	5200
4	319	474	742	1320	1290	1470	18400	2980	5250	2300	1230	2880
5	305	982	729	1190	1200	2940	17900	3350	7000	2330	1280	2070
6	312	1120	720	2480	1080	5750	13300	4430	6350	2010	2740	1680
7	300	880	686	4890	979	4790	9070	4360	5120	1770	4040	1390
8	297	797	636	11400	934	3100	6800	3570	4000	1750	2960	1190
9	293	722	581	10400	830	2560	5960	4700	3510	1720	2260	1070
10	305	1850	568	5950	840	3140	5340	8060	3060	1610	1850	1280
11	308	2020	542	3720	910	4890	4350	7540	2680	1450	1370	1300
12	302	1410	497	3330	871	5250	3700	4870	2730	3670	1180	1570
13	294	1430	514	3920	949	4180	3300	3950	2900	3830	1120	1320
14	302	1280	545	3990	1510	3350	3000	3540	8320	2880	1090	2240
15	305	983	533	3860	1860	3290	2740	3230	6000	2120	1090	8020
16	302	929	526	3250	2430	2820	2520	2970	4180	1690	1010	8910
17	349	833	498	2880	2370	2440	2390	3110	3860	1440	967	6640
18	1400	751	466	2610	2060	2180	3130	2720	3400	1340	948	3490
19	557	694	501	2440	1760	2000	4990	2360	2780	1340	965	2380
20	395	1550	540	2420	1700	2440	5630	2260	2730	2140	1110	1910
21	397	1660	538	2210	3870	3960	4070	2100	3460	8020	1180	1620
22	411	1340	500	2030	5560	4390	3240	1980	4170	9020	1100	1490
23	398	1310	648	1740	4400	3340	2750	13000	3270	6980	1630	1380
24	401	1100	1200	1560	2910	2680	2460	13900	2660	4350	2130	1270
25	381	939	1020	1490	2380	2360	2270	10600	2300	2980	2390	1280
26	364	905	835	1470	2380	2100	10800	24400	2040	2400	1730	1190
27	455	1530	823	1480	2300	1920	15800	27000	1990	2420	1390	1080
28	427	1280	3120	1580	2100	1830	11300	21000	5860	2640	1190	1030
29	366	1150	5090	1610	---	2270	9330	15400	5430	2680	1120	1020
30	338	987	3850	1490	---	9000	7870	11600	3390	2060	1370	980
31	325	---	2570	1460	---	17800	---	7780	---	1770	2410	---
TOTAL	12019	31967	32650	93290	53573	113270	224510	229740	121930	88290	49420	74720
MEAN	388	1066	1053	3009	1913	3654	7484	7411	4064	2848	1594	2491
MAX	1400	2020	5090	11400	5560	17800	18400	27000	8320	9020	4040	8910
MIN	293	347	466	1190	830	1470	2270	1980	1990	1340	948	980
CFSM	.14	.39	.39	1.11	.71	1.35	2.76	2.73	1.50	1.05	.59	.92
IN.	.16	.44	.45	1.28	.74	1.55	3.08	3.15	1.67	1.21	.68	1.03

CAL YR 1988 TOTAL 421614 MEAN 1152 MAX 11900 MIN 209 CFSM .42 IN. 5.79
WTR YR 1989 TOTAL 1125379 MEAN 3083 MAX 27000 MIN 293 CFSM 1.14 IN. 15.44

GREAT MIAMI RIVER BASIN

03271510 GREAT MIAMI RIVER NEAR LINDEN AVENUE AT MIAMISBURG, OH

LOCATION.--Lat 39°38'14", long 84°17'33", Montgomery County, Hydrologic Unit 05080002, on left bank at Miamisburg, 1.0 mi downstream from Bear Creek, 0.6 mi downstream from discharge station at Miamisburg, 0.65 mi downstream from discharge station at Miamisburg, and at mile 65.75.

DRAINAGE AREA.--2,713 mi².

PERIOD OF RECORD.--June 1978 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: June 1978 to current year.

pH: June 1978 to current year.

WATER TEMPERATURES: June 1978 to current year.

DISSOLVED OXYGEN: June 1978 to current year.

INSTRUMENTATION.--Water-quality monitor since June 1978. Digital recorder set for one-hour-interval punches.

REMARKS.--Interruptions in the water-quality record were due to malfunction of the instrument. Prior to June 1978, records published as 03271600, Great Miami River near Miamisburg, Ohio. See records of discharge for gaging station at Miamisburg (station 03271500).

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 1,410 microsiemens Feb. 12, 1985; minimum 206 microsiemens Feb. 18, 1982.

pH: Maximum, 9.7 units July 5, 1988; minimum, 7.0 units July 30, Aug. 30, 1979.

WATER TEMPERATURES: Maximum, 33.0°C July 20, 22, 1978; minimum, 0.0°C on many days during winters.

DISSOLVED OXYGEN: Maximum, >20.0 mg/L on several days in water year 1988-1989; minimum, 0.4 mg/L Aug. 27, 1981, Aug. 2, 1982.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 1,130 microsiemens Oct. 16, 17; minimum recorded, 348 microsiemens Oct. 18.

pH: Maximum recorded, 9.1 units Oct 6, 7, July 11; minimum recorded, 7.6 units Sept. 1, 2, 3.

WATER TEMPERATURES: Maximum recorded, 28.5°C Aug. 5; minimum recorded, 0.0°C Feb. 9.

DISSOLVED OXYGEN: Maximum recorded, >20.0 mg/L Dec. 19; minimum recorded, 5.9 mg/L Aug. 6.

03271510 GREAT MIAMI RIVER NEAR LINDEN AVENUE AT MIAMISBURG, OH--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	1090	1000	1060	1090	1040	1070	900	874	892	798	764	780
2	1060	1010	1030	1110	1050	1070	904	882	897	826	800	815
3	1030	1000	1020	1110	1060	1080	906	886	898	844	826	835
4	1030	986	1000	1080	936	1010	924	896	909	868	848	859
5	1070	1020	1040	966	700	821	930	898	916	884	842	870
6	1100	1050	1060	732	710	719	948	898	930	868	812	848
7	1120	1090	1100	774	736	761	948	920	937	808	474	774
8	1120	1080	1100	840	758	805	952	924	939	634	524	574
9	1100	1070	1080	892	836	861	966	940	950	556	520	533
10	1110	1080	1090	890	568	751	988	940	964	640	562	597
11	1120	1090	1100	658	578	617	998	950	979	704	642	670
12	1120	1090	1100	734	608	673	1020	978	997	734	696	715
13	1120	1100	1110	808	712	782	1020	992	1010	744	732	738
14	1120	1090	1100	812	788	800	1030	984	1010	834	532	747
15	1120	1090	1100	838	804	820	1060	1030	1050	818	740	760
16	1130	1080	1110	884	828	863	1060	980	1030	768	740	749
17	1130	1040	1090	924	882	905	1050	1020	1040	788	764	776
18	996	348	719	934	916	925	1040	1010	1020	810	790	802
19	696	614	651	936	896	924	1040	1010	1020	818	802	809
20	824	700	763	896	702	795	1040	1000	1020	818	802	812
21	940	828	891	758	702	735	1040	984	1010	822	806	812
22	924	900	915	788	752	774	1070	1020	1040	826	804	811
23	926	904	917	852	766	817	1070	1000	1030	828	814	817
24	926	892	913	892	860	878	1020	792	883	842	830	835
25	968	914	942	902	882	891	828	758	790	854	826	841
26	1010	952	986	906	826	891	896	824	855	856	832	840
27	1040	982	1010	868	746	806	958	862	885	864	850	854
28	1040	974	1010	822	752	800	902	682	780	876	856	864
29	1050	1020	1040	846	804	829	866	702	748	874	858	864
30	1060	1030	1040	884	842	866	738	694	718	878	854	870
31	1080	1050	1060	---	---	---	766	728	748	884	864	875
MONTH	1130	348	1000	1110	568	845	1070	682	932	884	474	785
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	880	838	861	824	806	815	496	464	477	---	---	---
2	860	836	852	836	798	815	540	496	519	---	---	---
3	864	828	845	842	686	802	594	532	566	---	---	---
4	880	846	866	858	796	835	538	448	484	---	---	---
5	864	848	858	876	696	780	474	436	452	---	---	---
6	876	844	864	842	756	788	546	478	509	---	---	---
7	898	866	885	816	684	733	608	548	581	---	---	---
8	912	884	896	870	802	838	630	608	621	---	---	---
9	918	888	908	930	850	900	---	---	---	---	---	---
10	930	902	919	900	838	878	---	---	---	---	---	---
11	918	900	908	834	736	784	---	---	---	---	---	---
12	914	898	905	734	692	710	---	---	---	---	---	---
13	992	842	924	708	690	698	---	---	---	---	---	---
14	948	826	893	870	706	727	---	---	---	---	---	---
15	872	774	824	802	750	775	---	---	---	---	---	---
16	804	772	784	788	772	778	---	---	---	---	---	---
17	824	798	804	800	782	788	---	---	---	---	---	---
18	824	806	813	812	792	799	---	---	---	---	---	---
19	828	802	813	810	798	806	---	---	---	---	---	---
20	820	734	801	810	710	779	---	---	---	---	---	---
21	756	664	697	758	734	747	---	---	---	---	---	---
22	704	668	681	736	714	728	---	---	---	---	---	---
23	696	680	690	752	712	733	---	---	---	---	---	---
24	730	698	711	764	746	752	---	---	---	---	---	---
25	766	728	743	784	760	766	---	---	---	---	---	---
26	862	796	824	796	770	780	---	---	---	---	---	---
27	840	812	824	814	784	794	---	---	---	---	---	---
28	836	814	823	828	806	815	---	---	---	---	---	---
29	---	---	---	822	756	791	---	---	---	---	---	---
30	---	---	---	774	560	648	---	---	---	---	---	---
31	---	---	---	552	452	476	---	---	---	---	---	---
MONTH	992	664	829	930	452	770	630	436	526	---	---	---

GREAT MIAMI RIVER BASIN

03271510 GREAT MIAMI RIVER NEAR LINDEN AVENUE AT MIAMISBURG, OH--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	---	---	---	704	680	691	780	710	749	678	436	586
2	---	---	---	710	680	694	796	770	783	610	530	570
3	---	---	---	716	680	691	816	788	799	534	478	500
4	---	---	---	706	680	686	834	802	821	644	538	592
5	---	---	---	784	712	764	834	700	808	686	636	665
6	---	---	---	808	784	795	800	530	697	758	692	717
7	---	---	---	818	800	811	598	480	537	764	744	756
8	---	---	---	818	794	808	512	480	495	808	768	791
9	---	---	---	800	722	775	604	516	580	850	798	828
10	---	---	---	790	742	774	622	608	615	838	760	809
11	---	---	---	818	800	810	638	596	623	802	762	783
12	---	---	---	816	480	645	636	588	609	794	774	781
13	---	---	---	714	586	648	636	518	599	824	796	807
14	---	---	---	702	626	656	612	516	579	836	552	728
15	---	---	---	718	680	702	620	564	592	602	408	513
16	---	---	---	714	682	698	838	564	742	458	420	434
17	---	---	---	800	758	780	860	836	846	---	---	---
18	---	---	---	832	802	816	860	836	850	---	---	---
19	---	---	---	836	796	816	864	842	856	---	---	---
20	---	---	---	838	774	805	872	734	835	---	---	---
21	---	---	---	760	366	541	800	758	781	---	---	---
22	---	---	---	414	380	401	850	756	800	---	---	---
23	---	---	---	432	400	418	862	732	807	---	---	---
24	---	---	---	580	434	504	808	744	774	---	---	---
25	---	---	---	638	580	604	742	626	668	---	---	---
26	---	---	---	696	600	634	710	618	663	---	---	---
27	808	784	802	706	632	688	768	720	754	---	---	---
28	810	440	659	716	644	669	802	764	789	880	868	872
29	608	450	512	710	622	668	822	794	812	884	862	875
30	696	600	633	714	676	702	838	810	827	888	858	878
31	---	---	---	714	682	700	810	686	738	---	---	---
MONTH	810	440	651	838	366	690	872	480	723	888	408	710
YEAR	1130	348	803									

PH (STANDARD UNITS), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	8.4	8.1	8.2	8.6	8.3	8.5	8.5	8.3	8.4	8.3	8.2	8.3
2	8.4	8.1	8.2	8.7	8.3	8.5	8.6	8.3	8.5	8.3	8.2	8.3
3	8.5	8.0	8.2	8.7	8.3	8.5	8.6	8.3	8.5	8.3	8.3	8.3
4	8.5	8.1	8.3	8.5	8.2	8.3	8.7	8.4	8.5	8.4	8.3	8.3
5	8.8	8.3	8.5	8.3	7.9	8.1	8.6	8.5	8.6	8.5	8.3	8.4
6	9.1	8.6	8.8	8.1	8.0	8.0	8.7	8.5	8.6	8.3	8.2	8.3
7	9.1	8.7	8.9	8.2	8.1	8.1	8.6	8.4	8.5	8.2	8.2	8.2
8	9.0	8.6	8.8	8.3	8.1	8.2	8.7	8.5	8.6	8.1	7.9	8.0
9	9.0	8.6	8.8	8.2	8.1	8.1	8.8	8.3	8.6	8.0	7.9	8.0
10	8.9	8.5	8.7	8.2	7.9	8.1	8.8	8.5	8.6	8.1	8.0	8.0
11	8.9	8.5	8.7	8.0	7.9	8.0	8.9	8.5	8.7	8.1	8.1	8.1
12	8.8	8.5	8.7	8.1	8.0	8.0	9.0	8.5	8.7	8.1	8.1	8.1
13	8.9	8.5	8.7	8.2	8.1	8.2	8.9	8.5	8.7	8.2	8.1	8.1
14	9.0	8.7	8.8	8.2	8.1	8.2	8.8	8.3	8.6	8.3	8.1	8.2
15	9.0	8.6	8.8	8.2	8.1	8.1	8.8	8.4	8.6	8.2	8.1	8.1
16	8.8	8.5	8.7	8.2	8.1	8.2	8.9	8.4	8.7	8.2	8.1	8.2
17	8.7	8.4	8.6	8.3	8.2	8.2	8.9	8.4	8.7	8.2	8.1	8.2
18	8.5	8.2	8.4	8.3	8.2	8.3	8.8	8.4	8.6	8.2	8.2	8.2
19	8.3	8.1	8.2	8.3	8.2	8.3	8.9	8.3	8.6	8.3	8.2	8.2
20	8.4	8.0	8.2	8.2	8.1	8.2	8.7	8.4	8.6	8.3	8.2	8.2
21	8.2	8.1	8.2	8.2	8.0	8.1	8.8	8.4	8.6	8.3	8.1	8.2
22	8.3	8.1	8.2	8.2	8.0	8.1	8.6	8.3	8.4	8.4	8.2	8.3
23	8.2	8.0	8.1	8.3	8.1	8.2	8.7	8.2	8.5	8.4	8.2	8.3
24	8.2	8.0	8.1	8.4	8.2	8.3	8.4	8.3	8.4	8.4	8.2	8.3
25	8.4	8.2	8.3	8.5	8.3	8.4	8.4	8.2	8.3	8.4	8.2	8.3
26	8.4	8.2	8.3	8.5	8.3	8.4	8.4	8.2	8.3	8.3	8.1	8.2
27	8.4	8.2	8.3	8.3	8.2	8.3	8.5	8.3	8.4	8.4	8.2	8.3
28	8.5	8.2	8.4	8.3	8.2	8.2	8.4	8.2	8.3	8.5	8.2	8.3
29	8.5	8.2	8.4	8.4	8.2	8.3	8.2	8.1	8.2	8.5	8.3	8.4
30	8.6	8.2	8.4	8.4	8.2	8.3	8.2	8.1	8.2	8.4	8.3	8.4
31	8.6	8.3	8.4	---	---	---	8.3	8.2	8.2	8.5	8.3	8.4
MONTH	9.1	8.0	8.5	8.7	7.9	8.2	9.0	8.1	8.5	8.5	7.9	8.2

PH (STANDARD UNITS), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	8.6	8.3	8.4	8.7	8.5	8.6	8.1	8.0	8.0	---	---	---
2	8.5	8.3	8.4	8.8	8.5	8.7	8.1	8.0	8.1	---	---	---
3	8.4	8.3	8.4	8.8	8.5	8.6	8.1	8.1	8.1	---	---	---
4	8.6	8.3	8.5	8.8	8.4	8.6	8.1	7.9	8.0	---	---	---
5	8.7	8.4	8.5	8.6	8.3	8.4	7.9	7.9	7.9	---	---	---
6	8.7	8.5	8.6	8.3	8.2	8.3	8.0	7.9	8.0	---	---	---
7	8.7	8.4	8.6	8.3	8.2	8.2	8.1	8.0	8.1	---	---	---
8	8.8	8.5	8.6	8.4	8.3	8.3	8.1	8.1	8.1	---	---	---
9	8.8	8.5	8.6	8.5	8.3	8.4	---	---	---	---	---	---
10	8.7	8.5	8.6	8.5	8.4	8.5	---	---	---	---	---	---
11	8.8	8.5	8.6	8.5	8.3	8.4	---	---	---	---	---	---
12	8.8	8.5	8.6	8.3	8.3	8.3	---	---	---	---	---	---
13	8.6	8.5	8.6	8.4	8.3	8.3	---	---	---	---	---	---
14	8.5	8.3	8.4	8.4	8.3	8.4	---	---	---	---	---	---
15	8.4	8.2	8.3	8.4	8.3	8.4	---	---	---	---	---	---
16	8.4	8.3	8.3	8.4	8.3	8.4	---	---	---	---	---	---
17	8.6	8.4	8.5	8.6	8.5	8.5	---	---	---	---	---	---
18	8.7	8.5	8.6	8.6	8.4	8.5	---	---	---	---	---	---
19	8.7	8.4	8.6	8.6	8.4	8.5	---	---	---	---	---	---
20	8.6	8.3	8.5	8.6	8.4	8.5	---	---	---	---	---	---
21	8.4	8.3	8.3	8.4	8.3	8.3	---	---	---	---	---	---
22	8.3	8.2	8.3	8.4	8.4	8.4	---	---	---	---	---	---
23	8.3	8.3	8.3	8.5	8.4	8.4	---	---	---	---	---	---
24	8.3	8.3	8.3	8.6	8.4	8.5	---	---	---	---	---	---
25	8.5	8.3	8.4	8.7	8.5	8.6	---	---	---	---	---	---
26	8.5	8.4	8.4	8.8	8.5	8.7	---	---	---	---	---	---
27	8.6	8.4	8.5	8.8	8.5	8.7	---	---	---	---	---	---
28	8.7	8.4	8.5	8.8	8.5	8.6	---	---	---	---	---	---
29	---	---	---	8.6	8.3	8.5	---	---	---	---	---	---
30	---	---	---	8.3	7.9	8.1	---	---	---	---	---	---
31	---	---	---	8.0	7.9	7.9	---	---	---	---	---	---
MONTH	8.8	8.2	8.5	8.8	7.9	8.4	8.1	7.9	8.0	---	---	---
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE				JULY			AUGUST			SEPTEMBER		
1	---	---	---	8.5	8.3	8.4	8.5	8.3	8.4	7.9	7.6	7.8
2	---	---	---	8.5	8.3	8.4	8.8	8.4	8.5	7.7	7.6	7.7
3	---	---	---	8.5	8.3	8.4	8.9	8.4	8.6	7.7	7.6	7.7
4	---	---	---	8.6	8.4	8.5	8.8	8.4	8.6	7.9	7.7	7.8
5	---	---	---	8.6	8.5	8.6	8.7	8.3	8.5	7.9	7.8	7.9
6	---	---	---	8.7	8.6	8.6	8.6	8.2	8.4	8.0	7.9	7.9
7	---	---	---	8.9	8.6	8.8	8.4	8.1	8.2	8.1	7.9	8.0
8	---	---	---	8.9	8.7	8.8	8.2	8.0	8.1	8.1	7.9	8.0
9	---	---	---	8.8	8.6	8.8	8.3	8.2	8.3	8.2	8.0	8.1
10	---	---	---	9.0	8.6	8.8	8.4	8.2	8.3	8.1	7.9	8.0
11	---	---	---	9.1	8.7	8.9	8.4	8.4	8.4	8.1	7.9	8.0
12	---	---	---	8.8	8.1	8.4	8.6	8.4	8.5	8.1	8.0	8.0
13	---	---	---	8.5	8.2	8.3	8.9	8.6	8.7	8.2	8.0	8.1
14	---	---	---	8.5	8.3	8.4	8.8	8.4	8.6	8.2	8.0	8.1
15	---	---	---	8.4	8.4	8.4	8.6	8.4	8.5	8.1	7.8	7.9
16	---	---	---	8.5	8.3	8.4	8.6	8.3	8.5	7.9	7.9	7.9
17	---	---	---	8.5	8.3	8.4	8.5	8.2	8.3	---	---	---
18	---	---	---	8.4	8.3	8.4	8.4	8.1	8.3	---	---	---
19	---	---	---	8.4	8.3	8.3	8.4	8.1	8.2	---	---	---
20	---	---	---	8.4	8.3	8.4	8.2	8.1	8.2	---	---	---
21	---	---	---	8.4	7.9	8.2	8.1	7.7	8.0	---	---	---
22	---	---	---	8.0	7.9	8.0	8.1	7.8	8.0	---	---	---
23	---	---	---	8.1	7.9	8.0	8.0	7.9	7.9	---	---	---
24	---	---	---	8.2	8.1	8.1	8.0	7.9	7.9	---	---	---
25	---	---	---	8.3	8.2	8.3	7.8	7.7	7.8	---	---	---
26	---	---	---	8.5	8.3	8.4	7.9	7.7	7.8	---	---	---
27	8.8	8.7	8.7	8.5	8.4	8.4	8.0	7.8	7.9	---	---	---
28	8.7	8.1	8.4	8.5	8.3	8.4	8.0	7.8	7.9	8.8	8.6	8.7
29	8.3	8.1	8.2	8.4	8.3	8.3	8.1	7.8	7.9	8.8	8.5	8.6
30	8.4	8.3	8.4	8.4	8.3	8.3	8.1	7.8	8.0	8.8	8.5	8.6
31	---	---	---	8.4	8.3	8.3	8.1	7.9	8.0	---	---	---
MONTH	8.8	8.1	8.4	9.1	7.9	8.4	8.9	7.7	8.2	8.8	7.6	8.0
YEAR	9.1	7.6	8.3									

GREAT MIAMI RIVER BASIN

03271510 GREAT MIAMI RIVER NEAR LINDEN AVENUE AT MIAMISBURG, OH--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	21.5	21.0	21.5	11.0	9.0	10.0	6.0	5.0	5.5	2.5	2.0	2.5
2	22.0	20.0	21.0	11.5	9.5	10.5	5.5	4.5	5.0	3.0	2.5	3.0
3	20.5	18.5	19.5	11.5	9.5	10.5	6.0	4.5	5.0	3.0	2.5	2.5
4	19.0	17.0	18.0	13.0	11.5	12.0	6.0	4.0	5.0	3.0	2.0	2.5
5	17.5	15.5	16.5	13.0	11.5	12.5	6.0	4.5	5.0	3.0	2.0	2.5
6	16.5	14.0	15.5	11.5	8.5	10.0	6.5	4.5	5.5	4.0	2.5	3.5
7	17.0	14.5	16.0	9.0	8.0	8.5	6.5	5.5	6.0	8.5	4.0	4.5
8	16.0	14.0	15.0	10.0	8.5	9.0	6.5	5.5	6.0	7.5	5.0	6.0
9	16.0	14.5	15.0	10.5	9.0	10.0	6.0	5.0	5.5	5.0	3.5	4.0
10	15.5	13.5	14.5	12.0	10.5	11.5	5.0	4.0	4.5	3.5	2.5	3.0
11	15.5	13.5	14.5	11.0	9.5	10.5	4.0	2.5	3.5	3.0	2.5	2.5
12	14.0	12.5	13.0	9.5	8.5	9.0	3.0	1.5	2.5	5.0	3.0	4.5
13	14.0	11.5	12.5	9.5	8.5	9.0	3.5	2.0	2.5	5.0	4.0	4.5
14	14.0	11.5	13.0	10.5	9.0	9.5	4.5	3.0	3.5	4.0	2.5	3.5
15	15.0	12.5	13.5	11.0	9.5	10.0	4.5	4.0	4.0	3.5	3.0	3.0
16	14.0	13.0	13.5	12.5	10.5	11.5	6.5	3.0	4.5	4.0	3.0	3.5
17	15.5	14.0	14.5	11.0	9.5	10.5	3.0	2.0	2.5	4.0	3.5	3.5
18	16.5	15.0	15.5	9.5	9.0	9.5	2.0	1.0	1.5	4.5	4.0	4.0
19	15.5	14.0	15.0	9.5	9.0	9.0	4.0	1.5	2.5	5.5	4.5	5.0
20	14.5	13.0	14.0	10.5	9.5	10.0	6.5	3.5	5.0	5.5	4.5	5.5
21	14.0	13.0	13.5	10.0	9.0	9.5	6.5	5.5	6.0	4.5	3.5	4.0
22	13.5	12.5	13.0	9.5	8.0	8.5	6.5	6.0	6.0	4.0	3.0	3.5
23	12.5	11.5	12.0	8.5	7.0	8.0	7.0	6.5	6.5	4.5	3.5	4.0
24	11.5	10.0	11.0	8.0	7.0	7.5	7.5	5.5	6.5	5.5	4.0	5.0
25	11.5	9.0	10.0	8.5	7.0	7.5	6.0	5.0	6.0	7.0	5.5	6.0
26	11.0	8.5	10.0	10.5	8.0	9.0	5.0	4.5	5.0	8.0	7.0	7.5
27	11.0	8.5	9.5	11.0	10.0	10.5	6.5	4.0	5.0	7.5	6.5	7.0
28	11.5	10.0	10.5	10.0	7.0	8.5	6.0	3.5	5.0	7.0	6.5	6.5
29	11.0	9.0	10.5	7.0	6.0	7.0	3.0	1.0	2.0	7.0	6.5	6.5
30	11.0	9.0	10.0	6.5	5.5	6.0	1.0	.5	1.0	7.0	6.5	7.0
31	11.0	8.0	9.5	---	---	---	2.0	1.0	1.5	8.0	6.5	7.0
MONTH	22.0	8.0	14.0	13.0	5.5	9.5	7.5	.5	4.5	8.5	2.0	4.5
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	9.0	7.0	8.0	4.5	3.5	4.0	7.5	7.0	7.5	---	---	---
2	8.5	7.5	8.5	5.0	4.0	4.5	8.0	7.5	7.5	---	---	---
3	7.5	5.5	6.5	7.0	4.5	5.5	10.0	8.0	8.5	---	---	---
4	5.5	4.0	4.5	8.5	6.0	7.5	11.0	10.5	11.0	---	---	---
5	4.0	3.0	4.0	8.5	6.0	8.0	11.0	10.0	10.5	---	---	---
6	3.0	1.5	2.5	6.0	2.5	4.0	9.5	9.0	9.5	---	---	---
7	2.5	1.5	2.0	2.0	1.0	1.5	10.0	8.5	9.0	---	---	---
8	3.0	.5	1.5	3.0	2.0	2.5	10.5	9.5	10.0	---	---	---
9	1.5	.0	.5	4.5	3.0	3.5	---	---	---	---	---	---
10	2.5	.5	1.0	6.0	4.5	5.0	---	---	---	---	---	---
11	3.0	1.0	2.0	7.5	6.0	6.5	---	---	---	---	---	---
12	3.5	1.5	2.5	7.5	6.5	7.0	---	---	---	---	---	---
13	4.0	2.5	3.0	7.0	6.0	6.5	---	---	---	---	---	---
14	5.0	3.5	4.5	9.0	7.0	8.0	---	---	---	---	---	---
15	5.0	5.0	5.0	9.5	8.0	9.0	---	---	---	---	---	---
16	5.5	4.5	5.0	8.5	7.0	8.0	---	---	---	---	---	---
17	5.0	3.5	4.5	10.0	8.0	8.5	---	---	---	---	---	---
18	4.0	3.0	3.5	10.5	9.0	10.0	---	---	---	---	---	---
19	4.0	3.5	3.5	9.0	8.0	8.5	---	---	---	---	---	---
20	4.5	3.5	4.0	8.5	7.0	7.5	---	---	---	---	---	---
21	5.0	4.5	5.0	7.0	6.0	6.5	---	---	---	---	---	---
22	5.0	3.5	4.0	7.0	5.5	6.5	---	---	---	---	---	---
23	3.5	2.0	2.5	7.0	6.5	7.0	---	---	---	---	---	---
24	2.0	1.0	2.0	9.5	7.0	8.0	---	---	---	---	---	---
25	3.0	1.5	2.5	12.0	9.5	10.5	---	---	---	---	---	---
26	3.5	3.0	3.5	14.0	11.0	12.0	---	---	---	---	---	---
27	4.0	3.0	3.5	15.0	13.0	13.5	---	---	---	---	---	---
28	4.5	3.5	4.0	16.0	14.0	15.0	---	---	---	---	---	---
29	---	---	---	16.5	15.5	16.0	---	---	---	---	---	---
30	---	---	---	15.5	11.0	13.5	---	---	---	---	---	---
31	---	---	---	10.5	8.0	9.0	---	---	---	---	---	---
MONTH	9.0	.0	3.5	16.5	1.0	8.0	11.0	7.0	9.0	---	---	---

03271510 GREAT MIAMI RIVER NEAR LINDEN AVENUE AT MIAMISBURG, OH--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	22.5	21.0	22.0	23.0	21.0	22.0	23.5	22.0	23.0
2	---	---	---	22.5	21.0	22.0	25.5	22.0	23.5	22.0	21.0	21.5
3	---	---	---	22.0	20.0	21.0	25.5	24.0	24.5	21.0	20.0	20.5
4	---	---	---	22.0	20.5	21.5	26.0	25.0	25.0	21.0	19.5	20.5
5	---	---	---	23.0	20.5	22.0	28.5	25.5	26.0	22.0	20.5	21.5
6	---	---	---	25.0	23.0	23.5	26.5	25.0	26.0	23.5	21.5	22.5
7	---	---	---	26.0	24.0	25.0	25.0	23.0	23.5	24.5	22.5	23.5
8	---	---	---	26.0	24.5	25.0	23.5	21.0	21.5	25.5	23.5	24.0
9	---	---	---	26.0	25.0	25.5	22.0	20.0	21.0	26.0	23.5	24.5
10	---	---	---	26.0	24.5	25.0	22.5	20.5	21.5	24.5	23.0	24.0
11	---	---	---	28.0	25.0	26.5	23.0	20.5	21.5	23.0	22.5	23.0
12	---	---	---	25.5	23.0	24.5	24.5	21.0	22.5	23.5	22.0	22.5
13	---	---	---	24.5	22.0	23.5	24.5	20.5	23.0	24.0	22.0	22.5
14	---	---	---	24.5	22.0	23.0	25.0	20.5	23.0	22.0	20.0	21.5
15	---	---	---	23.0	22.0	22.5	25.0	22.5	24.0	19.5	18.0	18.5
16	---	---	---	23.0	22.0	22.5	25.5	22.0	23.5	17.5	17.5	17.5
17	---	---	---	25.0	22.0	23.0	24.0	22.5	23.0	---	---	---
18	---	---	---	25.0	22.0	23.5	22.5	21.0	21.5	---	---	---
19	---	---	---	23.0	22.0	22.5	22.0	20.5	21.0	---	---	---
20	---	---	---	22.5	22.0	22.5	21.5	20.5	21.0	---	---	---
21	---	---	---	23.0	20.5	21.5	22.5	20.5	21.5	---	---	---
22	---	---	---	22.5	20.5	21.5	23.5	22.0	22.5	---	---	---
23	---	---	---	23.0	22.0	22.5	23.5	22.5	22.5	---	---	---
24	---	---	---	24.5	22.0	23.0	23.0	22.0	22.5	---	---	---
25	---	---	---	25.5	24.0	25.0	22.0	21.0	21.5	---	---	---
26	---	---	---	26.0	25.0	25.5	23.5	21.5	22.5	---	---	---
27	25.5	24.0	25.0	26.0	25.0	25.5	25.0	22.5	23.5	---	---	---
28	24.5	22.0	23.0	26.0	25.0	25.5	25.0	23.5	24.5	17.5	16.0	16.5
29	22.5	20.5	22.0	25.5	24.5	25.0	25.5	23.5	24.5	17.5	15.0	16.5
30	22.5	21.0	22.0	24.5	23.0	24.0	26.0	23.5	24.5	18.0	15.5	17.0
31	---	---	---	24.0	22.5	23.0	24.5	23.5	24.0	---	---	---
MONTH	25.5	20.5	23.0	28.0	20.0	23.5	28.5	20.0	23.0	26.0	15.0	21.0
YEAR	28.5	.0	12.0									

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	11.0	6.5	9.2	13.9	10.2	12.5	14.2	10.7	12.0	13.6	12.1	13.0
2	12.8	6.5	9.2	15.5	8.6	11.8	15.0	11.0	12.9	13.4	11.7	12.6
3	13.5	6.7	10.1	16.8	8.8	11.3	15.8	11.0	13.0	13.5	11.6	11.8
4	14.4	7.8	11.3	11.1	8.2	9.0	16.1	11.0	13.2	16.4	11.4	12.4
5	13.4	9.7	12.0	8.2	7.5	7.8	15.4	10.8	12.7	14.8	11.8	12.8
6	14.2	10.1	13.3	10.4	8.1	8.8	15.6	10.7	12.5	13.5	11.4	12.0
7	14.6	11.1	13.4	13.1	9.2	10.3	14.2	10.3	11.5	12.8	10.4	11.6
8	14.7	11.6	13.6	12.3	9.5	10.6	16.0	10.4	12.6	13.0	10.4	11.1
9	14.7	10.3	13.2	11.9	9.4	10.5	17.3	10.3	13.3	13.6	11.5	12.2
10	14.6	9.8	12.6	9.8	8.3	9.0	16.3	10.6	13.0	15.1	10.4	12.4
11	14.7	9.0	12.6	10.4	8.9	9.3	18.7	10.7	14.0	12.7	12.2	12.4
12	15.5	10.0	13.0	9.7	9.5	9.6	18.9	10.9	14.4	12.1	11.2	11.5
13	14.4	10.6	12.5	10.4	9.6	9.9	18.7	11.2	14.0	13.2	11.2	11.4
14	14.4	12.4	13.4	11.4	9.8	10.2	17.2	11.0	13.7	14.1	11.6	11.9
15	14.1	10.1	12.7	11.9	9.2	10.0	18.2	10.6	13.4	13.5	11.5	11.7
16	13.7	9.5	11.9	9.6	9.0	9.2	18.9	10.3	11.8	13.5	11.4	11.7
17	12.7	8.3	10.0	11.6	8.9	9.8	19.0	10.4	13.6	14.0	11.3	11.6
18	9.0	7.9	8.6	12.3	9.3	10.5	19.0	10.8	13.7	11.9	11.1	11.3
19	10.1	7.9	8.9	11.7	9.6	10.2	20.0	11.0	14.7	11.2	10.8	11.0
20	12.7	8.0	10.0	9.9	9.4	9.6	15.9	10.8	13.0	11.2	10.7	10.9
21	10.7	8.2	9.4	11.1	9.5	10.1	19.4	10.2	12.9	13.7	11.0	11.4
22	10.9	8.2	9.4	11.6	10.0	10.6	15.1	9.6	11.4	11.9	11.5	11.7
23	9.6	8.3	8.9	11.8	10.4	11.0	16.7	9.5	12.4	13.1	11.4	11.8
24	10.4	8.0	9.0	14.1	10.7	11.9	10.8	9.9	10.3	12.2	10.8	11.4
25	10.6	7.9	9.2	14.5	10.4	11.7	11.4	10.3	10.7	11.2	10.1	10.8
26	11.1	7.8	9.5	12.3	9.2	10.6	14.1	10.4	11.4	10.1	9.8	9.9
27	11.1	8.1	9.8	9.4	8.9	9.2	14.9	10.8	12.2	12.7	9.8	10.5
28	13.4	8.8	10.8	10.1	9.1	9.7	11.4	10.6	11.1	12.7	10.4	11.1
29	13.9	8.9	11.6	13.8	10.0	11.1	13.7	11.3	12.0	11.5	10.1	10.7
30	14.6	8.8	12.0	12.4	10.6	11.2	15.7	12.2	13.3	11.1	10.1	10.4
31	14.8	9.6	12.7	---	---	---	14.4	12.1	12.8	13.4	10.0	10.9
MONTH	15.5	6.5	11.1	16.8	7.5	10.2	20.0	9.5	12.7	16.4	9.8	11.5

GREAT MIAMI RIVER BASIN

03271510 GREAT MIAMI RIVER NEAR LINDEN AVENUE AT MIAMISBURG, OH--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	14.0	9.9	10.9	17.5	12.9	14.9	10.2	9.9	10.0	---	---	---
2	12.4	10.3	10.7	17.8	13.5	15.2	10.2	10.0	10.1	---	---	---
3	12.9	10.3	11.2	16.9	12.3	14.2	10.0	9.1	9.6	---	---	---
4	16.0	11.2	13.0	16.2	11.2	13.3	8.9	8.4	8.7	---	---	---
5	17.3	12.2	13.9	11.3	10.9	11.1	9.4	8.6	9.0	---	---	---
6	16.3	12.0	13.4	12.9	11.3	12.1	9.6	9.4	9.5	---	---	---
7	19.0	12.2	14.5	15.0	12.6	13.3	9.7	8.5	9.4	---	---	---
8	17.5	12.4	14.2	14.0	12.3	13.1	---	---	---	---	---	---
9	17.7	12.3	14.2	14.4	12.2	12.7	---	---	---	---	---	---
10	18.7	12.5	14.7	13.3	11.5	12.1	---	---	---	---	---	---
11	19.1	12.7	15.0	12.3	10.4	10.9	---	---	---	---	---	---
12	19.2	12.5	15.0	11.0	10.4	10.7	---	---	---	---	---	---
13	15.0	11.8	13.2	12.8	10.7	11.0	---	---	---	---	---	---
14	13.1	11.5	12.1	12.0	10.0	10.8	---	---	---	---	---	---
15	13.5	11.5	12.1	10.4	9.8	10.0	---	---	---	---	---	---
16	13.8	12.0	12.8	11.7	10.4	10.9	---	---	---	---	---	---
17	15.7	12.8	14.3	13.5	10.4	11.5	---	---	---	---	---	---
18	16.8	13.5	15.2	10.6	9.7	10.1	---	---	---	---	---	---
19	16.0	12.9	14.4	14.9	10.1	11.8	---	---	---	---	---	---
20	15.1	12.3	13.5	11.5	10.4	10.9	---	---	---	---	---	---
21	12.4	11.8	12.1	13.9	10.4	10.9	---	---	---	---	---	---
22	15.6	12.2	12.6	12.3	10.9	11.3	---	---	---	---	---	---
23	14.3	12.7	13.2	13.8	10.9	11.5	---	---	---	---	---	---
24	14.5	13.2	13.6	12.4	10.7	11.4	---	---	---	---	---	---
25	15.5	13.3	14.1	12.4	10.2	11.0	---	---	---	---	---	---
26	14.7	12.9	13.4	12.8	9.6	10.7	---	---	---	---	---	---
27	15.6	12.7	13.7	13.8	9.0	10.5	---	---	---	---	---	---
28	16.3	13.2	14.3	11.8	8.4	9.6	---	---	---	---	---	---
29	---	---	---	8.3	7.7	7.9	---	---	---	---	---	---
30	---	---	---	8.4	7.9	8.1	---	---	---	---	---	---
31	---	---	---	9.8	8.5	9.3	---	---	---	---	---	---
MONTH	19.2	9.9	13.4	17.8	7.7	11.4	10.2	8.4	9.5	---	---	---
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE				JULY			AUGUST			SEPTEMBER		
1	---	---	---	9.0	8.0	8.3	8.2	6.8	7.3	7.4	6.9	7.1
2	---	---	---	9.1	7.7	8.3	10.1	6.8	7.8	7.5	7.1	7.3
3	---	---	---	9.2	8.0	8.4	10.2	6.9	8.0	7.9	7.6	7.8
4	---	---	---	9.2	8.0	8.6	10.2	6.3	8.0	8.2	7.9	8.0
5	---	---	---	9.7	8.2	9.0	10.8	6.0	7.3	8.4	7.7	8.0
6	---	---	---	10.2	8.1	9.1	7.9	5.9	6.5	8.9	7.5	8.0
7	---	---	---	13.7	8.0	10.2	6.9	6.0	6.3	9.3	7.3	8.1
8	---	---	---	13.1	8.0	10.2	7.8	6.3	6.8	9.6	7.1	8.0
9	---	---	---	12.2	8.0	9.7	7.1	6.8	6.9	10.3	6.8	8.1
10	---	---	---	14.4	6.0	10.3	8.3	6.8	7.3	7.9	6.6	7.1
11	---	---	---	16.4	7.1	10.9	9.2	6.1	7.6	8.6	6.4	7.4
12	---	---	---	8.3	6.0	6.9	12.2	6.3	8.4	9.1	6.8	7.7
13	---	---	---	8.4	6.4	7.4	15.2	6.4	9.7	9.7	6.9	8.0
14	---	---	---	8.9	7.0	7.7	16.1	6.9	10.1	7.5	7.1	7.3
15	---	---	---	8.3	6.8	7.7	14.9	6.9	9.9	7.9	7.4	7.7
16	---	---	---	8.4	7.1	7.7	18.4	9.0	12.2	8.2	8.0	8.1
17	---	---	---	9.1	6.3	7.6	15.5	7.7	10.7	---	---	---
18	---	---	---	8.3	6.8	7.7	12.7	7.6	9.6	---	---	---
19	---	---	---	8.4	6.9	7.8	13.1	7.5	9.6	---	---	---
20	---	---	---	9.1	6.8	7.7	9.4	7.6	8.5	---	---	---
21	---	---	---	8.2	6.0	6.9	9.3	7.1	7.9	---	---	---
22	---	---	---	7.2	6.2	6.7	9.5	6.9	7.8	---	---	---
23	---	---	---	7.7	6.2	6.7	7.6	7.0	7.2	---	---	---
24	---	---	---	7.0	6.1	6.6	7.9	7.2	7.4	---	---	---
25	---	---	---	7.8	6.3	7.0	7.8	7.2	7.5	---	---	---
26	---	---	---	8.2	6.3	7.0	8.1	6.9	7.4	---	---	---
27	10.8	8.4	9.4	8.1	6.1	7.0	8.8	6.9	7.7	---	---	---
28	9.2	6.0	7.6	8.3	6.7	7.4	9.0	6.8	7.7	12.0	9.4	11.0
29	8.5	7.2	7.8	7.6	6.8	7.1	9.3	6.5	7.5	12.1	8.7	10.0
30	9.1	7.6	8.2	7.1	6.8	6.9	10.0	6.5	7.7	12.9	8.5	10.1
31	---	---	---	7.2	6.8	7.0	9.0	6.3	7.6	---	---	---
MONTH	10.8	6.0	8.2	16.4	6.0	8.0	18.4	5.9	8.1	12.9	6.4	8.1
YEAR	20.0	5.9	10.5									

GREAT MIAMI RIVER BASIN

209

03271800 TWIN CREEK NEAR INGOMAR, OH

LOCATION.--Lat 39°42'28", long 84°31'30", in sec. 15, T.5 N., R.3 E., Preble County, Hydrologic Unit 05080002, on left bank at downstream side of bridge on Halderman Road, 0.5 mi downstream from Bantas Fork, 1.4 mi west of Ingomar, and 4.8 mi upstream from Aukerman Creek.

DRAINAGE AREA.--197 mi².

PERIOD OF RECORD.--Occasional low-flow measurements water years 1959, 1961-62, October 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is 815.42 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 12, 18. Records good. Sediment data collected at this site 1970 to 1974.

COOPERATION.--Gage-height tapes and 8 discharge measurements furnished by Miami Conservancy District.

AVERAGE DISCHARGE.--27 years, 195 ft³/s, 13.44 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,300 ft³/s Mar. 4, 1963, gage height, 14.40 ft, from rating curve extended above 7,000 ft³/s on basis of contracted-opening measurement at gage height 18.8 ft; minimum daily, 2.5 ft³/s Sept. 12-14, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 21, 1959 reached a stage of 18.8 ft, discharge, 30,300 ft³/s, computed by Miami Conservancy District. Flood of Mar. 25, 1913 reached a stage of 28.0 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4700 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 23	1100	7,380	9.01	May 26	0845	*12,500	*12.11

Minimum daily discharge, 2.9 ft³/s Oct. 5, 11, 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	7.0	49	114	102	126	1270	467	210	50	20	57
2	4.3	7.2	41	95	91	112	652	342	205	49	19	185
3	3.7	7.4	37	84	95	110	1270	269	181	84	17	84
4	3.2	11	34	72	87	111	2810	220	195	109	15	43
5	2.9	34	31	63	83	709	960	424	188	82	16	29
6	3.2	35	30	536	77	617	556	729	266	64	22	23
7	3.5	24	29	788	73	293	443	526	181	54	17	19
8	3.5	21	27	1680	69	203	391	348	147	47	14	16
9	3.4	18	25	536	68	199	397	943	143	42	13	18
10	3.1	196	24	286	75	463	314	1290	121	39	13	99
11	2.9	79	23	202	61	868	265	555	101	37	12	84
12	2.9	47	22	342	59	621	229	360	105	43	18	61
13	3.3	65	21	421	61	371	206	279	150	51	29	38
14	3.6	74	22	274	97	295	183	236	261	44	19	498
15	3.9	49	23	322	154	330	174	206	313	37	15	1366
16	4.1	39	21	309	357	237	155	176	219	31	13	540
17	5.2	32	20	303	230	200	141	149	173	28	12	277
18	16	27	20	269	173	184	228	132	137	26	12	158
19	18	25	19	266	151	148	644	126	124	27	13	99
20	10	78	21	219	143	250	379	136	117	35	16	71
21	8.5	136	22	162	812	774	272	116	136	147	17	56
22	7.8	82	20	139	575	399	218	105	204	77	15	47
23	7.3	58	26	125	288	274	185	4420	115	63	15	41
24	7.1	47	59	112	197	225	164	1810	87	46	15	36
25	7.0	40	79	109	172	195	152	851	76	36	16	32
26	7.0	37	57	124	184	167	462	7470	68	30	18	29
27	7.2	126	50	151	176	152	622	1980	71	27	15	27
28	7.8	122	487	132	151	153	826	684	77	23	12	25
29	7.4	75	390	121	---	200	930	451	64	22	12	24
30	7.1	58	208	117	---	1690	876	344	54	21	12	22
31	7.0	---	146	108	---	2570	---	263	---	21	11	---
TOTAL	185.9	1656.6	2083	8581	4861	13246	16374	26407	4489	1492	483	4098
MEAN	6.00	55.2	67.2	277	174	427	546	852	150	48.1	15.6	137
MAX	18	196	487	1680	812	2570	2810	7470	313	147	29	1360
MIN	2.9	7.0	19	63	59	110	141	105	54	21	11	16
CFSM	.03	.28	.34	1.41	.88	2.17	2.77	4.32	.76	.24	.08	.69
IN.	.04	.31	.39	1.62	.92	2.50	3.09	4.99	.85	.28	.09	.77
CAL YR 1988	TOTAL 30935.8	MEAN 84.5	MAX 4150	MIN 2.6	CFSM .43	IN. 5.84						
WTR YR 1989	TOTAL 83956.5	MEAN 230	MAX 7470	MIN 2.9	CFSM 1.17	IN. 15.85						

GREAT MIAMI RIVER BASIN

03272000 TWIN CREEK NEAR GERMANTOWN, OH

LOCATION.--Lat 39°38'10", long 84°23'48", in NW 1/4 sec. 11, T.3 N., R.4 E., Montgomery County, Hydrologic Unit 05080002, on right bank 0.3 mi downstream from Germantown Dam, 1.5 mi northwest of Germantown, and 3 mi upstream from Little Twin Creek.

DRAINAGE AREA.--275 mi².

PERIOD OF RECORD.--April 1914 to December 1923, December 1926 to current year.

REVISED RECORDS.--WSP 403: 1914(M). WSP 1385: 1915(M).

GAGE.--Water-stage recorder. Datum of gage is 700.24 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 18, 1926, nonrecording gage at site 1 mi downstream at datum 12.49 ft higher.

REMARKS.--Estimated daily discharge: Feb. 4-12. Records good except for estimated periods which are poor. Flood flow regulated by Germantown retarding basin, 0.3 mi upstream beginning in 1920.

COOPERATION.--Gage-height tapes, and 7 discharge measurements furnished by Miami Conservancy District.

AVERAGE DISCHARGE.--71 years (1914-23, 1927-89), 265 ft³/s, 13.09 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,390 ft³/s July 8, 1915, gage height 11.7 ft, from graph based on gage readings, site and datum then in use; maximum gage height, 29.19 ft Jan. 22, 1959; minimum discharge, 1.5 ft³/s Sept. 25, 1941.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 25, 1913 reached a stage of 18.3 ft, original site and datum, discharge, 66,000 ft³/s, computed by Miami Conservancy District.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,330 ft³/s May 26, 27, gage height 27.64 ft; minimum daily, 3.1 ft³/s Oct. 14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	13	81	189	146	198	2040	709	319	85	34	106
2	5.6	13	69	157	133	174	950	498	316	82	32	178
3	5.4	13	60	138	141	168	1640	387	347	127	30	121
4	4.6	17	55	122	130	166	3920	318	329	142	28	67
5	3.7	38	49	106	120	981	1570	456	334	126	29	47
6	3.7	67	47	631	110	1030	845	842	393	101	37	38
7	3.6	48	46	1030	105	470	677	713	288	86	33	33
8	4.4	35	44	2340	100	325	576	465	235	75	28	29
9	4.1	28	41	845	100	302	599	934	222	68	26	27
10	4.1	168	39	434	110	584	469	1890	197	63	25	84
11	4.0	165	42	302	94	1110	386	825	168	58	24	80
12	3.8	84	40	421	90	860	338	528	163	59	22	85
13	3.4	71	38	596	88	534	304	412	193	100	31	55
14	3.1	112	35	387	219	417	268	339	1740	72	34	234
15	3.2	83	35	512	345	444	251	292	595	59	27	1500
16	3.8	65	37	468	607	356	228	256	391	52	24	680
17	6.0	53	35	425	370	290	206	224	298	46	23	333
18	27	45	33	367	271	266	268	200	234	43	23	198
19	23	41	33	344	230	224	856	186	206	42	23	131
20	20	72	29	300	218	372	537	188	187	49	31	98
21	16	195	30	232	1250	1130	381	175	171	108	36	78
22	13	138	30	196	936	637	307	153	260	128	29	66
23	13	100	32	178	460	421	260	4560	178	158	30	57
24	14	80	77	161	302	340	227	5220	142	136	32	48
25	13	67	138	156	268	292	206	1190	123	70	30	43
26	13	61	100	178	272	252	414	5460	112	54	28	39
27	12	127	82	210	273	223	995	6840	113	46	28	36
28	12	186	635	191	233	219	1120	3040	157	42	25	33
29	13	126	635	173	---	307	1550	676	111	37	24	31
30	13	96	349	166	---	2030	1380	510	94	37	24	31
31	13	---	247	157	---	3260	---	392	---	35	23	---
TOTAL	287.3	2407	3243	12112	7721	18382	23768	38878	8616	2386	873	4586
MEAN	9.27	80.2	105	391	276	593	792	1254	287	77.0	28.2	153
MAX	27	195	635	2340	1250	3260	3920	6840	1740	158	37	1500
MIN	3.1	13	29	106	88	166	206	153	94	35	22	27
CFSM	.03	.29	.38	1.42	1.00	2.16	2.88	4.56	1.04	.28	.10	.56
IN.	.04	.33	.44	1.64	1.04	2.49	3.22	5.26	1.17	.32	.12	.62

CAL YR 1988 TOTAL 47241.4 MEAN 129 MAX 4770 MIN 3.1 CFSM .47 IN. 6.39
WTR YR 1989 TOTAL 123259.3 MEAN 338 MAX 6840 MIN 3.1 CFSM 1.23 IN. 16.67

GREAT MIAMI RIVER BASIN

211

03272700 SEVENMILE CREEK AT CAMDEN, OH

LOCATION.--Lat 39°37'45", long 84°38'40", Preble County, Hydrologic Unit 05080002, on right bank at downstream side of bridge on State Highway 725 in Camden, 0.3 mi downstream from Beasley Run and at mile 16.2.

DRAINAGE AREA.--69.0 mi².

PERIOD OF RECORD.--December 1970 to current year.

GAGE.--Water-stage recorder. Datum of gage is 818.57 ft above National Geodetic Vertical Datum of 1929. (Levels by Miami Conservancy District). Prior to Oct. 1, 1975, at same site at datum 3.02 ft higher.

REMARKS.--Estimated daily discharges: Jan 1-11. Records fair except those for periods of missing record, which are poor. Water-quality data collected at this site 1972 to 1974.

COOPERATION.--Gage-height tapes, and 8 discharge measurements furnished by Miami Conservancy District.

AVERAGE DISCHARGE.--18 years (1972-89), 71.4 ft³/s, 14.05 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,200 ft³/s May 26, 1989, gage height 18.67 ft, present datum; minimum daily, 1.2 ft³/s July 17, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1500 ft³/s and maximum (*).

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 4	0330	2,120	8.48	May 26	0445	*20,200	*18.67
May 23	0445	6,930	13.12				

Minimum daily discharge, 2.0 ft³/s Oct. 9, 11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	4.9	28	58	46	47	446	145	77	20	7.3	59
2	4.0	5.1	22	50	40	44	263	110	73	19	6.5	34
3	3.1	5.2	20	41	46	44	507	87	62	40	5.9	14
4	2.5	11	18	36	40	45	1120	75	57	32	5.5	9.2
5	2.2	39	15	33	39	400	355	148	68	25	6.1	7.9
6	2.1	27	15	250	34	251	214	188	60	22	17	7.4
7	2.1	16	15	450	30	123	189	155	49	19	8.4	6.3
8	2.1	13	14	800	26	87	176	110	46	17	6.2	5.9
9	2.0	13	13	300	22	96	187	325	50	15	5.4	7.0
10	2.1	210	13	150	26	176	130	372	41	14	5.4	108
11	2.0	71	11	110	26	259	106	188	36	13	5.1	24
12	2.1	34	9.2	169	23	208	92	131	41	25	5.1	14
13	2.2	63	11	161	27	140	79	108	42	47	17	10
14	2.5	54	11	127	87	115	71	88	231	22	7.6	153
15	2.5	33	11	155	141	140	67	77	99	16	6.0	115
16	3.1	28	8.3	140	163	101	60	67	67	14	4.9	52
17	5.0	21	8.5	123	92	86	55	59	53	11	4.9	35
18	42	17	7.3	103	71	76	89	53	44	10	4.9	24
19	13	15	9.2	95	61	59	190	51	41	11	4.8	18
20	6.6	68	11	86	70	170	120	59	38	12	11	15
21	5.3	76	12	65	347	301	92	47	71	14	11	13
22	6.0	48	9.7	59	193	160	76	45	131	33	8.4	12
23	5.6	35	17	52	106	115	66	2970	47	27	7.6	11
24	5.4	28	52	48	74	95	57	531	37	16	9.0	9.6
25	5.6	23	47	53	68	81	53	277	31	12	8.2	8.7
26	5.2	23	32	70	72	69	52	5520	28	10	6.5	8.7
27	4.5	91	30	76	65	70	136	464	32	9.3	5.5	8.3
28	5.6	65	298	64	56	73	163	233	37	8.6	5.4	7.9
29	6.4	42	163	57	---	165	280	159	25	7.8	5.5	7.9
30	6.1	34	97	54	---	738	258	121	22	7.9	5.4	7.5
31	5.0	---	69	49	---	915	---	93	---	7.6	4.6	---
TOTAL	166.3	1213.2	1097.2	4084	2091	5449	5749	13056	1736	557.2	222.1	813.3
MEAN	5.36	40.4	35.4	132	74.7	176	192	421	57.9	18.0	7.16	27.1
MAX	42	210	298	800	347	915	1120	5520	231	47	17	153
MIN	2.0	4.9	7.3	33	22	44	52	45	22	7.6	4.6	5.9
CFSM	.08	.59	.51	1.91	1.08	2.55	2.78	6.10	.84	.26	.10	.39
IN.	.09	.65	.59	2.20	1.13	2.94	3.10	7.04	.94	.30	.12	.44
CAL YR 1988	TOTAL 12279.5	MEAN 33.6	MAX 1170	MIN 1.2	CFSM .49	IN. 6.62						
WTR YR 1989	TOTAL 36234.3	MEAN 99.3	MAX 5520	MIN 2.0	CFSM 1.44	IN. 19.54						

GREAT MIAMI RIVER BASIN

03274000 GREAT MIAMI RIVER AT HAMILTON, OH

LOCATION.--Lat 39°23'28", long 84°34'20", in NE 1/4 sec. 6, T.1 N., R.3 E., Butler County, Hydrologic Unit 05080002, on right bank 1,000 ft downstream from Columbia Bridge at Hamilton, 3 mi downstream from Four Mile Creek, 4.3 mi upstream from Pleasant Run, and at mile 34.8.

DRAINAGE AREA.--3,630 mi².

PERIOD OF RECORD.--January 1907 to June 1909 (fragmentary), January 1910 to September 1918, April 1927 to current year. Monthly discharge only for some periods, published in WSP 1305. Gage-height records collected at site 0.7 mi upstream since 1911 are contained in reports of National Weather Service. Prior to October 1962, published as Miami River at Hamilton.

REVISED RECORDS.--WSP 803: 1936. WSP 1908: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 499.98 ft above National Geodetic Vertical Datum of 1929. Prior to Apr. 12, 1927, nonrecording gage at site 0.7 mi upstream at datum 64.65 ft higher.

REMARKS.--Estimated daily discharges: Feb. 9-13, Aug. 4, 5, 11-23, 28, 29, Sept. 25-30. Records fair except those for estimated discharges which are poor. Some regulation at low flow by industrial plants upstream from station. Flood flow regulated by five retarding basins upstream from station beginning in 1920 (see REMARKS for station numbers 03271500 and 03272000). The Miami and Erie Canal diverted water from the basin 1.7 mi upstream from station until Nov. 1, 1930, when the canal was abandoned; amount of diversion not known. Water-quality data collected at this site for water years 1950, 1951, 1973. Water temperature data collected at this site October 1950 to September 1951, October 1957 to September 1976.

COOPERATION.--Gage-height charts, tapes and 12 discharge measurements furnished by Miami Conservancy District.

AVERAGE DISCHARGE.--58 years (1931-89), 3,292 ft³/s, 12.32 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 352,000 ft³/s Mar. 26, 1913, gage height, 38.5 ft, site and datum then in use, computed by Miami Conservancy District; maximum discharge since construction of five retarding basins upstream in 1922, 108,000 ft³/s Jan. 21, 1959, gage height 79.47 ft; minimum daily discharge, 155 ft³/s Sept 27, 1941.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 64,600 ft³/s May 26, gage height, 74.91 ft; minimum daily, 355 ft³/s Oct. 11-15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	444	412	1510	3450	1640	2600	21700	8610	6700	3120	1640	3100
2	463	430	1340	2830	2030	2240	16000	6210	5680	2790	1460	4680
3	436	425	1360	1800	2250	2020	15600	5150	4960	2990	1090	6000
4	402	490	1290	1380	2170	1910	27300	4340	5910	3080	1000	3760
5	390	814	1180	1080	1860	4790	21700	4480	7860	2800	1000	2440
6	382	1830	1140	5500	1660	7970	16000	6070	7590	2630	1240	1900
7	381	1300	1080	10700	1380	7010	11800	6370	6400	2400	4010	1710
8	374	1030	996	23300	1020	4740	9110	5230	5000	2240	3230	1890
9	365	929	774	20000	1000	3990	8420	6140	4310	2250	2380	1770
10	357	1320	689	13800	1000	4810	7440	12200	3850	2160	1830	1910
11	355	5320	643	8240	1100	6660	6340	10300	3370	2090	1500	1990
12	355	2780	594	7710	1200	7500	5410	7190	3270	3130	1400	2430
13	355	2220	563	9190	1300	6190	4900	5550	3390	3880	1300	2460
14	355	2400	637	8870	3470	4910	4390	4900	12200	3440	1300	2220
15	355	1820	676	11300	4640	5090	4040	4470	8760	2670	1300	7420
16	359	1390	560	8030	6280	4260	3720	4030	5720	2270	1200	9960
17	430	1270	511	5570	4070	3440	3460	3860	4780	2040	1200	8010
18	2530	1070	467	4190	3410	2880	3920	3720	4220	1900	1200	5250
19	1270	956	456	3480	2850	2530	6690	3240	3620	1910	1200	3910
20	625	2070	460	2980	2670	4320	7490	3110	3360	2030	1100	3420
21	523	4080	464	2440	8320	8430	5920	2960	3510	5850	1300	3040
22	522	2840	465	1900	8370	6720	4700	2740	5280	8940	1200	2790
23	516	2350	502	1590	6830	5120	3950	25500	4320	7950	1300	2600
24	487	2030	2100	1330	4660	3910	3510	22700	3390	5350	2360	2350
25	484	1550	1950	1240	3550	3260	3210	15400	2950	3590	2760	1800
26	455	1330	949	1880	3440	2780	7430	41900	2620	2860	2070	1600
27	448	2400	740	2510	3460	2400	19400	35500	2500	2600	1570	1400
28	542	2870	9420	2370	3010	2210	15000	27900	4200	2820	1100	1300
29	495	2240	12800	2620	---	3320	17500	18400	6670	2830	1100	1200
30	449	1770	10100	2120	---	12800	14400	14200	4010	2560	1220	1200
31	421	---	4830	2110	---	23500	---	10300	---	2080	1710	---
TOTAL	16325	53736	61246	175510	88640	164310	300450	332670	150400	99250	49270	95510
MEAN	527	1791	1976	5662	3166	5300	10010	10730	5013	3202	1589	3184
MAX	2530	5320	12800	23300	8370	23500	27300	41900	12200	8940	4010	9960
MIN	355	412	456	1080	1000	1910	3210	2740	2500	1900	1000	1200
CFSM	.15	.49	.54	1.56	.87	1.46	2.76	2.96	1.38	.88	.44	.88
IN.	.17	.55	.63	1.80	.91	1.68	3.08	3.41	1.54	1.02	.50	.98

CAL YR 1988 TOTAL 613246 MEAN 1676 MAX 23100 MIN 265 CFSM .46 IN. 6.28
WTR YR 1989 TOTAL 1587317 MEAN 4349 MAX 41900 MIN 355 CFSM 1.20 IN. 16.27

GREAT MIAMI RIVER BASIN

213

03274600 GREAT MIAMI RIVER AT NEW BALTIMORE, OH
(National stream-quality accounting network station)

LOCATION.--Lat 39°15'47", long 84°40'04", in N 1/2 sec. 34, R.1, T.2, Hamilton County, Hydrologic Unit 05080002, at Blue Rock Road bridge at New Baltimore, 6.4 mi downstream from Indian Creek, and 14.3 mi downstream from discharge station at Hamilton.

DRAINAGE AREA.--3,814 mi².

PERIOD OF RECORD.--July 1966 to current year.

REMARKS.--Four parameter (Specific conductance, pH, Water temperature, and Dissolved oxygen) water quality monitor at sitae from July 1966 to September 1981. See records of daily discharge for station at Hamilton (station 032740000).

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE AIR (DEG C)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT 12...	1015	472	1050	9.0	6.0	13.0	11	12.0	118	K50	680
JAN 10...	1015	15900	550	7.5	-3.0	3.0	130	14.5	110	5300	K29000
MAR 08...	0915	3970	710	8.1	-3.0	2.0	43	14.0	103	6000	K12000
MAY 24...	0930	23200	533	8.2	20.0	15.0	220	--	--	K16000	K400
JUL 27...	0945	3920	630	8.3	26.0	27.0	47	7.0	90	1100	440
AUG 24...	1230	1310	740	8.5	26.5	25.0	27	7.3	91	1500	2000

DATE	HARD- NESS TOTAL (MG/L AS CACO3)	HARD- NESS NONCARB TOT FLD MG/L AS CACO3	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3	ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
OCT 12...	350	140	84	35	92	6.8	200	31	215	110	140
JAN 10...	250	100	63	22	15	3.6	176	0	142	51	34
MAR 08...	280	110	71	26	32	2.9	207	0	171	62	63
MAY 24...	180	0	45	16	9.8	3.9	246	0	199	27	16
JUL 27...	270	58	67	24	23	4.4	254	0	207	56	36
AUG 24...	300	110	73	29	46	4.4	239	0	211	80	58

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHOROUS TOTAL (MG/L AS P)	PHOS- PHOROUS DIS- SOLVED (MG/L AS P)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P)
OCT 12...	0.7	0.47	643	0.02	2.20	0.03	0.01	0.90	0.66	0.43	0.37
JAN 10...	0.3	7.0	325	0.04	10.0	0.16	0.16	2.2	0.22	0.14	0.11
MAR 08...	0.3	5.4	412	0.06	10.0	0.20	0.19	1.6	0.32	0.17	0.15
MAY 24...	0.2	7.5	211	0.05	3.30	0.17	0.17	1.2	0.23	0.17	0.14
JUL 27...	0.3	8.4	367	0.06	4.30	0.06	0.04	0.30	0.38	0.28	0.25
AUG 24...	0.4	5.6	463	0.06	3.40	0.10	0.10	1.4	0.48	0.43	0.38

GREAT MIAMI RIVER BASIN

03274600 GREAT MIAMI RIVER AT NEW BALTIMORE, OH--Continued

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM DIS- SOLVED (UG/L AS LI)
OCT 12...	<10	2	96	<0.5	1	2	<3	7	6	<5	13
JAN 10...	30	1	49	<0.5	6	<1	<3	6	60	<5	8
MAR 08...	--	--	--	--	--	--	--	--	--	--	--
MAY 24...	430	2	41	<0.5	1	<1	<3	10	400	<1	5
JUL 27...	--	--	--	--	--	--	--	--	--	--	--
AUG 24...	20	1	89	<0.5	<1	<1	<3	15	14	2	11

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)	SEDI- MENT, SUS- PENDED (MG/L)
OCT 12...	3	<0.1	10	8	2	1.0	670	<6	16	18
JAN 10...	4	<0.1	<10	4	<1	<1.0	470	<6	17	235
MAR 08...	--	--	--	--	--	--	--	--	--	70
MAY 24...	3	0.7	<10	2	<1	<1.0	280	<6	3	452
JUL 27...	--	--	--	--	--	--	--	--	--	80
AUG 24...	4	<0.1	<10	5	<1	<1.0	730	<6	18	64

K Results based on colony count outside the acceptable range

GROUND-WATER RECORDS

215

ASHLAND COUNTY

405303082170700. Local number, AS-2.

LOCATION.--Lat 40° 53' 03", long 82° 17' 07", Hydrologic Unit 05040002, Jerome Fork well field 2 mi northeast of Ashland.

Owner: Ashland Water Department.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled test water table well, diameter 6 in., depth 64 ft, cased.

INSTRUMENTATION.--Digital recorder-- 60 minute punch.

DATUM.--Elevation of land-surface datum is 980 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 2.00 ft above land-surface datum.

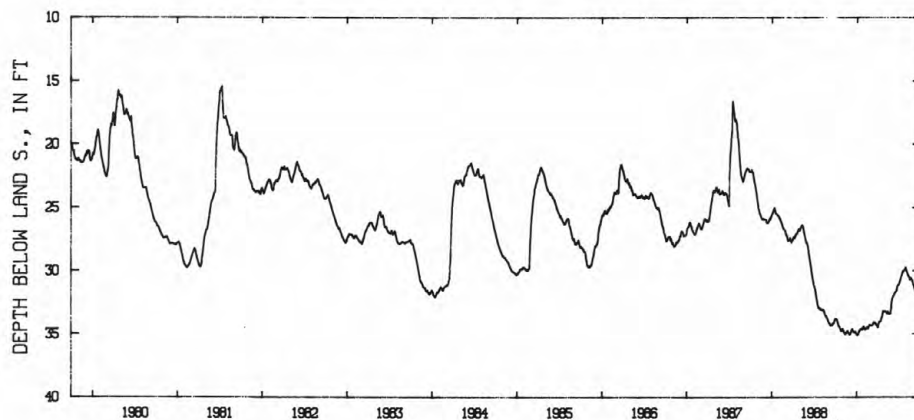
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--March 1964 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 35.12 ft below land-surface datum, Jan. 2, 1989; minimum daily low, 13.20 ft below land-surface datum, May 15, 18, 1967.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33.80	34.59	35.08	35.10	34.51	34.33	34.49	33.18	32.26	31.03	29.98	31.18
2	33.81	34.66	35.08	35.12	34.54	34.32	34.42	33.16	32.17	30.96	30.03	31.21
3	33.81	34.71	35.04	35.11	34.60	34.32	34.29	33.20	32.14	30.90	30.08	31.27
4	33.82	34.75	35.03	35.11	34.62	34.32	34.21	33.21	32.08	30.84	30.13	31.35
5	33.84	34.81	34.93	35.07	34.65	34.33	34.15	33.23	32.04	30.78	30.19	31.43
6	33.86	34.85	34.88	35.05	34.70	34.31	34.05	33.27	31.99	30.72	30.26	31.48
7	33.89	34.89	34.81	35.04	34.65	34.32	34.04	33.29	31.96	30.65	30.30	31.54
8	33.95	34.89	34.78	34.92	34.62	34.30	34.06	33.32	31.92	30.55	30.36	31.60
9	34.01	34.88	34.72	34.88	34.61	34.28	34.04	33.34	31.87	30.52	30.41	31.67
10	34.08	35.00	34.67	34.83	34.57	34.26	34.00	33.37	31.87	30.48	30.46	31.73
11	34.14	35.04	34.63	34.81	34.52	34.19	33.98	33.37	31.83	30.42	30.49	31.76
12	34.22	35.05	34.60	34.74	34.49	34.12	33.96	33.37	31.77	30.36	30.46	31.76
13	34.28	35.05	34.65	34.75	34.46	34.07	33.97	33.31	31.71	30.27	30.53	31.83
14	34.36	35.01	34.69	34.70	34.47	34.07	33.95	33.22	31.69	30.23	30.59	31.88
15	34.42	34.98	34.73	34.65	34.47	34.11	33.92	33.26	31.68	30.15	30.65	31.88
16	34.42	34.90	34.74	34.64	34.49	34.09	33.79	33.31	31.64	30.08	30.72	31.89
17	34.41	34.89	34.84	34.63	34.57	34.07	33.68	33.36	31.63	30.02	30.75	31.91
18	34.41	34.85	34.84	34.62	34.59	34.09	33.66	33.40	31.63	30.08	30.72	31.93
19	34.47	34.79	34.86	34.61	34.52	34.08	33.66	33.43	31.60	30.08	30.65	31.93
20	34.50	34.79	34.87	34.58	34.45	34.08	33.53	33.45	31.50	30.03	30.61	31.94
21	34.56	34.78	34.89	34.56	34.37	34.16	33.42	33.45	31.39	30.00	30.59	31.94
22	34.63	34.74	34.89	34.62	34.36	34.21	33.34	33.42	31.27	29.97	30.65	31.95
23	34.67	34.78	34.90	34.67	34.34	34.24	33.25	33.41	31.22	29.96	30.70	32.03
24	34.72	34.84	34.89	34.67	34.30	34.27	33.17	33.41	31.20	29.92	30.73	32.03
25	34.78	34.89	34.89	34.65	34.26	34.23	33.18	33.38	31.18	29.88	30.75	31.98
26	34.80	34.90	34.82	34.55	34.31	34.23	33.21	33.36	31.16	29.84	30.77	31.95
27	34.77	34.97	34.87	34.52	34.31	34.27	33.22	33.12	31.12	29.79	30.80	31.92
28	34.73	35.02	34.97	34.46	34.31	34.31	33.23	32.97	31.11	29.74	30.84	31.80
29	34.71	35.02	34.97	34.40	---	34.37	33.24	32.81	31.11	29.73	30.95	31.73
30	34.66	35.05	35.01	34.40	---	34.41	33.21	32.52	31.07	29.82	31.05	31.71
31	34.62	---	35.06	34.43	---	34.46	---	32.39	---	29.91	31.09	---
MAX	34.80	35.05	35.08	35.12	34.70	34.46	34.49	33.45	32.26	31.03	31.09	32.03

CAL YR 1988 LOW 35.08
WTR YR 1989 LOW 35.12405303082170700 AS-2 ASHLAND WTR DEPT AT WELL FLD ASHLAND OH
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

ASHLAND COUNTY--Continued

405425082173000. Local number. AS-3.

LOCATION.--Lat 40° 54' 25", long 82° 17' 30", Hydrologic Unit 05040002, Ashland Bates well field along Jerome Fork near Ashland.

Owner: Ashland Water Department.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 in, depth 78 ft, cased.

INSTRUMENTATION.--Digital recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 990 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 5.00 ft above land-surface datum.

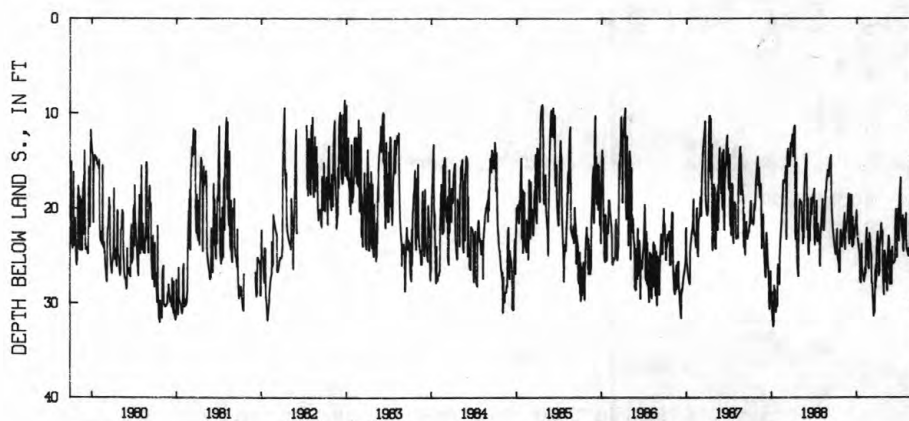
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--August 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 32.51 ft below land-surface datum, Jan. 9, 1988; minimum daily low, 3.10 ft, above land-surface, Feb. 23, 1978.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24.46	23.26	23.76	20.23	27.47	23.68	22.79	25.18	28.03	23.24	20.56	14.74
2	24.69	23.29	20.67	20.82	27.67	23.96	22.53	24.48	25.37	23.42	23.34	18.05
3	24.86	22.81	19.72	21.71	27.75	24.25	23.13	24.64	25.08	20.16	23.78	20.20
4	24.78	22.59	19.23	22.17	26.95	24.53	23.59	24.83	24.08	19.06	24.11	20.90
5	24.09	22.38	18.56	22.56	27.14	24.83	23.99	25.06	25.75	18.62	24.24	21.39
6	23.61	22.20	21.69	23.01	27.26	25.07	26.75	27.79	25.84	18.10	24.38	21.74
7	23.15	21.83	22.94	23.18	26.30	27.67	27.00	25.56	25.84	17.84	24.43	22.02
8	22.67	21.47	23.25	23.41	26.78	27.89	27.11	25.49	25.82	17.62	24.55	22.34
9	22.18	21.12	19.67	23.57	26.87	27.97	26.58	25.63	25.78	16.74	24.64	22.61
10	24.23	20.55	18.61	23.82	24.41	28.00	26.72	25.79	25.78	20.16	24.71	22.93
11	24.88	23.71	22.87	23.94	23.41	28.60	23.65	25.90	25.78	21.19	24.81	23.13
12	25.17	23.99	23.11	24.24	22.95	29.26	23.15	28.48	25.69	21.57	25.00	23.32
13	25.41	24.33	23.57	24.43	22.48	29.89	23.44	28.69	25.64	21.89	25.04	23.43
14	25.54	21.74	23.85	24.59	22.06	30.42	23.22	28.68	25.60	22.23	24.60	23.47
15	25.69	22.36	24.08	24.82	23.55	31.01	22.59	25.46	25.50	22.46	24.20	19.57
16	25.79	22.50	20.92	27.42	24.96	31.41	22.10	24.85	22.17	22.59	24.56	20.23
17	25.82	22.09	22.90	27.70	25.15	29.20	21.58	24.30	21.28	22.70	24.79	21.07
18	26.78	21.82	23.51	27.79	23.28	31.08	22.06	23.80	20.35	23.06	24.87	22.34
19	24.31	21.51	23.93	27.82	26.12	31.09	22.53	23.29	20.11	20.76	24.91	21.79
20	26.47	21.26	21.99	27.82	26.19	30.97	22.87	22.92	20.75	24.05	21.76	22.55
21	26.72	21.22	22.59	24.81	26.04	28.13	23.09	23.33	21.14	24.37	20.76	22.73
22	23.69	20.89	22.98	24.19	26.23	27.16	22.74	23.61	21.52	24.52	19.94	18.81
23	23.21	20.30	23.06	23.80	26.36	26.49	22.35	27.17	21.98	21.21	19.15	22.11
24	22.71	19.76	22.65	26.22	26.40	28.45	25.39	27.80	25.24	23.35	18.56	22.68
25	22.29	19.32	22.37	26.49	23.39	26.00	26.51	28.03	22.62	21.17	18.02	22.95
26	22.72	18.92	22.16	26.72	22.63	27.57	27.27	27.48	21.82	21.52	17.49	23.36
27	23.08	18.45	21.88	26.82	22.96	27.62	28.08	27.65	21.22	21.83	17.03	23.51
28	23.50	22.66	21.66	26.87	23.36	24.50	28.72	27.69	20.63	22.20	16.68	23.58
29	23.83	23.07	21.38	26.91	---	24.04	29.13	24.46	20.08	22.44	16.18	23.43
30	24.08	23.50	21.03	27.03	---	23.59	26.07	26.77	21.88	22.20	15.87	23.60
31	23.80	---	20.63	27.20	---	23.18	---	27.58	---	21.34	15.39	---
MAX	26.78	24.33	24.08	27.82	27.75	31.41	29.13	28.69	28.03	24.52	25.04	23.60
CAL YR 1988	LOW 32.51											
WTR YR 1989	LOW 31.41											



405425082173000 AS-3 ASHLAND W.D. ASHLAND BATES WELLFIELD NR ASHLAND OH
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

ATHENS COUNTY

392004082071600. Local number, AT-2A.

LOCATION.--Lat 39° 20'04", long 82° 07'16", Hydrologic Unit 05030204, 1.1 mi west of city hall in Athens.
Owner: City of Athens.

AQUIFER.--Sand and gravel of Quaternary Age.

WELL CHARACTERISTICS.--Drilled unused water table well, diameter 12 in., depth 48 ft, cased.

INSTRUMENTATION.--Biyearly measurement with chalked tape by ODNR personnel.

DATUM.--Elevation of land-surface datum is 641.81 ft above National Geodetic Vertical Datum of 1929.

Measuring point: Floor of instrument shelter, 5.80 ft above land-surface datum.

REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water. Prior to water year 1978, well depth reported as 43 ft.

PERIOD OF RECORD.--March 1954 to September 1982 continuous, periodic thereafter.

EXTREMES FOR PERIOD OF RECORD.--Maximum measured low, 21.13 ft below land-surface datum, Oct. 16, 1987;
minimum daily low, 1.05 ft below land-surface datum, May 25, 28, 1968.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM
INSTANTANEOUS OBSERVATIONS

DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 26, 1988	20.56	Apr. 26, 1989	16.06
Jan. 23, 1989	18.17		

GROUND WATER RECORDS

ATHENS COUNTY--Continued

392009082072200. Local number, AT-5

LOCATION.--Lat 39° 20' 09", long 82° 07' 22", Hydrologic Unit 05030204, in Athens well field along Hocking River.
Owner: Athens Water Department.

AQUIFER.--Sand and gravel of Quaternary Age.

WELL CHARACTERISTICS.--Drilled unused water table well, diameter 12 in., depth 48 ft, cased.

INSTRUMENTATION.--Digital recorder -- 60-minute punch.

DATUM.--Elevation of land surface datum is 640 ft above National Geodetic Vertical Datum on 1929, from topographic map. Measuring point: Floor of instrument shelter, 4.75 ft above land-surface datum.

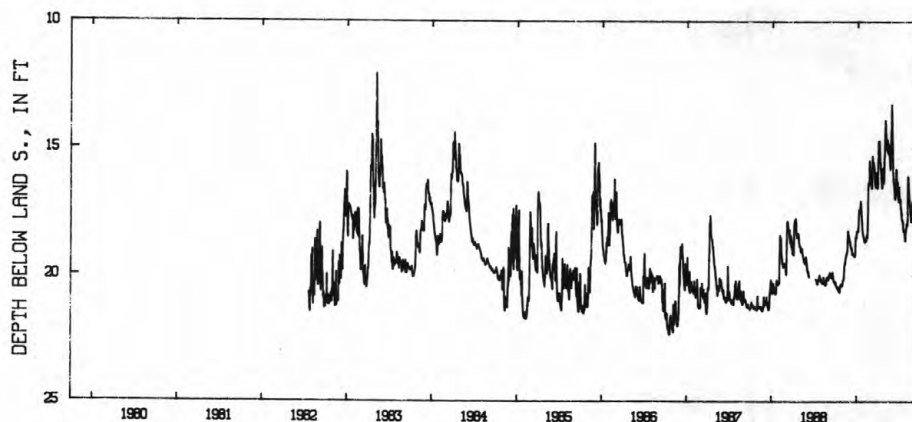
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--July 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 22.35 ft below land-surface datum, Oct. 19, 20, 1986; Minimum daily low 12.07 ft below land-surface datum, May 5, 1983.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.29	20.20	18.64	18.30	18.64	16.25	15.15	13.90	14.81	16.88	17.96	17.15
2	20.37	20.20	18.66	18.31	18.63	16.37	14.72	14.11	15.17	17.02	18.01	17.30
3	20.41	20.19	18.79	18.27	18.69	16.50	14.82	14.26	15.72	17.08	18.00	17.44
4	20.44	20.19	18.82	18.23	18.54	16.57	14.85	14.45	16.03	17.12	18.02	17.56
5	20.42	20.11	18.86	18.26	18.54	16.58	14.71	14.57	16.08	17.15	17.84	17.66
6	20.45	20.05	18.89	18.26	18.66	16.14	14.78	14.68	16.20	17.00	16.94	17.77
7	20.50	19.80	18.96	17.93	18.63	15.30	15.13	14.75	16.35	17.35	16.09	17.84
8	20.53	19.62	18.92	17.65	18.62	15.46	15.24	14.88	16.34	17.33	16.18	17.87
9	20.53	19.54	19.04	17.41	18.64	15.55	15.46	15.08	16.59	17.45	16.35	17.95
10	20.46	19.55	19.09	17.41	18.52	15.53	15.59	14.92	16.58	17.62	16.50	18.03
11	20.52	19.55	19.17	17.48	18.42	15.55	15.74	14.67	16.90	17.55	16.72	18.10
12	20.55	19.37	19.17	17.54	18.50	15.64	15.92	14.75	16.99	17.78	16.88	18.18
13	20.57	19.32	19.11	17.45	18.52	15.78	15.93	15.14	16.99	17.83	17.04	18.25
14	20.60	19.28	19.12	17.39	18.52	15.70	16.14	15.17	16.88	17.83	17.16	18.31
15	20.62	19.24	19.16	17.29	18.13	15.86	16.22	15.21	16.90	17.84	17.27	18.36
16	20.63	19.16	19.16	17.08	17.35	15.96	16.39	14.98	15.98	17.95	17.39	18.23
17	20.64	19.16	19.18	17.26	16.61	16.14	16.50	14.83	15.81	17.89	17.48	18.24
18	20.67	19.08	19.20	17.40	16.37	16.30	16.56	15.04	15.83	18.16	17.57	18.30
19	20.67	19.06	19.23	17.52	16.37	16.40	16.41	15.07	16.19	18.26	17.68	18.39
20	20.46	19.04	19.25	17.67	16.34	16.52	15.78	15.32	16.30	18.27	17.82	18.43
21	20.41	18.69	19.26	17.82	16.42	16.46	15.84	15.43	16.51	18.24	17.88	18.48
22	20.42	18.36	19.26	17.97	15.84	16.00	15.83	15.71	16.52	18.23	17.89	18.50
23	20.35	18.25	19.21	18.12	15.48	15.94	16.01	15.82	16.31	18.26	17.82	18.44
24	20.35	18.30	19.18	18.23	15.58	16.11	16.08	15.58	16.71	18.43	17.43	17.88
25	20.35	18.41	18.83	18.29	15.73	16.16	16.36	14.99	16.72	18.51	17.16	17.74
26	20.38	18.45	18.48	18.41	15.88	16.18	16.21	14.78	16.96	18.62	17.08	17.80
27	20.38	18.48	18.47	18.41	15.93	16.37	15.51	14.11	16.97	18.64	17.16	17.93
28	20.42	18.55	18.54	18.45	16.05	16.50	15.27	13.27	17.08	18.31	17.26	18.00
29	20.41	18.64	18.51	18.49	---	16.57	15.09	13.53	16.79	18.13	17.41	18.19
30	20.36	18.65	18.27	18.54	---	16.40	14.46	13.98	16.51	18.15	17.41	18.19
31	20.33	---	18.25	18.57	---	15.75	---	14.38	---	18.16	17.05	---
MAX	20.67	20.20	19.26	18.57	18.69	16.58	16.56	15.82	17.08	18.64	18.02	18.50
CAL YR 1988	LOW 20.74											
WTR YR 1989	LOW 20.67											



— 392009082072200 AT-5 ATHENS WELL FIELD ATHENS OH
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

AUGLAIZE COUNTY

403233083574500. Local number, AU-3.

LOCATION.--Lat 40°32'33", long 83°57'45", Hydrologic Unit 05080001, 1.0 mi Southwest of New Hampshire.

Owner: State of Ohio.

AQUIFER.--Limestone of Silurian Age.

WELL CHARACTERISTICS.--Drilled test artesian well, diameter 12 in., depth 380 ft., cased to 52 ft.

INSTRUMENTATION.--Biyearly measurement with chalked tape by ODNR personnel.

DATUM.--Elevation of land-surface datum is 1,020 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter, 3.00 ft. above land-surface datum.

REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--December 1974 to September 1982 continuous, periodic thereafter.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 11.87 ft below land-surface datum, Feb. 7-8, 1977; minimum measured low, 4.86 ft below land-surface datum, Oct. 29, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM
INSTANTANEOUS OBSERVATIONS

DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 28, 1988	8.80	Apr. 28, 1989	5.17

GROUND-WATER RECORDS

BELMONT COUNTY

400118081082200. Local number, B-3.

LOCATION.--Lat 40° 01' 18", long 81° 08' 22", Hydrologic Unit 05040001, Mt. Olivett Public Square, Mt. Olivett, Oh.

Owner: Village of Mt. Olivett.

AQUIFER.--Shale of Pennsylvanian Age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 119 ft.

INSTRUMENTATION.--Type F continuous recorder.

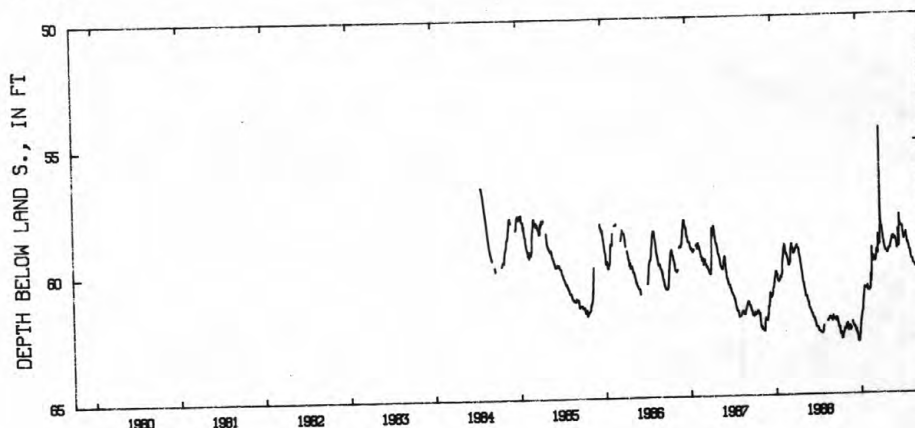
DATUM.--Elevation of land-surface datum is 1,265 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter, 1.5 ft. above land-surface datum.

REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--July 19, 1984 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 62.94 ft below land-surface datum, Dec. 26, 1988;
minumum daily low, 54.47 ft below land-surface datum, Mar. 31, 1989.DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62.39	62.26	62.28	62.28	60.72	59.73	56.50	59.45	58.82	58.40	59.28	60.01
2	62.37	62.24	62.30	62.16	60.78	59.75	57.72	59.44	58.85	58.40	59.32	60.01
3	62.34	62.24	62.30	62.11	60.91	59.75	58.12	59.39	58.87	58.40	59.34	60.05
4	62.43	62.24	62.35	62.04	60.92	59.74	58.31	59.35	58.88	58.45	59.34	60.06
5	62.59	62.20	62.35	62.03	60.92	59.74	58.38	59.31	58.90	58.43	59.34	60.06
6	62.63	62.25	62.34	61.92	60.91	59.59	58.42	59.27	58.93	58.60	59.36	60.06
7	62.63	62.38	62.34	61.90	60.91	59.70	58.42	59.26	58.98	58.66	59.45	60.06
8	62.63	62.46	62.41	61.79	60.91	59.75	58.42	59.27	59.03	58.73	59.53	60.00
9	62.62	62.50	62.45	61.74	60.92	59.75	58.55	59.27	59.05	58.80	59.62	59.97
10	62.61	62.44	62.45	61.73	60.92	59.74	58.68	59.24	59.20	58.86	59.67	59.96
11	62.56	62.37	62.51	61.71	60.83	59.68	58.76	59.25	59.28	58.90	59.68	59.99
12	62.74	62.38	62.55	61.58	60.85	59.53	58.83	59.25	---	58.78	59.69	60.04
13	62.81	62.30	62.50	61.40	60.86	59.53	58.92	59.22	---	58.78	59.70	60.08
14	62.81	62.31	62.44	61.40	60.84	59.32	58.96	59.11	---	58.77	59.72	60.08
15	62.80	62.33	62.60	61.21	60.80	59.29	58.99	59.10	58.52	58.79	59.72	60.06
16	62.74	62.32	62.62	61.11	60.28	59.38	59.09	59.05	59.02	58.79	59.74	60.06
17	62.70	62.41	62.61	61.07	60.56	59.39	59.13	58.99	59.18	58.72	59.83	60.09
18	62.63	62.48	62.61	60.93	60.56	59.37	59.19	58.99	59.19	58.69	59.87	60.14
19	62.60	62.48	62.64	60.80	60.47	59.45	59.26	58.95	59.19	58.68	59.88	60.15
20	62.60	62.37	62.70	60.77	60.31	59.45	59.29	58.88	59.14	58.63	59.88	60.15
21	62.60	62.42	62.89	60.83	60.12	58.70	59.29	58.80	57.92	58.73	59.88	60.15
22	62.47	62.42	62.93	60.83	59.21	59.03	59.30	58.81	57.95	58.86	59.89	60.12
23	62.42	---	62.92	60.82	59.67	59.13	59.34	58.81	58.26	58.95	59.89	60.06
24	62.41	---	62.89	60.80	59.77	59.13	59.36	58.78	58.32	58.99	59.91	60.12
25	62.41	---	62.92	60.81	59.77	59.12	59.36	58.78	58.34	59.03	59.96	60.12
26	62.45	---	62.94	60.81	59.65	59.10	59.35	58.78	58.34	59.07	59.96	60.04
27	62.46	62.14	62.88	60.82	59.54	59.10	59.35	58.85	58.34	59.07	60.00	60.02
28	62.45	62.20	62.70	60.83	59.60	59.10	59.36	58.90	58.34	59.06	60.01	60.01
29	62.43	62.26	62.65	60.83	---	59.07	59.38	58.90	58.40	59.12	60.01	59.90
30	62.37	62.26	62.60	60.76	---	58.65	59.45	58.85	58.40	59.15	60.01	59.84
31	62.31	---	62.42	60.74	---	54.47	---	58.82	---	59.22	60.01	---
MAX	62.81	62.50	62.94	62.28	60.92	59.75	59.45	59.45	59.28	59.22	60.01	60.15

CAL YR 1988 LOW 62.94
WTR YR 1989 LOW 62.94

400118081082200 B-3 VILLAGE OF MT OLIVETT AT MT OLIVETT OH
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

BUTLER COUNTY

391805084261800. Local number, BU-9.

LOCATION.--Lat 39° 18' 05", long 84° 26' 18", Hydrologic Unit 05090203, 2.5 mi northwest of Sharonville.

Owner: Olinkraft, Inc.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 in., depth 85 ft.

INSTRUMENTATION.--Biyearly measurement with chalked tape by ODNR personnel.

DATUM.--Elevation of land-surface datum is 586.89 ft above National Geodetic Vertical Datum of 1929. Measuring point: Floor of instrument shelter, 4.66 ft above land-surface datum.

REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water. Prior to water year 1978, well diameter reported as 26 in.

PERIOD OF RECORD.--July 1938 to September 1982 continuous, periodic thereafter.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 24.40 ft below land-surface datum, Mar. 16, 1954; minimum daily low, 4.40 ft below land-surface datum, Aug. 3, 1958.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM
INSTANTANEOUS OBSERVATION

DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 19, 1988	11.25	May 1, 1989	10.91

393202084241500. Local number, BU-15.

LOCATION.--Lat 39° 32' 02", long 84° 24' 15", Hydrologic Unit 05080002, at Hook Field (municipal airport) at Middletown.

Owner: City of Middletown.

AQUIFER.--Sand and gravel of Pleistocene Age.

INSTRUMENTATION.--Periodic measurement with chalked tape by ODNR personnel.

WELL CHARACTERISTICS.--Drilled observation water table well, diameter 6 in., depth 23 ft cased.

DATUM.--Elevation of land-surface datum is 641 ft, from topographic map. Measuring point: Floor of instrument shelter 3.50 ft above land-surface datum.

REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water. Water level affected by pumping wells nearby in Middletown well field.

PERIOD OF RECORD.--June 1972 to September 1982 continuous, periodic thereafter.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 14.60 ft below land-surface datum, Jan. 26, 1981; minimum daily low, 0.06 ft below land-surface datum, Feb. 25, 1975.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM
INSTANTANEOUS OBSERVATIONS

DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 19, 1988	13.32	Mar. 31, 1989	8.37

GROUND-WATER RECORDS

BUTLER COUNTY--Continued

391904084371800. Local number, BU-12.

LOCATION.--Lat 39° 19' 04", long 84° 37' 18", Hydrologic Unit 05080002. Cincinnati well field 1.5 mi east of Ross.

Owner: City of Cincinnati.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled test water table well, diameter 6 in., depth 157 ft, cased.

INSTRUMENTATION.--Type F continuous recorder.

DATUM.--Elevation of land-surface datum is 547.73 ft above National Geodetic Vertical Datum of 1929. Measuring point: Floor of instrument shelter 7.80 ft above land-surface datum.

REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

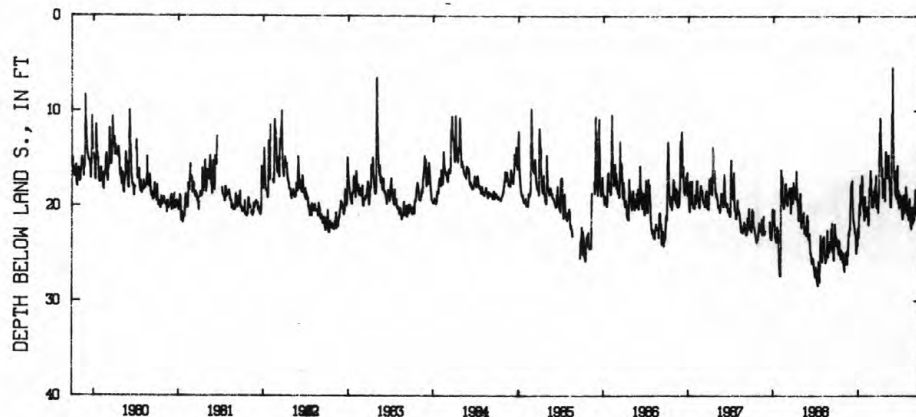
PERIOD OF RECORD.--April 1968 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 28.40 ft below land-surface datum, July 11, 1988; minimum daily low, 2.00 ft above land surface, May 24, 25, 1968.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.70	26.70	17.75	23.10	20.15	19.80	12.30	14.55	14.80	19.90	19.65	19.70
2	23.55	26.90	17.65	23.30	20.15	19.90	13.20	15.80	16.05	20.00	20.50	18.30
3	24.15	26.00	17.55	22.55	20.25	19.65	13.25	16.60	16.90	18.95	20.55	18.30
4	24.30	26.00	17.45	21.10	20.15	19.30	10.75	16.50	17.20	19.00	20.95	20.20
5	24.49	26.00	17.35	20.15	20.10	20.10	11.00	17.05	16.80	19.20	21.45	19.90
6	23.90	25.90	18.75	19.80	21.10	19.95	12.35	17.00	16.45	19.35	20.80	19.95
7	25.00	25.65	19.30	20.95	20.65	19.15	13.25	16.55	17.70	20.30	20.20	21.00
8	24.35	24.90	20.40	20.90	20.35	18.45	14.05	16.85	18.50	21.00	19.65	20.80
9	25.10	24.90	20.85	17.75	20.55	18.60	14.95	16.10	18.60	21.25	19.25	21.40
10	23.65	26.00	21.40	18.60	20.15	18.60	16.80	15.65	18.90	21.40	19.50	20.70
11	24.00	26.15	21.70	19.40	20.10	19.60	16.80	14.70	16.25	21.20	20.65	20.50
12	24.50	26.10	21.70	19.80	21.55	18.95	16.10	16.05	17.80	20.90	21.10	20.20
13	24.55	26.05	21.85	19.80	22.00	17.95	16.00	16.70	19.00	19.50	22.00	19.95
14	24.60	26.10	22.10	17.65	22.00	18.10	18.05	16.90	19.20	18.85	21.70	19.10
15	25.15	24.70	22.30	18.00	21.55	18.25	17.60	17.35	16.45	19.10	22.20	19.70
16	25.50	25.10	22.40	16.80	19.70	18.20	19.10	18.30	17.45	19.55	22.40	17.80
17	25.60	25.20	22.80	16.90	18.30	17.15	17.45	18.10	16.55	20.40	22.20	18.00
18	25.40	24.35	22.70	17.30	18.10	16.80	18.20	19.10	15.75	20.60	21.90	19.60
19	24.70	24.05	22.95	19.70	18.85	19.90	17.10	19.85	18.30	20.70	20.15	19.95
20	24.90	22.85	22.90	19.85	18.85	20.20	17.24	20.00	19.50	19.75	20.50	20.35
21	25.00	23.15	23.00	19.05	17.40	18.65	18.10	20.10	19.65	19.20	21.55	21.05
22	25.00	23.20	24.55	20.10	16.30	18.60	18.55	18.85	18.85	18.90	21.90	21.60
23	25.00	22.60	25.00	20.50	18.30	19.00	18.10	18.80	18.40	18.70	21.75	20.80
24	25.00	22.50	24.65	20.05	18.80	19.70	18.20	10.30	19.35	18.00	21.60	21.90
25	25.90	22.45	24.00	20.10	17.10	20.10	18.70	11.55	20.25	18.30	21.15	22.25
26	25.80	22.45	24.30	21.25	18.30	19.60	19.45	12.20	19.80	19.25	20.85	22.25
27	24.95	21.00	24.00	21.50	19.80	20.70	16.70	5.40	19.10	18.80	21.50	20.35
28	25.20	19.70	24.10	21.50	20.10	19.60	14.40	9.10	19.15	20.10	21.55	18.95
29	26.15	18.70	22.85	19.00	---	19.20	14.30	11.10	18.80	20.55	20.05	19.80
30	26.50	18.10	22.30	19.70	---	18.60	14.80	12.65	19.00	20.90	20.75	20.90
31	26.65	---	22.70	20.80	---	15.65	---	13.70	---	20.10	19.80	---
MAX	26.65	26.90	25.00	23.30	22.00	20.70	19.45	20.10	20.25	21.40	22.40	22.25

CAL YR 1988 LOW 28.40
WTR YR 1989 LOW 26.90



— 391904084371800 BU-12 CITY OF CINCINNATI GTMIAMI WFLD NR ROSS OH
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

223

BUTLER COUNTY--Continued

392017084345200. Local number, BU-7.

LOCATION.--Lat 39° 20' 17", long 84° 34' 52", Hydrologic Unit 05080002, 5584 East River Road in Fairfield.

Owner: C. E. Schiering.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled unused water table well, diameter 6 in., depth 176 ft, cased.

INSTRUMENTATION.--Type F continuous recorder.

DATUM.--Elevation of land-surface datum is 572.54 ft above National Geodetic Vertical Datum of 1929.

Measuring point: Floor of instrument shelter 1.93 ft above land-surface datum.

REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

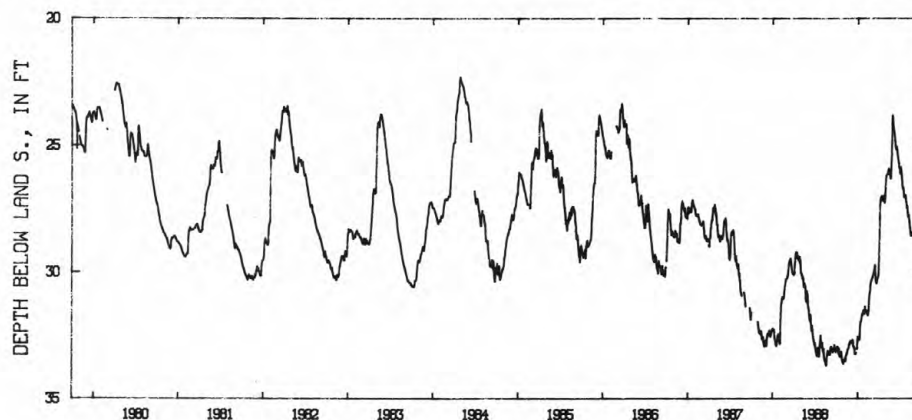
PERIOD OF RECORD.--August 1943 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 33.70 ft below land-surface datum, Aug. 19, 1988;
minimum daily low, 11.45 ft below land-surface datum, June 6, 1947.DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33.06	33.56	32.76	32.57	31.52	30.30	29.52	26.52	24.17	26.10	27.40	28.42
2	33.05	33.54	32.76	32.62	31.58	30.25	29.15	26.25	24.28	26.14	27.50	28.42
3	33.02	33.54	32.74	32.67	31.53	30.23	28.90	26.22	24.32	26.05	27.62	28.40
4	32.97	33.46	32.80	32.65	31.53	30.20	28.45	26.18	24.40	25.99	27.75	28.33
5	32.96	33.46	32.81	32.68	31.53	30.21	27.90	26.16	24.43	25.86	27.82	28.35
6	32.97	33.48	32.82	32.70	31.54	30.17	27.42	26.16	24.51	25.96	27.75	28.38
7	32.97	33.52	32.80	32.70	31.54	30.10	27.22	26.16	24.59	26.09	27.75	28.42
8	33.10	33.40	32.75	32.68	31.60	30.10	27.15	26.15	24.67	26.17	27.75	28.37
9	33.20	33.52	32.69	32.55	31.64	30.07	27.07	26.15	24.80	26.27	27.83	28.44
10	33.21	33.52	32.72	32.33	31.67	30.03	27.07	26.11	24.88	26.38	27.95	28.53
11	33.14	33.31	32.77	32.09	31.62	29.98	27.04	26.03	25.00	26.55	28.03	28.56
12	33.03	33.30	32.93	32.00	31.65	29.92	27.01	26.00	25.06	26.67	28.14	28.59
13	33.24	33.25	32.95	32.01	31.72	29.88	27.02	25.95	25.11	26.70	28.24	28.62
14	33.30	33.27	32.95	31.95	31.70	29.81	27.03	25.93	25.18	26.66	28.34	28.62
15	33.30	33.23	32.97	31.92	31.58	29.73	27.05	25.96	25.17	26.67	28.45	28.31
16	33.35	33.16	33.02	31.88	31.49	29.75	27.09	26.02	25.06	26.73	28.52	28.02
17	---	33.16	33.00	31.77	31.24	30.06	27.13	26.06	25.15	26.87	28.57	28.10
18	---	33.07	33.07	31.69	31.08	30.26	27.20	26.14	25.18	26.95	28.57	28.17
19	33.36	33.07	33.20	31.66	30.94	30.38	27.20	26.19	25.25	27.06	28.58	28.18
20	33.25	33.04	33.26	31.70	30.87	30.44	27.17	26.18	25.36	27.04	28.50	28.28
21	33.16	33.04	---	31.65	30.82	30.46	27.00	26.24	25.43	26.98	28.49	28.38
22	33.17	33.01	---	31.60	30.76	30.43	27.03	26.32	25.48	27.03	28.44	28.42
23	33.24	33.01	33.25	31.58	30.61	30.37	26.99	26.32	25.55	27.06	28.46	28.43
24	33.35	32.88	33.20	31.53	30.52	30.29	27.11	25.98	25.62	26.97	28.45	28.55
25	33.40	32.87	---	31.56	30.44	30.25	27.19	25.65	25.68	27.00	28.44	28.60
26	33.50	32.88	---	31.60	30.35	30.23	27.24	25.56	25.75	27.10	28.42	28.61
27	33.50	32.79	33.02	31.63	30.34	30.19	27.27	24.97	25.86	27.23	28.40	28.63
28	33.57	32.79	33.05	31.65	30.33	30.17	27.11	24.13	25.87	27.25	28.45	28.67
29	33.51	32.75	33.00	31.66	---	30.13	26.94	23.83	25.87	27.34	28.45	28.73
30	33.56	32.74	32.75	31.59	---	30.07	26.75	23.85	26.00	27.45	28.41	28.82
31	33.63	---	32.56	31.38	---	29.90	---	24.01	---	27.48	28.42	---
MAX	33.63	33.56	33.26	32.70	31.72	30.46	29.52	26.52	26.00	27.48	28.58	28.82

CAL YR 1988 LOW 33.70

WTR YR 1989 LOW 33.63



392017084345200 BU-7 C E SCHIERING EAST RIVER RD FAIRFIELD OH
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS
BUTLER COUNTY--Continued

392021084340300. Local number, BU-56.

LOCATION.--Lat 39° 20' 21", long 84° 34' 03", Hydrologic Unit 05080002, 1.3 mi east of the Great Miami River in Fairfield.

Owner: Hamilton Water Department.

WELL CHARACTERISTICS.--Drilled unused water table well, diameter 5 in., depth 58 ft, cased.

INSTRUMENTATION.--Type F continuous recorder.

DATUM.--Elevation of land-surface datum is 583.62 ft above National Geodetic Vertical Datum of 1929. (Levels by Miami Conservancy District.) Measuring point: Floor of instrument shelter, 3.00 ft above land-surface datum.

REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

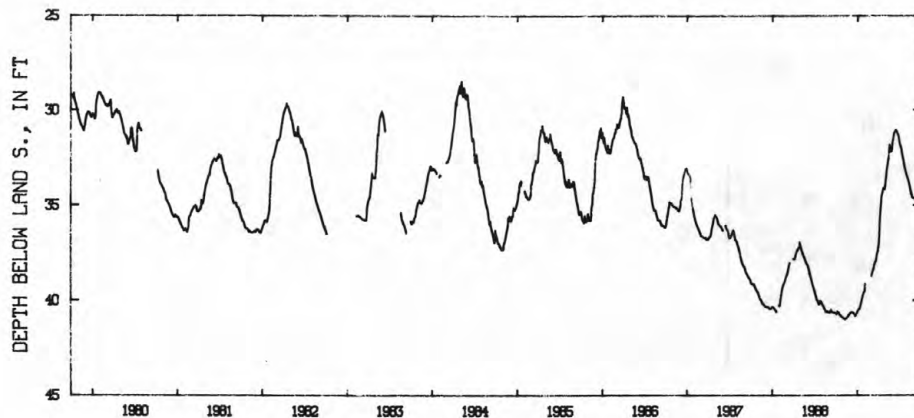
PERIOD OF RECORD.--November 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 41.00 ft below land-surface datum, Nov. 9, 10, 1988; minimum daily low, 26.81 ft below land-surface datum, Apr. 10, 1975.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40.71	40.94	40.65	40.57	39.43	38.72	37.16	33.84	31.63	31.78	33.48	34.65
2	40.73	40.95	40.65	40.54	39.14	38.68	37.02	33.70	31.55	31.86	33.50	34.65
3	40.73	40.96	40.65	40.53	---	38.63	36.89	33.58	31.47	31.88	33.53	34.67
4	40.70	40.97	40.63	40.51	---	38.57	36.74	33.46	31.36	31.88	33.58	34.67
5	40.65	40.97	40.62	40.50	---	38.54	36.49	33.31	31.31	31.91	33.63	34.67
6	40.59	40.97	40.61	40.47	---	38.49	36.11	33.23	31.25	31.97	33.65	34.69
7	40.61	40.98	40.61	40.47	---	38.45	35.85	33.13	31.20	32.02	33.68	34.71
8	40.63	40.99	40.62	40.44	---	38.43	35.60	33.04	31.17	32.08	33.72	34.72
9	40.66	41.00	40.62	40.43	---	38.40	35.40	32.95	31.13	32.15	33.78	34.76
10	40.68	41.00	40.62	40.41	---	38.35	35.22	32.88	31.12	32.22	33.83	34.78
11	40.68	40.99	40.62	40.38	---	38.30	35.02	32.77	31.11	32.30	33.89	34.82
12	40.65	40.96	40.64	40.33	---	38.24	34.87	32.67	31.09	32.35	33.95	34.85
13	40.65	40.94	40.65	40.28	---	38.17	34.71	32.58	31.05	32.41	34.01	34.85
14	40.70	40.93	40.66	40.23	---	38.12	34.59	32.56	31.07	32.49	34.07	34.84
15	40.73	40.93	40.68	40.17	---	38.05	34.50	32.50	31.07	32.55	34.13	34.76
16	40.75	40.92	40.69	40.12	---	38.05	34.45	32.19	31.10	32.61	34.21	34.67
17	40.77	40.91	40.69	40.07	---	38.00	34.39	31.98	31.14	32.67	34.28	34.65
18	40.79	40.89	40.69	40.00	---	37.97	34.36	31.83	31.15	32.74	34.35	34.68
19	40.80	40.87	40.71	39.94	---	37.97	34.28	31.85	31.15	32.78	34.39	34.72
20	40.80	40.85	40.74	39.89	---	37.94	34.22	32.07	31.22	32.87	34.31	34.77
21	40.81	40.83	40.76	39.87	---	37.89	34.16	32.15	31.25	32.94	34.45	34.79
22	40.81	40.81	40.81	39.80	---	37.83	34.14	32.19	31.26	33.02	34.49	34.84
23	40.83	40.78	40.81	39.76	---	37.72	34.13	32.20	31.28	33.07	34.54	34.91
24	40.84	40.77	40.79	39.70	---	37.63	34.10	32.20	31.30	33.12	34.58	34.92
25	40.85	40.75	40.77	39.66	---	37.57	34.10	32.19	31.34	33.17	34.58	34.93
26	40.86	40.73	40.73	39.63	---	37.54	34.10	32.16	31.39	33.21	34.58	34.95
27	40.90	40.72	40.68	39.60	---	37.50	34.12	32.17	31.48	33.25	34.59	34.95
28	40.90	40.72	40.69	39.59	---	37.46	34.16	32.08	31.53	33.30	34.61	34.92
29	40.90	40.71	40.68	39.57	---	37.39	34.07	31.94	31.65	33.35	34.64	34.97
30	40.91	40.69	40.64	39.55	---	37.26	33.96	31.80	31.70	33.40	34.63	35.02
31	40.93	---	40.59	39.54	---	37.19	---	31.68	---	33.43	34.63	---
MAX	40.93	41.00	40.81	40.57	39.43	38.72	37.16	33.84	31.70	33.43	34.64	35.02

CAL YR 1988 LOW 41.00
WTR YR 1989 LOW 41.00



— 392021084340300 BU-56 HAMILTON WATER WKS AT FAIRFIELD OH
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

BUTLER COUNTY--Continued

392048084311400. Local number, BU-8.

LOCATION.--Lat 39° 20' 48", long 84° 31' 14", Hydrologic Unit 05080002, Symmes and Gilmore Road, east of Hamilton.

Owner: Hamilton Water Department.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled test artesian well, diameter 6 in., depth 200 ft, cased.

INSTRUMENTATION.--Type F continuous recorder.

DATUM.--Elevation of land-surface datum is 630 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 4.13 ft above land-surface datum.

REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--April 1944 to current year.

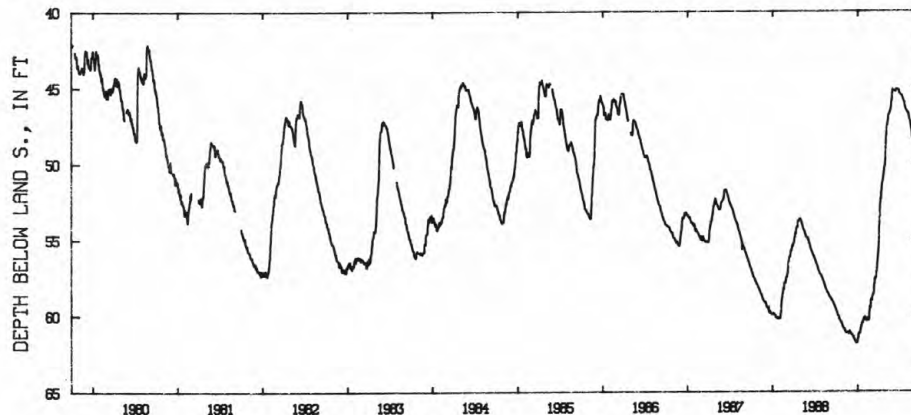
EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 71.70 ft below land-surface datum, Oct. 24, 1944; minimum daily low, 38.24 ft below land-surface datum, June 8, 1947.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59.70	60.84	61.14	61.61	60.10	58.99	55.42	49.00	45.17	45.43	46.62	48.04
2	59.72	60.85	61.18	61.50	60.17	59.00	55.21	48.53	45.21	45.46	46.63	47.88
3	59.77	60.86	61.19	61.50	60.28	58.85	54.51	48.24	45.23	45.48	46.69	47.87
4	59.82	60.88	61.23	61.23	60.33	58.70	54.09	48.11	45.20	45.49	46.67	47.77
5	59.90	60.88	61.24	61.24	60.34	58.69	53.96	47.64	45.21	45.50	46.68	47.67
6	59.97	60.89	61.25	61.17	60.30	58.66	53.53	47.56	45.22	45.51	46.70	47.64
7	60.01	60.97	61.25	61.13	60.31	58.58	52.96	47.55	45.22	45.52	46.79	47.63
8	60.03	61.05	61.30	61.15	60.34	58.59	52.59	47.50	45.23	45.53	46.87	47.61
9	60.04	61.09	61.32	61.17	60.35	58.59	52.34	47.30	45.23	45.54	46.97	47.60
10	60.04	61.09	61.33	61.18	60.32	58.50	52.35	47.22	45.27	45.57	47.03	47.62
11	60.07	61.14	61.37	61.18	60.18	58.25	52.32	47.17	45.29	45.62	47.10	47.68
12	60.16	61.14	61.39	60.91	60.20	57.95	52.02	47.00	45.27	45.67	47.15	47.77
13	60.24	61.10	61.39	60.93	60.20	57.95	51.79	46.82	45.15	45.69	47.20	47.86
14	60.27	61.12	61.38	60.93	60.22	57.76	51.70	46.80	45.15	45.75	47.25	47.92
15	60.30	61.13	61.50	60.67	60.26	57.53	51.41	46.75	45.15	45.81	47.29	47.99
16	60.31	61.09	61.53	60.68	60.32	57.64	51.29	46.72	45.17	45.85	47.38	48.05
17	60.34	61.10	61.55	60.67	60.33	57.65	51.23	46.73	45.18	45.90	47.50	48.15
18	60.36	61.13	61.58	60.55	60.20	57.49	51.18	46.73	45.18	45.95	47.65	48.26
19	60.40	61.14	61.59	60.47	59.85	57.50	51.11	46.64	45.13	45.95	47.72	48.34
20	60.44	61.10	61.61	60.46	59.68	57.50	51.10	46.52	45.12	45.97	47.78	48.44
21	60.45	61.15	61.69	60.48	59.40	57.10	50.87	46.52	45.13	46.06	47.90	48.48
22	60.48	61.17	61.73	60.47	59.44	57.12	50.78	46.52	45.15	46.23	48.03	48.50
23	60.49	61.19	61.73	60.33	59.48	57.12	50.66	46.36	45.16	46.32	48.17	48.72
24	60.51	61.20	61.73	60.27	59.50	56.86	50.54	46.29	45.17	46.37	48.26	48.81
25	60.56	61.20	61.80	60.27	59.45	56.61	50.39	46.02	45.18	46.43	48.32	48.85
26	60.61	61.18	61.83	60.20	58.95	56.47	50.27	45.92	45.19	46.48	48.34	48.97
27	60.65	61.02	61.83	60.20	58.92	56.32	50.24	45.86	45.19	46.50	48.37	49.10
28	60.71	61.10	61.77	60.21	58.96	56.18	50.16	45.73	45.25	46.53	48.41	49.14
29	60.77	61.11	61.79	60.21	---	55.97	49.98	45.39	45.33	46.56	48.45	49.20
30	60.80	61.12	61.79	60.10	---	55.85	49.70	45.19	45.39	46.57	48.45	49.23
31	60.84	---	61.65	60.10	---	55.57	---	45.15	---	46.60	48.35	---
MAX	60.84	61.20	61.83	61.61	60.35	59.00	55.42	49.00	45.39	46.60	48.45	49.23

CAL YR 1988 LOW 61.83

WTR YR 1989 LOW 61.83



392048084311400 BU-8 HAMILTON WTR DPT SYMMES RD E OF HAMILTON OH
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

BUTLER COUNTY--Continued

392445084333000. Local number BU-36.

LOCATION.--Lat 39°24'45", long 84°33'30", Hydrologic Unit 05080002, on right bank of Great Miami River 300 ft downstream from Twomile Creek in Hamilton.

Owner: Champion Paper Company.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled industrial supply water-table well, diameter 30 in, depth 168 ft cased.

PERIOD OF RECORD.--December 1965 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE AIR (DEG C)	TEMPERATURE WATER (DEG C)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNESIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTASSIUM, DIS-SOLVED (MG/L AS K)	BICARBONATE WATER DIS IT FIELD (MG/L AS HCO3)
DEC 14...	1245	942	7.4	10.0	15.5	10	110	34	33	3.6	383
MAY 25...	1240	870	7.2	28.0	15.0	16	100	32	30	3.8	398
AUG 11...	1115	925	7.3	25.0	16.5	26	110	34	32	4.0	189

DATE	ALKALINITY WAT WH TOT FET FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	ARSENIC TOTAL (UG/L AS AS)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)
DEC 14...	312	91	53	0.2	11	550	<0.01	1.30	<1	11
MAY 25...	323	88	55	0.2	10	533	<0.01	1.30	--	--
AUG 11...	153	91	49	0.2	11	459	<0.01	1.10	<1	11

DATE	CHROMIUM, DIS-SOLVED (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGANESE, DIS-SOLVED (UG/L AS MN)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
DEC 14...	9	4	4	16	<5	<5	4	<10	16	1.2
MAY 25...	--	--	--	7	--	--	<1	--	--	0.7
AUG 11...	10	5	4	21	2	2	4	<10	5	0.9

GROUND-WATER RECORDS

227

BUTLER COUNTY--Continued

392515084322000. Local number, BU-5.

LOCATION.--Lat 39° 25' 15", long 84° 32' 20", Hydrologic Unit 05080002, 2.0 mi north of courthouse in Hamilton.

Owner: Hamilton Water Department.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled unused water table well, diameter 18 in., depth 110 ft, cased.

INSTRUMENTATION.--Digital recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 590 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 5.71 ft above land-surface datum.

REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water. Water level affected by pumping of nearby North Hamilton well field and by stage of the Great Miami River.

PERIOD OF RECORD.--July 1939 to current year.

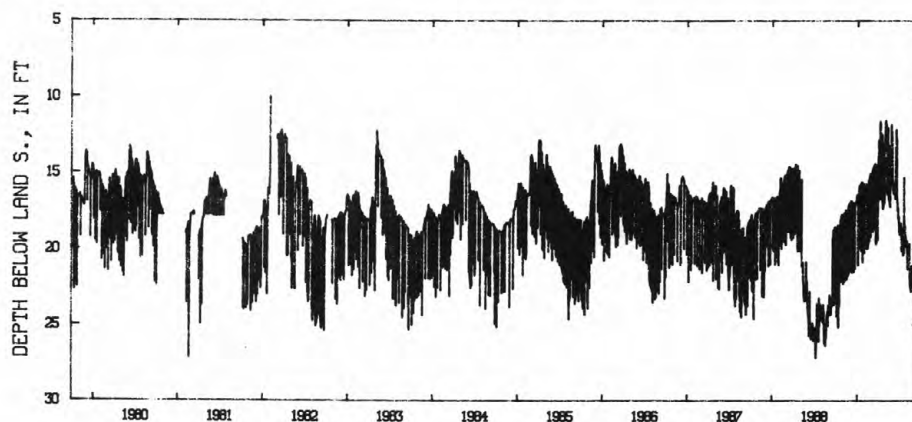
EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 42.05 ft below land-surface datum, Sept. 16-17, 1954; minimum daily low, 4.10 ft below land-surface datum, Jan. 23, 1959.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.95	22.31	16.99	16.45	16.08	15.15	13.11	11.56	15.16	18.60	19.54	20.70
2	18.61	18.01	21.37	16.42	17.02	15.08	12.80	11.67	15.45	19.06	19.49	22.14
3	23.32	21.91	17.12	20.90	15.93	15.03	16.80	11.79	15.97	18.36	19.54	20.91
4	24.46	17.98	16.98	21.07	15.90	15.04	15.90	11.86	16.15	19.01	20.54	21.22
5	24.23	17.75	16.86	17.75	15.89	15.01	15.99	11.97	16.14	18.76	21.35	20.89
6	22.99	17.65	16.84	17.01	15.84	14.83	12.06	16.07	16.36	18.33	19.85	21.29
7	19.06	22.14	16.90	16.52	15.75	14.74	11.62	16.17	15.67	18.30	20.09	22.84
8	18.66	17.88	21.56	16.26	15.83	18.88	11.70	16.33	15.70	18.42	19.82	22.00
9	18.45	17.64	17.16	15.86	18.98	14.95	11.77	16.42	15.85	18.65	19.76	21.76
10	24.67	21.70	17.03	19.87	20.00	14.79	16.34	12.58	16.21	19.98	19.76	21.09
11	25.18	17.72	16.99	19.98	16.01	14.65	16.58	12.12	16.31	20.14	20.17	21.00
12	25.05	17.49	16.97	16.25	15.92	14.53	16.73	12.05	16.28	19.05	19.97	21.36
13	19.55	17.46	16.97	16.57	15.90	18.69	12.48	16.21	16.69	18.70	19.69	23.21
14	23.53	21.58	16.96	15.78	15.86	14.67	12.44	16.43	16.28	18.65	21.79	23.70
15	23.77	22.01	16.98	15.73	19.97	14.49	12.47	16.60	12.39	19.38	22.30	21.82
16	18.98	17.57	21.53	15.97	15.95	14.45	12.55	16.68	12.16	19.26	22.45	21.20
17	18.62	21.92	17.17	20.14	19.66	14.42	16.73	16.75	16.21	20.43	22.57	22.41
18	18.41	17.61	17.05	16.06	15.56	17.16	16.82	16.86	16.47	19.49	22.53	21.36
19	22.08	21.76	17.00	15.62	15.48	14.48	16.95	13.17	12.71	19.58	22.78	19.49
20	18.10	17.48	17.01	19.61	15.45	19.37	17.37	17.00	16.54	20.29	22.83	16.61
21	22.18	21.76	21.33	15.73	19.51	19.58	13.00	17.19	16.75	15.30	21.48	16.32
22	18.12	17.37	17.17	15.66	15.46	19.69	17.30	17.24	16.95	18.72	21.12	16.17
23	17.92	21.67	17.05	20.90	15.21	19.53	13.07	15.78	17.50	18.45	21.11	18.28
24	17.85	17.31	17.01	16.22	15.16	15.00	13.05	15.70	17.26	18.45	21.50	19.47
25	17.83	17.12	16.95	16.22	15.07	14.66	13.06	15.75	17.41	18.44	21.55	21.18
26	17.78	21.56	16.92	16.22	15.06	14.54	17.02	11.83	18.02	19.30	21.59	21.60
27	17.75	17.24	16.88	16.21	19.22	14.46	16.67	12.82	17.83	19.08	21.71	22.85
28	21.83	17.00	16.85	15.75	15.25	18.94	12.59	12.25	17.95	19.25	21.76	23.10
29	17.85	21.34	16.69	15.74	---	19.41	12.25	12.69	17.94	19.44	22.10	18.07
30	17.76	17.03	16.50	20.22	---	14.96	11.71	13.14	18.86	19.91	22.56	21.46
31	21.92	---	16.46	20.26	---	14.14	---	13.66	---	19.62	21.36	---
MAX	25.18	22.31	21.56	21.07	20.00	19.69	17.37	17.24	18.86	20.43	22.83	23.70

CAL YR 1988 LOW 27.18

WTR YR 1989 LOW 25.18



392515084322000 BU-5 HAMILTON WTR DPT N PLANT N OF HAMILTON OH
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

BUTLER COUNTY--Continued

392939084231700. Local number, BU-3.

LOCATION.--Lat 39° 29' 39", long 84° 23' 17", Hydrologic Unit 05080002, Armco Steel Corp. Rt. 122 in Middletown.

Owner: Armco Steel Corp.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 24 in., depth 250 ft, cased.

INSTRUMENTATION.--Type F continuous recorder.

DATUM.--Elevation of land-surface datum is 668 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 1.08 ft above land-surface datum.

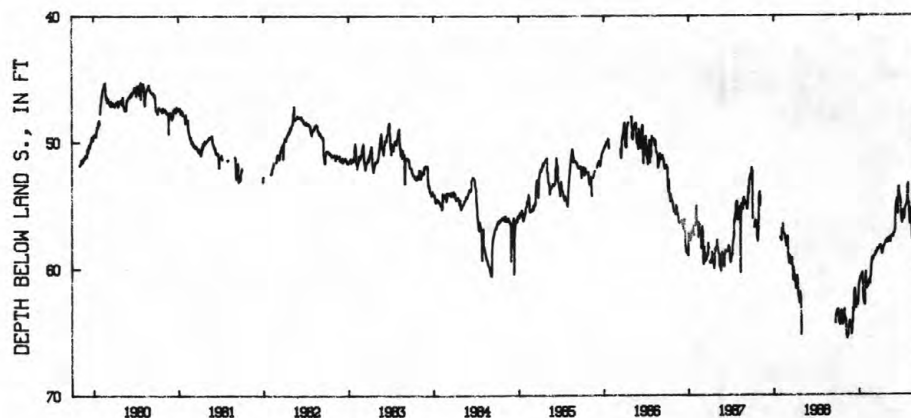
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--July 1938 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 147.27 ft below land-surface datum, Apr. 4, 1955; minimum daily low, 45.27 ft below land-surface datum, July 21, 1980.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63.25	63.95	64.82	61.17	61.57	59.33	58.39	57.75	57.26	55.88	54.97	53.70
2	63.22	64.09	64.83	61.10	61.57	59.24	58.32	57.96	57.18	56.07	55.03	54.02
3	63.23	64.06	64.30	60.97	61.51	59.04	58.19	57.77	57.00	56.16	54.84	53.93
4	63.22	63.97	64.32	61.00	61.51	59.05	58.28	57.64	56.93	56.40	55.44	53.97
5	64.02	64.04	64.05	60.82	61.44	59.07	58.30	57.76	56.89	56.35	55.72	54.06
6	64.19	64.24	63.12	60.68	61.47	59.06	58.45	57.84	55.65	56.29	56.11	54.10
7	64.25	65.23	63.23	60.68	61.41	59.03	58.50	57.92	55.27	56.18	56.49	53.88
8	64.25	65.33	63.38	60.70	61.38	59.03	58.58	57.76	55.03	55.71	55.56	53.88
9	64.26	65.38	63.09	60.68	61.38	58.96	58.81	57.67	54.84	55.43	55.45	53.80
10	64.26	65.40	61.96	60.58	61.08	58.85	58.84	57.70	54.76	55.80	55.69	53.79
11	64.44	65.52	61.81	60.50	60.92	58.78	58.75	57.69	54.70	56.00	55.26	53.99
12	64.44	65.40	61.69	60.57	61.04	58.95	58.50	57.64	54.71	56.02	55.35	54.12
13	63.65	65.32	61.60	60.64	60.92	58.90	58.47	57.55	54.50	56.06	55.33	54.09
14	63.48	65.30	61.71	60.53	61.07	58.64	58.43	57.61	55.46	56.09	55.47	53.97
15	63.38	65.29	61.83	60.32	60.94	58.76	58.25	57.60	55.63	55.77	56.64	53.99
16	63.37	65.15	61.96	60.88	61.04	58.78	58.30	57.91	55.70	55.40	57.45	53.92
17	63.34	64.66	62.13	61.06	61.19	58.61	58.26	57.75	55.65	55.27	57.69	53.97
18	63.38	64.47	63.13	61.74	60.78	58.64	58.28	57.55	54.05	55.23	57.41	53.79
19	64.25	64.25	62.31	62.12	60.64	58.64	58.25	57.49	53.61	55.20	54.56	53.77
20	64.34	64.30	62.42	62.47	60.62	58.41	58.12	57.41	53.70	55.10	53.79	53.58
21	64.33	64.32	62.57	62.60	60.55	58.57	58.05	57.42	53.57	55.05	53.48	53.70
22	64.42	64.11	62.45	62.64	59.78	58.56	58.03	57.50	53.85	55.03	53.34	53.41
23	64.42	64.19	62.55	62.72	59.59	58.46	57.97	57.50	54.14	54.99	53.19	53.43
24	64.40	64.23	62.70	62.82	59.58	58.40	57.96	57.50	54.25	54.86	53.12	53.31
25	64.30	64.38	62.85	62.87	59.37	58.46	57.87	57.37	54.32	54.82	54.10	53.07
26	64.33	64.38	62.90	62.86	59.12	58.42	57.90	57.37	54.42	54.73	54.21	53.26
27	63.49	64.40	62.67	60.87	59.13	58.36	57.95	57.45	54.55	53.62	54.27	53.17
28	63.37	64.60	62.63	60.64	59.20	58.31	57.89	57.50	54.66	53.42	54.55	53.19
29	63.34	65.07	62.01	60.42	---	58.25	57.73	57.25	54.71	53.50	54.38	52.86
30	63.20	65.19	61.53	60.29	---	58.21	57.79	57.18	55.63	53.33	53.59	52.79
31	63.76	---	61.33	61.37	---	58.35	---	57.25	---	54.73	53.68	---
MAX	64.44	65.52	64.83	62.87	61.57	59.33	58.84	57.96	57.26	56.40	57.69	54.12

CAL YR 1988 LOW 65.52
WTR YR 1989 LOW 65.52392939084231700 BU-3 ARMCO STEEL CORP MIDDLETOWN OH
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

BUTLER COUNTY--Continued

393103084240900. Local number, BU-2

LOCATION.--Lat 39° 31' 03", long 84° 24' 09", Hydrologic Unit 05080002, in basement of YMCA in Middletown.

Owner: Middletown YMCA.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 12 in., depth 88 ft, cased.

INSTRUMENTATION.--Type F continuous recorder.

DATUM.--Elevation of land-surface datum is 636.27 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of platform 14.77 ft below land-surface datum.

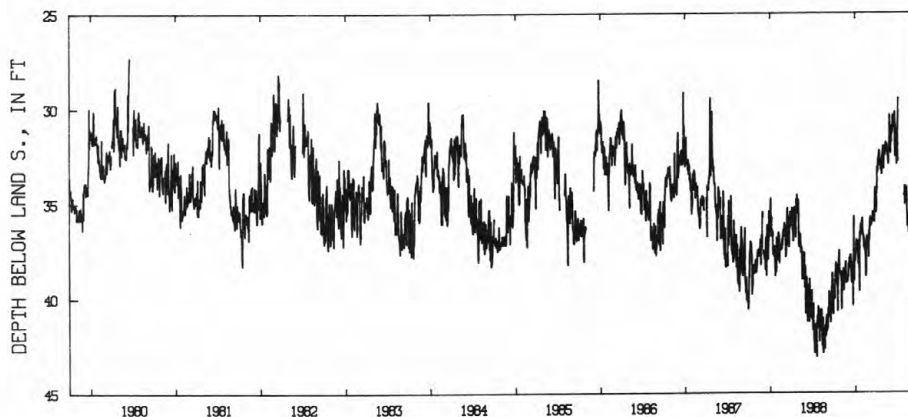
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--October 1942 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 52.15 ft below land-surface datum, Sept. 28, Nov. 5, 1953 and Jan. 22, 1954; minimum daily low, 27.30 ft below land-surface datum, June 17, 1980.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39.40	38.65	38.90	37.65	36.60	36.95	34.20	33.15	32.40	32.80	35.07	35.87
2	39.50	40.25	38.25	37.70	36.65	36.45	34.20	33.20	31.45	30.80	34.28	35.76
3	39.70	40.60	38.20	37.40	36.65	36.00	34.30	32.35	30.95	30.25	34.33	35.76
4	40.05	39.50	38.25	37.00	36.80	35.90	33.10	32.00	31.80	29.50	34.84	35.90
5	39.20	39.10	38.45	36.95	36.75	35.75	33.40	32.50	31.10	---	34.94	36.01
6	38.75	39.30	37.90	36.95	37.20	36.00	33.15	32.30	31.25	---	34.64	36.07
7	38.75	38.60	38.10	37.20	37.35	35.90	33.30	32.50	31.35	---	34.60	35.24
8	38.35	38.95	37.90	37.35	37.40	36.20	32.75	32.40	31.15	---	34.16	35.52
9	38.15	38.90	37.75	37.50	36.95	36.10	32.60	32.15	31.25	---	34.62	35.48
10	38.55	38.70	37.75	37.20	37.50	36.10	32.85	32.05	30.55	---	34.86	35.62
11	38.30	38.45	37.75	37.35	37.30	36.00	32.40	31.80	30.35	---	35.44	35.43
12	38.80	39.00	37.75	37.15	37.55	36.00	33.00	31.90	31.00	---	36.23	34.73
13	38.65	39.60	38.50	38.20	37.35	35.95	32.25	31.95	30.90	---	35.60	34.69
14	39.25	38.85	38.70	37.10	38.85	35.75	33.00	31.95	30.90	---	36.06	35.69
15	39.40	39.00	39.20	37.00	38.85	35.85	33.00	31.90	30.70	---	35.82	36.15
16	38.70	38.75	39.10	37.65	38.50	35.45	32.70	32.00	31.05	---	35.72	35.63
17	40.70	38.60	38.90	38.00	37.35	35.50	33.00	32.30	30.75	---	35.96	34.65
18	39.80	38.45	39.10	39.65	37.10	35.85	32.70	32.15	30.35	---	36.57	35.33
19	38.20	38.45	38.95	37.00	36.75	35.70	33.10	32.50	30.20	---	35.98	35.19
20	38.30	38.10	38.15	36.50	36.80	35.70	33.25	32.45	32.55	---	35.54	35.08
21	38.15	38.80	38.70	36.70	36.90	35.85	33.20	32.45	30.90	---	35.72	35.37
22	37.80	39.15	40.40	36.55	37.00	36.00	33.20	32.95	30.85	---	36.44	35.76
23	37.50	39.20	38.55	36.10	37.00	35.40	33.20	32.80	31.00	---	36.22	34.73
24	38.30	39.00	38.30	36.70	36.90	35.20	33.50	32.10	31.40	---	35.97	35.04
25	38.65	38.95	35.70	36.30	36.85	34.20	32.55	32.15	31.40	---	34.73	35.59
26	38.60	38.95	38.50	36.45	37.00	34.85	32.75	32.00	31.40	---	35.02	35.82
27	38.70	39.00	39.10	36.20	37.85	34.65	32.50	31.80	32.95	---	34.93	35.34
28	38.80	39.15	37.85	35.95	36.45	34.80	32.30	30.35	32.55	34.58	35.77	35.99
29	38.80	38.95	38.10	35.85	---	35.15	32.30	30.85	32.80	34.53	35.52	36.30
30	38.80	38.85	37.95	35.80	---	35.50	32.00	32.10	32.65	34.62	35.53	35.71
31	38.90	---	38.00	36.50	---	35.25	---	31.50	---	34.11	35.81	---
MAX	40.70	40.60	40.40	39.65	38.85	36.95	34.30	33.20	32.95	34.62	36.57	36.30
CAL YR 1988	LOW 43.10											
WTR YR 1989	LOW 40.70											



393103084240900 BU-2 YMCA IN MIDDLETOWN OH
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

CARROLL COUNTY

403709081052800. Local number, C-1.

LOCATION.--Lat 40° 37' 09", long 81° 05' 28", Hydrologic Unit 05040001, Carrollton well field, State Route 171, 3 mi north of Carrollton.

Owner: Carrollton Water Department.

AQUIFER.--Sandstone of Pennsylvanian Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 10 in., depth 70 ft, cased.

INSTRUMENTATION.--Digital recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 1050 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of platform 3.0 ft above land-surface datum.

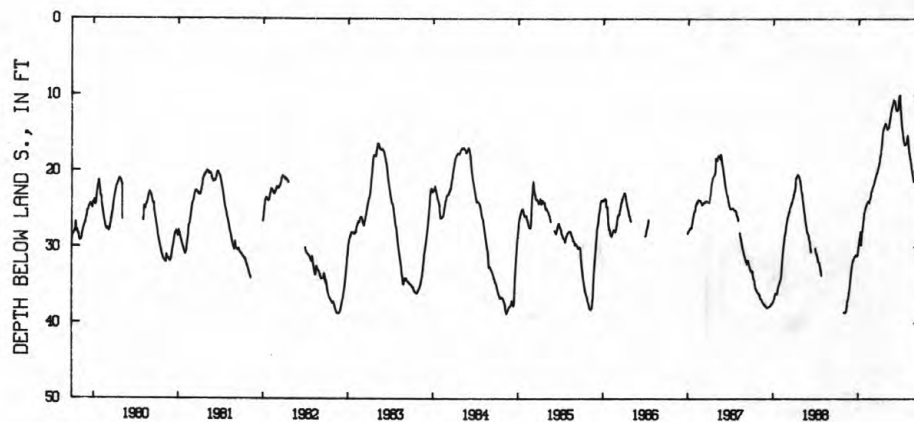
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--August 1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 40.70 ft below land-surface datum, Nov. 19, 1957; minimum daily low, 7.20 ft below land-surface datum, Jan. 10, 1971.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	38.65	33.41	30.06	24.80	22.45	18.86	14.29	10.62	12.48	16.03	---
2	---	38.66	33.07	29.91	24.72	22.24	18.62	14.28	10.64	13.05	16.40	---
3	---	38.55	32.75	29.72	24.64	22.08	18.18	14.39	10.77	13.37	16.51	---
4	---	38.50	32.70	29.55	24.52	22.03	18.04	14.47	10.78	13.88	16.89	---
5	---	38.57	32.41	29.22	24.37	21.95	18.03	14.31	10.90	14.05	17.15	---
6	---	38.60	32.17	28.95	24.36	21.85	17.82	14.37	10.99	14.29	17.60	---
7	---	38.63	31.98	28.88	24.21	21.87	17.64	14.37	11.18	14.47	17.72	---
8	---	38.58	31.91	28.70	24.18	21.72	17.17	14.33	11.37	14.71	17.63	---
9	---	38.48	31.73	28.59	24.18	21.64	16.90	14.32	11.60	14.95	17.96	---
10	---	38.47	31.65	28.24	24.07	21.47	16.53	14.22	11.82	15.19	18.19	---
11	---	38.26	31.66	27.99	23.98	21.26	16.10	14.10	12.01	15.47	18.40	---
12	---	38.00	31.63	28.57	24.09	21.28	15.69	13.71	11.95	15.67	18.46	---
13	---	37.78	31.47	29.77	23.97	21.04	15.29	13.62	11.94	15.82	18.75	---
14	---	37.65	31.42	29.03	24.07	20.91	15.03	13.45	12.03	16.03	18.94	---
15	---	37.17	31.38	28.55	24.09	20.91	14.72	13.16	12.06	16.19	19.13	---
16	---	36.96	31.22	28.32	24.18	20.90	14.59	13.01	11.96	16.31	19.40	---
17	---	36.90	31.22	28.00	24.01	20.61	14.42	12.77	11.97	16.47	19.62	---
18	---	36.83	31.22	27.86	23.81	20.47	14.37	12.67	11.90	16.52	19.82	---
19	---	36.61	31.23	27.66	23.70	20.47	14.28	12.37	11.82	16.52	20.02	---
20	---	36.45	31.08	27.25	23.64	20.21	14.17	12.15	11.39	16.47	20.22	---
21	---	36.26	31.15	27.16	23.51	20.31	14.05	12.11	10.49	16.43	20.33	---
22	---	35.92	31.07	26.70	23.39	20.17	13.99	11.78	10.41	16.35	20.49	---
23	---	35.80	31.06	26.47	23.30	19.99	14.01	11.55	10.22	16.34	20.70	---
24	---	35.53	31.14	26.29	23.14	19.77	13.99	11.59	10.09	16.32	20.89	---
25	---	35.29	31.20	25.86	22.80	19.67	13.70	11.46	10.04	16.35	21.02	---
26	---	34.96	31.17	25.49	22.61	19.70	13.78	11.37	9.98	16.25	21.22	---
27	---	34.57	31.01	25.41	22.60	19.51	13.83	11.22	10.13	15.92	21.40	---
28	---	34.31	31.09	25.34	22.46	19.38	13.87	11.12	10.90	15.53	---	---
29	---	34.02	31.06	25.21	---	19.30	14.01	10.82	11.60	15.49	---	---
30	---	33.57	30.68	24.98	---	19.00	14.23	10.63	12.04	15.29	---	---
31	38.63	---	30.50	24.91	---	18.90	---	10.57	---	15.62	---	---
MAX	38.63	38.66	33.41	30.06	24.80	22.45	18.86	14.47	12.06	16.52	21.40	---
CAL YR 1988	LOW 38.66											
WTR YR 1989	LOW 38.66											



403709081052800 C-1 MUNICIPAL WELL FIELD CARROLLTON OH
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

231

CHAMPAIGN COUNTY

400638083453900. Local number, CH-3.

LOCATION.--Lat 40° 06' 38", long 83° 45' 39", Hydrologic Unit 05080001, in Urbana.

Owner: Howard Paper Company.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled test water table well, diameter 8 in., depth 40 ft, cased.

INSTRUMENTATION.--Digital recorder -- 60-minute punch.

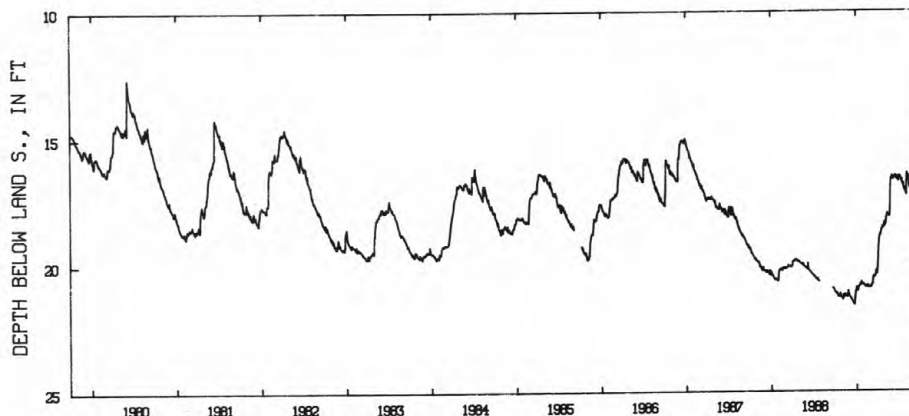
DATUM.--Elevation of land-surface datum is 1030 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 4.50 ft above land-surface datum.

REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--May 1957 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 24.80 ft below land-surface datum, Feb. 26-29, Mar. 13, 1964;
minimum daily low, 12.45 ft below land-surface datum, Mar. 24, 1975.DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.08	21.32	21.24	20.93	20.78	20.88	20.14	18.37	16.59	16.71	17.12	16.90
2	21.08	21.34	21.25	20.89	20.80	20.90	19.99	18.32	16.55	16.60	17.16	16.87
3	21.08	21.38	21.27	21.00	20.82	20.89	19.82	18.43	16.59	16.56	17.18	16.42
4	21.09	21.35	21.28	21.04	20.84	20.90	19.67	18.46	16.50	16.53	17.23	16.28
5	21.12	21.29	21.29	21.04	20.86	20.87	19.48	18.43	16.56	16.50	17.25	16.20
6	21.13	21.20	21.31	21.03	20.87	20.82	19.28	18.41	16.64	16.52	16.40	16.19
7	21.16	21.23	21.32	21.03	20.85	20.80	19.15	18.41	16.63	16.56	16.42	16.21
8	21.16	21.24	21.36	20.97	20.86	20.80	19.05	18.28	16.60	16.52	16.40	16.22
9	21.11	21.27	21.37	20.92	20.85	20.79	18.94	18.19	16.60	16.55	16.46	16.23
10	21.17	21.28	21.39	20.88	20.88	20.79	18.89	18.11	16.64	16.61	16.47	16.23
11	21.16	21.21	21.40	20.87	20.88	20.78	18.85	18.08	16.54	16.63	16.49	16.57
12	21.18	21.22	21.39	20.86	20.90	20.66	18.81	18.05	16.58	16.60	16.54	16.71
13	21.21	21.17	21.41	20.86	20.91	20.54	18.83	18.02	16.59	16.64	16.50	16.75
14	21.26	21.18	21.44	20.86	20.90	20.47	18.80	17.97	16.58	16.68	16.67	16.57
15	21.27	21.23	21.46	20.83	20.88	20.50	18.79	18.06	16.54	16.71	16.75	16.60
16	21.23	21.23	21.47	20.80	20.83	20.51	18.74	18.07	16.54	16.63	16.82	16.66
17	21.21	21.22	21.48	20.76	20.85	20.50	18.70	18.06	16.53	16.72	16.89	16.74
18	21.21	21.26	21.50	20.77	20.87	20.51	18.64	18.07	16.48	16.77	16.94	16.72
19	21.24	21.26	21.53	20.81	20.84	20.49	18.60	18.07	16.51	16.82	16.97	16.74
20	21.26	21.25	21.55	20.79	20.90	20.49	18.59	18.09	16.55	16.82	16.88	16.82
21	21.28	21.21	21.56	20.81	20.89	20.44	18.59	18.04	16.56	16.85	16.96	16.83
22	21.29	21.27	21.58	20.68	20.90	20.42	18.59	18.10	16.59	16.88	16.99	16.86
23	21.13	21.27	21.59	20.71	20.91	20.42	18.50	18.10	16.64	16.80	16.96	16.91
24	21.15	21.28	21.59	20.73	20.91	20.41	18.54	18.03	16.65	16.95	16.96	16.92
25	21.18	21.10	21.39	20.76	20.88	20.25	18.54	17.92	16.52	17.00	16.81	16.97
26	21.23	21.07	21.30	20.78	20.87	20.24	18.53	17.80	16.59	17.02	16.84	16.98
27	21.27	21.04	21.25	20.78	20.87	20.33	18.53	17.21	16.65	17.05	16.74	17.02
28	21.30	21.13	21.10	20.79	20.89	20.37	18.54	16.80	16.61	17.07	16.84	17.06
29	21.30	21.16	21.04	20.80	---	20.38	18.53	16.63	16.65	17.10	16.86	17.14
30	21.31	21.20	21.03	20.78	---	20.36	18.43	16.59	16.66	16.99	16.86	17.10
31	21.29	---	21.01	20.77	---	20.23	---	16.60	---	17.06	16.89	---
MAX	21.31	21.38	21.59	21.04	20.91	20.90	20.14	18.46	16.66	17.10	17.25	17.14

CAL YR 1988 LOW 21.59
WTR YR 1989 LOW 21.59400638083453900 CH-3 HOWARD PAPER CO URBANA OH
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

CLARK COUNTY

395639084012200. Local number, CL-9.

LOCATION.--Lat 39 56'39", long 84 01'22", Hydrologic Unit 05080001, at north edge of New Carlisle.

Owner: New Carlisle Water Department.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 12 in., depth 113 ft, cased.

INSTRUMENTATION.--Digital recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 900 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of platform 2.50 ft above land-surface datum.

REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--September 1974 to current year.

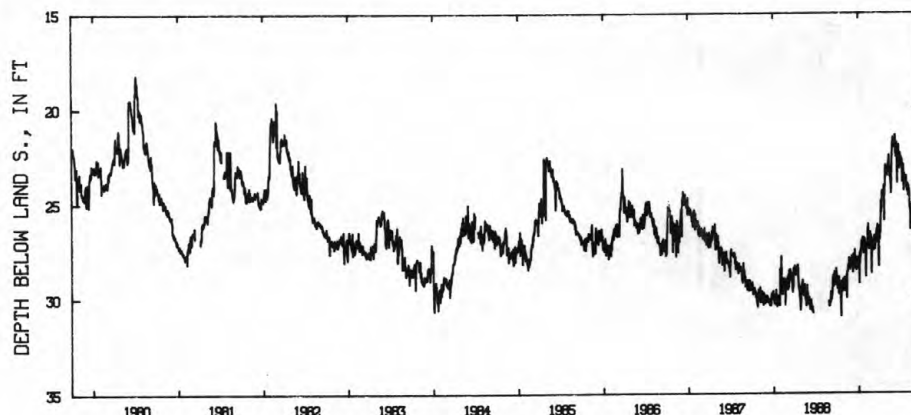
EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 31.25 ft below land-surface datum, July 13, 1977; minimum daily low, 18.20 ft below land-surface datum, July 4, 1980.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28.91	29.37	27.95	27.98	28.51	27.51	26.22	23.29	21.76	22.70	24.16	25.48
2	29.13	28.92	28.06	28.19	28.89	27.08	26.94	23.47	21.56	23.03	24.62	25.10
3	29.52	29.64	27.80	28.38	27.78	26.95	26.47	23.56	21.85	22.62	24.54	25.17
4	29.04	29.51	28.05	28.16	27.35	27.23	26.27	23.57	21.70	22.93	24.10	25.61
5	29.31	29.43	28.33	29.24	27.42	27.34	26.59	23.23	21.62	22.94	24.34	25.79
6	29.29	29.33	27.91	27.63	27.11	27.45	25.83	23.32	21.44	23.00	24.28	26.42
7	29.28	29.55	28.19	28.25	27.16	27.03	25.35	23.09	21.42	22.74	24.39	25.68
8	29.79	29.33	28.67	27.96	27.24	27.49	24.89	22.96	21.56	23.90	24.60	25.84
9	28.90	29.43	28.38	27.84	26.32	26.77	25.48	23.16	22.42	23.39	25.27	25.63
10	29.44	29.21	27.70	27.47	26.45	27.11	25.23	22.80	21.89	23.56	25.00	25.65
11	29.54	28.77	28.04	27.72	26.12	26.72	24.60	22.93	22.57	23.40	25.10	25.81
12	29.13	30.00	28.41	27.47	26.72	27.28	24.37	22.50	22.22	22.97	26.40	25.90
13	29.34	28.63	27.97	27.22	27.02	27.44	24.41	23.29	21.81	23.10	25.27	25.92
14	29.66	28.68	27.95	27.00	26.83	27.17	24.62	23.07	22.20	23.34	25.24	25.57
15	29.62	28.62	28.43	27.17	27.45	27.05	24.49	23.61	22.23	24.35	25.16	25.00
16	29.67	28.58	27.47	26.95	27.10	27.03	24.62	23.13	23.09	23.56	25.70	25.32
17	30.61	28.35	28.17	26.95	27.27	26.89	24.57	23.23	23.95	23.47	25.84	25.50
18	30.96	28.26	28.05	26.82	26.83	26.60	24.52	23.26	22.69	23.76	26.08	25.47
19	29.73	28.41	28.28	27.31	26.93	26.42	24.51	23.94	22.34	23.57	25.57	25.17
20	29.27	28.40	27.84	27.25	26.54	27.07	24.08	23.72	21.99	23.78	25.23	25.26
21	29.16	27.90	27.90	27.11	26.89	26.49	24.79	24.50	22.62	23.88	25.74	25.36
22	29.67	28.04	28.48	27.68	26.83	26.33	25.93	24.22	21.95	23.81	25.64	25.88
23	29.11	28.30	28.53	27.13	26.72	26.15	24.21	23.36	22.58	23.88	25.75	25.76
24	29.67	28.06	28.08	26.83	26.98	26.24	24.06	22.55	22.60	23.87	24.97	25.83
25	29.10	28.17	28.45	27.13	26.85	26.84	24.12	22.53	22.51	23.59	25.36	25.68
26	29.32	28.50	28.22	26.99	28.47	26.68	23.39	21.94	23.21	24.20	26.03	25.79
27	29.00	27.97	28.43	27.03	28.70	26.58	23.02	21.85	22.68	24.09	25.61	27.28
28	29.57	28.35	28.42	26.89	27.44	27.72	23.02	21.57	22.38	24.02	25.62	27.56
29	29.38	28.16	27.86	27.44	---	28.23	23.07	21.70	22.49	24.39	25.70	25.91
30	29.33	27.98	27.90	27.24	---	28.33	23.10	21.57	22.59	24.11	25.41	26.00
31	29.61	---	28.00	27.32	---	26.37	---	22.09	---	24.00	25.76	---
MAX	30.96	30.00	28.67	29.24	28.89	28.33	26.94	24.50	23.95	24.39	26.40	27.56

CAL YR 1988 LOW 30.96

WTR YR 1989 LOW 30.96



395639084012200 CL-9 CITY OF NEW CARLISLE AT NEW CARLISLE OH
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

233

CLARK COUNTY--Continued

395840083495200. Local number, CL-7.

LOCATION.--Lat 39° 58' 40", long 83° 49' 52", Hydrologic Unit 05080001. Eagle City Road northwest of Springfield.

Owner: State of Ohio.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled test water table well, diameter 6 in., depth 50 ft, cased.

INSTRUMENTATION.--Digital recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 928.02 ft. Measuring point: Floor of instrument shelter 2.00 ft above land-surface datum.

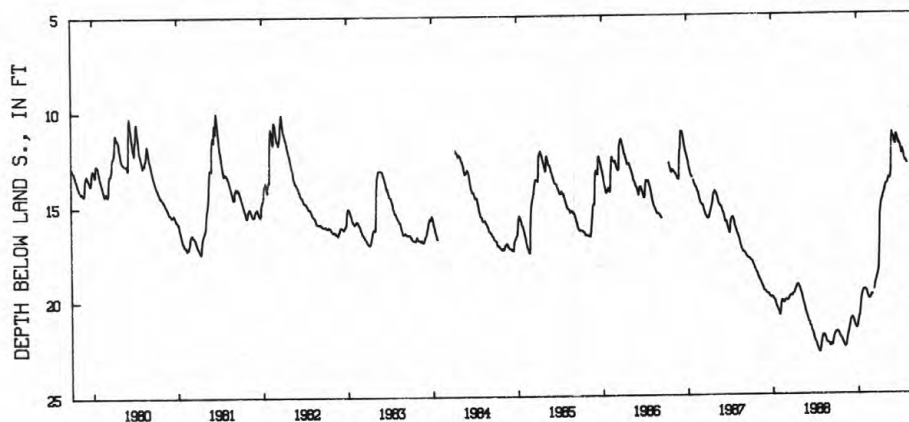
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--September 1960 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 30.17 ft below land-surface datum, Feb. 18, 19, 1961; minimum daily low, 10.04 ft below land-surface datum, June 16, 1981.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN.	JUL	AUG	SEP
1	21.73	22.42	21.07	21.17	19.51	19.78	18.11	14.09	11.31	11.82	12.82	13.30
2	21.72	22.45	21.05	21.12	19.53	19.78	17.74	14.00	11.38	11.86	12.87	13.30
3	21.71	22.50	21.02	21.04	19.56	19.77	17.36	13.99	11.40	11.90	12.89	13.30
4	21.70	22.52	21.00	20.97	19.57	---	17.05	13.99	11.45	11.94	---	13.28
5	21.72	22.53	21.00	20.94	19.57	---	16.65	13.95	11.45	11.98	---	13.27
6	21.74	22.53	21.00	20.91	19.58	---	16.14	13.95	11.49	12.03	---	13.29
7	21.76	22.51	20.99	20.89	19.63	---	15.77	13.95	11.55	12.11	---	13.31
8	21.79	22.48	21.01	20.82	19.68	---	15.49	13.94	11.60	12.15	---	13.35
9	21.81	22.46	21.03	20.71	19.72	---	15.30	13.92	11.70	12.21	---	13.40
10	21.81	22.45	21.06	20.58	19.77	---	15.18	13.90	11.79	12.30	---	13.45
11	21.83	22.40	21.11	20.43	19.83	19.51	15.05	13.88	11.81	12.37	---	13.46
12	21.88	22.33	21.12	20.28	19.87	19.45	14.96	13.81	11.81	12.27	---	13.50
13	21.91	22.23	21.15	20.17	19.89	19.39	14.89	13.74	11.87	12.15	---	13.54
14	21.96	22.15	21.19	20.07	19.93	19.30	14.86	13.72	11.87	12.17	---	13.56
15	22.00	22.04	21.24	19.95	19.98	19.20	14.78	13.66	11.54	12.19	---	13.54
16	22.02	21.95	21.27	19.88	20.00	19.17	14.76	13.61	11.39	12.24	---	13.51
17	22.02	21.89	21.32	19.80	20.00	19.11	14.74	13.64	11.36	12.29	---	13.53
18	22.03	21.83	21.36	19.74	20.00	19.05	14.70	13.65	11.36	12.35	---	13.53
19	22.07	21.79	21.39	19.70	20.00	19.04	14.67	13.65	11.37	12.39	---	13.55
20	22.08	21.75	21.43	19.64	19.99	18.98	14.60	13.67	11.41	12.45	---	13.59
21	22.10	21.68	21.47	19.62	19.97	18.91	14.53	13.67	11.46	12.53	---	13.62
22	22.13	21.60	21.50	19.59	19.96	18.87	14.50	13.64	11.50	12.60	---	13.64
23	22.15	21.55	21.52	19.55	19.94	18.83	14.47	13.61	11.57	12.64	13.43	13.72
24	22.16	21.50	21.54	19.52	19.92	18.77	14.43	13.52	11.65	12.67	13.43	13.72
25	22.19	21.45	21.54	19.52	19.90	18.73	14.39	13.32	11.70	12.73	13.25	13.72
26	22.24	21.37	21.54	19.52	19.85	18.68	14.38	13.17	11.75	12.77	13.23	13.79
27	22.27	21.29	21.51	19.52	19.82	18.62	14.33	12.45	11.84	12.76	13.26	13.81
28	22.31	21.22	21.47	19.51	19.78	18.56	14.27	11.75	11.83	12.73	13.27	13.83
29	22.35	21.15	21.42	19.51	---	18.52	14.18	11.40	11.78	12.76	13.28	13.89
30	22.38	21.09	21.34	19.51	---	18.50	14.14	11.26	11.77	12.76	13.32	13.91
31	22.39	---	21.24	19.50	---	18.36	---	11.25	---	12.78	13.32	---
MAX	22.39	22.53	21.54	21.17	20.00	19.78	18.11	14.09	11.87	12.78	13.43	13.91

CAL YR 1988 LOW 22.80
WTR YR 1989 LOW 22.53395840083495200 CL-7 OH DIV WTR EAGLE CITY RD NR SPRINGFIELD OH
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

COSHOCKTON COUNTY

401256081525100. Local number, CS-3.

LOCATION.--Lat 40°12'56", long 81°52'51", Hydrologic Unit 05040004, 1.5 mi north of Conesville.

Owner: Universal Cyclops Corp.

AQUIFER.--Sand and gravel of Quaternary Age.

WELL CHARACTERISTICS.--Drilled test water table well, diameter 8 in., depth 110 ft, cased.

INSTRUMENTATION.--Digital recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 745 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 2.80 ft above land-surface datum.

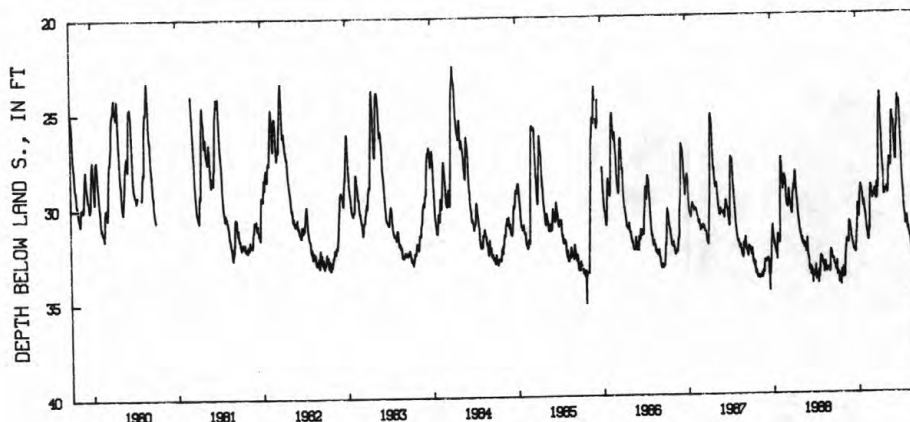
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--April 1958 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 36.98 ft below land-surface datum, Oct. 16, 1973; minimum daily low, 21.40 ft below land-surface datum, July 10, 1969.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33.48	33.63	31.33	30.20	30.37	29.26	28.16	29.32	25.24	24.61	31.08	32.84
2	33.21	33.82	31.42	30.05	30.47	29.47	27.23	29.34	25.47	24.80	31.21	32.70
3	33.04	33.88	31.53	30.31	30.65	29.47	26.40	29.39	25.62	25.06	31.31	32.44
4	33.77	33.86	31.61	30.47	30.56	29.60	25.85	29.33	25.77	25.33	31.44	32.33
5	33.55	33.88	31.86	30.64	30.75	29.67	25.47	29.34	25.78	25.68	31.46	32.65
6	33.62	33.70	31.83	30.76	31.03	29.80	25.03	29.30	25.76	26.09	31.30	32.75
7	33.62	33.23	31.91	30.69	31.19	29.74	24.62	29.18	25.73	26.44	31.46	32.83
8	33.61	32.88	31.99	30.42	31.33	29.66	24.83	29.29	26.06	26.84	31.56	32.88
9	33.62	32.64	32.08	30.17	31.42	29.65	24.21	29.37	26.51	27.21	31.62	32.92
10	33.68	32.49	32.13	29.84	31.57	29.67	24.24	29.52	26.84	27.49	31.70	32.83
11	33.72	32.37	32.14	29.55	31.59	29.62	24.56	29.52	27.07	28.23	31.77	32.87
12	34.20	32.22	32.23	29.32	31.65	29.54	25.05	29.42	27.42	28.58	31.82	32.96
13	33.74	32.03	32.36	29.28	31.83	29.46	25.60	29.18	27.67	28.86	31.76	32.99
14	33.76	31.92	32.47	29.21	31.93	29.50	25.95	28.79	27.75	29.14	31.92	33.02
15	33.77	31.93	32.49	29.06	31.97	29.45	26.22	28.36	27.72	29.28	32.07	33.04
16	33.75	31.93	32.44	29.16	31.95	29.38	26.54	28.14	27.39	29.36	32.19	32.92
17	33.78	32.03	32.41	29.21	31.73	29.29	27.01	28.01	26.93	29.77	32.28	32.66
18	33.83	32.08	32.38	29.27	31.59	29.56	27.39	27.66	26.23	30.08	32.33	32.64
19	33.84	32.10	32.52	29.32	31.40	29.61	27.75	27.67	25.99	30.30	32.30	32.65
20	34.29	32.10	32.55	29.45	31.23	29.73	27.96	27.72	26.02	30.47	32.15	32.72
21	33.76	31.98	32.59	29.47	31.45	29.78	28.16	27.75	25.98	30.61	32.40	32.79
22	33.67	31.80	32.62	29.57	30.85	29.74	28.31	27.96	25.66	30.67	32.48	32.89
23	33.57	32.06	32.50	29.85	30.34	29.83	28.41	28.08	25.08	30.71	32.55	32.85
24	33.50	31.33	32.22	29.84	29.83	29.20	29.60	28.11	24.72	31.15	32.61	32.61
25	33.51	30.97	32.01	29.98	29.42	28.98	29.28	27.96	24.37	30.93	32.68	32.36
26	33.52	31.47	31.79	30.13	29.08	28.99	29.50	27.73	24.54	31.10	32.61	32.22
27	33.92	31.08	31.55	30.21	29.08	29.74	29.54	27.18	24.79	31.15	32.42	32.17
28	33.61	31.02	31.38	30.14	29.16	29.20	29.54	26.45	24.89	31.15	32.56	32.25
29	33.48	31.11	31.28	29.92	---	29.26	29.46	25.75	24.81	31.02	32.64	32.33
30	33.39	31.22	30.91	30.13	---	29.22	29.32	25.31	24.65	30.73	32.76	32.19
31	33.48	---	30.49	30.26	---	28.87	---	25.26	---	30.91	32.81	---
MAX	34.29	33.88	32.62	30.76	31.97	29.83	29.60	29.52	27.75	31.15	32.81	33.04

CAL YR 1988 LOW 34.29
WTR YR 1989 LOW 34.29401256081525100 CS-3
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

COSHOCOTON COUNTY--Continued

401735081523800. Local number, CS-2.

LOCATION.--Lat 40° 17' 35", long 81° 52' 38", Hydrologic Unit 05040003, 1.7 mi northwest of courthouse in Coshocoton.

Owner: City of Coshocoton.

AQUIFER.--Sand and gravel of Quaternary Age.

WELL CHARACTERISTICS.--Drilled test well, diameter 6 in., depth 40 ft, cased.

INSTRUMENTATION.--Type F continuous recorder.

DATUM.--Elevation of land-surface datum is 740 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 8.50 ft above land-surface datum.

REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

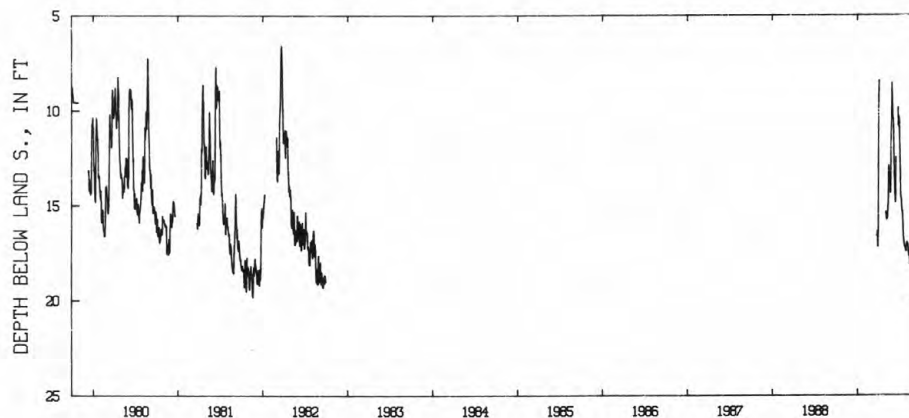
PERIOD OF RECORD.--May 1949 to September 1982. Reactivated March 24, 1989.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 19.83 ft below land-surface datum, Nov. 20, 1982; minimum daily low, 0.43 ft, Feb. 21, 1951.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	13.10	---	9.41	10.63	17.09	17.83
2	---	---	---	---	---	---	11.00	15.42	9.83	11.36	16.95	17.83
3	---	---	---	---	---	---	9.34	15.44	10.46	12.02	16.97	17.56
4	---	---	---	---	---	---	8.91	15.36	10.46	12.48	17.03	17.38
5	---	---	---	---	---	---	8.46	15.64	10.45	12.96	17.09	17.53
6	---	---	---	---	---	---	---	15.76	10.83	13.55	17.10	17.74
7	---	---	---	---	---	---	---	15.70	11.18	14.40	17.05	18.01
8	---	---	---	---	---	---	---	15.45	12.00	14.63	17.25	18.13
9	---	---	---	---	---	---	---	15.67	12.71	14.64	17.40	18.19
10	---	---	---	---	---	---	---	15.67	13.31	14.76	17.51	18.12
11	---	---	---	---	---	---	---	15.48	13.78	15.10	17.66	18.00
12	---	---	---	---	---	---	---	15.06	14.35	15.27	17.67	18.03
13	---	---	---	---	---	---	---	14.98	14.77	15.31	17.61	17.95
14	---	---	---	---	---	---	---	14.73	14.85	15.30	17.65	18.01
15	---	---	---	---	---	---	---	13.43	14.46	15.60	17.94	18.38
16	---	---	---	---	---	---	---	12.92	12.50	15.85	18.10	18.27
17	---	---	---	---	---	---	---	13.06	---	16.06	18.11	17.84
18	---	---	---	---	---	---	---	13.34	---	16.63	18.16	17.69
19	---	---	---	---	---	---	---	13.34	---	16.73	18.17	17.88
20	---	---	---	---	---	---	---	13.53	---	16.82	17.80	17.96
21	---	---	---	---	---	---	---	13.81	---	16.98	17.87	18.09
22	---	---	---	---	---	---	---	14.30	---	17.06	17.92	18.26
23	---	---	---	---	---	---	---	14.35	---	17.13	17.77	18.17
24	---	---	---	---	---	16.60	---	14.33	---	17.16	17.76	17.34
25	---	---	---	---	---	16.61	---	13.54	---	17.15	17.41	17.25
26	---	---	---	---	---	16.57	---	12.61	9.87	17.28	17.18	17.80
27	---	---	---	---	---	16.37	---	10.77	10.75	17.29	17.08	18.00
28	---	---	---	---	---	16.87	---	10.77	10.85	17.30	17.30	18.00
29	---	---	---	---	---	17.16	---	9.90	10.37	17.45	17.69	18.05
30	---	---	---	---	---	17.17	---	8.56	10.33	17.43	17.82	18.34
31	---	---	---	---	---	16.20	---	9.03	---	17.17	17.82	---
MAX	---	---	---	---	---	17.17	13.10	15.76	14.85	17.45	18.17	18.38

WTR YR 1969 LOW 18.38

401735081523800 CS-2
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

DARKE COUNTY

400514084345700. Local number, D-2.

LOCATION.--Lat 40° 05' 14", long 84° 34' 57", Hydrologic Unit 05080001, State Route 571, 3 mi east of Greenville.

Owner: Greenville Water Department.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled unused water table well, diameter 6 in., depth 70 ft, cased.

INSTRUMENTATION.--Digital recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 1038 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 4.00 ft above land-surface datum.

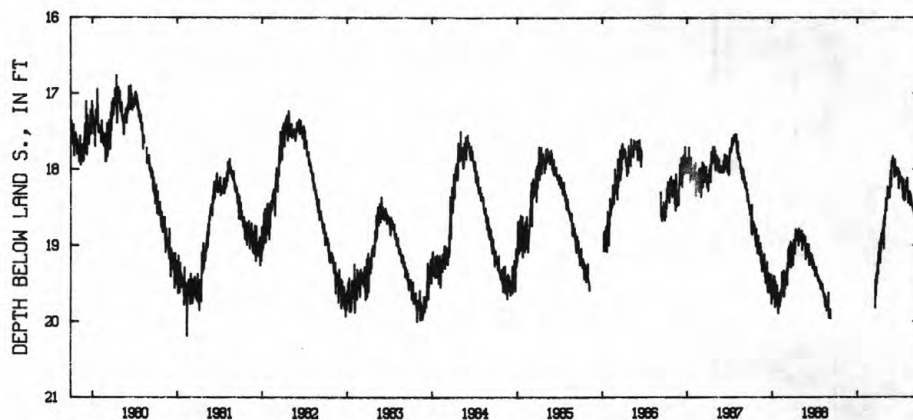
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--August 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 20.43 ft below land-surface datum, Nov. 29, 1977; minimum daily low, 16.76 ft below land-surface datum, Apr. 14, 1980.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	19.38	18.64	17.89	18.03	18.26	18.54
2	---	---	---	---	---	---	19.24	18.53	17.90	18.06	18.25	18.59
3	---	---	---	---	---	---	19.08	18.55	17.83	18.04	18.17	18.55
4	---	---	---	---	---	---	19.13	18.55	17.96	18.08	18.11	18.42
5	---	---	---	---	---	---	19.15	18.38	17.88	18.14	18.17	18.43
6	---	---	---	---	---	---	19.08	18.50	17.88	18.15	18.27	18.39
7	---	---	---	---	---	---	18.96	18.54	17.86	18.13	18.30	18.33
8	---	---	---	---	---	---	19.01	18.43	17.87	18.12	18.38	18.35
9	---	---	---	---	---	---	19.18	18.38	17.98	18.10	18.44	18.33
10	---	---	---	---	---	---	19.23	18.39	18.10	18.14	18.41	18.43
11	---	---	---	20.24	---	---	19.07	18.37	18.08	18.18	18.38	18.45
12	---	---	---	---	---	---	18.92	18.23	17.87	18.15	18.31	18.45
13	---	---	---	---	---	---	19.07	18.27	17.91	18.11	18.30	18.37
14	20.03	---	---	---	---	---	18.92	18.30	17.97	18.24	18.36	18.29
15	---	---	---	---	---	---	18.84	18.28	17.97	18.28	18.29	18.33
16	---	---	---	---	---	---	18.91	18.31	18.01	18.19	18.40	18.23
17	---	---	---	---	---	---	18.92	18.37	18.08	18.36	18.47	18.31
18	---	---	---	---	---	---	18.94	18.33	18.05	18.38	18.46	18.28
19	---	---	---	---	---	19.82	18.98	18.25	17.98	18.13	18.33	18.17
20	---	---	---	---	---	19.45	18.90	18.27	18.02	18.23	18.37	18.18
21	---	---	---	---	---	19.66	18.80	18.37	17.98	18.33	18.46	18.11
22	---	---	---	---	---	19.64	18.79	18.25	18.04	18.41	18.39	18.28
23	---	---	---	---	---	19.49	18.78	18.11	18.04	18.38	18.42	18.38
24	---	---	---	---	---	19.37	18.77	18.12	18.03	18.29	18.46	18.36
25	---	---	---	---	---	19.44	18.68	18.02	18.03	18.33	18.47	18.10
26	---	---	---	19.97	---	19.50	19.04	18.10	18.00	18.40	18.47	18.35
27	---	---	---	---	---	19.42	18.66	18.23	17.99	18.26	18.49	18.39
28	---	---	---	---	---	19.34	18.61	18.12	18.13	18.22	18.51	18.13
29	---	---	---	---	---	19.38	18.63	17.89	18.25	18.26	18.49	18.10
30	---	---	---	---	---	19.22	18.74	17.89	18.14	18.14	18.54	18.14
31	---	---	---	---	---	19.33	---	17.97	---	18.25	18.52	---
MAX	20.03	---	---	20.24	---	19.82	19.38	18.64	18.25	18.41	18.54	18.59

CAL YR 1988 LOW 20.03
WTR YR 1989 LOW 20.24400514084345700 D-2
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

237

DELAWARE COUNTY

402126083040400. Local number, DL-3.

LOCATION.--Lat 40° 21' 26", long 83° 04' 04", Hydrologic Unit 05060001, east bank of Olentangy River at toe of Delaware dam.

Owner: U.S. Army Corps of Engineers.

AQUIFER.--Limestone of Devonian Age.

WELL CHARACTERISTICS.--Drilled test artesian well, diameter 12 in., depth 135 ft, cased.

INSTRUMENTATION.--Type F continuous recorder.

DATUM.--Elevation of land-surface datum is 900 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 2.60 ft above land-surface datum.

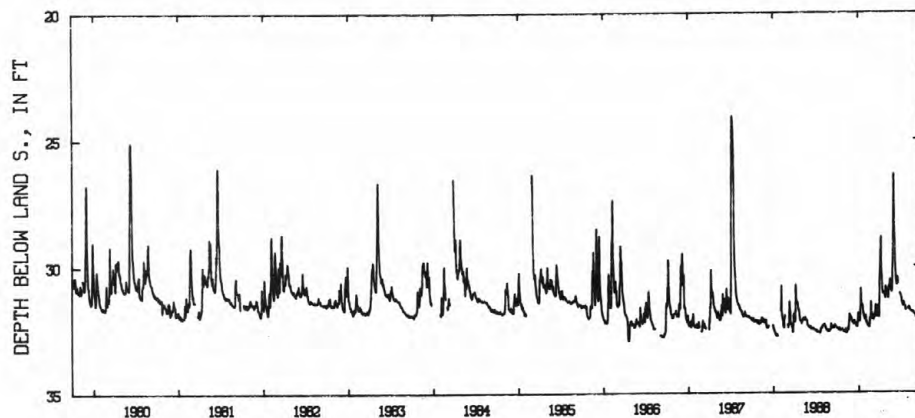
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--October 1948 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 37.04 ft below land-surface datum, Nov. 1, 1948, Dec. 2, 3, 1948; minimum daily low, 20.43 ft below land-surface datum, Jan. 27, 1959.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32.44	32.55	32.13	31.90	32.09	32.10	30.41	30.96	26.39	31.20	31.69	31.93
2	32.46	32.61	32.15	32.05	32.18	32.10	30.30	31.02	26.72	31.23	31.67	32.00
3	32.47	32.61	32.19	32.12	32.27	32.07	30.05	31.09	27.62	31.25	31.65	32.02
4	32.48	32.58	32.23	32.19	32.27	32.12	29.70	31.18	28.54	31.30	31.64	32.02
5	32.51	32.50	32.18	32.17	32.24	32.13	29.47	31.16	28.78	31.40	31.62	32.03
6	32.53	32.55	32.17	32.13	32.26	32.10	29.08	31.21	28.97	31.46	31.65	32.03
7	32.52	32.60	32.25	31.92	32.30	31.95	28.87	31.27	29.57	31.50	31.67	32.02
8	32.50	32.64	32.27	31.69	32.36	31.97	30.15	31.25	29.99	31.51	31.71	32.02
9	32.47	32.65	32.25	31.61	32.38	32.03	30.36	30.96	30.13	31.52	31.75	32.02
10	32.45	32.56	32.28	30.90	32.35	32.00	30.43	30.87	30.39	31.55	31.78	32.04
11	32.47	32.60	32.30	31.08	32.30	31.87	30.75	30.80	30.57	31.58	31.78	32.07
12	32.53	32.61	32.30	31.40	32.40	31.87	30.92	30.84	30.61	31.59	31.78	32.09
13	32.56	32.51	32.17	31.56	32.38	31.84	31.08	30.87	30.68	31.44	31.78	32.10
14	32.54	32.50	32.20	31.56	32.41	31.55	31.08	30.89	30.75	31.50	31.80	32.07
15	32.53	32.47	32.27	31.53	32.42	31.75	31.02	30.61	30.65	31.57	31.78	32.07
16	32.52	32.43	32.26	31.58	32.42	31.80	31.05	30.54	30.46	31.57	31.78	32.05
17	32.52	32.48	32.25	31.57	32.18	31.81	31.10	30.72	30.46	31.59	31.83	32.07
18	32.52	32.53	32.25	31.66	32.06	31.93	31.12	30.89	30.51	31.62	31.83	32.10
19	32.52	32.33	32.25	31.81	32.06	32.00	31.08	30.95	30.70	31.61	31.82	32.09
20	32.55	32.23	32.28	31.84	32.10	31.95	31.08	30.92	---	31.61	31.80	32.07
21	32.51	32.14	32.39	31.92	32.05	31.68	31.07	31.02	---	31.67	31.82	32.07
22	32.49	31.90	32.39	31.90	31.75	31.57	31.07	31.03	---	31.75	31.84	32.04
23	32.51	31.93	32.32	31.98	31.44	31.71	31.10	31.02	---	---	31.82	32.10
24	---	31.93	32.33	32.02	31.87	31.87	31.21	30.89	---	---	31.85	32.15
25	---	32.00	32.40	32.08	31.90	31.93	31.27	30.65	---	---	31.86	32.11
26	---	32.02	32.41	32.06	31.87	32.01	30.83	30.16	---	---	31.89	32.12
27	---	32.01	32.30	32.11	31.95	32.02	30.83	30.01	---	---	31.91	32.18
28	32.60	32.04	32.12	32.13	32.03	32.01	30.97	29.73	31.10	---	31.92	32.16
29	32.60	32.10	31.90	32.13	---	32.00	30.89	28.74	31.14	---	31.91	32.12
30	32.61	32.07	31.87	32.09	---	31.39	30.96	28.00	31.15	---	31.92	32.13
31	32.58	---	31.89	31.97	---	30.70	---	26.55	---	31.70	31.94	---
MAX	32.61	32.65	32.41	32.19	32.42	32.13	31.27	31.27	31.15	31.75	31.94	32.18
CAL YR 1988	LOW 32.76											
WTR YR 1989	LOW 32.65											



402126083040400 DL-3
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

FAIRFIELD COUNTY

393450082403600. Local number, F-7.

LOCATION.--Lat 39°34'50", long 82°40'36", Hydrologic Unit 05030204, southeast of Amanda.

Owner: Pine Grove Springs Water Co. Inc.

AQUIFER.--Sandstone of Mississippian Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 5 in., depth 120 ft, cased to 31 ft.

INSTRUMENTATION.--Type F continuous recorder.

DATUM.--Elevation of land-surface datum is 980 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 0.60 ft above land-surface datum.

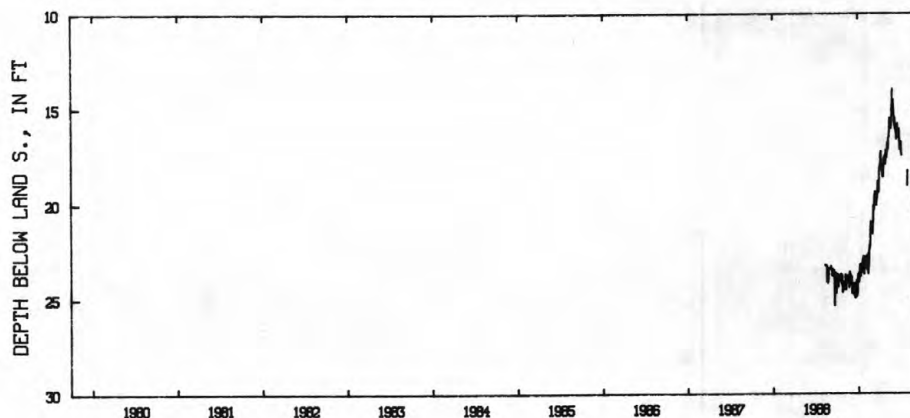
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--August 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 25.36 ft below land-surface datum, Sept. 20, 1988; minimum daily low, 14.00 ft below land-surface datum, May 28, 1989.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.88	24.52	24.16	24.02	23.13	21.28	18.08	17.19	15.00	17.12	---	20.43
2	23.69	24.30	24.24	24.12	23.10	21.58	18.05	17.26	15.07	16.75	---	---
3	24.20	24.30	23.83	23.63	23.16	21.13	18.00	17.57	15.28	17.20	---	---
4	23.87	24.40	24.71	24.07	23.08	20.98	18.00	17.34	15.72	16.75	---	---
5	24.19	23.85	24.47	23.75	22.73	20.80	17.94	17.28	15.46	17.25	---	---
6	24.36	23.73	24.27	23.74	23.44	20.10	17.45	16.90	15.85	17.45	---	---
7	23.93	24.40	24.38	23.43	23.11	20.20	17.30	16.78	15.50	---	---	---
8	23.89	24.50	24.28	23.20	23.24	20.19	17.26	17.17	15.84	---	---	---
9	23.76	24.44	24.65	23.58	23.06	20.30	17.50	17.10	16.07	---	---	---
10	24.03	24.05	24.56	23.82	22.78	19.80	18.15	16.95	16.06	---	---	---
11	23.75	24.15	24.76	23.50	22.63	19.49	18.23	16.58	15.91	---	---	---
12	23.77	23.90	24.19	23.15	23.67	19.47	18.28	16.50	16.21	---	---	---
13	23.79	23.80	24.17	23.62	23.22	19.54	18.15	16.50	16.45	---	---	---
14	23.78	23.77	24.35	23.25	23.27	19.35	18.20	16.26	16.60	---	---	---
15	23.77	23.77	24.87	23.32	22.97	19.51	18.56	15.98	16.03	---	---	---
16	23.75	23.77	24.78	23.38	22.50	19.75	18.20	15.50	16.01	---	---	---
17	23.88	24.12	24.69	23.23	22.38	19.84	18.57	15.79	16.11	---	---	---
18	23.69	23.89	24.96	23.26	22.14	19.48	18.57	15.53	15.80	---	---	---
19	24.07	23.87	24.90	22.90	22.31	20.07	17.97	16.04	16.09	---	---	---
20	24.21	23.75	24.31	23.37	22.22	19.69	17.60	15.78	16.48	---	---	---
21	24.08	24.22	24.67	22.97	21.80	19.51	17.73	16.05	16.34	---	---	---
22	24.12	24.39	24.14	22.75	21.30	19.67	17.64	15.88	16.25	---	---	---
23	23.75	24.00	24.87	23.13	20.92	19.25	17.56	15.72	16.50	---	---	---
24	24.20	23.74	24.32	23.63	20.97	19.25	17.57	15.56	16.14	---	---	---
25	24.65	23.57	24.01	23.68	21.03	18.81	17.48	15.13	16.07	---	---	---
26	24.53	23.88	24.85	22.98	21.14	18.84	17.44	14.84	16.22	---	---	---
27	24.14	23.72	24.74	22.79	21.09	19.30	17.92	14.20	16.69	---	---	---
28	24.37	24.07	24.72	23.38	21.40	19.33	17.79	14.00	16.90	---	---	---
29	24.10	24.10	24.05	---	---	19.38	17.45	---	17.13	---	18.91	20.20
30	24.24	24.22	23.70	---	---	19.14	17.19	14.59	17.05	19.02	19.50	---
31	24.23	---	23.72	---	---	18.35	---	14.54	---	18.25	18.58	---
MAX	24.65	24.52	24.96	24.12	23.67	21.58	18.57	17.57	17.13	19.02	19.50	20.43

CAL YR 1988 LOW 25.36
WTR YR 1989 LOW 24.96393450082403600 F-7 P65 WTR CO NR AMANDA OH
MAXIMUM DAILY DEPTH BELOW LAND S. (FT), DEPTH TO WATER BL. LSD

GROUND-WATER RECORDS

239

FAIRFIELD COUNTY--Continued

394257082362900. Local number, F-6.

LOCATION.--Lat 39 42'57", long 82 36'29", Hydrologic Unit 05030204, near Hocking River in well field at Lancaster.
Owner: Lancaster Water Department.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled unused water table well, diameter 12 in., depth 108 ft, cased.

INSTRUMENTATION.--Type F continuous recorder.

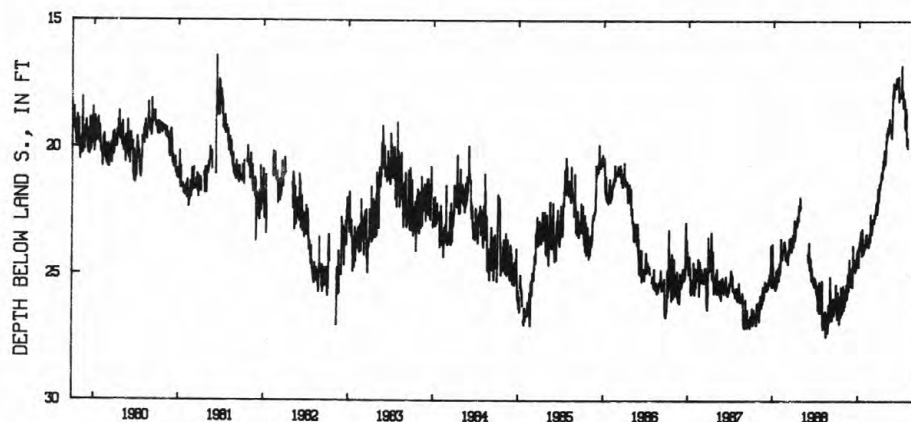
DATUM.--Elevation of land-surface datum is 820 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 3.00 ft above land-surface datum.

REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--June 1978 to current year.

EXREMES FOR PERIOD OF RECORD.--Maximum daily low, 27.45 ft below land-surface datum, Aug. 17, 1988;
minimum daily low, 16.40 ft below land-surface datum, June 25, 1981.DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25.90	25.70	25.45	24.00	23.95	23.25	21.55	19.80	18.00	17.95	---	19.10
2	25.90	26.40	25.15	24.00	23.80	23.20	21.40	19.40	17.80	18.00	---	19.25
3	26.55	25.95	25.05	24.05	23.60	23.15	21.45	19.65	17.50	17.70	---	18.85
4	26.50	25.60	24.75	24.70	23.45	22.80	21.60	19.45	17.55	16.75	---	18.80
5	26.75	26.00	25.35	23.90	23.55	22.85	21.40	19.50	17.55	16.80	---	19.55
6	26.50	26.25	25.10	23.90	23.65	22.80	21.45	19.20	17.60	17.90	---	19.75
7	25.70	26.05	25.45	24.00	23.40	22.95	21.30	19.40	17.65	17.95	---	19.75
8	26.60	26.00	25.50	23.70	23.85	22.80	21.30	19.45	17.65	17.75	---	19.60
9	26.40	25.65	25.20	23.90	23.60	22.95	21.10	19.35	17.50	17.75	---	18.65
10	26.65	25.95	23.85	24.00	23.85	22.95	20.95	19.40	17.65	17.85	---	19.50
11	26.65	25.95	23.95	23.90	23.55	22.70	21.15	19.20	17.40	18.40	---	19.20
12	26.60	26.00	24.60	23.45	23.60	22.60	21.20	19.10	17.25	18.15	---	19.00
13	26.75	25.40	24.85	23.95	23.70	22.60	21.20	19.05	17.35	18.30	---	20.00
14	26.95	25.85	24.85	23.30	23.90	22.70	21.15	18.85	17.55	18.10	---	20.30
15	26.20	25.95	24.85	23.80	23.80	22.75	20.75	19.00	17.55	18.05	---	19.60
16	25.85	25.95	24.85	23.80	23.90	22.60	20.85	19.05	17.50	18.10	---	20.00
17	26.65	25.70	24.40	24.05	23.75	22.50	20.50	19.15	17.40	18.15	---	20.30
18	26.65	25.35	24.45	24.25	23.65	22.35	20.55	19.05	17.35	18.30	---	20.15
19	26.30	25.00	24.55	23.20	23.50	22.20	20.50	19.30	17.40	19.20	---	20.00
20	26.65	25.65	24.80	23.75	23.40	22.55	20.80	19.20	17.20	19.10	---	19.50
21	25.50	25.65	24.90	23.55	23.65	22.60	20.50	19.25	17.25	19.25	---	19.55
22	26.30	25.65	24.80	24.20	23.70	22.10	20.20	19.50	18.00	18.50	---	19.55
23	26.30	25.20	24.75	24.05	22.60	22.60	20.10	19.55	18.15	18.45	---	19.40
24	26.25	25.40	24.80	24.00	23.40	22.30	20.15	19.60	18.00	18.65	---	19.35
25	26.55	24.40	24.65	24.15	23.10	22.40	20.30	19.30	17.85	18.65	---	19.50
26	26.45	25.15	24.55	23.80	23.00	21.60	20.65	18.55	17.90	19.55	---	20.05
27	26.45	25.15	24.45	24.05	23.15	22.15	20.50	18.20	17.90	19.90	---	20.35
28	26.25	25.40	24.15	23.95	23.40	22.05	20.35	17.90	17.90	19.65	19.75	20.15
29	26.15	25.15	24.40	24.00	---	22.10	20.15	17.80	18.00	19.60	19.40	20.25
30	25.45	25.45	24.10	---	---	21.98	19.70	17.85	17.90	19.60	19.65	19.70
31	26.25	---	24.15	---	---	21.80	---	17.45	---	20.00	18.90	---
MAX	26.95	26.40	25.50	24.70	23.95	23.25	21.60	19.80	18.15	20.00	19.75	20.35

CAL YR 1988 LOW 27.45
WTR YR 1989 LOW 26.95394257082362900 F-6
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

FAIRFIELD COUNTY--Continued

394544082271000. Local number, F-1.

LOCATION.--Lat 39 45'44", long 82 27'10", Hydrologic Unit 05030204, near the west edge of West Rushville.

Owner: State of Ohio.

AQUIFER.--Sandstone of Mississippian Age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 84 ft, cased.

INSTRUMENTATION.--Type F continuous recorder.

DATUM.--Elevation of land-surface datum is 980 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 8.02 ft above land-surface datum.

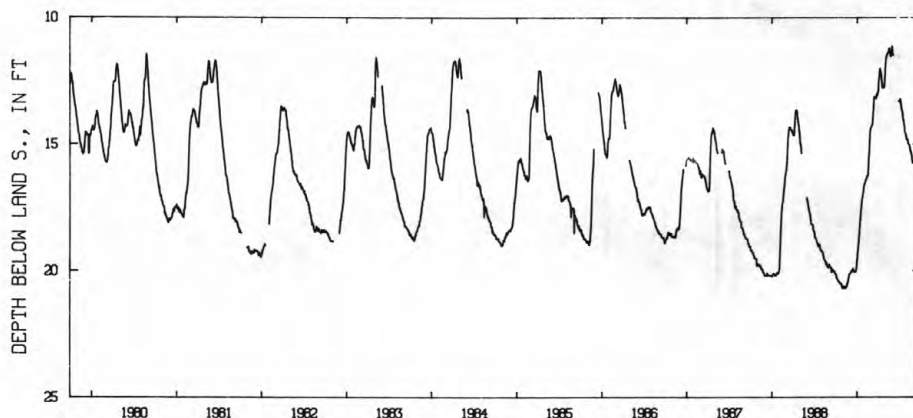
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--March 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 20.70 ft below land-surface datum, Oct. 31, Nov. 1, 11-12, 1988; minimum daily low, 7.27 ft below land-surface datum, May 5-6, 1962.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.12	20.70	20.11	19.61	16.60	14.32	12.90	12.14	11.30	13.32	14.79	15.67
2	20.12	20.65	20.10	19.52	16.60	14.32	12.85	11.88	11.43	13.31	14.83	15.65
3	20.15	20.65	20.10	19.41	16.57	14.28	12.60	11.80	11.46	13.26	14.83	15.73
4	20.16	20.65	20.08	19.26	16.57	14.29	12.42	11.68	11.48	13.22	14.83	15.70
5	20.25	20.63	20.08	19.22	16.52	14.28	12.40	11.55	11.50	13.23	14.81	15.68
6	20.31	20.61	20.04	19.09	16.47	14.26	12.28	11.58	---	13.28	14.80	15.68
7	20.31	20.69	20.01	19.03	16.43	14.22	12.13	11.49	---	13.36	14.88	15.66
8	20.31	20.69	20.05	18.88	16.41	14.15	12.05	11.48	---	13.43	14.96	15.70
9	20.33	20.69	20.05	18.85	16.40	14.09	12.01	11.44	---	13.43	14.99	15.68
10	20.37	20.68	20.01	18.67	16.34	13.91	12.07	11.44	---	13.55	15.00	15.70
11	20.37	20.70	19.97	18.62	16.31	13.72	12.13	11.44	---	13.63	15.01	15.70
12	20.39	20.70	20.00	18.40	16.30	13.58	12.15	11.42	---	13.67	15.02	15.75
13	20.41	20.65	19.96	18.31	16.28	13.41	12.20	11.36	---	13.67	15.02	15.77
14	20.42	20.67	19.92	18.23	16.24	13.24	12.25	11.35	---	13.74	15.02	15.76
15	20.42	20.67	20.00	18.03	16.28	13.12	12.37	11.36	---	13.79	15.11	15.76
16	20.46	20.60	20.00	17.97	16.28	13.12	12.47	11.31	---	13.82	15.18	15.80
17	20.46	20.61	19.98	17.75	16.27	13.12	12.55	11.24	---	14.01	15.20	15.92
18	20.46	20.61	19.97	17.66	16.15	13.14	12.65	11.20	---	14.01	15.25	15.94
19	20.46	20.60	20.03	17.56	15.92	13.14	12.77	11.20	---	14.05	15.27	16.00
20	20.50	20.48	20.03	17.46	15.74	13.14	12.77	11.24	---	14.05	15.29	16.00
21	20.52	20.52	20.04	17.41	15.51	13.13	12.77	11.33	---	14.15	15.35	16.01
22	20.52	20.46	20.05	17.26	15.38	13.21	12.78	11.43	---	14.25	15.38	16.01
23	20.51	20.42	20.05	17.18	15.26	13.21	12.76	11.46	---	14.28	15.40	15.98
24	20.51	20.37	20.03	17.12	15.00	13.12	12.77	11.53	---	14.35	15.44	15.98
25	20.52	20.33	20.03	17.09	14.75	13.02	12.76	11.54	---	14.53	15.54	15.97
26	20.54	20.28	20.04	17.01	14.49	13.00	12.75	11.54	---	14.55	15.60	15.91
27	20.55	20.21	20.01	16.98	14.46	13.08	12.70	11.53	---	14.55	15.66	15.91
28	20.61	20.14	19.92	16.92	14.34	13.08	12.65	11.35	---	14.57	15.75	15.78
29	20.68	20.13	19.88	16.84	---	12.98	12.49	11.28	13.29	14.63	15.73	15.70
30	20.68	20.12	19.87	16.76	---	12.97	12.36	11.13	13.32	14.65	15.70	15.68
31	20.70	---	19.72	16.68	---	12.91	---	11.15	---	14.75	15.70	---
MAX	20.70	20.70	20.11	19.61	16.60	14.32	12.90	12.14	13.32	14.75	15.75	16.01

CAL YR 1988 LOW 20.70
WTR YR 1989 LOW 20.70394544082271000 F-1
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

241

FAIRFIELD COUNTY--Continued

395053082361900. Local number, F-5.

LOCATION.--Lat 39° 50' 53", long 82° 36' 19", Hydrologic Unit 05060001, Gaylord Paper Co., Baltimore.

Owner: Crown Zellerbach - Gaylord Paper Division.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 12 in., depth 180 ft, cased.

INSTRUMENTATION.--Type F continuous recorder.

DATUM.--Elevation of land-surface datum is 850 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 3.5 ft above land-surface datum.

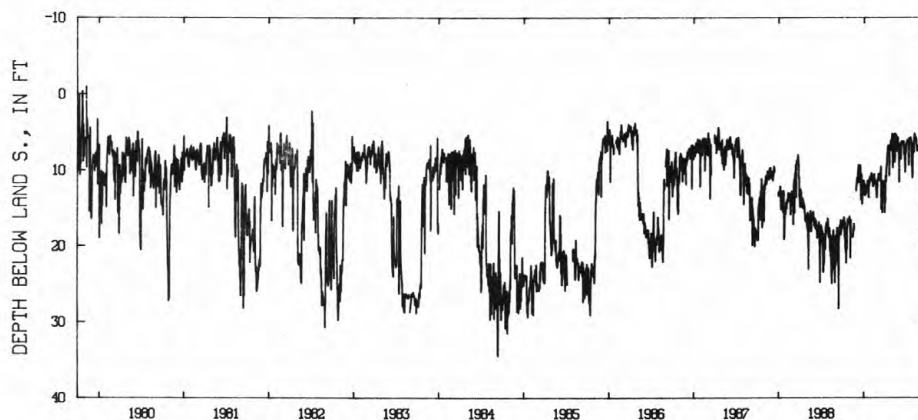
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--June 1971 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 34.50 ft below land-surface datum, Sept. 13, 1984; minimum daily low, 0.98 ft above land-surface datum, Nov. 7, 1979.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.80	16.10	12.20	11.40	11.00	11.20	15.60	6.90	7.10	7.10	6.40	7.50
2	17.40	16.30	11.80	11.50	10.50	11.20	11.90	5.50	11.60	6.40	6.80	7.10
3	17.20	16.50	11.10	12.70	10.60	11.10	14.30	5.20	7.00	6.40	6.60	6.80
4	16.60	17.60	11.00	13.30	10.40	11.20	14.00	7.50	6.60	6.40	7.70	7.40
5	16.90	21.60	11.20	12.50	10.40	10.50	10.80	7.80	7.80	6.40	5.60	7.60
6	17.20	16.80	11.70	12.20	11.30	10.90	10.80	9.70	7.80	6.40	5.20	8.80
7	17.30	16.60	10.30	11.90	11.50	11.10	11.50	6.20	7.40	6.00	5.40	8.10
8	16.50	18.70	10.20	13.30	10.70	10.80	9.90	6.00	6.40	6.20	5.60	11.70
9	16.20	18.40	9.70	13.20	12.00	10.80	9.40	5.40	8.60	6.20	5.80	8.20
10	17.20	18.50	9.30	13.00	12.20	11.40	9.40	7.10	6.60	6.30	5.60	8.40
11	18.90	18.80	10.40	12.80	11.30	11.30	8.20	7.30	6.40	6.20	5.80	14.90
12	17.10	18.60	11.60	12.70	11.40	10.60	7.80	7.80	6.40	6.30	6.00	12.20
13	16.90	18.60	10.80	12.90	11.10	10.30	7.20	5.20	6.20	9.40	5.80	7.40
14	20.40	18.90	10.60	12.80	11.40	10.90	7.00	9.00	6.50	6.50	6.20	6.80
15	17.40	18.70	10.00	12.50	10.50	10.10	6.80	7.80	6.40	5.80	6.80	7.70
16	20.80	18.80	9.40	12.40	11.30	9.50	6.80	5.20	6.50	5.80	6.80	7.60
17	18.40	18.00	9.50	11.40	11.70	15.20	7.40	5.40	6.60	6.00	7.50	7.40
18	22.30	17.70	9.40	11.90	11.20	13.10	7.30	5.50	6.50	5.80	7.40	8.00
19	18.30	18.00	10.90	12.00	11.90	12.30	7.70	7.50	6.80	5.80	7.00	18.00
20	18.50	17.10	13.40	11.40	11.90	11.90	7.20	5.40	6.30	5.70	6.80	7.30
21	20.50	17.90	13.90	12.80	11.80	13.00	10.80	5.60	6.20	5.80	7.00	8.20
22	17.60	---	11.30	13.60	11.50	15.60	6.70	7.00	7.20	6.00	7.10	9.50
23	17.40	---	10.60	11.80	12.00	11.40	6.80	7.30	7.70	6.10	7.00	10.90
24	16.50	---	12.40	11.20	12.70	11.60	7.00	5.80	8.00	7.20	7.30	13.60
25	16.50	---	12.00	11.90	12.70	14.00	7.30	7.40	6.90	9.00	7.40	13.10
26	17.20	---	14.50	11.20	13.70	12.20	6.20	5.70	7.80	9.40	7.00	9.60
27	16.80	---	12.40	10.90	13.40	12.40	6.10	5.70	8.90	9.50	7.10	8.80
28	17.10	---	11.60	11.20	12.20	13.00	6.10	7.60	10.30	11.00	7.30	8.30
29	16.50	12.70	11.70	11.40	---	11.40	6.40	7.60	7.20	10.60	6.90	8.20
30	16.80	12.20	11.60	---	---	12.00	7.40	7.00	7.80	7.40	7.20	8.10
31	17.00	---	11.40	---	---	11.80	---	7.20	---	7.20	7.40	---
MAX	22.30	21.60	14.50	13.60	13.70	15.60	15.60	9.70	11.60	11.00	7.70	18.00
CAL YR 1988	LOW 28.30											
WTR YR 1989	LOW 22.30											



395053082361900 F-5
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

FAYETTE COUNTY

393153083322000. Local number, FA-1.

LOCATION.--Lat 39° 31' 53", long 83° 32' 20", Hydrologic Unit 05060003, Burnett-Perill Road about 6 mi west of Washington Court House.

Owner: Martha Slagle.

AQUIFER.--Limestone of Silurian Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 5 in., depth 78 ft, cased.

INSTRUMENTATION.--Type F continuous recorder.

DATUM.--Elevation of land-surface datum is 1010 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 3.30 ft above land-surface datum.

REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--February 1946 to current year.

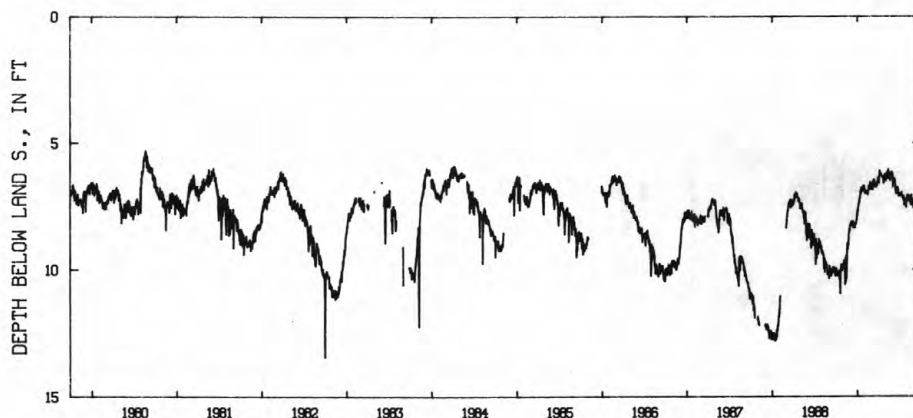
EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 13.45 ft below land-surface datum, Sep. 30 1982; minimum daily low, 3.26 ft below land-surface datum, Apr. 28, 1964.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.00	9.95	8.25	7.75	6.90	6.75	6.40	6.45	6.20	7.05	7.20	7.50
2	10.05	9.85	8.25	7.85	6.80	6.70	6.55	6.35	6.35	7.10	7.20	7.60
3	9.95	9.80	8.30	7.70	6.85	6.80	6.45	6.25	6.25	7.00	7.30	7.55
4	10.15	9.85	8.20	7.60	7.00	6.60	6.35	6.45	6.75	7.05	7.15	7.55
5	10.15	9.65	8.15	7.65	6.90	6.60	6.60	6.50	6.50	7.10	7.05	7.70
6	10.05	9.75	8.20	7.45	6.95	6.65	6.35	6.20	6.55	7.05	7.25	7.55
7	10.20	9.80	8.10	7.45	7.00	6.60	6.20	6.20	6.40	7.10	7.10	7.75
8	10.25	9.65	8.15	7.45	6.90	6.60	6.10	6.35	6.50	7.05	7.20	7.75
9	10.10	9.65	8.20	7.35	6.90	6.85	6.20	6.40	6.40	7.00	7.20	7.70
10	10.20	10.60	8.15	7.25	7.00	6.65	6.25	6.30	6.50	7.10	7.25	7.75
11	10.15	10.00	8.15	7.35	6.90	6.50	6.20	6.40	6.50	6.95	7.10	7.75
12	10.10	9.55	8.30	7.20	7.00	6.70	6.20	6.15	6.45	7.05	7.15	7.90
13	10.15	10.50	8.10	7.15	7.00	6.50	6.25	6.10	6.60	7.10	7.10	7.80
14	10.20	9.85	8.10	7.15	6.95	6.45	6.25	6.20	6.75	7.10	7.35	8.00
15	10.05	9.45	8.35	6.90	7.00	6.65	6.30	6.05	6.90	7.10	7.35	7.70
16	10.25	10.35	8.20	6.90	7.05	6.55	6.30	6.40	6.85	7.15	7.15	8.00
17	10.40	9.70	8.15	7.00	6.90	6.50	6.30	6.20	7.00	7.15	7.15	8.00
18	10.10	9.40	8.35	6.80	6.90	6.75	6.35	6.35	6.90	7.25	7.25	7.80
19	10.10	9.00	8.20	6.85	6.85	6.75	6.35	6.20	6.85	7.25	7.30	8.10
20	10.95	8.95	8.20	6.90	6.70	6.70	6.35	6.20	6.75	7.10	7.45	8.10
21	10.25	9.20	8.35	6.90	6.80	6.75	6.35	6.45	6.80	7.20	7.45	8.00
22	10.00	9.00	8.35	6.75	6.75	6.65	6.35	6.25	7.00	7.45	7.05	7.85
23	10.05	8.95	8.30	6.90	6.75	6.60	6.40	6.20	6.75	7.20	7.25	7.95
24	9.85	9.05	8.25	6.75	6.80	6.75	6.40	6.50	6.90	7.30	7.20	7.90
25	9.80	8.80	8.20	6.80	6.65	6.60	6.60	6.20	7.00	7.45	7.20	7.90
26	9.95	8.60	8.20	6.85	6.55	6.65	6.40	6.20	6.80	7.20	7.25	8.05
27	9.85	8.55	8.20	6.80	6.75	6.70	6.35	6.35	7.00	7.20	7.25	7.95
28	9.80	8.40	8.05	6.70	6.85	6.55	6.45	6.25	7.10	7.30	7.25	8.10
29	10.05	8.40	8.05	6.90	---	6.50	6.25	6.15	7.00	7.25	7.40	8.20
30	9.85	8.45	8.05	6.70	---	6.55	6.25	6.35	7.00	7.55	7.55	8.35
31	9.90	---	7.85	6.70	---	6.40	---	6.25	---	7.30	7.55	---
MAX	10.95	10.60	8.35	7.85	7.05	6.85	6.60	6.50	7.10	7.55	7.55	8.35

CAL YR 1988 LOW 12.80

WTR YR 1989 LOW 10.95



393153083322000 FA-1
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

FRANKLIN COUNTY

394956083002700. Local number, FR-18.

LOCATION.--Lat 39° 49' 56", long 83° 00' 27", Hydrologic Unit 05060001, south of State Rt. 665 at Shadeville.

Owner: City of Columbus.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled test water table well, diameter 6 in., depth 86.4 ft, cased.

INSTRUMENTATION.--Type F continuous recorder.

DATUM.--Elevation of land-surface datum is 690 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 3.80 ft above land-surface datum.

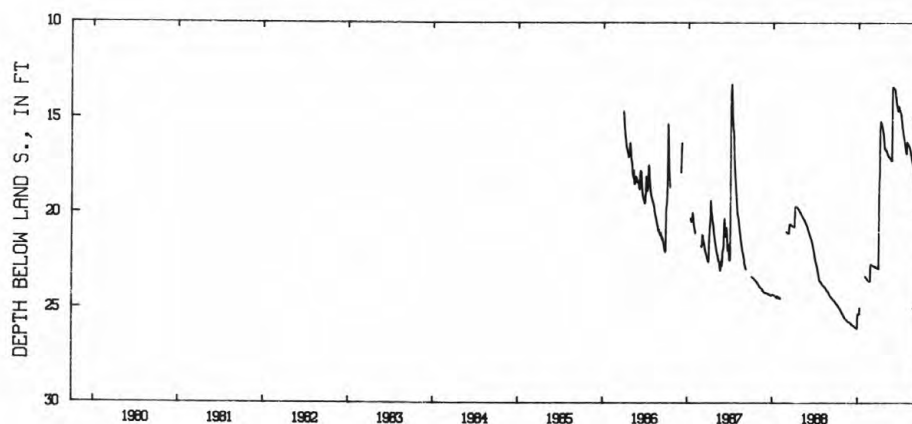
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--November 22, 1985 to March 26, 1986 periodic, continuous thereafter.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 26.07 ft below land-surface datum, Dec. 29, 1988; minimum daily low, 13.23 ft below land-surface datum, July 7, 1987.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24.77	25.40	25.78	25.33	23.34	22.73	19.38	16.68	13.40	14.69	16.30	17.76
2	24.79	25.42	25.79	25.30	23.37	22.74	18.43	16.70	13.41	14.74	16.32	17.81
3	24.81	25.44	25.81	25.30	23.38	22.75	18.22	16.74	13.43	14.78	16.34	17.86
4	24.82	25.47	25.82	25.31	23.40	22.76	18.10	16.77	13.44	14.82	16.37	17.92
5	24.84	25.49	25.84	25.32	23.41	22.77	16.15	16.81	13.45	14.92	16.40	17.98
6	24.85	25.50	25.85	25.33	23.43	22.78	15.43	16.85	13.47	15.03	16.42	18.04
7	24.87	25.52	25.86	25.33	23.45	22.79	15.40	16.87	13.50	15.15	16.44	18.09
8	24.89	25.54	25.87	25.32	23.46	22.80	15.18	16.92	13.53	15.28	16.46	18.15
9	24.90	25.55	25.88	25.00	23.48	22.80	15.22	16.95	13.61	15.40	16.50	18.21
10	24.92	25.57	25.89	---	23.50	22.81	15.25	16.98	13.80	15.51	16.52	18.28
11	24.94	25.58	25.90	---	23.51	22.82	15.29	17.00	13.88	15.58	16.56	18.36
12	24.96	25.60	25.91	---	23.53	22.82	15.34	17.01	13.96	15.66	16.61	18.44
13	24.98	25.61	25.92	---	23.54	22.83	15.40	17.03	14.07	15.74	16.66	18.53
14	25.00	25.62	25.93	---	23.56	22.83	15.45	17.05	14.20	15.81	16.72	18.60
15	25.02	25.64	25.94	---	23.57	22.83	15.52	17.07	14.28	15.88	16.78	18.68
16	25.04	25.65	25.95	---	23.58	22.84	15.58	17.08	14.33	15.95	16.84	18.75
17	25.06	25.66	25.96	---	23.59	22.85	15.65	17.09	14.38	16.02	16.91	18.83
18	25.08	25.67	25.97	---	23.59	22.85	15.71	17.11	14.45	16.09	17.00	18.89
19	25.09	25.69	25.98	---	23.60	22.86	15.78	17.13	14.51	16.16	17.07	18.97
20	25.11	25.70	25.99	---	23.60	22.87	15.88	17.15	14.58	16.24	17.15	19.10
21	25.13	25.71	26.00	---	23.60	22.88	15.96	17.17	14.63	16.33	17.22	19.11
22	25.16	25.72	26.01	---	23.60	22.88	16.09	17.20	14.64	16.42	17.28	19.18
23	25.18	25.72	26.02	---	23.11	22.89	16.26	17.22	14.38	16.50	17.33	19.25
24	25.21	25.73	26.02	---	22.81	22.89	16.42	17.24	14.39	16.58	17.38	19.32
25	25.23	25.73	26.03	---	22.71	22.90	16.56	17.25	14.41	16.65	17.43	19.39
26	25.25	25.73	26.04	---	22.71	22.90	16.62	17.25	14.45	16.75	17.48	19.46
27	25.28	25.74	26.04	---	22.72	22.92	16.65	17.10	14.53	16.83	17.53	19.54
28	25.30	25.75	26.05	---	22.72	22.93	16.67	13.58	14.58	16.88	17.58	19.60
29	25.33	25.76	26.07	---	---	22.94	16.63	13.35	14.62	16.49	17.62	19.70
30	25.35	25.77	26.04	---	---	22.95	16.65	13.37	14.66	16.26	17.68	19.76
31	25.37	---	25.50	---	---	21.35	---	13.38	---	16.28	17.72	---
MAX	25.37	25.77	26.07	25.33	23.60	22.95	19.38	17.25	14.66	16.88	17.72	19.76

CAL YR 1988 LOW 26.07
WTR YR 1989 LOW 26.07394956083002700 FR-18 CITY OF COLS S OF RT 665 AT SHADEVILLE OH
MAXIMUM DAILY DEPTH BELOW LAND S. (FT), DEPTH TO WATER BL. LSD

GROUND-WATER RECORDS

FRANKLIN COUNTY--Continued

395118082573300. Local number, FR-3.

LOCATION.--Lat 39° 51' 14", long 82° 57' 32", Hydrologic Unit 05060001, 0.7 mi southwest of Rees.

Owner: R. Hann.

AQUIFER.--Sand and gravel of Pleistocene Age.

CHARACTERISTICS.--Drilled test water table well, diameter 12 in., depth drilled 60 ft, present depth 53 ft, cased.

INSTRUMENTATION.--Monthly measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 712.94 ft above National Geodetic Vertical Datum of 1929. Measuring point: Floor of instrument shelter 3.43 ft above land-surface datum.

PERIOD OF RECORD.--April 1946 to September 1982 continuous, periodic thereafter.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 20.75 ft below land-surface datum, July 7, 1966; minimum daily low, 0.0 ft below land-surface datum, Jan. 22, 1959.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM
INSTANTANEOUS OBSERVATIONS

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 31, 1988	13.22	Feb. 28, 1989	11.46	June 30, 1989	8.73	Sept. 29, 1989	12.51
Nov. 29, 1988	12.88	Mar. 31, 1989	9.03	July 31, 1989	10.20	Sept. 30, 1989	12.53
Dec. 30, 1988	11.79	Apr. 28, 1989	10.74	Aug. 31, 1989	11.61		
Jan. 31, 1989	12.24	May 30, 1989	9.36	Sept. 28, 1989	12.49		

GROUND-WATER RECORDS

245

FRANKLIN COUNTY--Continued

395157083003500. Local number, FR-109.

LOCATION.--Lat 39° 51' 57", long 83° 00' 35", Hydrologic Unit 05060001, 6.6 mi south of the State capital in Columbus.

Owner: City of Columbus.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled test water table well, diameter 6 in., depth 92 ft, cased to 82 ft.

INSTRUMENTATION.--Digital recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 702.24 ft above National Geodetic Vertical Datum of 1929. Measuring

point: Floor of instrument shelter 3.00 ft above land-surface datum.

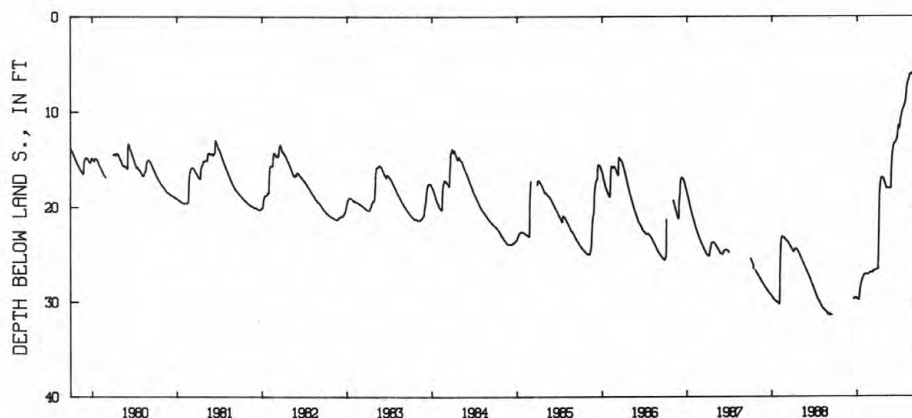
REMARKS.--Water level affected by nearby gravel mining operation.

PERIOD OF RECORD.--July 1975 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 31.43 ft below land-surface datum, Sept. 12, 1988; minimum daily low, 5.99 ft below land-surface datum, Aug. 24, 1989.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	29.67	27.14	26.91	25.71	17.53	14.61	11.77	7.84	6.22
2	---	---	---	29.70	27.13	26.91	24.46	17.69	14.33	11.77	7.63	6.20
3	---	---	---	29.72	27.14	26.92	23.30	17.72	14.13	11.68	7.46	6.17
4	---	---	---	29.77	27.14	26.94	22.33	17.78	13.98	11.49	7.32	6.14
5	---	---	---	29.78	27.13	26.94	21.32	17.86	13.83	11.26	7.15	6.11
6	---	---	---	29.79	27.10	26.93	20.10	17.93	13.67	11.00	7.01	6.09
7	---	---	---	29.79	27.10	26.86	19.19	18.00	13.57	10.83	6.88	6.07
8	---	---	---	29.77	27.11	26.85	18.46	18.06	13.49	10.68	6.77	6.74
9	---	---	---	29.68	27.11	26.85	17.92	18.08	13.42	10.56	6.73	7.88
10	---	---	---	29.42	27.09	26.84	17.65	18.05	13.32	10.43	6.70	8.38
11	---	---	---	29.12	27.08	26.79	17.45	18.02	13.35	10.32	6.61	8.38
12	---	---	---	28.81	27.10	26.73	17.25	18.01	13.35	10.21	6.49	9.52
13	---	---	---	28.66	27.10	26.73	17.10	18.01	13.30	10.11	6.36	9.52
14	---	---	---	28.54	27.10	26.71	17.03	18.03	13.24	9.98	6.23	9.42
15	---	---	---	28.38	27.11	26.71	16.95	18.04	13.21	9.87	6.11	9.25
16	---	---	29.67	28.25	27.11	26.72	16.92	18.04	13.14	9.78	6.11	9.00
17	---	---	29.69	28.11	27.08	26.72	16.93	18.04	13.11	9.73	6.10	8.73
18	---	---	29.69	27.99	27.05	26.69	16.92	18.04	13.07	9.68	6.06	8.48
19	---	---	29.67	27.87	27.04	26.69	16.92	18.05	13.02	9.61	6.06	8.24
20	---	---	29.67	27.77	27.06	26.68	16.92	18.06	12.92	9.56	6.05	8.04
21	---	---	29.63	27.70	27.05	26.64	16.94	18.07	12.90	9.50	6.03	7.87
22	---	---	29.58	27.62	27.03	26.64	16.97	18.07	12.89	9.39	6.02	7.74
23	---	---	29.57	27.54	26.98	26.63	17.01	18.07	12.66	9.33	6.01	7.63
24	---	---	29.57	27.47	26.95	26.63	17.02	18.04	12.43	9.28	5.99	7.57
25	---	---	29.56	27.42	26.95	26.62	17.05	18.02	12.22	9.18	6.00	7.53
26	---	---	29.58	27.36	26.92	26.61	17.11	18.00	11.98	9.10	6.00	7.50
27	---	---	29.59	27.32	26.90	26.62	17.20	17.82	11.70	8.98	6.01	7.46
28	---	---	29.61	27.28	26.90	26.62	17.25	16.85	11.49	8.81	6.13	7.46
29	---	---	29.60	27.24	---	26.62	17.30	15.96	11.44	8.60	6.20	7.43
30	---	---	29.61	27.19	---	26.61	17.37	15.34	---	8.33	6.23	7.36
31	---	---	29.64	27.17	---	26.49	---	14.91	---	8.08	6.23	---
MAX	---	---	29.69	29.79	27.14	26.94	25.71	18.08	14.61	11.77	7.84	9.52
CAL YR 1988	LOW 31.43											
WTR YR 1989	LOW 29.79											



— 395157083003500 FR-109
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

FRANKLIN COUNTY--Continued

400101083021800. Local number, FR-10.

LOCATION.--Lat 40° 01' 01", long 83° 02' 18", Hydrologic Unit 05060001, Kenny and Ackerman Roads, Columbus.

Owner: Ohio State University.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled test artesian well, diameter 4 in., depth 75 ft, cased.

INSTRUMENTATION.--Type F continuous recorder.

DATUM.--Elevation of land-surface datum is 775 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 4.00 ft above land-surface datum.

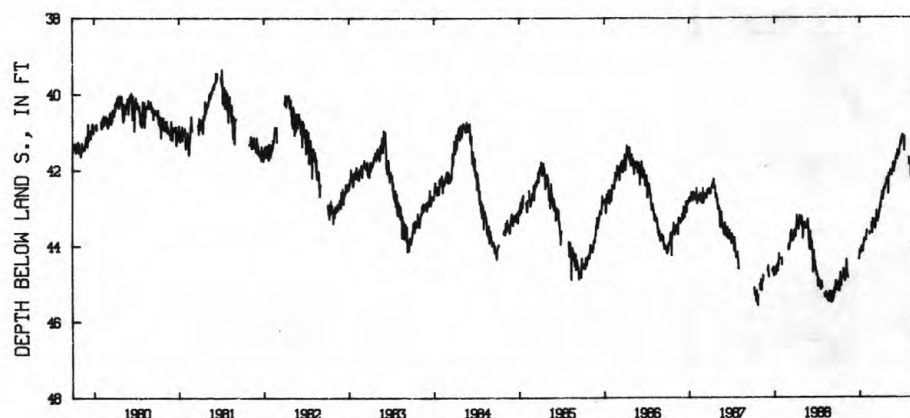
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--March 1944 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 48.20 ft below land-surface datum, Oct. 7, 1954; minimum daily low, 37.76 ft below land-surface datum, Apr. 13, 1951.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44.96	44.65	---	44.11	43.59	43.51	43.00	42.30	41.91	41.19	41.86	42.25
2	---	44.68	---	44.12	---	43.45	42.92	42.22	41.87	41.13	41.85	42.42
3	44.93	44.67	---	44.12	---	43.33	42.75	42.30	41.85	41.10	41.84	42.50
4	44.97	44.55	---	44.20	---	43.31	42.73	42.63	41.83	41.10	41.72	42.50
5	45.12	44.36	---	44.20	---	43.36	42.77	42.54	41.70	41.08	41.73	42.55
6	45.20	44.39	---	44.10	---	43.37	42.71	42.10	41.67	41.13	41.81	42.50
7	45.13	44.62	---	44.06	---	43.54	42.62	42.19	41.70	41.15	41.82	42.44
8	44.95	44.70	---	44.02	---	43.53	42.57	42.19	41.67	41.15	41.91	42.58
9	44.83	44.83	---	---	---	43.54	42.75	42.17	41.60	41.13	42.13	42.39
10	44.70	44.74	---	---	---	43.47	42.79	42.10	41.69	41.15	42.01	42.50
11	44.88	44.81	---	---	43.65	43.29	42.73	42.12	41.73	41.26	42.23	42.80
12	45.04	44.85	---	---	43.70	43.33	42.65	42.11	41.67	41.50	42.13	42.80
13	45.05	---	---	44.12	43.64	43.22	42.66	42.01	41.48	41.28	42.18	42.65
14	44.93	---	---	44.15	---	43.07	42.58	42.06	41.55	41.13	42.16	42.50
15	44.88	---	---	44.15	---	43.28	42.46	42.07	41.55	---	42.08	42.54
16	44.82	---	---	43.96	---	43.31	42.50	42.06	41.57	---	42.13	42.51
17	44.81	---	---	43.99	---	43.21	42.45	42.12	41.60	---	42.27	42.61
18	44.80	---	---	43.92	---	43.33	42.46	42.15	41.63	---	42.20	42.62
19	44.84	---	---	43.83	---	43.37	42.51	42.14	41.59	---	42.11	42.62
20	44.86	---	---	43.90	43.51	43.18	42.50	42.11	41.57	---	42.04	42.64
21	44.72	---	---	43.80	43.40	43.24	42.43	42.03	41.55	---	42.06	42.66
22	44.68	---	---	43.85	43.60	43.29	42.40	42.05	41.44	---	42.04	42.55
23	44.60	---	---	---	43.67	43.24	42.37	41.97	41.40	---	42.02	42.66
24	44.62	---	---	---	43.65	43.13	42.38	41.86	41.38	---	42.02	42.72
25	44.71	---	---	43.89	43.43	43.07	42.34	41.88	41.34	---	42.09	42.62
26	44.80	---	---	---	43.28	43.13	42.25	41.81	41.29	---	42.10	42.64
27	44.79	---	---	---	43.34	43.07	42.32	41.95	41.25	---	42.15	42.77
28	44.90	---	44.35	43.85	43.43	43.01	42.25	42.05	41.20	---	42.30	42.67
29	44.92	44.36	44.35	43.72	---	42.94	42.20	42.06	41.33	---	42.23	42.58
30	44.93	---	44.31	43.67	---	42.89	42.32	41.96	41.28	---	42.25	42.53
31	44.88	---	44.18	43.62	---	42.92	---	41.93	---	41.68	42.32	---
MAX	45.20	44.85	44.35	44.20	43.70	43.54	43.00	42.63	41.91	41.68	42.32	42.80

CAL YR 1988 LOW 45.50
WTR YR 1989 LOW 45.20400101083021800 FR-10
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

247

GALLIA COUNTY

383638082103300. Local number, G-2.

LOCATION.--Lat 38° 36' 38", long 82° 10' 33", Hydrologic Unit 05090101, 5.9 mi east of Crown City.

Owner: State of Ohio.

AQUIFER.--Sand and gravel of Quaternary Age.

WELL CHARACTERISTICS.--Drilled test water-table well, diameter 12 in., depth 65 ft, cased.

INSTRUMENTATION.--Periodic measurement with chalked tape by ODNR personnel.

DATUM.--Elevation of land-surface datum is 552 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 3.00 ft above land-surface datum.

REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--June 1975 to September 1982 continuous, periodic thereafter.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 33.94 ft below land-surface datum, Oct. 4, 1982; minimum daily low 16.43 ft below land-surface datum, Mar. 8, 1979.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM
INSTANTANEOUS OBSERVATIONS

DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 25, 1988	33.81	Apr. 25, 1989	30.00

GROUND-WATER RECORDS

GREENE COUNTY

394330083531400. Local number, GR-11.

LOCATION.--Lat 39° 43'30", long 83° 53'14", Hydrologic Unit 05090202, near Wilberforce.

Owner: Central State University.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 in., depth 85 ft, cased.

INSTRUMENTATION.--Type F continuous recorder.

DATUM.--Elevation of land-surface datum is 870 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 4.00 ft above land-surface datum.

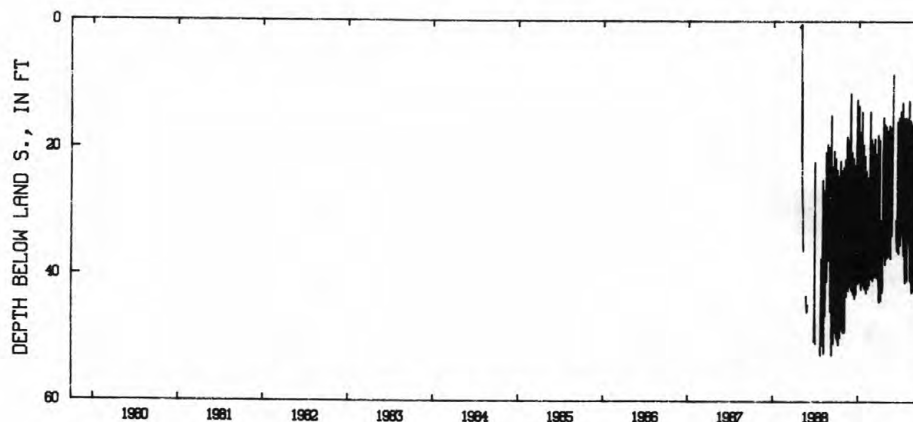
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--March 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 52.70 ft below land-surface datum, Sept. 9, 1988; minimum daily low, 0.55 ft below land-surface datum, Apr. 27, 1988.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50.10	47.90	41.90	18.80	41.00	39.70	36.60	32.90	---	28.10	21.60	41.50
2	23.40	48.90	42.40	13.30	41.60	40.70	18.70	35.20	---	14.10	25.80	32.00
3	43.60	49.10	38.00	30.40	42.20	40.90	35.70	36.80	---	29.60	27.40	17.00
4	48.00	48.50	20.60	37.65	42.90	32.80	38.60	37.30	---	20.30	34.80	11.20
5	49.90	36.80	37.90	39.90	23.60	19.30	41.90	37.20	---	31.90	25.00	30.60
6	50.50	21.70	40.70	41.10	34.40	35.10	43.50	32.30	---	33.60	12.50	34.00
7	51.00	39.70	42.00	30.90	38.70	38.40	44.10	17.20	---	31.60	32.10	40.30
8	51.00	42.90	42.60	17.40	40.40	38.70	37.40	33.10	---	23.50	35.20	42.60
9	24.30	43.10	43.00	37.70	41.60	40.00	31.30	35.90	---	12.80	35.60	40.30
10	43.80	43.40	40.00	40.20	42.00	40.30	35.30	36.80	---	26.20	39.40	19.00
11	44.70	31.80	21.60	41.10	42.20	31.00	38.70	36.90	---	30.70	41.00	37.40
12	46.40	20.00	38.10	41.90	24.60	18.50	41.40	37.00	31.40	34.10	29.20	35.60
13	49.00	18.20	41.30	42.30	28.70	35.10	42.80	32.00	34.70	35.60	15.60	39.90
14	49.90	39.10	42.50	35.00	39.30	37.90	42.00	16.40	33.50	36.90	34.70	43.10
15	41.00	35.10	43.20	19.80	40.50	39.40	42.00	31.50	35.40	29.10	38.80	43.20
16	22.00	18.50	43.70	14.20	41.40	40.10	20.60	35.00	36.20	15.20	41.00	41.70
17	44.70	39.10	40.50	35.80	41.60	40.00	19.40	35.60	34.30	33.90	42.10	---
18	46.90	42.50	22.60	39.60	35.40	40.30	15.10	36.20	15.70	35.20	42.80	---
19	48.20	38.00	38.80	41.00	20.00	20.80	27.10	37.20	26.80	38.60	29.60	---
20	48.30	20.20	41.60	41.70	14.20	36.10	34.90	37.40	33.70	40.50	16.20	---
21	48.70	37.80	42.60	33.00	34.40	39.10	36.60	16.70	36.00	41.20	36.50	---
22	48.00	40.70	43.00	19.40	38.70	40.10	36.40	29.50	36.20	30.40	40.80	45.00
23	23.50	41.80	38.00	37.40	40.40	40.50	16.20	30.40	36.60	15.20	37.00	39.20
24	43.00	36.00	20.80	40.40	40.60	40.30	32.70	33.30	31.00	34.20	---	21.20
25	47.00	20.00	15.00	41.40	33.80	29.80	35.60	33.70	15.10	37.70	42.50	32.90
26	48.40	14.20	12.30	41.80	18.60	17.90	38.40	30.80	32.40	40.90	35.70	41.40
27	48.90	11.40	35.00	42.10	36.30	36.10	32.20	22.60	31.60	40.60	18.00	44.60
28	49.10	36.50	39.80	42.20	39.20	40.50	37.60	12.60	35.20	40.90	35.80	45.90
29	40.60	39.80	41.10	21.20	---	42.10	35.80	8.40	33.80	30.00	40.60	46.20
30	23.00	41.30	41.40	36.80	---	43.60	16.50	---	35.30	15.30	42.80	40.70
31	43.40	---	32.20	39.60	---	44.30	---	---	---	24.80	40.70	---
MAX	51.00	49.10	43.70	42.30	42.90	44.30	44.10	37.40	36.60	41.20	42.80	46.20

CAL YR 1988 LOW 52.70
WTR YR 1989 LOW 51.00394330083531400 GR-11 C S UNIV NR WILBERFORCE OH
MAXIMUM DAILY DEPTH BELOW LAND S. (FT), FROM GRAPHIC RECORDER

GROUND-WATER RECORDS
GREENE COUNTY--Continued

249

394411083561300. Local number, GR-1.

LOCATION.--Lat 39° 44' 11" N, long 83° 56' 13" W, Hydrologic Unit 05090202, along Massies Creek near U.S. 68 north of Xenia.

Owner: Xenia Water Department.

AQUIFER.--Sand and Gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 30 in., depth 77 ft, cased.

INSTRUMENTATION.--Digital recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 818.88 ft above National Geodetic Vertical Datum of 1929. Measuring point: Floor of instrument shelter 4.50 ft above land-surface datum.

REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

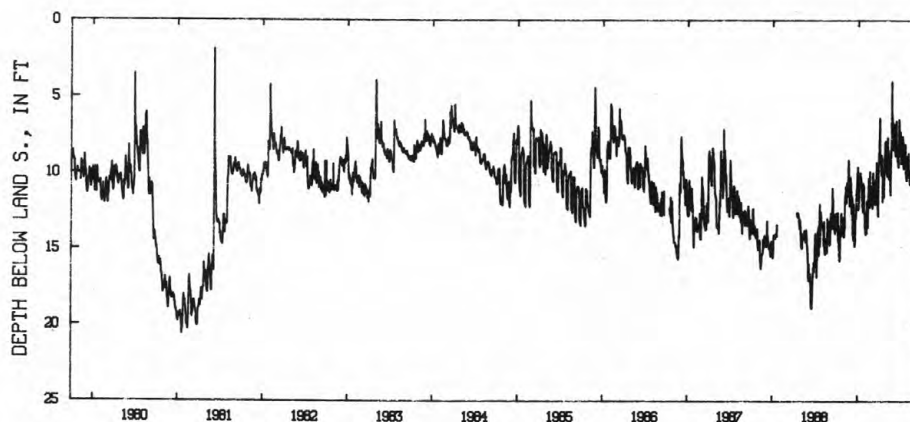
PERIOD OF RECORD.--August 1944 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 21.60 ft below land-surface datum, July 7, 1966; minimum daily low, 0.70 ft above land-surface datum, above land surface Aug. 3, 1958.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.79	12.91	10.45	9.59	13.58	11.58	8.69	8.55	7.12	7.56	8.89	10.30
2	13.67	12.94	10.69	9.95	13.77	11.85	9.00	7.89	8.15	8.53	9.25	10.56
3	12.86	14.23	11.21	12.41	14.00	12.09	7.95	9.60	8.46	8.57	9.84	10.57
4	12.61	13.99	11.20	12.34	14.04	12.19	7.40	9.92	8.02	7.30	10.01	11.25
5	13.51	13.24	12.64	12.32	14.03	12.30	6.39	9.75	8.09	8.49	10.15	11.28
6	12.74	13.64	11.54	11.59	13.91	10.37	8.56	10.02	6.74	9.36	9.67	11.40
7	12.59	11.49	11.58	11.59	13.96	9.98	8.89	10.19	6.89	9.28	10.24	11.44
8	13.78	11.43	11.76	10.11	11.87	11.01	9.21	10.00	8.29	9.23	8.69	11.59
9	14.45	11.38	12.70	10.13	13.16	11.18	9.19	8.69	7.28	8.08	9.93	11.71
10	14.54	10.90	13.90	10.10	12.70	10.62	9.83	7.66	7.32	8.28	9.96	11.24
11	13.49	11.34	14.07	10.77	11.82	10.75	9.68	8.72	8.47	8.29	10.04	11.45
12	14.78	11.19	14.11	9.96	13.34	10.72	10.12	9.26	8.86	8.25	10.45	11.38
13	15.37	11.15	14.41	10.48	13.61	11.66	8.80	8.48	7.58	7.57	10.74	11.31
14	15.72	11.96	11.99	10.25	11.88	11.98	8.93	8.76	7.43	7.80	10.74	11.20
15	15.78	10.63	13.02	10.44	11.45	12.05	9.02	10.38	7.51	7.97	10.71	11.11
16	15.72	10.96	13.21	10.52	11.04	11.68	9.63	9.13	6.56	9.29	10.27	11.19
17	15.63	11.34	13.35	10.72	10.36	10.44	9.99	9.02	8.72	9.69	10.49	11.73
18	14.03	11.48	14.82	11.05	10.83	11.18	11.89	9.00	8.72	9.50	9.80	11.72
19	13.86	11.46	14.83	11.63	12.07	12.06	11.17	9.61	8.83	8.76	10.77	11.80
20	13.66	11.52	14.25	12.10	12.23	10.53	11.16	9.79	8.41	9.26	10.77	12.23
21	14.13	9.84	14.52	12.25	10.91	10.07	10.99	11.06	9.18	9.17	10.81	12.77
22	12.63	9.15	12.99	12.23	9.89	9.29	10.84	11.43	9.00	9.59	9.28	13.36
23	12.89	9.70	12.91	12.54	10.89	10.76	11.27	9.88	9.20	8.32	9.93	13.78
24	12.97	10.37	12.98	10.68	11.19	10.99	11.59	8.48	9.44	8.11	8.97	14.06
25	13.06	10.45	12.47	12.23	11.92	10.65	9.98	8.94	9.59	8.25	9.95	13.72
26	12.86	11.94	11.47	11.96	12.08	11.53	9.30	6.96	7.99	9.96	10.77	13.18
27	13.32	12.16	11.17	10.84	11.56	12.26	9.06	3.99	7.98	10.09	10.60	13.33
28	13.17	10.44	11.22	12.32	10.85	12.72	8.73	5.47	6.46	10.16	10.44	13.44
29	13.19	10.33	10.72	12.55	---	12.83	7.95	6.11	6.60	10.41	10.24	13.49
30	14.13	10.28	9.96	12.58	---	9.90	8.17	6.41	7.49	10.47	10.21	13.47
31	13.36	---	10.33	13.39	---	9.86	---	6.67	---	9.78	10.28	---
MAX	15.78	14.23	14.83	13.39	14.04	12.83	11.89	11.43	9.59	10.47	10.81	14.06

CAL YR 1988 LOW 18.92
WTR YR 1989 LOW 15.78



394411083561300 GR-1
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

GREENE COUNTY--Continued

394425083551100. Local number, GR-10.

LOCATION.--Lat 39° 44' 25", long 83° 55' 11", Hydrologic Unit 05090202, in well field along Massies Creek north of Xenia.

Owner: Xenia Water Department.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in., depth 100 ft, cased.

INSTRUMENTATION.--Digital recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 835 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter at land-surface datum.

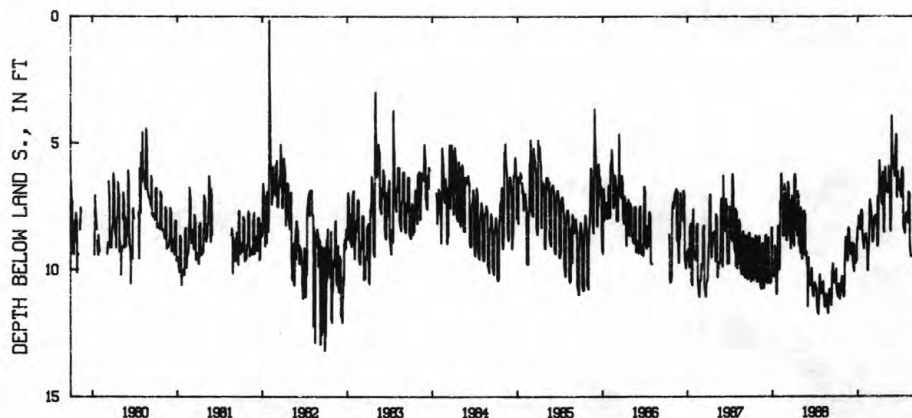
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--March 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 20.40 ft below land-surface datum, Nov. 5, 1977; minimum daily low, 0.15 ft below land-surface datum, Feb. 1, 1982.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.98	10.95	9.25	8.33	8.63	7.89	7.48	6.29	5.82	6.90	7.87	---
2	10.53	11.05	9.34	8.32	8.65	8.05	7.05	6.47	5.94	6.46	7.98	---
3	10.68	11.07	9.40	8.33	8.66	8.16	6.96	6.66	5.99	6.62	8.07	---
4	10.79	11.06	9.14	8.39	8.68	8.27	6.75	6.78	5.52	6.80	8.16	---
5	10.91	10.80	8.97	8.37	8.66	8.90	5.69	6.84	5.69	6.96	8.16	---
6	10.90	10.41	8.97	8.16	8.58	8.89	5.98	6.90	5.86	6.98	8.06	---
7	10.96	9.79	8.97	7.88	8.73	8.74	6.31	6.89	6.01	7.13	6.95	---
8	11.06	9.62	8.98	7.88	8.86	8.84	6.49	6.94	6.14	7.14	6.94	---
9	10.74	9.22	8.98	8.05	8.87	8.80	6.49	6.94	6.23	6.16	6.96	---
10	10.59	9.03	8.96	8.17	8.97	8.68	6.68	6.67	6.31	6.08	6.97	---
11	10.60	8.86	9.59	8.32	9.07	8.54	6.80	6.59	5.71	6.13	7.01	---
12	10.57	8.72	9.62	8.32	9.97	8.12	7.03	6.82	5.16	5.97	7.06	---
13	10.62	9.32	9.74	8.41	10.03	7.94	7.17	6.95	5.13	6.08	8.98	---
14	10.58	9.28	9.87	8.35	10.05	8.27	7.29	6.96	5.01	6.16	9.17	---
15	10.59	9.28	9.96	8.35	9.77	7.88	7.39	5.91	4.66	6.23	9.31	---
16	11.06	9.37	9.93	7.71	9.32	7.93	7.42	6.02	4.75	8.18	9.41	---
17	11.17	9.52	10.07	7.64	9.16	7.91	6.33	6.07	4.88	8.33	9.48	---
18	10.98	9.55	8.98	7.65	9.08	7.96	6.31	6.14	6.95	8.36	9.49	---
19	10.97	9.65	9.52	7.66	8.75	7.99	6.15	6.23	7.14	8.37	9.44	---
20	10.86	9.53	9.54	7.76	8.41	7.85	6.98	6.25	6.75	8.38	9.46	---
21	10.88	8.97	9.58	7.86	8.40	7.85	7.08	8.36	6.69	8.48	---	---
22	10.87	8.40	9.58	8.52	7.28	7.87	6.16	8.47	6.12	8.56	---	---
23	10.53	8.34	9.56	8.74	7.25	7.93	8.35	8.48	6.34	8.56	---	---
24	10.45	8.36	9.56	8.86	7.39	7.99	8.45	7.96	6.47	7.97	---	---
25	10.41	8.40	9.74	8.89	7.39	8.08	8.51	7.81	6.72	7.98	---	---
26	10.27	8.41	9.54	8.99	7.44	9.06	7.90	5.98	6.82	7.83	---	---
27	10.28	8.88	9.63	9.07	7.58	9.07	6.95	3.92	6.83	7.77	---	---
28	10.28	8.96	9.64	9.17	7.76	7.11	6.59	4.37	6.63	7.77	---	---
29	10.27	9.04	8.83	8.83	---	9.05	6.35	5.00	6.68	7.82	---	---
30	10.82	9.18	8.75	8.65	---	8.66	5.96	5.42	6.76	7.84	---	---
31	10.93	---	8.79	8.66	---	8.22	---	5.71	---	7.76	---	---
MAX	11.17	11.07	10.07	9.17	10.05	9.07	8.51	8.48	7.14	8.56	9.49	---
CAL YR 1988	LOW 11.75											
WTR YR 1989	LOW 11.17											



394425083551100 GR-10
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

HAMILTON COUNTY

391039084291500. Local number, H-11.

LOCATION.--Lat 39° 10' 39", long 84° 29' 15", Hydrologic Unit 05090203, 5.6 mi north of Riverfront Stadium in Cincinnati.

Owner: Procter and Gamble Company.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled test artesian well, diameter 6 in., depth 148 ft, cased.

INSTRUMENTATION.--Biyearly measurement with chalked tape by ODNR personnel.

DATUM.--Elevation of land-surface datum is 539 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 2.23 ft above land-surface datum.

REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--August 1939 to September 1982 continuous, periodic thereafter.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 129.72 ft below land-surface datum, Oct 25, 1948; minimum daily low, 68.45 ft below land-surface datum, May 2, 1989.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM
INSTANTANEOUS OBSERVATIONS

DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 19, 1988	69.00	May 2, 1989	68.45

GROUND-WATER RECORDS

HAMILTON COUNTY-Continued

391101084172100. Local number, H-3.

LOCATION.--Lat 39° 11' 01", long 84° 17' 21", Hydrologic Unit 05090202, southeast of Miami.

Owner: Indian Hills Water Department.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled test water table well, diameter 4 in., depth 60 ft, cased.

INSTRUMENTATION.--Type F continuous recorder.

DATUM.--Elevation of land-surface datum is 532.22 ft above National Geodetic Vertical Datum of 1929. Measuring point: Floor of instrument shelter 3.00 ft above land-surface datum.

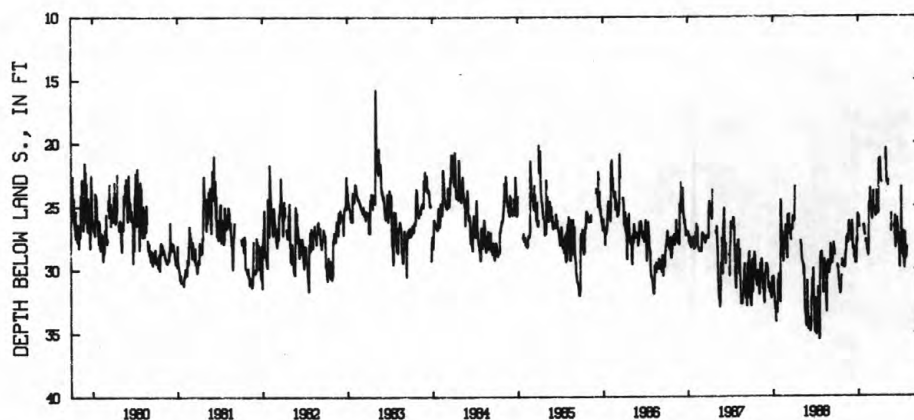
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--August 1952 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 35.75 ft below land-surface datum, Aug. 29, 1955; minimum daily low, 15.60 ft below land-surface datum, Feb. 28, 1962.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	29.35	26.70	26.15	27.85	26.05	21.30	21.25	---	28.50	---	---
2	---	29.45	26.95	26.00	27.85	26.00	21.95	22.05	26.50	28.85	---	---
3	29.65	29.70	27.75	25.75	27.65	24.85	22.35	22.65	26.75	28.40	---	---
4	29.75	29.65	27.75	25.95	27.65	25.05	21.85	23.20	---	26.30	---	---
5	29.85	29.85	---	26.70	27.65	25.05	21.25	---	27.15	23.50	---	---
6	29.75	29.65	26.20	26.60	27.85	24.75	21.75	23.15	27.20	26.55	---	---
7	29.90	29.00	26.80	---	28.10	23.85	22.10	---	27.35	27.60	---	---
8	30.35	28.70	27.20	---	28.35	25.00	22.50	---	25.80	27.90	---	---
9	30.65	28.55	28.20	---	28.55	25.25	22.90	23.40	27.75	28.50	---	---
10	30.85	28.55	28.45	---	28.50	25.15	23.10	23.00	28.30	28.50	---	---
11	31.20	28.10	28.45	---	28.60	25.15	23.15	---	26.85	27.50	---	---
12	31.40	27.50	---	---	28.80	25.25	---	---	27.95	29.05	---	---
13	31.50	27.75	28.15	---	28.90	25.10	---	---	28.00	27.00	---	---
14	31.70	27.75	28.25	---	28.55	25.50	---	---	27.85	28.80	---	---
15	31.90	27.75	29.05	---	27.60	25.70	---	---	26.25	29.00	---	---
16	31.70	27.30	29.10	---	25.20	25.40	---	---	25.95	29.30	---	---
17	31.80	27.90	28.55	---	24.75	25.80	---	---	26.40	29.75	---	---
18	31.60	27.90	28.65	---	25.10	25.65	---	---	27.05	29.90	---	---
19	31.30	27.50	29.40	---	25.25	25.65	---	---	26.45	29.35	---	---
20	30.65	27.70	29.50	---	25.35	25.70	---	---	26.80	28.90	---	---
21	30.50	26.60	28.90	---	24.30	23.80	---	---	27.15	27.10	---	---
22	---	26.30	28.90	---	23.60	24.15	---	27.00	27.50	29.20	---	---
23	29.75	26.20	28.95	26.55	24.15	24.40	---	25.60	27.35	29.00	---	---
24	29.20	26.80	29.50	26.60	24.55	24.45	---	---	27.25	28.55	---	---
25	---	27.00	28.80	26.50	25.00	25.00	---	---	27.80	28.20	---	---
26	29.70	27.05	27.85	27.00	25.00	25.10	---	---	28.40	29.05	---	---
27	29.70	26.45	27.55	27.00	25.25	25.30	---	---	29.70	28.67	---	---
28	---	26.65	27.85	26.70	25.75	25.60	---	---	29.85	28.27	---	---
29	---	26.95	26.20	27.20	---	25.50	21.30	---	28.70	---	---	---
30	29.85	26.95	25.60	27.30	---	22.30	20.45	---	28.05	---	---	---
31	29.80	---	26.20	---	---	21.35	---	25.15	---	---	---	---
MAX	31.90	29.85	29.50	27.30	28.90	26.05	23.15	27.00	29.85	29.90	---	---

CAL YR 1988 LOW 35.50
WTR YR 1989 LOW 31.90391101084172100 H-3
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

253

HAMILTON COUNTY--Continued

391201084281600. Local number, H-10.

LOCATION.--Lat 39° 12' 01", long 84° 28' 16", Hydrologic Unit 05090203, Section Road, Cincinnati.

Owner: National Distillers.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 in., depth 170 ft, cased.

INSTRUMENTATION.--Digital recorder -- 60-minute.

DATUM.--Elevation of land-surface datum is 544.7 ft above National Geodetic Vertical Datum of 1929.

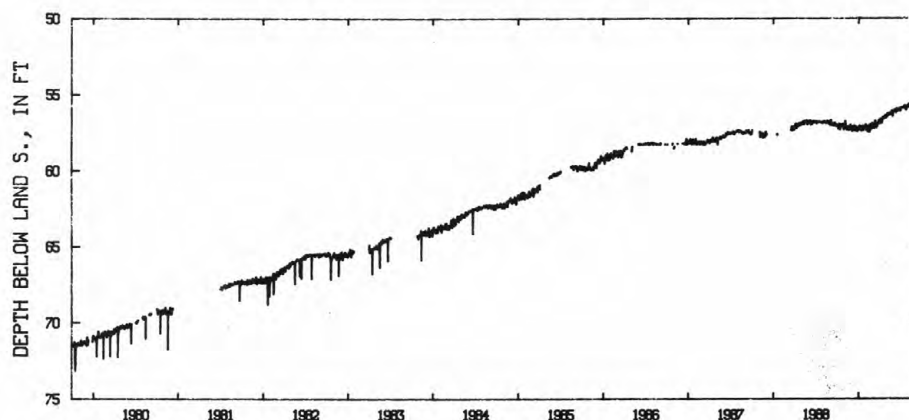
Measuring point: Floor of instrument shelter 8.13 ft above land-surface datum.

REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--January 1944 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 121.58 ft below land-surface datum, Nov. 3, 10, 1950;
minimum daily low, 55.59 ft below land-surface datum, Sept. 22, 1989.DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57.01	56.95	57.33	57.13	57.02	57.22	56.94	56.49	56.17	55.95	55.84	55.70
2	57.00	57.05	57.36	57.14	57.13	57.11	56.85	56.46	56.16	55.91	55.84	55.83
3	57.04	57.00	57.24	57.13	57.37	56.90	56.65	56.48	56.06	55.87	55.77	55.88
4	57.13	56.84	57.44	57.31	57.35	56.93	56.76	56.46	56.13	55.88	55.66	55.82
5	57.22	56.77	57.30	57.12	57.21	56.97	56.79	56.28	56.04	55.90	55.67	55.82
6	57.27	56.97	57.11	57.07	57.28	57.04	56.75	56.40	56.05	55.94	55.70	55.78
7	57.22	57.11	57.18	57.07	57.27	57.20	56.62	56.43	56.02	55.92	55.78	55.71
8	57.12	57.26	57.33	57.32	57.44	57.22	56.64	56.35	56.01	55.89	55.83	55.68
9	56.99	57.25	57.29	57.36	57.45	57.24	56.83	56.29	56.07	55.87	55.89	55.64
10	56.93	57.20	57.21	57.30	57.23	57.12	56.92	56.33	56.19	55.88	55.92	55.70
11	57.07	57.33	57.32	57.34	57.06	56.94	56.84	56.35	56.22	55.89	55.87	55.75
12	57.24	57.27	57.32	57.25	57.22	57.04	56.72	56.25	56.01	55.85	55.83	55.79
13	57.31	57.16	57.07	57.41	57.10	56.92	56.75	56.24	55.94	55.81	55.79	55.77
14	57.17	57.18	57.11	57.31	57.22	56.74	56.63	56.27	56.02	55.89	55.76	55.68
15	57.07	57.13	57.41	57.13	57.36	57.11	56.51	56.25	55.99	55.92	55.68	55.71
16	57.00	57.13	57.40	57.24	57.50	57.14	56.55	56.29	56.05	55.86	55.72	55.70
17	57.02	57.29	57.25	57.10	57.46	57.00	56.53	56.35	56.12	55.86	55.80	55.79
18	57.06	57.36	57.25	57.07	57.28	57.16	56.54	56.34	56.09	55.84	55.85	55.82
19	57.09	57.19	57.13	57.13	57.06	57.20	56.61	56.26	55.98	55.74	55.77	55.78
20	57.11	57.23	57.13	57.36	56.98	56.95	56.58	56.23	56.00	55.79	55.68	55.78
21	56.99	57.35	57.40	57.38	56.99	57.04	56.48	56.30	55.96	55.92	55.74	55.71
22	56.97	57.30	57.41	57.19	57.12	57.09	56.48	56.19	56.00	56.03	55.70	55.59
23	56.95	57.23	57.19	57.14	57.29	56.99	56.47	56.13	56.00	56.05	55.69	55.94
24	56.94	57.16	57.19	57.12	57.30	56.87	56.46	56.17	55.96	56.00	55.73	55.98
25	57.05	57.08	57.40	57.16	57.13	56.84	56.39	56.08	55.97	56.00	55.75	55.83
26	57.10	57.02	57.44	57.16	56.91	56.89	56.40	56.26	55.91	55.96	55.73	55.92
27	57.13	57.01	57.17	57.21	56.92	56.85	56.43	56.42	55.90	55.85	55.77	56.02
28	57.25	57.27	57.38	57.18	57.09	56.77	56.37	56.45	55.99	55.82	55.78	55.89
29	57.31	57.30	57.39	57.10	---	56.72	56.46	56.28	56.11	55.86	55.73	55.76
30	57.29	57.16	57.22	57.01	---	56.67	56.57	56.20	56.06	55.74	55.75	55.77
31	57.16	---	57.18	56.98	---	56.85	---	56.18	---	55.81	55.77	---
MAX	57.31	57.36	57.44	57.41	57.50	57.24	56.94	56.49	56.22	56.05	55.92	56.02

CAL YR 1988 LOW 57.68
WTR YR 1989 LOW 57.50— 391201084281600 H-10
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

HAMILTON COUNTY--Continued

391214084470100. Local number, H-1.

LOCATION.--Lat 39° 12' 14", long 84° 47' 01", Hydrologic Unit 05080003, Kilby Road 4 mi southeast of Harrison.

Owner: Robert Weber.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled test water-table well, diameter 6 in., depth 124 ft, cased.

INSTRUMENTATION.--Type F continuous recorder.

DATUM.--Elevation of land-surface datum is 500 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 2.70 ft above land-surface datum.

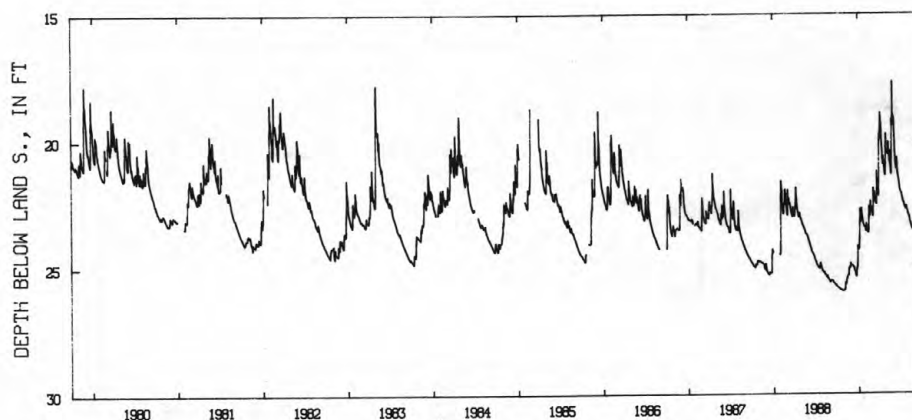
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--February 1948 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 25.95 ft below land-surface datum, Oct. 26-27, 1988; minimum daily low, 14.00 ft below land-surface datum, Jan. 22, 1959.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25.78	25.94	24.91	24.32	23.49	22.85	19.77	20.14	19.12	22.05	22.89	23.56
2	25.78	25.91	24.93	24.24	23.58	22.93	19.98	20.29	19.15	22.07	22.91	23.44
3	25.80	25.90	24.94	24.28	23.58	22.96	19.98	20.41	19.19	22.08	22.95	22.98
4	25.81	25.90	24.95	24.30	23.36	23.00	19.48	20.48	19.59	22.08	22.98	23.13
5	25.82	25.84	24.95	24.04	23.30	23.00	18.93	20.49	19.87	22.11	23.00	23.21
6	25.82	25.62	24.96	23.90	23.41	21.90	19.09	20.38	20.16	22.16	22.99	23.21
7	25.83	25.65	24.97	23.29	23.49	22.25	19.31	20.57	20.43	22.22	22.99	23.26
8	25.85	25.67	24.99	23.20	23.60	22.40	19.35	20.57	20.63	22.26	23.09	23.34
9	25.85	25.67	25.00	22.71	23.63	22.43	19.37	20.57	20.78	22.31	23.14	23.40
10	25.85	25.67	25.02	23.07	23.62	22.33	19.70	20.07	20.92	22.35	23.18	23.38
11	25.86	25.46	25.02	23.23	23.63	22.18	20.08	20.30	21.03	22.40	23.23	23.20
12	25.87	25.48	25.02	23.23	23.65	22.06	20.23	20.45	21.11	22.44	23.26	23.10
13	25.88	25.49	25.02	22.93	23.65	22.19	20.37	20.57	21.15	22.44	23.29	23.19
14	25.89	25.47	25.07	22.93	23.54	22.28	20.48	20.65	20.95	22.44	23.33	23.20
15	25.90	25.38	25.14	22.70	23.07	22.28	20.70	20.71	20.70	22.49	23.37	22.99
16	25.90	25.34	25.16	22.89	22.62	22.28	20.82	20.90	20.83	22.53	23.41	22.07
17	25.90	25.35	25.18	23.00	22.80	22.36	20.94	20.43	20.94	22.57	23.46	22.27
18	25.91	25.34	25.20	23.07	22.82	22.46	20.97	20.53	21.18	22.61	23.49	22.56
19	25.92	25.34	25.23	23.11	22.93	22.52	20.66	20.95	21.34	22.63	23.50	22.80
20	25.91	25.29	25.30	23.15	22.99	22.53	20.75	21.04	21.37	22.67	23.51	22.93
21	25.93	25.11	25.36	23.26	22.70	21.23	20.91	21.27	21.45	22.70	23.51	23.02
22	25.93	25.03	25.38	23.30	22.41	21.51	21.07	21.36	21.50	22.71	23.54	23.12
23	25.93	25.01	25.38	23.32	22.55	21.67	21.13	21.31	21.55	22.73	23.50	23.17
24	25.93	25.03	25.38	23.33	22.63	21.77	21.23	21.18	21.60	22.61	23.44	23.22
25	25.94	25.04	25.04	23.40	22.65	21.90	21.30	19.47	21.66	22.61	23.26	23.29
26	25.95	25.04	25.07	23.41	22.65	22.00	21.40	19.47	21.75	22.62	23.34	23.36
27	25.95	25.01	25.08	23.41	22.67	22.13	21.41	17.70	21.84	22.69	23.39	23.41
28	25.94	24.86	24.96	23.40	22.74	22.20	21.00	18.86	21.91	22.74	23.45	23.46
29	25.94	24.86	24.17	23.41	---	22.20	20.28	19.25	21.95	22.78	23.46	23.51
30	25.94	24.89	24.27	23.43	---	20.23	19.76	19.21	22.00	22.80	23.50	23.54
31	25.94	---	24.32	23.45	---	20.04	---	19.05	---	22.83	23.53	---
MAX	25.95	25.94	25.38	24.32	23.65	23.00	21.41	21.36	22.00	22.83	23.54	23.56

CAL YR 1988 LOW 25.95
WTR YR 1989 LOW 25.95— 391214084470100 H-1
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

HAMILTON COUNTY--Continued

391324084272500. Local number, H-9.

LOCATION.--Lat 39° 13' 24", long 84° 27' 25", Hydrologic Unit 05090203, 9.1 mi north of Riverfront Stadium in Cincinnati.

Owner: Diamond National Corporation.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 10 in., depth drilled 168 ft, present depth 163 ft, cased.

INSTRUMENTATION.--Biyearly measurement with chalked tape by ODNR personnel.

DATUM.--Elevation of land-surface datum is 555.30 ft above National Geodetic Vertical Datum of 1929. Measuring point: Floor of instrument shelter, 2.76 ft above land-surface datum.

REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--July 1938 to September 1982 continuous, periodic thereafter.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low 136.80 ft below land-surface datum, Nov. 9, 1947, Feb. 15, 1948; minimum water level measured, 52.38 ft below land-surface datum, May 2, 1989.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM
INSTANTANEOUS OBSERVATIONS

DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 19, 1988	54.04	May 2, 1989	52.38

GROUND-WATER RECORDS
HAMILTON COUNTY--Continued

391341084275300. Local number, H-8.

LOCATION.--Lat 39°13'41", long 84°27'53", Hydrologic Unit 05090203. Vine and Water Streets, Wyoming.

Owner.--Wyoming Water Department.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 in., depth 194 ft, cased.

INSTRUMENTATION.--Type F continuous recorder.

DATUM.--Elevation of land-surface datum is 576.2 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of platform 3.30 ft above land-surface datum.

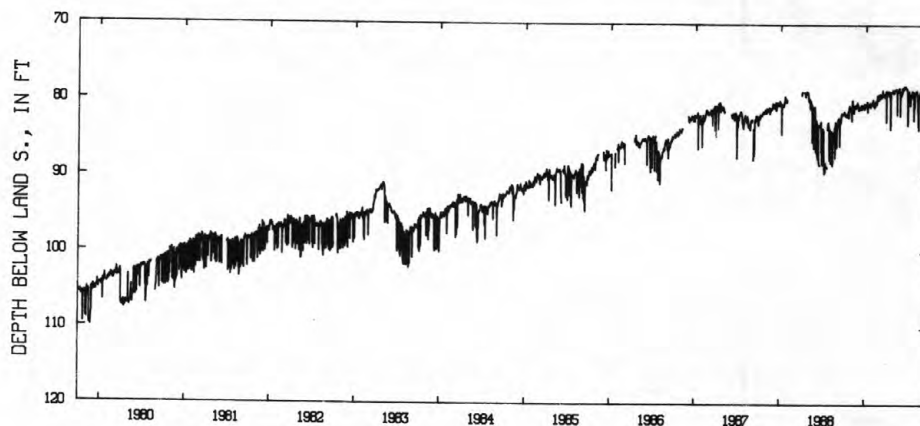
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--June 1938 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 148.86 ft below land-surface datum, Dec. 1, 1948; minimum daily low, 77.10 ft below land-surface datum, Sept. 22, 1989.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	81.40	80.70	80.80	80.45	79.80	79.70	79.05	78.65	79.30	82.60	78.80	77.70
2	81.55	82.55	81.20	80.45	80.20	79.30	78.95	78.80	79.25	79.05	78.85	77.95
3	81.75	80.70	80.70	80.40	80.60	79.00	78.65	78.80	78.90	78.80	78.85	80.20
4	81.75	80.35	81.05	80.55	80.55	79.10	78.70	78.80	79.05	78.70	78.80	78.80
5	81.85	79.90	---	80.30	80.35	79.25	78.80	78.40	78.85	78.60	78.80	78.75
6	81.90	80.40	---	80.20	80.45	79.15	78.75	78.60	78.70	79.00	78.55	78.50
7	81.95	80.65	80.75	80.05	80.80	79.50	78.65	78.65	78.20	79.25	78.55	77.80
8	81.95	80.80	81.00	80.65	80.65	79.55	78.60	78.55	78.70	79.20	78.70	77.80
9	81.70	80.90	80.90	81.40	80.65	79.45	79.10	78.40	78.20	79.30	78.90	77.90
10	81.65	80.55	80.90	80.65	80.35	79.35	79.25	78.45	78.50	80.50	79.00	77.90
11	81.70	81.55	81.05	80.60	79.95	79.05	79.15	78.45	78.45	80.50	79.00	77.80
12	82.00	81.10	81.00	80.50	80.20	79.20	78.95	78.35	78.10	79.80	81.10	77.80
13	81.95	80.80	80.50	80.70	80.00	78.85	79.00	78.35	78.10	79.00	81.50	77.90
14	81.70	80.80	80.50	80.45	79.95	78.55	78.70	78.55	78.10	79.15	83.30	77.60
15	81.75	80.70	81.00	80.35	80.10	79.10	78.70	78.45	78.00	79.10	79.30	77.50
16	81.80	80.60	80.80	80.45	80.40	79.20	78.85	81.75	78.25	79.45	83.80	77.40
17	81.55	80.90	80.80	80.30	80.40	79.00	83.70	78.70	78.20	79.40	79.50	77.75
18	81.30	80.90	80.60	80.20	79.95	79.35	82.90	78.80	78.15	79.15	79.40	77.80
19	81.35	80.50	80.65	80.30	79.50	79.35	78.85	78.70	78.10	78.60	79.15	77.65
20	82.20	80.70	80.50	80.60	79.35	79.00	78.80	78.55	78.00	78.60	79.00	80.10
21	80.90	80.85	80.90	80.80	79.15	79.30	78.75	78.70	78.00	78.65	79.00	77.50
22	81.00	80.80	80.75	80.40	79.45	79.40	78.70	78.50	78.10	79.10	78.80	77.10
23	80.60	80.65	80.50	80.30	79.80	79.20	78.80	78.25	78.10	79.05	78.70	77.75
24	80.80	80.55	80.50	80.30	79.85	79.00	78.80	78.25	78.25	78.90	78.70	77.80
25	81.00	80.45	80.95	80.20	79.45	79.00	78.60	78.20	78.35	79.05	78.60	77.55
26	81.00	80.15	81.00	80.45	79.20	79.00	78.65	78.65	78.40	82.50	78.65	77.80
27	81.00	80.35	80.35	80.35	79.10	78.95	78.55	78.90	78.30	78.70	78.80	80.80
28	81.30	80.70	80.90	80.40	79.40	78.75	78.45	78.80	78.55	78.90	78.70	77.90
29	81.25	80.70	80.85	80.05	---	78.60	78.55	81.90	78.60	80.80	78.50	77.90
30	81.30	80.55	80.40	80.00	---	82.75	78.90	78.65	83.15	79.90	78.65	78.00
31	80.95	---	80.40	---	---	78.75	---	78.85	---	78.75	78.50	---
MAX	82.20	82.55	81.20	81.40	80.80	82.75	83.70	81.90	83.15	82.60	83.80	80.80
CAL YR 1988	LOW 89.55											
WTR YR 1989	LOW 83.80											



391341084275300 H-8
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

257

HAMILTON COUNTY--Continued

391442084262900. Local number, H-7.

LOCATION.--Lat 39° 14' 42", long 84° 26' 29", Hydrologic Unit 05090203, at Evendale.

Owner: General Electric Corp.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled test artesian well, diameter 6 in., depth 180 ft, cased.

INSTRUMENTATION.--Type F continuous recorder.

DATUM.--Elevation of land-surface datum is 555.40 ft above National Geodetic Vertical Datum of 1929. Measuring point: Floor of instrument shelter 7.78 ft above land-surface datum.

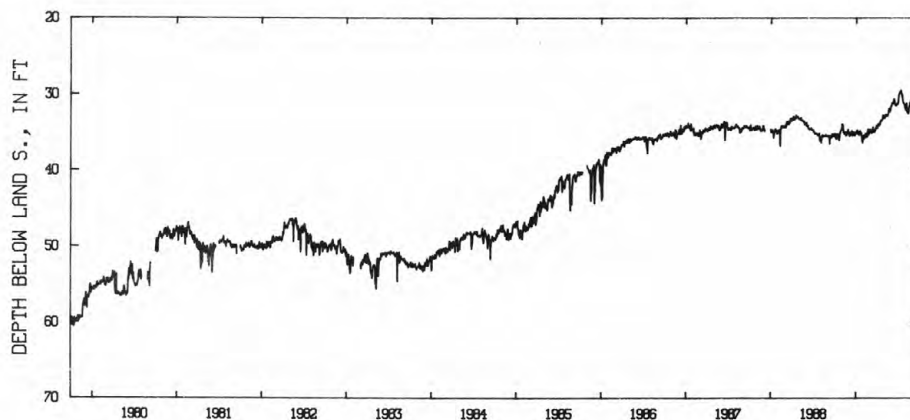
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--April 1941 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 101.09 ft below land-surface datum, Jan. 29, 1964; minimum daily low, 29.45 ft below land-surface datum, July 13, 1989.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35.42	33.94	35.30	34.94	35.45	35.08	34.54	33.16	31.65	31.11	31.99	30.40
2	35.18	34.07	35.40	34.93	35.92	35.04	34.46	33.06	31.55	30.78	32.08	30.51
3	35.39	34.08	35.33	34.88	35.86	34.75	34.03	33.12	31.46	30.47	32.03	30.54
4	35.50	34.05	35.50	35.06	35.86	34.63	33.98	33.12	31.32	30.11	31.70	30.45
5	35.74	33.97	35.43	34.98	35.60	34.75	34.17	32.80	31.26	29.96	31.32	30.30
6	35.89	34.40	35.09	34.77	35.38	34.78	34.17	32.94	31.15	29.91	31.20	30.23
7	35.82	34.76	35.03	34.80	35.37	35.09	34.02	33.00	31.15	29.87	31.75	30.22
8	35.70	35.07	35.29	35.17	35.62	35.15	33.85	32.90	31.10	29.77	32.08	30.35
9	35.40	35.10	35.28	35.27	35.69	35.13	33.96	32.66	31.04	29.70	32.39	30.65
10	35.23	34.96	35.14	35.23	35.33	35.01	34.12	32.77	31.25	29.65	32.45	31.07
11	35.56	35.23	35.28	35.27	35.14	34.75	34.07	32.86	31.24	29.60	32.40	31.25
12	35.75	35.23	35.28	35.13	35.24	34.72	33.97	32.82	30.90	29.53	32.37	31.42
13	35.85	34.99	34.85	35.37	35.21	34.68	33.94	32.79	30.62	29.45	32.53	31.42
14	35.71	35.03	34.95	35.32	35.26	34.34	33.90	32.78	30.73	29.63	32.58	31.36
15	35.46	35.01	35.46	34.92	35.35	34.74	33.61	32.79	30.73	29.83	32.31	31.45
16	35.33	34.99	35.46	35.07	35.66	34.87	33.50	32.85	30.95	29.93	31.85	31.52
17	35.26	35.33	35.20	34.92	35.66	34.79	33.42	32.87	31.23	30.22	31.70	31.73
18	35.29	35.45	35.20	34.84	35.45	34.98	33.39	32.82	31.27	30.22	31.65	31.80
19	35.39	35.28	34.97	34.92	35.04	35.03	33.53	32.57	31.29	30.06	31.58	31.60
20	36.12	35.00	35.02	35.25	34.84	34.73	33.55	32.26	31.48	30.37	31.30	31.83
21	35.73	35.33	35.38	35.32	34.60	34.81	33.43	32.31	31.55	30.78	31.18	31.80
22	35.28	35.34	35.39	35.16	34.90	34.90	33.39	32.18	31.55	31.08	31.13	31.65
23	35.26	35.27	35.00	35.10	35.26	34.82	33.37	31.89	31.46	31.15	30.97	31.12
24	34.97	35.15	35.04	35.60	35.32	34.65	33.29	31.97	31.37	31.15	30.87	32.22
25	34.97	34.99	35.40	35.65	35.20	34.50	33.17	31.90	31.40	31.22	30.88	32.10
26	34.85	34.84	35.45	36.10	34.76	34.50	32.78	32.15	31.34	31.28	30.88	32.22
27	34.81	34.64	35.08	36.23	34.63	34.38	32.75	32.30	31.23	31.26	30.85	32.39
28	34.71	35.04	35.29	36.37	34.78	34.31	32.78	32.31	31.18	31.40	30.80	32.30
29	34.75	35.13	35.32	36.36	---	34.19	32.93	32.05	31.32	31.54	30.63	32.11
30	34.63	35.01	35.09	35.63	---	34.10	33.15	31.76	31.28	31.62	30.58	32.12
31	34.44	---	35.02	35.83	---	34.40	---	31.68	---	31.85	30.58	---
MAX	36.12	35.45	35.50	36.37	35.92	35.15	34.54	33.16	31.65	31.85	32.58	32.39
CAL YR 1988	LOW 36.83											
WTR YR 1989	LOW 36.37											



391442084262900 H-7
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

HAMILTON COUNTY--Continued

391608084254400. Local number, H-6.

LOCATION.--Lat 39°16'08", long 84°25'44", Hydrologic Unit 05090203, Water Treatment Plant in Glendale.

Owner: Glendale Water Department.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 in., depth 167 ft, cased.

INSTRUMENTATION.--Type F continuous recorder.

DATUM.--Elevation of land-surface datum is 570.65 ft above National Geodetic Vertical Datum of 1929. Measuring point: Floor of instrument shelter 4.05 ft above land-surface datum.

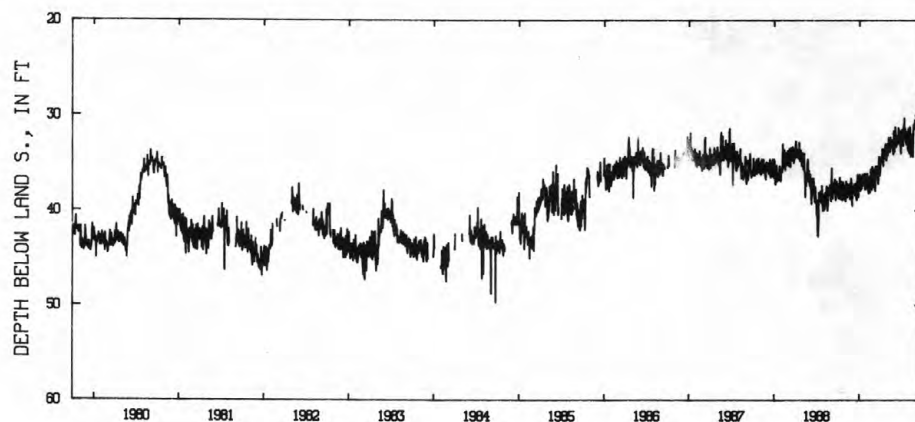
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--July 1938 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 84.10 ft below land-surface datum, Oct. 14, 1960; minimum daily low, 23.10 ft below land-surface datum, Apr. 28, 1939.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38.15	38.30	39.30	36.80	37.00	37.30	35.50	33.00	33.80	32.60	32.60	30.40
2	37.20	38.90	39.50	36.20	37.20	37.50	34.80	33.50	33.10	31.70	32.80	30.00
3	38.00	38.90	38.00	36.20	37.40	36.40	34.40	34.20	32.50	31.50	33.40	29.80
4	38.30	39.00	37.40	36.80	37.70	36.40	34.90	33.90	31.20	31.60	34.00	29.60
5	38.70	37.70	37.60	36.80	36.10	35.60	35.00	33.20	31.40	32.00	33.60	31.00
6	37.40	36.90	38.10	37.90	36.40	36.10	35.00	33.30	32.10	32.80	31.20	31.90
7	38.40	37.30	37.50	37.80	36.60	36.40	34.90	32.30	33.00	33.00	31.60	32.80
8	38.40	37.40	37.40	36.40	37.80	36.80	34.70	32.50	33.30	33.20	32.60	33.10
9	37.00	37.40	38.00	36.60	37.90	37.70	33.50	33.00	33.20	31.40	33.40	32.60
10	36.50	38.00	37.30	37.20	38.20	37.90	33.80	33.30	32.80	31.10	34.30	31.60
11	37.60	38.60	37.20	37.70	37.40	37.30	34.30	33.40	32.20	31.20	34.20	31.40
12	38.30	38.50	37.50	37.40	36.40	35.40	34.40	33.80	32.10	31.00	34.00	31.90
13	38.50	37.20	38.20	37.40	36.50	35.30	34.60	33.80	32.40	30.30	32.00	32.20
14	38.80	37.30	38.40	37.00	37.10	35.70	35.30	32.50	32.50	32.20	32.50	32.80
15	37.60	37.80	38.40	36.20	38.00	36.40	34.80	32.30	33.00	32.50	33.30	33.10
16	36.90	37.80	37.60	36.30	38.10	36.20	33.50	32.70	33.00	31.80	33.60	32.60
17	37.30	38.30	37.90	37.00	37.40	36.10	33.50	33.00	32.50	31.40	33.60	31.00
18	38.00	38.20	37.10	37.10	37.10	36.60	34.00	33.30	31.30	32.20	34.30	32.10
19	38.70	38.20	37.60	37.10	35.90	35.50	34.30	33.10	31.70	32.40	34.30	32.20
20	38.90	37.30	38.60	37.30	35.60	35.30	34.20	33.30	32.00	32.80	32.20	33.20
21	38.70	37.20	38.90	37.30	36.60	36.40	34.30	32.90	32.40	33.00	31.00	33.20
22	38.50	38.70	38.70	36.20	37.40	37.20	34.50	32.60	32.50	32.80	31.10	32.50
23	37.00	38.80	36.90	36.10	37.80	37.10	33.20	32.90	33.00	31.70	31.50	32.30
24	37.00	38.50	37.20	36.50	37.80	36.70	33.00	33.30	32.60	32.40	31.10	31.00
25	37.40	37.20	36.20	37.20	36.90	35.20	34.20	33.70	31.60	33.00	31.40	31.80
26	37.60	37.00	36.60	37.80	35.40	34.30	34.20	33.60	32.00	32.80	31.00	32.30
27	38.00	36.60	37.60	37.10	35.90	34.80	34.70	34.10	33.20	33.00	30.50	32.30
28	38.80	37.00	38.30	37.20	36.50	35.80	34.70	33.00	33.50	33.40	30.60	32.80
29	38.00	37.10	38.60	36.10	---	36.10	34.20	31.60	34.00	33.70	30.60	33.40
30	37.30	38.10	37.30	36.50	---	36.30	33.80	32.30	32.80	31.40	30.90	33.00
31	37.40	---	37.20	36.60	---	35.90	---	33.50	---	31.70	30.60	---
MAX	38.90	39.00	39.50	37.90	38.20	37.90	35.50	34.20	34.00	33.70	34.30	33.40
CAL YR 1988	LOW 42.70											
WTR YR 1989	LOW 39.50											



391608084254400 H-6
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

259

HAMILTON COUNTY--Continued

391733084392400. Local number, H-2.

LOCATION.--Lat 39° 17' 33", long 84° 39' 24", Hydrologic Unit 05080002, East Miami River Road 1.5 mi south of Ross.
Owner: Lee Wilhelm.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled test water table well, diameter 6 in., depth 89 ft, cased.

INSTRUMENTATION.--Type F continuous recorder.

DATUM.--Elevation of land-surface datum is 534.21 ft above National Geodetic Vertical Datum of 1929. Measuring point: Floor of instrument shelter 8.97 ft above land-surface datum.

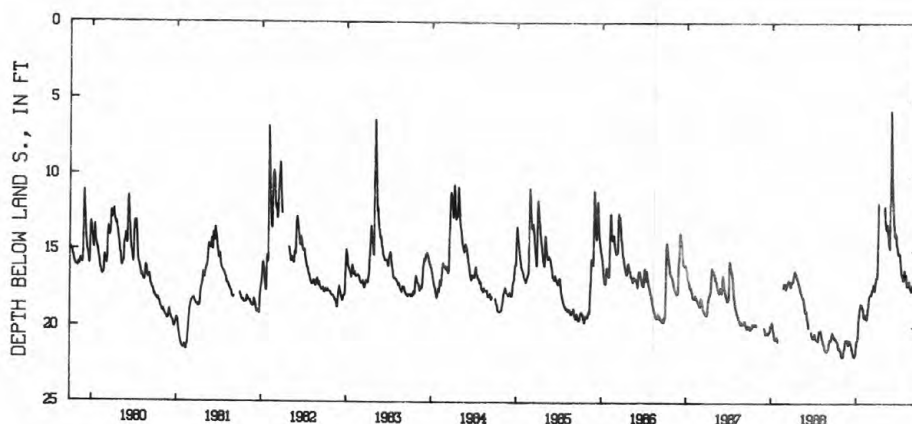
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--August 1952 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 24.37 ft below land-surface datum, Sept. 24, 25, 1972; minimum daily low 1.60 ft below land-surface datum, June, 16, 1958. (Water level above land surface but could not be measured during January 1959 flood.)

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.78	21.94	20.89	21.06	19.23	17.82	15.50	12.05	9.23	15.10	16.65	17.48
2	20.78	21.93	20.86	20.95	19.35	17.80	14.65	12.20	10.10	15.13	16.78	17.46
3	20.75	21.93	20.85	20.88	19.37	17.80	13.67	12.50	10.76	15.15	16.93	17.23
4	20.72	21.94	20.86	20.83	19.33	17.84	13.04	12.88	11.26	15.15	17.09	16.90
5	20.77	21.94	20.91	20.79	19.21	17.87	11.85	13.16	11.58	15.18	17.22	16.65
6	20.82	21.86	20.94	20.76	19.14	17.82	---	13.31	11.90	15.30	17.28	16.63
7	20.88	21.75	21.01	20.71	19.14	17.68	---	13.40	12.16	15.47	17.31	16.78
8	20.90	21.62	21.09	20.59	19.23	17.56	---	13.49	12.50	15.65	17.27	16.96
9	20.91	21.52	21.13	20.31	19.30	17.52	---	13.57	12.91	15.83	17.13	17.07
10	20.91	21.45	21.17	19.88	19.35	17.54	---	13.56	13.17	16.00	17.08	17.08
11	20.91	21.41	21.22	19.53	19.39	17.54	---	13.39	13.37	16.18	16.97	17.09
12	20.96	21.30	21.30	19.33	19.42	17.52	---	13.22	13.56	16.40	16.99	17.09
13	21.03	21.15	21.39	19.19	19.47	17.44	---	13.40	13.87	16.49	16.99	17.09
14	21.14	21.02	21.50	19.06	19.50	17.32	---	13.52	14.02	16.53	16.96	17.04
15	21.25	20.92	21.59	18.90	19.44	17.20	---	13.64	13.95	16.62	16.99	17.00
16	21.33	20.84	21.65	18.77	19.32	17.17	---	13.78	13.75	16.66	17.16	16.82
17	21.40	20.88	21.70	18.63	19.13	17.29	---	13.95	13.78	16.66	17.33	16.43
18	21.44	20.94	21.74	18.53	18.95	17.52	---	14.11	13.83	16.67	17.43	16.05
19	21.44	20.96	21.81	18.46	18.80	17.57	---	14.32	13.92	16.72	17.45	15.84
20	21.38	20.96	21.86	18.50	18.70	17.57	---	14.50	14.14	16.86	17.44	15.91
21	21.35	20.96	21.90	18.52	18.63	17.48	---	14.61	14.36	16.90	17.45	16.02
22	21.40	20.90	21.93	18.52	18.53	17.25	---	14.76	14.50	16.88	17.52	16.20
23	21.43	20.83	21.95	18.51	18.34	17.06	---	14.80	14.64	16.64	17.61	16.36
24	21.47	20.92	21.95	18.53	18.15	16.91	---	13.48	14.70	16.35	17.63	16.39
25	21.49	21.00	21.94	18.61	18.01	16.81	---	11.94	14.70	16.23	17.61	16.50
26	21.56	21.13	21.84	18.70	17.91	16.75	---	11.72	14.83	16.33	17.49	16.63
27	21.65	21.15	21.79	18.75	17.88	16.70	---	5.75	15.02	16.48	17.57	16.73
28	21.75	21.14	21.74	18.77	17.84	16.73	---	6.17	15.20	16.58	17.24	16.83
29	21.85	21.03	21.66	18.77	---	16.76	---	6.75	15.20	16.61	17.31	16.88
30	21.91	20.94	21.44	18.88	---	16.69	12.50	7.50	15.15	16.58	17.40	16.92
31	21.94	---	21.22	19.04	---	16.48	---	8.24	---	16.50	17.48	---
MAX	21.94	21.94	21.95	21.06	19.50	17.87	15.50	14.80	15.20	16.90	17.63	17.48
CAL YR 1988	LOW 21.95											
WTR YR 1989	LOW 21.95											



391733084392400 H-2
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

HAMILTON COUNTY--Continued

391748084393800. Local number, H-19.

LOCATION.--Lat 39°17'48", long 84°39'38", Hydrologic Unit 05080002, on left bank of Great Miami River 1.3 mi southwest of Venice.

Owner: Southwest Ohio Water Company.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Collector-type industrial supply water-table well, diameter 20 ft, depth 144 ft horizontal intakes at 95-100 ft.

PERIOD OF RECORD.--1964 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE AIR (DEG C)	TEMPER- ATURE WATER (DEG C)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3
DEC 15...	1000	790	7.6	-2.0	16.0	<10	84	30	50	4.3	295
MAY 24...	1045	800	7.6	25.0	17.0	19	79	28	35	3.9	303
JUL 27...	1015	739	7.6	27.0	17.0	16	81	26	28	3.6	295

DATE	ALKA- LITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
DEC 15...	241	90	82	0.3	9.0	459	0.02	0.800	<1	<1	3
MAY 24...	246	75	59	0.3	8.3	453	0.03	4.10	--	--	--
JUL 27...	236	67	49	0.3	8.4	434	0.03	3.00	<1	<1	--

DATE	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
DEC 15...	1	5	8	25	<5	<5	310	10	17	1.7
MAY 24...	--	--	--	17	--	--	290	--	--	1.1
JUL 27...	2	7	7	21	2	2	240	30	13	1.3

GROUND-WATER RECORDS

261

HAMILTON COUNTY--Continued

391817084393300. Local number, H-4.

LOCATION.--Lat 39° 18' 17", long 84° 39' 33", Hydrologic Unit 05080002, 0.7 mi southwest of Ross.

Owner: Southwestern Ohio Water Company.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled test water table well, diameter 6 in., depth 100 ft, cased.

INSTRUMENTATION.--Digital recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 541.57 ft above National Geodetic Vertical Datum of 1929. (Levels by

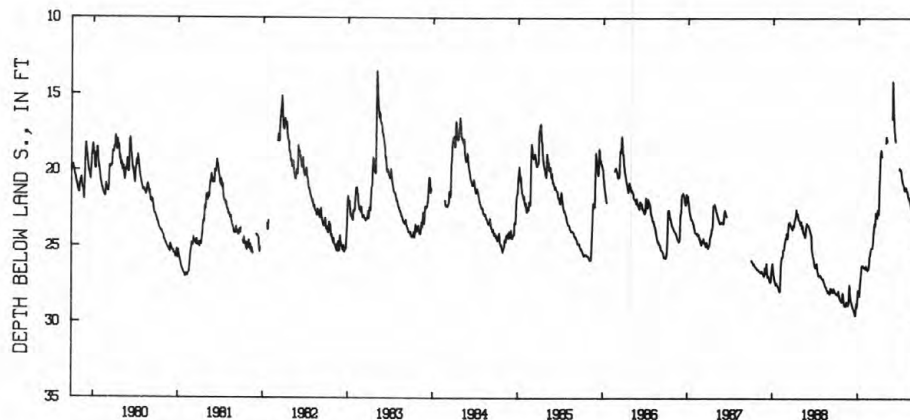
Miami Conservancy District.) Measuring point: Floor of instrument shelter 3.00 ft above land-surface datum.

PERIOD OF RECORD.--December 1954 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 32.16 ft below land-surface datum, Nov. 20, 1971; minimum daily low, 11.60 ft below land-surface datum, June 16, 1958.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28.15	28.51	28.41	28.08	26.37	25.07	22.19	17.78	16.05	20.00	21.44	22.91
2	28.09	28.65	28.51	27.88	26.42	25.07	21.31	17.96	16.53	19.89	21.52	22.92
3	28.07	28.73	28.61	27.93	26.46	25.08	20.68	17.97	16.76	19.98	21.61	22.92
4	28.12	28.79	28.62	28.08	26.46	25.09	20.42	17.93	17.14	19.99	21.72	22.72
5	28.14	28.89	28.66	28.17	26.25	25.03	19.62	18.08	17.35	20.11	21.78	22.65
6	28.16	28.89	28.73	28.26	26.30	24.78	19.03	---	17.49	20.22	21.72	22.69
7	28.21	28.81	28.79	28.27	26.35	24.65	18.82	---	17.66	20.35	21.75	22.74
8	28.21	28.87	28.88	28.22	26.41	24.38	18.79	---	17.83	20.50	21.79	22.82
9	28.11	28.89	28.95	28.00	26.46	24.10	18.65	---	18.02	20.59	21.84	22.93
10	27.92	28.92	29.01	27.70	26.54	24.03	18.70	---	18.08	20.69	21.92	23.02
11	28.05	28.93	29.03	27.47	26.57	23.78	18.91	---	---	20.77	22.01	23.05
12	28.14	28.75	29.02	27.30	26.51	23.54	19.09	---	---	20.84	22.03	23.09
13	28.18	28.73	29.07	27.22	26.43	23.46	---	---	---	20.87	22.05	23.14
14	28.23	28.63	29.12	27.09	26.47	23.51	---	---	---	20.89	22.15	23.17
15	28.32	28.68	29.18	26.81	26.47	23.60	---	---	---	20.93	22.26	23.17
16	28.41	28.70	29.25	26.43	26.42	23.62	---	---	---	20.98	22.33	23.10
17	28.47	28.74	29.28	26.28	26.30	23.36	---	---	---	21.08	22.40	22.70
18	28.50	28.78	29.33	26.25	26.17	22.78	---	---	---	21.15	22.52	22.52
19	28.51	28.87	29.38	26.24	25.97	22.75	---	---	---	21.25	22.59	22.47
20	28.54	28.88	29.45	26.25	25.67	23.01	---	---	---	21.31	22.68	22.52
21	28.57	28.75	29.52	26.27	25.63	23.09	---	---	---	21.31	22.70	22.58
22	28.59	28.75	29.54	26.26	25.59	23.09	---	---	---	21.27	22.77	22.68
23	28.63	28.75	29.40	26.23	25.47	23.09	---	---	---	21.21	22.81	22.80
24	28.65	28.53	29.19	26.27	25.36	23.08	---	---	---	21.13	22.87	22.79
25	28.67	27.98	29.01	26.29	25.26	22.86	---	---	---	21.09	22.88	22.80
26	28.52	27.50	28.79	26.33	25.14	22.56	---	---	---	21.15	22.90	22.94
27	28.31	27.67	28.93	26.37	25.11	22.63	---	16.60	19.83	21.24	22.91	23.06
28	28.14	27.96	28.96	26.40	25.08	22.78	---	14.13	19.95	21.31	22.90	23.12
29	28.05	28.15	28.82	26.40	---	22.86	---	14.23	19.97	21.34	22.88	23.24
30	28.09	28.29	28.57	26.35	---	22.86	18.18	14.94	19.96	21.39	22.84	23.31
31	28.31	---	28.31	26.37	---	22.67	---	15.51	---	21.37	22.81	---
MAX	28.67	28.93	29.54	28.27	26.57	25.09	22.19	18.08	19.97	21.39	22.91	23.31
CAL YR 1988	LOW 29.54											
WTR YR 1989	LOW 29.54											



391817084393300 H-4
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

HARDIN COUNTY

404218083503700. Local number, HN-1.

LOCATION.--Lat 40° 42' 18", long 83° 50' 37", Hydrologic Unit 05060001, at grain elevator in Alger.

Owner: Village of Alger.

AQUIFER.--Limestone of Silurian Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in., depth 40 ft, cased.

INSTRUMENTATION.--Type F continuous recorder.

DATUM.--Elevation of land-surface datum is 975 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 1.5 ft above land-surface datum.

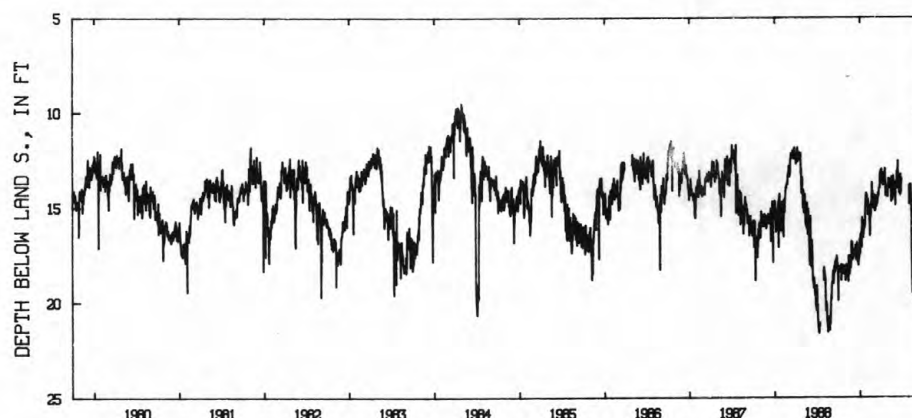
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--April 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 22.15 ft below land-surface datum, Dec. 14, 1964; minimum daily low, 5.85 ft below land-surface datum, July 1, 1946.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.55	18.05	17.75	17.45	14.80	15.05	13.05	14.45	14.15	---	14.85	14.55
2	18.35	18.70	17.65	17.45	14.65	15.00	13.75	13.85	13.95	---	13.85	14.60
3	18.10	18.65	17.35	16.85	14.85	14.90	13.10	13.90	14.90	---	14.60	14.40
4	18.20	18.45	17.55	16.40	15.40	15.00	13.00	13.50	14.00	---	13.80	14.90
5	18.30	18.00	17.50	17.10	14.55	14.35	13.60	13.95	13.65	---	14.30	14.45
6	18.35	18.60	17.40	16.60	15.30	15.00	13.50	13.70	13.70	---	14.20	14.40
7	18.20	18.35	17.20	16.50	15.10	15.20	13.15	14.00	14.00	---	14.15	14.30
8	18.25	18.30	17.45	16.30	15.00	15.10	13.35	13.50	13.85	---	13.80	15.35
9	18.20	18.70	17.30	17.10	15.00	15.15	13.55	13.80	13.10	---	14.20	15.15
10	18.20	18.30	17.20	15.75	14.90	14.80	13.85	13.70	13.65	---	14.60	14.90
11	18.05	18.45	17.55	15.55	15.65	14.75	13.40	13.90	13.90	---	17.25	14.90
12	18.05	18.90	17.40	15.70	15.80	14.40	13.40	13.65	14.00	---	18.65	14.80
13	18.85	18.30	17.00	15.95	16.50	14.95	13.80	14.00	12.55	---	19.10	14.85
14	18.00	17.55	17.25	16.30	16.25	14.75	13.60	13.90	13.80	---	19.50	14.70
15	18.15	18.40	17.75	16.60	15.35	14.80	13.65	13.85	13.20	---	19.50	14.60
16	18.40	17.75	17.60	15.70	15.00	14.60	13.15	14.70	13.40	---	16.75	14.70
17	18.50	17.55	17.20	16.40	15.45	14.80	13.55	13.40	13.65	---	15.45	14.90
18	18.10	18.50	17.15	15.75	14.80	14.55	13.70	14.30	13.60	---	15.30	15.05
19	18.10	17.65	17.35	15.70	14.95	14.55	12.95	13.90	14.25	---	15.00	15.10
20	18.35	17.65	16.85	16.10	14.70	14.25	13.75	13.85	14.10	---	14.80	15.00
21	18.25	17.75	17.20	16.10	14.35	14.40	13.60	13.70	13.95	---	15.10	15.00
22	18.05	17.85	17.35	15.80	13.70	14.40	14.40	14.60	13.90	---	15.00	15.20
23	18.20	18.20	17.90	15.90	14.30	14.10	13.80	13.80	13.80	---	14.85	14.90
24	18.30	17.60	17.65	14.90	14.80	14.00	14.15	13.35	14.35	---	14.90	15.00
25	18.50	17.55	17.80	14.95	14.15	14.00	14.10	13.55	13.25	---	14.75	15.00
26	18.15	16.80	18.05	14.55	14.50	14.00	13.95	13.55	13.70	---	14.95	15.00
27	18.40	17.45	17.50	14.45	15.05	14.00	14.45	13.70	14.20	---	15.00	15.15
28	18.50	17.30	17.75	14.25	14.70	13.40	14.00	14.00	13.70	---	15.00	14.90
29	18.35	16.85	17.60	14.95	---	13.15	14.25	14.15	13.50	---	14.50	15.10
30	18.40	17.65	17.40	14.75	---	13.55	13.90	14.05	---	---	14.65	15.30
31	18.85	---	16.70	14.35	---	13.50	---	14.45	---	13.88	15.10	---
MAX	18.85	18.90	18.05	17.45	16.50	15.20	14.45	14.70	14.90	13.88	19.50	15.35
CAL YR 1988	LOW 21.60											
WTR YR 1989	LOW 19.50											



404218083503700 HN-1
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

HOCKING COUNTY

393200082235300. Local number, HK-1.

LOCATION.--Lat 39° 32'00", long 82° 23'53", Hydrologic Unit 05060002, at railroad yards southeast edge of Logan.
Owner: Chessie System.

AQUIFER.--Sand and gravel of Quaternary Age.

WELL CHARACTERISTICS.--Drilled unused water table well, diameter 6 in., depth 88 ft, cased.

INSTRUMENTATION.--Periodic measurement with chalked tape by ODNR personnel.

DATUM.--Elevation of land-surface datum is 710 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of gage platform 4.90 ft above land-surface datum.

REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--August 1962 to September 1982 continuous, periodic thereafter.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 21.35 ft below land-surface datum, Dec. 21, 22, 1967;
minimum daily low, 9.11 ft below land-surface datum, Apr. 22, 1964.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM
INSTANTANEOUS OBSERVATIONS

DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 26, 1988	19.82	Apr. 26, 1989	15.75

GROUND-WATER RECORDS

KNOX COUNTY

402344082300700. Local number, K-1.

LOCATION.--Lat 40° 23' 44", long 82° 30' 07", Hydrologic Unit 05040003, in city park, Mt. Vernon.

Owner: Mt. Vernon Water Department.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled unused water table well, diameter 8 in., depth 90 ft, cased.

INSTRUMENTATION.--Digital recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 1,000 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 3.50 ft above land-surface datum.

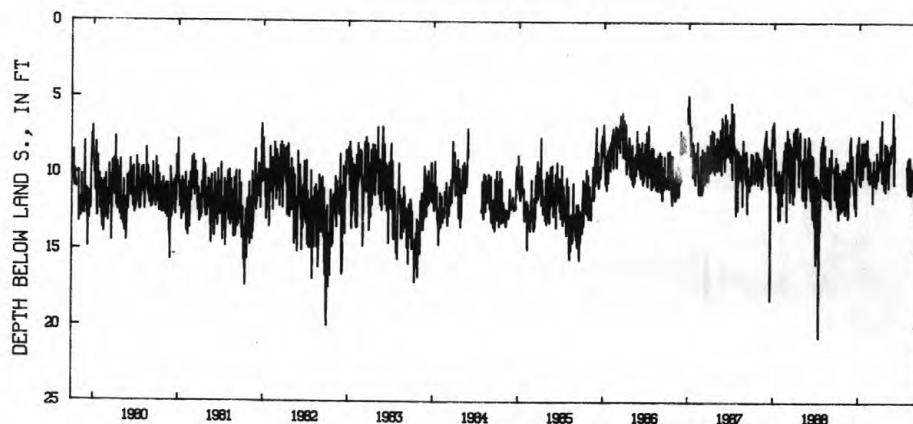
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.-- April 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 20.74 ft below land-surface datum, July 14, 1988; minimum daily low, 1.43 ft below land-surface datum, Apr. 29, 1950.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.70	11.95	10.13	8.74	9.20	11.84	9.05	8.52	10.67	---	11.24	11.75
2	9.26	12.49	10.36	9.32	9.12	10.39	7.45	8.54	9.03	---	9.65	11.86
3	11.38	12.60	9.08	10.02	9.32	10.36	8.31	8.84	9.03	---	9.80	10.71
4	12.46	11.93	8.76	10.56	8.03	10.37	8.68	8.30	7.43	---	8.86	9.29
5	12.79	11.99	9.04	8.89	7.66	9.25	8.20	10.03	---	---	8.98	11.69
6	12.92	9.60	9.82	10.39	7.81	9.06	8.48	10.45	---	---	10.58	12.31
7	11.83	9.61	10.41	8.67	9.11	9.96	8.19	9.28	---	---	9.93	12.26
8	10.45	11.99	10.65	9.33	10.18	10.38	8.14	10.35	---	---	8.88	12.63
9	9.92	11.00	10.33	10.72	10.23	9.71	6.42	10.85	---	---	9.53	12.69
10	9.85	11.23	10.97	10.10	9.63	10.39	10.37	9.91	---	---	11.32	10.25
11	11.94	11.23	11.18	9.38	8.86	10.72	10.50	9.24	---	---	10.41	11.86
12	12.48	10.94	10.47	9.79	9.91	10.38	9.08	9.17	---	---	9.55	12.41
13	12.35	9.14	11.77	7.88	10.27	10.28	9.49	8.49	---	---	9.81	13.17
14	12.43	11.57	12.11	8.44	10.54	10.59	9.19	8.58	---	---	11.28	11.22
15	11.09	12.89	10.72	8.70	9.75	10.78	9.11	8.68	---	---	10.61	10.86
16	11.20	12.17	10.97	8.30	10.48	10.81	9.08	9.08	---	---	10.78	10.85
17	11.51	12.69	10.94	9.14	10.52	10.31	9.42	9.18	---	---	10.80	9.57
18	12.23	10.60	10.93	10.27	9.10	10.59	9.68	8.12	---	---	10.99	10.35
19	10.20	9.84	12.26	9.84	9.68	8.54	9.87	8.81	---	---	11.01	12.05
20	10.03	9.50	12.61	8.08	9.84	10.02	10.96	8.02	---	---	9.64	11.11
21	12.33	10.22	10.93	7.88	9.78	9.38	10.60	8.43	---	---	10.20	11.85
22	10.43	11.35	10.06	8.60	10.25	9.80	9.91	8.58	---	---	10.41	12.30
23	9.65	8.47	8.54	9.26	10.32	10.24	7.93	8.46	---	---	10.53	9.85
24	10.90	7.78	9.98	9.38	10.48	10.30	10.15	8.20	---	---	9.70	9.22
25	10.90	9.48	8.74	8.81	10.47	9.06	10.13	8.21	---	9.48	9.96	10.44
26	11.34	9.73	7.98	9.17	9.85	9.25	11.13	7.57	---	9.65	10.14	10.46
27	10.18	7.50	8.67	8.29	10.11	9.67	8.29	7.59	---	9.64	9.26	11.52
28	11.88	9.88	9.64	7.86	10.20	9.73	9.87	5.93	---	10.90	10.16	12.07
29	12.20	10.19	7.91	8.05	---	9.70	8.85	7.10	---	10.19	11.74	10.39
30	9.96	10.08	8.67	9.11	---	9.61	8.03	7.72	---	9.02	10.98	10.58
31	9.75	---	7.47	9.09	---	9.41	---	9.52	---	10.65	11.75	---
MAX	12.92	12.89	12.61	10.72	10.54	11.84	11.13	10.85	10.67	10.90	11.75	13.17

CAL YR 1988 LOW 20.74
WTR YR 1989 LOW 13.17402344082300700 K-1
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

265

MADISON COUNTY

395301083272200. Local number, M-2.

LOCATION.--Lat 39° 53' 01", long 83° 27' 22", Hydrologic Unit 05060002, U.S. 42 and Westmore Dr., London.

Owner: State of Ohio

AQUIFER.--Limestone of Silurian Age.

WELL CHARACTERISTICS.--Drilled test artesian well, diameter 12 in., depth 350 ft, cased.

INSTRUMENTATION.--Digital recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 1035 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 1.00 ft above land-surface datum.

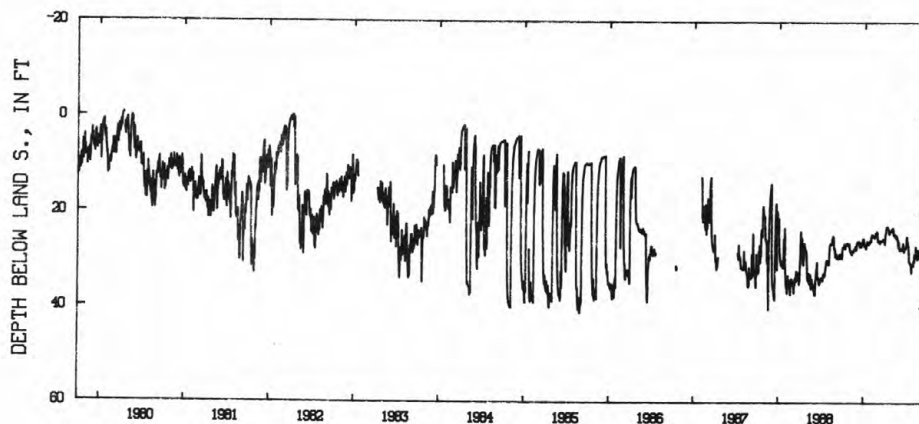
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--August 1971 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 41.29 ft below land-surface datum, Aug. 29, 1985; minimum daily low, 0.55 ft above land-surface, Apr. 13, 1980.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29.15	27.18	27.19	25.56	26.04	25.57	26.57	23.41	27.05	26.83	31.11	30.00
2	27.70	27.77	26.67	26.08	25.24	26.10	26.12	23.62	27.34	26.88	30.03	30.24
3	27.26	28.07	26.46	27.00	25.02	26.11	25.27	23.70	27.29	26.58	30.12	29.80
4	27.42	28.14	26.53	27.02	24.82	25.81	24.44	23.58	27.86	25.25	30.23	30.04
5	27.43	27.92	26.11	26.82	24.60	26.08	24.31	23.25	27.85	25.03	30.27	30.14
6	27.48	28.14	26.15	26.62	24.66	26.04	24.15	23.18	27.56	26.03	28.78	29.98
7	27.40	28.41	26.11	26.66	24.61	25.80	23.37	23.40	27.48	26.53	29.41	30.44
8	27.35	28.58	26.49	26.69	24.82	25.98	22.99	24.04	27.57	26.06	29.41	30.79
9	26.85	28.61	26.54	27.32	24.85	26.23	23.29	24.60	27.76	26.64	28.86	31.03
10	26.59	28.54	26.27	27.49	24.69	26.41	23.27	24.68	27.81	26.72	29.47	31.14
11	27.04	28.76	26.03	27.58	24.73	26.41	23.20	24.63	27.81	27.00	29.51	30.58
12	27.38	28.82	26.08	26.75	25.12	26.16	22.85	24.71	27.67	27.05	27.17	30.40
13	27.57	28.14	26.22	26.73	25.11	26.08	23.21	24.88	27.67	28.33	27.86	30.58
14	27.48	28.05	26.41	26.75	25.00	25.85	23.37	24.89	27.67	30.02	28.31	30.95
15	26.90	28.10	27.16	26.23	25.05	26.02	23.38	24.52	27.36	30.35	28.99	31.03
16	26.73	27.92	27.21	26.05	25.27	26.05	23.40	24.98	27.58	30.31	28.95	30.36
17	26.78	28.08	26.80	26.12	25.31	26.08	23.36	25.14	27.74	30.39	29.22	30.14
18	26.66	28.21	26.60	26.18	25.31	26.03	23.63	25.27	27.73	30.53	29.69	30.26
19	26.51	28.15	26.26	26.26	25.11	25.99	24.06	25.33	26.44	30.48	29.37	30.30
20	26.65	27.61	26.66	26.49	24.81	25.77	24.32	25.21	27.38	30.61	29.34	30.35
21	26.52	27.72	27.14	26.67	24.28	25.93	24.50	24.99	27.36	30.80	29.48	30.41
22	26.57	27.81	27.18	26.45	24.48	25.79	24.21	24.80	28.18	30.94	27.80	30.36
23	26.60	27.83	26.79	26.19	24.61	25.85	24.07	25.02	27.95	32.04	28.36	30.60
24	26.42	27.84	26.67	26.34	24.61	25.85	23.90	25.20	27.60	32.64	28.65	30.71
25	26.64	27.57	26.50	26.45	24.12	25.53	23.98	25.59	27.51	30.78	28.84	30.46
26	26.80	27.09	26.53	26.39	23.96	25.87	23.91	25.59	27.53	31.10	28.83	30.18
27	26.88	27.05	25.94	25.98	24.06	25.84	23.91	25.64	27.41	31.19	28.62	30.91
28	27.00	27.74	25.74	26.08	24.19	25.58	23.91	26.20	27.38	31.04	28.67	30.90
29	27.07	27.86	25.58	25.87	---	25.67	23.87	27.16	27.36	31.12	28.79	30.60
30	26.76	27.74	25.44	25.79	---	25.98	23.62	26.62	27.51	31.05	28.89	30.01
31	26.53	---	25.58	26.01	---	26.30	---	26.15	---	31.16	28.91	---
MAX	29.15	28.82	27.21	27.58	26.04	26.41	26.57	27.16	28.18	32.64	31.11	31.14

CAL YR 1988 LOW 37.39
WTR YR 1989 LOW 32.64395301083272200 M-2
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

MADISON COUNTY--Continued

395352083292100. Local number, M-5.

LOCATION.--Lat 39° 53' 52", long 83° 29' 21", Hydrologic Unit 05060002, at London Correctional Institute near London Ohio.

Owner: State of Ohio.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled unused water table well, diameter 8 in., depth 55 ft, cased.

INSTRUMENTATION.--Type F continuous recorder.

DATUM.--Elevation of land-surface datum is 1,090 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 3.50 ft above land-surface datum.

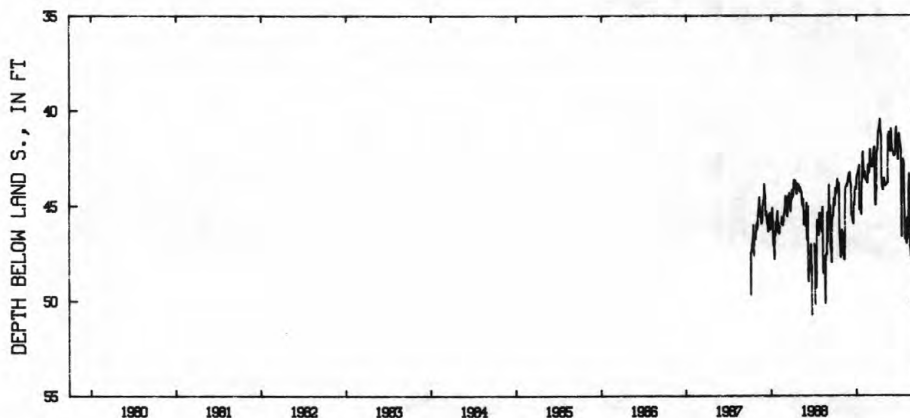
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--October 1, 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 51.51 ft below land-surface datum, Aug. 21, 1987; minimum daily low, 40.47 ft below land-surface datum, Apr. 11, 1989.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44.38	46.43	43.32	43.51	43.27	42.25	42.03	43.77	41.80	41.46	45.72	---
2	44.08	46.98	43.31	43.44	43.40	42.32	41.75	43.86	41.98	41.21	46.60	---
3	44.16	47.55	43.25	43.39	43.50	42.66	41.13	43.95	42.02	41.27	46.95	---
4	44.26	47.58	43.67	43.40	43.50	42.87	41.11	43.95	42.09	41.44	46.98	---
5	44.32	46.42	43.75	43.36	43.28	42.95	41.10	43.83	42.10	41.55	46.77	---
6	44.35	46.60	43.77	43.30	43.21	42.94	41.03	43.85	42.13	41.64	45.91	---
7	44.34	47.41	43.91	43.30	43.41	42.92	41.00	43.90	42.16	41.72	45.64	---
8	44.03	47.76	44.00	43.14	43.62	42.95	40.83	43.87	42.16	41.82	45.63	---
9	43.75	47.81	45.45	43.09	43.62	42.95	40.85	43.87	42.24	41.90	46.73	---
10	43.60	47.84	45.50	43.09	43.58	42.78	40.58	43.85	42.38	41.98	46.57	---
11	43.72	47.68	45.53	43.07	43.63	42.63	40.47	43.83	42.39	42.04	46.66	---
12	43.89	46.84	45.52	42.89	43.65	42.65	40.71	43.80	42.37	44.23	44.22	---
13	43.90	44.35	45.35	45.17	43.63	42.61	41.03	43.75	42.33	46.20	43.87	---
14	43.89	44.05	45.39	45.22	43.68	42.49	41.12	43.75	42.31	46.63	43.57	---
15	43.85	44.05	45.77	44.62	43.70	42.17	41.24	43.80	42.28	45.83	43.33	---
16	43.83	43.96	45.84	44.36	43.80	42.08	41.33	41.45	42.23	43.22	43.85	---
17	43.81	44.00	45.93	44.88	43.78	42.00	41.33	41.31	41.49	42.84	44.22	---
18	44.18	44.01	45.93	45.02	43.37	41.92	43.45	41.28	41.28	42.71	47.13	---
19	45.79	43.97	45.93	45.05	43.00	41.95	43.55	41.24	41.04	42.63	47.17	---
20	46.33	43.86	44.90	45.25	42.86	43.70	43.82	41.14	40.89	42.56	47.11	---
21	46.68	43.85	44.83	45.46	43.04	44.66	43.98	41.20	41.40	42.63	47.44	47.00
22	46.99	43.91	44.93	44.38	43.14	44.91	44.05	41.18	42.02	42.73	47.50	47.03
23	47.05	43.78	44.95	43.68	43.28	44.96	44.09	41.77	42.12	42.78	47.62	---
24	47.65	43.70	44.37	43.68	43.19	44.96	44.15	42.05	41.32	44.11	47.63	---
25	47.70	43.63	44.15	43.25	43.12	44.33	44.14	42.15	41.30	44.93	47.67	46.92
26	47.27	43.55	44.12	42.37	42.85	44.21	43.65	42.14	41.90	45.43	---	47.55
27	47.09	43.39	44.02	42.27	42.05	44.17	43.62	41.67	42.22	46.46	---	47.53
28	46.98	43.38	44.11	42.18	42.05	42.31	43.59	41.30	42.48	46.75	---	46.82
29	46.54	43.39	44.12	42.62	---	42.20	43.54	40.98	42.57	46.56	---	47.06
30	46.27	43.28	44.05	42.77	---	42.07	43.60	41.16	42.07	45.96	---	46.78
31	46.52	---	43.86	43.05	---	42.03	---	41.54	---	45.83	---	---
MAX	47.70	47.84	45.93	45.46	43.80	44.96	44.15	43.95	42.57	46.75	47.67	47.55
CAL YR 1988	LOW 50.75											
WTR YR 1989	LOW 47.84											



395352083292100 M-5 ST OF OH AT LONDON COR INST NR LONDON OH
MAXIMUM DAILY DEPTH BELOW LAND S. (FT), DEPTH TO WATER BL. LSD

GROUND-WATER RECORDS
MADISON COUNTY--Continued.

267

395357083304400. Local number, M-4.

LOCATION.--Lat 39° 53' 57", long 83° 30' 44" Hydrologic Unit 05060002, 3.5 mi northwest of London, Ohio.

Owner.--State of Ohio.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled unused water table well, diameter 10 in., depth 49 ft, cased.

INSTRUMENTATION.--Type F continuous recorder.

DATUM.--Elevation of land-surface datum is 1,112 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 4.00 ft above land-surface datum.

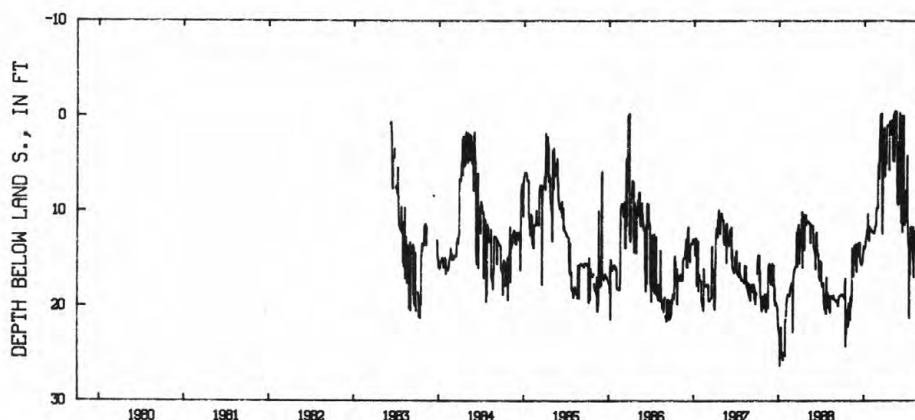
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--June 1983 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 26.30 ft below land-surface datum, Jan. 7, 1988; minimum daily low 0.50 ft above land-surface datum, May 13-14, 16, 1989.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.80	19.90	16.40	13.90	12.05	9.70	6.30	.50	3.20	9.45	11.75	13.50
2	18.80	20.10	13.90	13.70	12.10	6.10	4.45	.45	.40	9.55	15.25	13.00
3	18.85	20.05	13.60	13.85	12.20	5.40	5.00	.45	-.30	9.65	16.70	12.90
4	18.85	21.50	13.60	14.00	12.20	5.15	5.05	3.45	8.45	9.75	16.95	12.90
5	18.90	19.60	13.50	13.90	12.10	5.05	4.95	4.55	8.90	4.90	13.45	12.85
6	19.05	19.05	14.65	13.80	12.20	6.40	5.00	4.70	9.20	4.20	12.15	12.90
7	18.95	20.10	14.80	13.70	12.20	6.60	3.20	-.15	9.20	8.45	12.30	13.15
8	19.10	19.55	13.50	13.30	12.30	3.00	3.05	-.10	8.00	11.20	12.35	12.70
9	19.10	19.55	13.45	13.10	12.30	2.45	1.00	4.50	7.45	12.15	12.40	13.30
10	19.15	19.10	13.40	13.00	12.30	2.15	1.05	4.80	11.30	12.45	12.40	13.40
11	19.25	18.45	13.45	12.90	12.25	.45	1.00	3.30	.30	13.30	12.40	13.45
12	17.70	13.95	13.45	12.75	12.40	-.01	1.00	-.30	-.05	13.30	12.45	13.40
13	17.30	14.70	13.35	12.60	12.40	-.10	1.00	-.50	8.65	13.65	13.55	13.50
14	17.15	16.80	13.35	12.45	12.40	-.25	1.05	-.50	10.15	13.90	14.60	13.50
15	24.30	14.95	13.55	12.00	12.20	4.65	1.00	-.01	12.25	20.80	14.80	13.45
16	21.10	16.40	15.10	12.10	12.05	.25	1.05	-.50	9.05	21.30	15.00	13.40
17	22.95	16.90	15.40	12.95	11.90	-.25	1.05	-.45	7.30	15.00	15.50	13.45
18	20.65	15.05	15.50	10.35	11.75	3.90	---	-.45	7.30	14.50	15.65	13.50
19	20.60	14.90	15.40	12.75	11.65	5.30	5.66	-.45	-.05	16.70	15.55	13.40
20	22.20	14.75	15.50	11.70	11.65	11.80	.90	-.40	7.90	11.80	13.55	13.40
21	21.60	13.65	15.65	11.80	11.45	12.45	.60	3.10	9.30	11.80	12.90	13.45
22	20.70	15.05	15.70	11.85	11.60	9.40	.55	3.40	9.00	11.95	12.75	13.67
23	20.60	15.60	15.70	13.15	10.15	8.05	.60	8.60	10.75	12.00	14.40	13.80
24	20.40	13.70	15.60	11.65	9.90	2.10	.60	9.10	11.50	11.70	15.00	14.15
25	22.20	13.65	15.45	11.80	9.75	1.60	1.95	9.25	10.90	11.70	15.30	13.55
26	20.25	13.55	15.35	11.90	9.65	1.45	2.00	8.30	7.80	11.70	14.65	13.20
27	21.90	13.50	15.15	11.90	9.65	1.40	1.40	9.25	10.85	11.90	15.00	13.50
28	20.25	13.60	14.50	11.90	9.65	1.35	.55	9.35	11.20	14.25	15.10	13.55
29	19.75	15.80	14.50	11.90	---	1.30	.55	2.75	9.65	12.20	15.20	13.40
30	20.10	16.10	14.20	11.90	---	6.00	.60	7.75	9.40	11.90	15.20	13.20
31	20.05	---	13.90	11.90	---	6.40	---	7.75	---	15.10	14.75	---
MAX	24.30	21.50	16.40	14.00	12.40	12.45	6.30	9.35	12.25	21.30	16.95	14.15
CAL YR 1988	LOW 26.30											
WTR YR 1989	LOW 24.30											



— 395357083304400 M-4 LONDON ST FISH HATCHERY 3 MI NW OF LONDON OH
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

MADISON COUNTY--Continued

395740083255700. Local number, M-3.

LOCATION.--Lat 39° 57' 40", long 83° 25' 57", Hydrologic Unit 05060002, 5.2 mi north of London.

Owner: State of Ohio.

AQUIFER.--Limestone of Silurian Age.

WELL CHARACTERISTICS.--Drilled test artesian well, diameter 12 in., depth 290 ft, cased to 145 ft.

INSTRUMENTATION.--Periodic measurement with chalked tape by ODNR personnel.

DATUM.--Elevation of land-surface datum is 1,020 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 3.00 ft above land-surface datum.

REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--November 1974 to September 1982 continuous, periodic thereafter.

EXTREMES FOR PERIOD OF RECORD.--Maximum measured low, 10.35 ft below land-surface datum, Dec. 30, 1987; minimum daily low, 3.93 ft below land-surface datum, Feb. 25, 1975.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM
INSTANTANEOUS OBSERVATIONS

DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 20, 1988	9.35	May 19, 1989	5.47
Jan. 13, 1989	5.86	Aug. 22, 1989	6.78
Mar. 17, 1989	5.44		

GROUND-WATER RECORDS

269

MAHONING COUNTY

410042080453800. Local number, MA-1.

LOCATION.--Lat 41° 00' 42", long 80° 45' 38", Hydrologic Unit, 05030103, in county fairgrounds at south edge of Canfield.

Owner: Canfield Water Department.

AQUIFER.--Sandstone of Pennsylvanian Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 in., depth 170 ft, cased to 99.5 ft.

INSTRUMENTATION.--Periodic measurement with chalked tape by ODNR personnel.

DATUM.--Elevation of land-surface datum is 1,160 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter at land-surface datum.

REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water. Influenced by seasonal water demand at county fairgrounds.

PERIOD OF RECORD.--May 1946 to September 1982 continuous, periodic thereafter.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 110.75 ft below land-surface datum, Sept. 18, 1946; minimum daily low, 30.35 ft below land-surface datum, Apr. 23, 1951.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM
INSTANTANEOUS OBSERVATIONS

DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 3, 1988	33.43	May 1, 1989	31.10

GROUND-WATER RECORDS

MARION COUNTY

403413083170500. Local number, MN-4.

LOCATION.--Lat 40° 34' 13", long 83° 17' 05", Hydrologic Unit 05060001, 1.9 mi southeast of New Bloomington.

Owner: State of Ohio.

AQUIFER.--Limestone of Silurian Age.

WELL CHARACTERISTICS.--Drilled test artesian well, diameter 12 in., depth drilled 290 ft, present depth 286 ft, cased to 33 ft.

INSTRUMENTATION.--Digital recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 915.96 ft above National Geodetic Vertical Datum of 1929. Measuring point: Floor of shelter 3.00 ft above land-surface datum.

REMARKS.--Influenced by seasonal water demand for nearby wildlife refuge.

PERIOD OF RECORD.--January 1973 to current year.

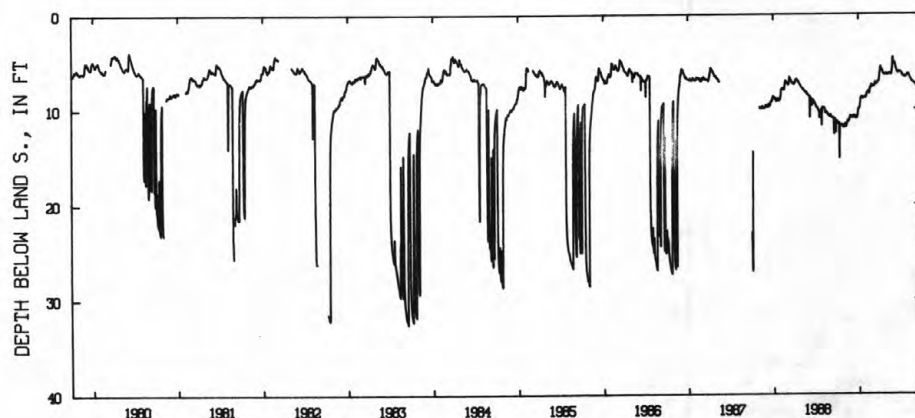
EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 32.57 ft below land-surface datum, Aug. 14, 1983; minimum daily low, 0.61 ft below land-surface datum, Mar. 18, 1974.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11.24	11.69	10.86	9.96	8.77	7.65	6.53	6.33	5.02	6.10	6.36	7.35
2	11.24	11.77	10.87	9.94	8.80	7.63	6.32	6.31	5.16	6.14	6.35	7.46
3	11.32	11.77	10.84	9.91	8.76	7.53	6.13	6.38	5.20	6.17	6.33	7.49
4	11.35	11.67	10.93	9.99	8.71	7.57	5.95	6.39	5.28	6.20	6.30	7.46
5	11.48	11.52	10.83	9.92	8.50	7.60	5.80	6.28	5.22	6.26	6.33	7.45
6	11.55	11.67	10.74	9.79	8.33	7.57	5.56	6.35	5.15	6.32	6.43	7.46
7	11.52	11.82	10.80	9.78	8.30	7.62	5.55	6.41	5.24	6.40	6.48	7.42
8	11.48	11.89	10.87	9.41	8.33	7.63	5.55	6.41	5.31	6.37	6.56	7.44
9	11.41	11.90	10.86	9.35	8.35	7.61	5.75	6.36	5.44	6.37	6.67	7.42
10	11.39	11.72	10.81	8.95	8.20	7.53	5.86	6.38	5.64	6.46	6.75	7.50
11	11.54	11.76	10.89	8.88	8.12	7.39	5.88	6.34	5.73	6.59	6.77	7.57
12	15.17	11.73	10.89	8.79	8.26	7.41	5.89	6.26	5.73	6.57	6.80	7.64
13	12.77	11.39	10.66	8.90	8.18	7.33	6.01	6.27	5.90	6.49	6.83	7.65
14	11.94	11.40	10.68	8.85	8.28	7.17	5.98	6.27	6.00	6.51	6.90	7.63
15	11.70	11.36	10.92	8.72	8.29	7.34	6.05	6.22	6.02	6.59	6.92	7.61
16	11.65	11.18	10.90	8.75	8.37	7.37	6.13	6.26	6.09	6.58	7.00	7.55
17	11.63	11.29	10.78	8.73	8.35	7.31	6.22	6.33	6.11	6.62	7.10	7.60
18	11.62	11.35	10.77	8.71	8.19	7.41	6.26	6.37	6.18	6.67	7.15	7.62
19	11.67	11.23	10.73	8.74	7.99	7.44	6.33	6.36	6.21	6.64	7.13	7.63
20	11.72	11.11	10.80	8.93	7.89	7.35	6.34	6.30	6.22	6.54	7.11	7.61
21	11.61	11.20	10.99	8.93	7.72	7.30	6.34	6.39	6.17	6.56	7.15	7.61
22	11.60	11.19	10.99	8.83	7.74	7.29	6.37	6.38	6.11	6.59	7.19	7.51
23	11.59	11.07	10.80	8.78	7.77	7.23	6.39	6.30	6.07	6.60	7.18	7.72
24	11.61	10.95	10.78	8.81	7.78	7.12	6.42	6.16	6.03	6.56	7.22	7.80
25	11.69	10.87	10.95	8.82	7.63	7.08	6.37	5.99	6.05	6.57	7.24	7.71
26	11.77	10.80	10.97	8.77	7.41	7.13	6.32	5.77	6.07	6.56	7.23	7.82
27	11.86	10.69	10.79	8.80	7.47	7.08	6.30	5.34	6.08	6.51	7.26	7.90
28	11.87	10.86	10.66	8.80	7.55	7.05	6.28	4.69	6.11	6.41	7.32	7.83
29	11.90	10.90	10.63	8.76	---	7.05	6.26	4.55	6.16	6.42	7.29	7.81
30	11.93	10.75	10.31	8.69	---	6.94	6.36	4.72	6.12	6.32	7.35	7.84
31	11.87	---	10.10	8.66	---	6.76	---	4.90	---	6.34	7.41	---
MAX	15.17	11.90	10.99	9.99	8.80	7.65	6.53	6.41	6.22	6.67	7.41	7.90

CAL YR 1988 LOW 15.17

WTR YR 1989 LOW 15.17

403413083170500 MN-4
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

271

MARION COUNTY--Continued

403443083230400. Local number, MN-1.

LOCATION.--Lat 40° 34' 43", long 83° 23' 04", Hydrologic Unit 05060001, SR 37 at Baptist Church in LaRue.

Owner: Village of LaRue.

AQUIFER.--Limestone of Silurian Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 4 in., depth 100 ft, cased.

INSTRUMENTATION.--Type F continuous recorder.

DATUM.--Elevation of land-surface datum is 930 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 3.30 ft above land-surface datum.

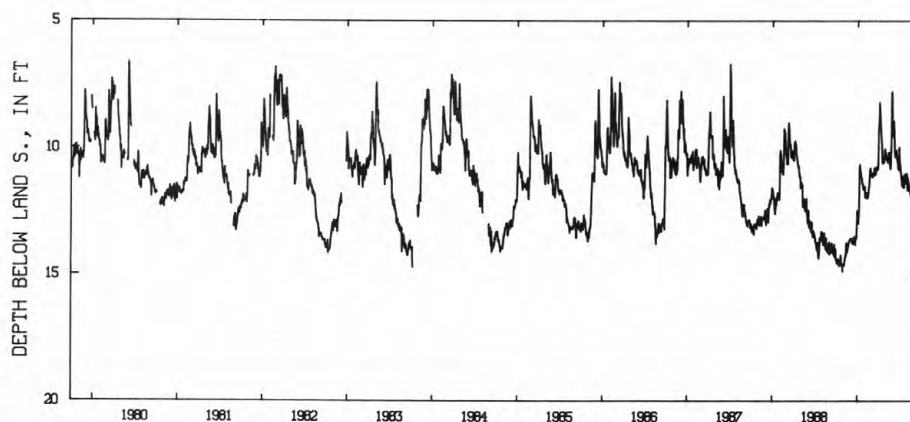
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--March 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 14.87 ft below land-surface datum, Oct. 29, 1988; minimum daily low, 5.67 ft below land-surface datum, Jan. 23, 1959.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.40	---	13.61	12.60	11.53	11.10	9.22	10.18	9.25	10.60	11.10	12.23
2	14.39	14.57	13.62	12.64	11.92	11.11	9.15	10.22	9.45	10.70	11.10	12.23
3	14.39	14.64	13.57	12.86	11.95	11.09	9.13	10.29	9.55	10.72	11.66	12.25
4	14.55	14.64	13.67	12.99	11.87	11.15	8.79	10.46	9.23	10.77	11.23	12.21
5	14.53	14.57	13.66	12.76	11.75	11.15	8.20	10.43	8.93	10.90	11.20	12.25
6	14.51	14.50	13.58	12.72	11.75	11.04	8.41	10.35	9.10	10.97	11.31	12.24
7	14.50	14.44	13.60	12.33	11.78	10.99	8.50	10.40	9.35	11.08	11.32	12.22
8	14.50	14.36	13.68	11.77	11.97	10.99	8.73	10.44	9.64	11.20	11.33	12.27
9	14.52	14.34	13.77	10.85	11.98	11.10	9.00	10.49	9.90	11.25	11.38	12.27
10	14.38	14.24	13.75	10.65	11.76	11.07	9.22	10.57	10.16	11.35	11.40	12.29
11	14.57	14.20	13.72	10.75	11.78	10.95	9.33	10.47	10.27	11.50	11.62	12.29
12	14.55	14.25	13.79	10.85	11.85	11.07	9.51	10.32	10.35	11.49	11.70	12.27
13	14.65	13.93	13.55	10.97	11.83	10.87	9.65	10.37	10.30	11.12	11.71	12.31
14	14.64	13.75	13.74	10.94	11.96	10.77	9.77	10.21	10.37	11.20	11.75	12.27
15	14.45	13.80	13.72	11.03	11.85	10.85	9.90	10.17	10.31	11.30	11.76	12.27
16	14.45	14.07	13.52	11.13	11.80	10.88	10.10	10.25	10.35	11.34	11.77	11.90
17	14.45	14.10	13.59	11.16	11.68	10.87	10.40	10.42	10.08	11.50	11.86	12.24
18	14.61	14.11	13.57	11.18	11.59	11.02	10.60	10.54	10.25	11.55	11.91	12.28
19	14.55	13.95	13.50	11.20	11.52	11.05	10.60	10.59	10.30	11.57	11.81	12.30
20	14.60	13.90	13.67	11.37	11.45	10.95	10.55	10.67	10.46	11.22	11.90	12.18
21	14.24	13.90	13.80	11.43	11.25	10.88	10.57	10.76	10.53	11.05	11.84	12.22
22	14.45	13.84	13.83	11.44	11.07	10.76	10.37	10.83	10.59	11.07	11.85	12.24
23	14.64	13.81	13.57	11.40	10.86	10.77	10.37	10.63	10.61	11.10	11.87	12.32
24	14.64	13.70	13.56	11.53	10.86	10.73	10.56	10.19	10.80	11.16	11.90	12.36
25	14.60	13.73	13.55	11.55	10.79	10.81	10.47	10.09	10.81	11.31	11.90	12.37
26	14.57	13.71	13.60	11.63	10.92	10.80	10.30	9.35	10.83	11.40	11.83	12.39
27	14.62	13.64	13.52	11.55	11.03	10.81	10.15	7.80	10.86	11.35	11.91	12.42
28	14.65	13.65	13.29	11.52	11.05	10.85	10.15	7.78	10.83	11.12	11.96	12.36
29	14.87	13.66	12.95	11.54	---	10.81	10.03	8.02	9.97	11.08	11.95	12.31
30	---	13.59	12.47	11.58	---	10.64	10.18	8.51	10.35	11.00	12.15	12.31
31	---	---	12.56	11.52	---	10.05	---	8.95	---	11.07	12.27	---
MAX	14.87	14.64	13.83	12.99	11.98	11.15	10.60	10.83	10.86	11.57	12.27	12.42
CAL YR 1988	LOW 14.87											
WTR YR 1989	LOW 14.87											



403443083230400 MN-1
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

MARION COUNTY--Continued

403601083110400. Local number, MN-2.

LOCATION.--Lat 40° 36' 01", long 83° 11' 04", Hydrologic Unit 05060001, water treatment plant 2 mi west of Marion.

Owner: Marion Water Department.

AQUIFER.--Limestone of Silurian Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 12 in., depth 67 ft, cased.

INSTRUMENTATION.--Type F continuous recorder.

DATUM.--Elevation of land-surface datum is 910 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 2.00 ft above land-surface datum.

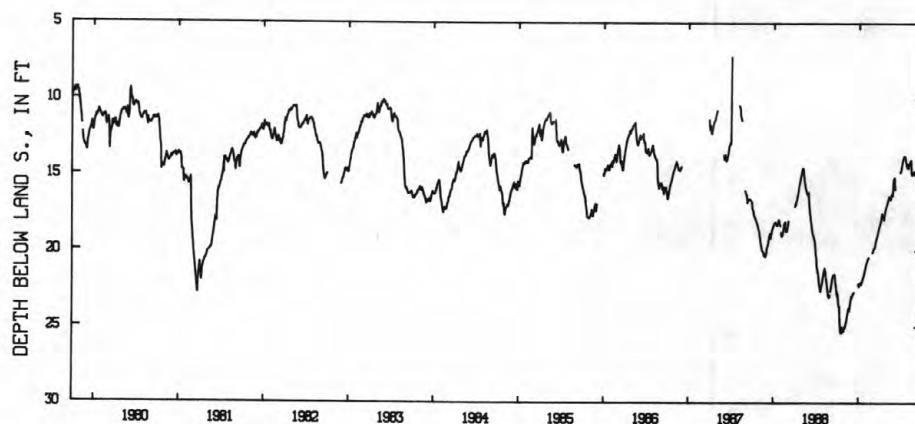
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--May 1959 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 49.50 ft below land-surface datum, Feb. 11, 1956; minimum daily low, 7.00 ft below land-surface datum, July 12, 1987.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.89	25.00	23.08	22.34	20.88	20.08	18.35	17.02	15.24	14.68	14.47	14.91
2	22.74	25.02	23.07	22.34	20.85	20.07	18.27	16.95	15.20	14.56	14.54	14.98
3	22.91	25.02	22.98	22.17	20.82	20.00	18.19	16.88	15.16	14.47	14.47	15.00
4	23.05	25.02	22.92	22.16	20.77	19.93	18.13	16.84	15.17	14.39	14.36	15.00
5	23.26	24.91	22.91	22.16	20.73	19.88	18.10	16.78	15.65	14.30	14.28	14.97
6	23.47	24.79	22.86	22.11	20.66	19.83	18.05	16.69	15.96	14.22	14.22	15.02
7	23.62	24.72	22.82	22.07	20.60	19.83	17.96	16.65	15.90	14.16	14.19	15.22
8	23.65	24.69	22.78	22.06	20.54	19.83	17.85	16.60	---	14.07	14.17	15.47
9	23.63	24.61	22.77	22.13	20.50	19.83	17.67	16.55	---	14.00	14.13	15.65
10	23.69	24.53	22.77	22.17	20.50	19.77	17.62	16.45	---	13.93	14.10	15.78
11	24.20	24.37	22.73	22.20	20.47	19.71	17.59	16.42	---	13.86	14.05	15.90
12	24.56	24.32	---	22.20	20.43	19.61	17.53	16.42	---	13.82	14.02	16.15
13	24.88	24.23	---	22.03	---	19.57	17.65	16.45	---	13.80	14.18	16.34
14	25.15	24.10	---	22.04	---	19.45	17.69	16.53	---	13.75	14.68	16.45
15	25.28	24.10	---	22.00	---	19.33	17.68	16.57	---	13.76	14.91	16.58
16	25.27	23.96	---	21.94	---	19.33	17.69	16.61	---	13.77	15.00	16.63
17	25.40	23.82	---	21.91	---	19.26	17.75	16.61	---	13.77	15.00	16.51
18	25.40	23.76	---	21.83	---	19.16	17.90	16.61	---	13.77	15.00	16.47
19	25.40	23.76	---	21.78	---	19.14	17.96	16.60	---	13.83	14.98	16.42
20	24.97	23.76	---	21.74	---	19.08	17.88	16.48	---	13.93	14.96	16.37
21	25.11	23.84	---	21.66	---	18.95	17.75	16.37	---	14.05	14.85	16.30
22	25.11	23.94	---	21.64	---	18.94	17.66	16.33	---	14.16	14.84	16.24
23	25.12	23.74	---	21.56	---	18.88	17.55	16.24	---	14.23	14.81	16.10
24	25.25	23.60	---	21.49	---	18.80	17.47	16.23	---	14.25	14.78	16.00
25	25.33	23.49	---	21.43	---	18.73	17.40	16.35	---	14.32	14.77	15.97
26	25.30	23.38	---	21.35	---	18.66	17.27	16.36	---	14.46	14.76	16.02
27	25.27	23.29	---	21.26	---	18.59	17.26	16.11	---	14.51	14.75	16.37
28	25.22	23.16	---	21.21	20.10	18.52	17.19	15.94	14.82	14.45	14.75	16.62
29	25.20	23.10	22.18	21.17	---	18.43	17.10	15.55	14.81	14.42	14.77	16.83
30	25.10	22.97	22.21	21.08	---	18.38	17.05	15.30	14.77	14.42	14.86	17.13
31	25.00	---	22.32	20.97	---	18.35	---	15.27	---	14.29	14.92	---
MAX	25.40	25.02	23.08	22.34	20.88	20.08	18.35	17.02	15.96	14.68	15.00	17.13
CAL YR 1988	LOW 25.40											
WTR YR 1989	LOW 25.40											



403601083110400 MN-2
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

273

MEDINA COUNTY

410120081431800. Local number, MD-3.

LOCATION.--Lat 41 01'20", long 81 43'18", Hydrologic Unit 05040001, Auble Street at water treatment plant in Wadsworth.

Owner: Wadsworth Water Department.

AQUIFER.--Sandstone of Mississippian Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 12 in., depth 275 ft, cased.

INSTRUMENTATION.--Type F continuous recorder.

DATUM.--Elevation of land-surface datum is 1180 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 1.00 ft above land-surface datum.

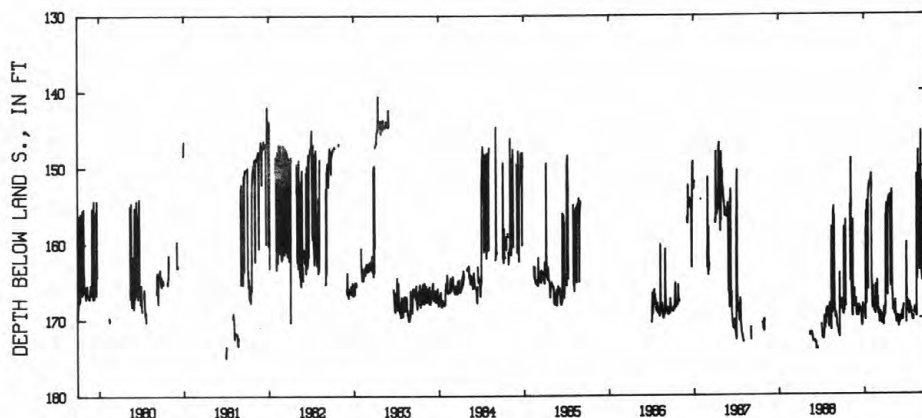
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--December 1973 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 186.74 ft below land-surface datum, Jan. 21, 1975; minimum daily low, 140.60 ft below land-surface datum, Apr. 16, 1983

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	168.10	155.00	168.70	168.70	152.20	169.40	168.10	166.30	170.70	160.00	---	162.30
2	169.40	161.00	168.70	169.00	164.80	168.90	168.70	166.50	170.50	167.40	169.20	145.30
3	169.30	165.10	168.30	169.50	165.30	168.80	156.60	167.30	169.80	168.20	169.30	161.20
4	169.20	163.80	168.30	169.20	167.60	168.80	156.40	168.90	169.80	167.50	169.30	160.00
5	169.50	148.90	168.50	170.00	168.20	169.00	156.30	169.00	170.00	167.60	169.40	163.90
6	157.90	155.00	169.70	170.20	168.70	169.00	155.80	168.00	170.20	168.90	168.60	164.20
7	168.80	164.70	169.30	158.10	165.80	170.60	154.90	167.90	170.20	169.20	168.60	165.10
8	169.00	166.50	168.90	167.40	168.10	169.70	154.90	168.10	170.30	169.20	168.80	164.70
9	166.30	167.20	168.30	155.90	167.30	170.40	166.40	169.20	170.00	168.80	168.90	165.00
10	168.05	168.80	168.70	167.60	167.90	170.50	165.20	169.20	170.30	167.80	168.80	163.70
11	168.20	169.70	168.70	168.10	168.30	169.20	167.00	169.40	169.30	169.00	169.40	152.00
12	157.00	169.70	168.50	154.80	169.00	170.10	156.20	169.50	169.10	169.40	169.40	163.30
13	167.90	157.00	168.60	154.60	169.10	169.50	155.60	167.60	169.60	169.50	169.80	164.00
14	168.40	168.30	168.60	154.60	168.90	170.10	154.40	168.10	170.10	168.20	169.80	164.40
15	---	168.50	169.20	165.30	168.60	170.10	154.70	169.30	170.20	168.00	151.10	163.40
16	---	167.80	169.20	165.60	169.30	169.50	154.00	169.80	169.00	168.00	153.40	162.60
17	---	168.00	168.90	166.20	169.40	170.70	154.40	169.40	168.60	168.20	164.90	163.20
18	---	168.10	169.00	154.40	168.80	170.70	154.20	170.30	168.60	168.60	154.10	163.40
19	---	167.50	169.00	153.50	165.60	169.70	154.40	170.60	168.30	169.20	153.20	163.30
20	---	166.10	170.50	152.60	168.40	170.70	154.50	170.60	---	169.10	152.00	163.60
21	---	168.50	170.60	152.90	167.00	170.70	153.80	170.40	---	168.70	152.40	163.90
22	---	168.10	171.00	152.10	168.10	169.80	154.00	170.60	---	169.10	147.90	160.00
23	---	167.90	170.70	152.20	168.20	170.60	154.20	170.40	---	169.30	151.50	163.60
24	---	167.50	170.70	152.20	168.80	170.90	164.80	170.50	---	169.60	150.00	155.00
25	---	167.90	168.60	152.20	168.80	170.90	165.80	169.70	---	169.60	151.10	163.40
26	---	167.40	168.10	152.30	165.00	168.60	154.40	170.30	---	169.90	151.20	147.70
27	---	168.40	168.40	152.20	168.60	170.00	153.70	170.30	---	170.20	162.80	164.70
28	---	168.90	169.10	151.70	167.20	169.20	165.50	170.90	---	170.20	163.70	150.10
29	---	169.70	169.30	151.70	---	169.40	153.10	171.10	---	170.20	163.20	162.60
30	---	168.70	168.40	151.10	---	169.20	153.80	170.10	170.62	170.30	151.40	163.00
31	---	---	168.80	151.00	---	169.60	---	170.20	---	169.70	150.60	---
MAX	169.50	169.70	171.00	170.20	169.40	170.90	168.70	171.10	170.70	170.30	169.80	165.10
CAL YR 1988	LOW 174.00											
WTR YR 1989	LOW 171.10											



410120081431800 MD-3
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

MERCER COUNTY

402833084375200. Local number, MR-2.

LOCATION.--Lat 40° 28' 33", long 84° 37' 52", Hydrologic Unit 05120101, at AVCO Mfg. Co. building in Coldwater.

Owner: New Idea Farm Equipment Co.

AQUIFER.--Limestone of Silurian Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in., depth 253 ft, cased.

INSTRUMENTATION.--Digital recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 915 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of platform 1.2 ft above land-surface datum.

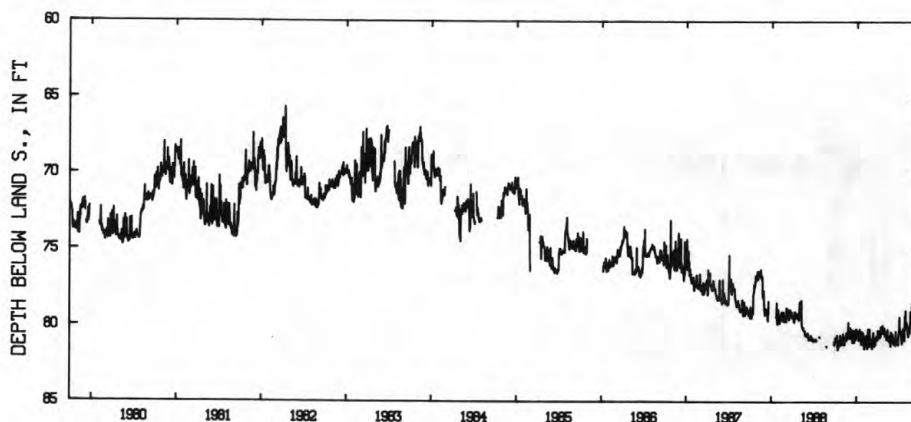
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--February 1967 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 81.60 ft below land-surface datum, Sept. 15, 1988; minimum daily low, 60.13 ft below land-surface datum, Feb. 14, 1967.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	81.00	80.80	80.80	80.44	81.19	81.24	80.86	80.14	80.90	80.53	79.81	79.81
2	80.78	81.10	80.58	80.36	81.25	81.23	80.30	80.48	80.99	80.31	79.74	79.84
3	80.83	81.10	80.62	80.50	81.49	80.84	80.29	80.65	80.68	79.79	79.91	79.34
4	80.89	80.65	80.66	80.65	81.50	81.03	80.62	80.66	80.71	79.40	80.11	79.10
5	80.95	80.51	80.28	80.31	80.69	80.89	80.78	80.62	80.52	80.17	80.18	79.85
6	80.99	80.80	80.14	80.57	80.97	81.07	80.68	80.67	80.76	80.25	79.89	79.97
7	81.02	81.03	80.64	80.59	81.09	81.26	80.68	80.44	80.86	80.40	80.10	80.05
8	80.98	81.25	80.82	80.56	81.30	81.40	80.32	80.47	80.92	80.41	80.41	80.11
9	80.94	80.98	80.63	80.61	81.09	81.48	80.63	80.71	81.17	80.31	80.49	80.09
10	80.63	81.17	80.68	80.93	80.99	81.39	80.78	80.89	81.19	80.51	80.66	79.56
11	81.10	81.22	80.41	80.61	80.92	81.09	80.63	80.65	81.17	80.63	80.69	80.10
12	81.44	80.82	80.25	80.85	80.68	80.97	80.65	80.50	80.80	80.70	80.64	80.30
13	81.56	80.69	80.45	80.90	80.63	80.66	80.68	80.48	80.92	80.86	80.21	80.35
14	81.42	80.84	80.63	80.36	81.07	80.44	80.68	80.24	81.09	81.06	80.07	80.37
15	81.40	80.86	81.09	80.23	81.27	81.22	80.36	80.45	81.15	81.16	80.09	80.48
16	81.07	80.85	81.09	80.44	81.48	81.06	80.03	80.78	81.27	80.83	80.07	80.39
17	80.99	80.96	80.64	80.39	81.19	81.06	80.37	80.83	81.06	80.67	80.45	80.29
18	81.27	80.87	80.28	80.62	81.14	81.32	80.40	80.69	80.36	80.75	80.09	80.25
19	81.35	80.46	80.38	80.49	80.49	81.00	80.45	80.71	80.96	80.69	79.88	80.39
20	81.15	80.49	80.81	81.06	80.21	80.80	80.49	80.97	80.95	80.16	79.05	80.44
21	81.16	80.85	81.06	81.08	80.79	81.08	80.45	81.02	81.00	80.23	79.69	80.49
22	81.08	80.87	81.08	81.21	81.22	81.26	80.48	80.64	81.04	80.79	79.29	80.33
23	80.62	80.55	80.68	80.38	81.35	80.98	79.97	80.80	81.09	80.88	79.75	80.45
24	80.90	80.62	80.68	80.70	81.36	81.00	80.20	80.81	81.18	80.91	79.71	79.75
25	81.22	80.36	80.63	80.79	81.16	80.91	80.17	80.84	80.98	80.95	79.86	79.89
26	81.23	80.36	80.68	80.86	80.19	80.70	80.29	81.14	80.87	80.18	79.83	80.42
27	80.90	79.76	80.26	81.04	80.63	80.68	80.44	81.32	81.02	79.39	78.46	80.58
28	81.25	80.56	80.86	81.05	81.03	80.69	80.47	81.08	81.17	79.67	79.49	80.43
29	81.19	80.64	80.89	80.43	---	80.81	80.36	80.41	81.25	79.48	79.49	80.37
30	81.20	80.60	80.75	80.63	---	80.76	80.16	80.65	80.58	78.99	79.85	80.38
31	80.73	---	80.21	80.63	---	80.91	---	80.88	---	79.70	79.89	---
MAX	81.56	81.25	81.09	81.21	81.50	81.48	80.86	81.32	81.27	81.16	80.69	80.58

CAL YR 1988 LOW 81.60
WTR YR 1989 LOW 81.56402833084375200 MR-2
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

MIAMI COUNTY

395848084085500. Local number, MI-3.

LOCATION.--Lat 39° 58' 48", long 84° 08' 55", Hydrologic Unit 05080001, 2.0 mi northeast of Tipp City.

Owner: Fulton Fruit Farms.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled unused water table well, diameter 5 in., depth 48 ft, cased.

INSTRUMENTATION.--Periodic measurement with chalked tape by ODNR personnel.

DATUM.--Elevation of land-surface datum is 804.78 ft above National Geodetic Vertical Datum of 1929. (Levels by Miami Conservancy District.) Measuring point: Floor of shelter 3.50 ft above land-surface datum.

REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--October 1966 to September 1982 continuous, periodic thereafter.

EXTREMES FOR PERIOD OF RECORD---Maximum daily low, 15.61 ft below land-surface datum, Feb. 4, 1971; minimum daily low, 7.53 ft below land-surface datum, Feb. 25, 1975.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM
INSTANTANEOUS OBSERVATIONS

DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 14, 1988	12.76	Apr. 6, 1989	8.65

GROUND-WATER RECORDS

MIAMI COUNTY--Continued

400208084112900. Local number, MI-44.

LOCATION.--Lat 40°02'08", long 84°11'29", Hydrologic Unit 05080001, on left bank of Great Miami River 0.7 mi east of city hall in Troy.

Owner: City of Troy.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled public supply water-table well, diameter 26 in, depth 105 ft, screened below 89 ft.

PERIOD OF RECORD.--August 1974 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE AIR (DEG C)	TEMPER- ATURE WATER (DEG C)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3
DEC 14...	0850	770	7.6	3.0	12.0	<10	83	34	20	2.1	439
JUN 02...	0900	758	7.6	20.0	15.0	19	85	34	18	2.0	351
AUG 11...	0830	747	7.6	19.0	14.0	36	86	34	18	2.1	339

DATE	ALKA- LINTY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
DEC 14...	360	64	27	0.9	14	424	<0.01	<0.100	1	1	2
JUN 02...	288	59	23	0.9	15	407	<0.01	<0.100	--	--	--
AUG 11...	278	61	23	0.9	14	369	<0.01	<0.100	1	1	<1

DATE	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
DEC 14...	1	3	2	1500	<5	<5	45	20	18	1.2
JUN 02...	--	--	--	1500	--	--	48	--	--	1.1
AUG 11...	<1	2	1	1500	<1	<1	48	30	16	0.9

GROUND-WATER RECORDS

277

MONTGOMERY COUNTY

393757084173600. Local number MT-928.

LOCATION.--Lat 39°37'57", long 84°17'36", Hydrologic Unit 05080002, on right bank of Great Miami River 0.2 mi south of Linden Ave. bridge, Miamisburg.

Owner: City of Miamisburg.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled municipal supply water-table well, 20 in, depth 95 ft, screened below 70 ft.

PERIOD OF RECORD.--September 1983 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE AIR (DEG C)	TEMPERATURE WATER (DEG C)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNESIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTASSIUM, DIS-SOLVED (MG/L AS K)	BICARBONATE WATER DIS IT FIELD (MG/L AS HCO3)
DEC 14...	1000	930	7.6	4.0	15.0	12	86	30	60	4.0	332
MAY 25...	1115	823	7.6	20.0	15.0	16	86	30	42	3.7	332
AUG 11...	0945	910	7.4	20.0	15.0	14	98	34	41	3.7	342

DATE	ALKALINITY WAT WH TOT FET FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	ARSENIC TOTAL (UG/L AS AS)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)
DEC 14...	268	74	87	0.3	9.5	523	0.03	0.900	1	3
MAY 25...	274	68	65	0.3	8.7	484	0.02	1.90	--	--
AUG 11...	276	64	64	0.3	9.4	476	0.01	2.00	<1	2

DATE	CHROMIUM, DIS-SOLVED (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGANESE, DIS-SOLVED (UG/L AS MN)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
DEC 14...	1	11	7	12	<5	<5	190	20	15	1.9
MAY 25...	--	--	--	8	--	--	160	--	--	1.0
AUG 11...	<1	10	4	15	2	<1	160	10	15	1.0

GROUND-WATER RECORDS
MONTGOMERY COUNTY--Continued

394012084151700. Local number, MT-55.

LOCATION.--Lat 39° 40'12", long 84° 15'17", Hydrologic Unit 05080002, Elm Street in West Carrollton.

Owner: Oxford Paper Company.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled unused water table well, diameter 12 in., depth 84 ft, cased.

INSTRUMENTATION.--Digital recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 717.6 ft above National Geodetic Vertical Datum of 1929. Measuring point: Floor of instrument shelter 0.30 ft above land-surface datum.

REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

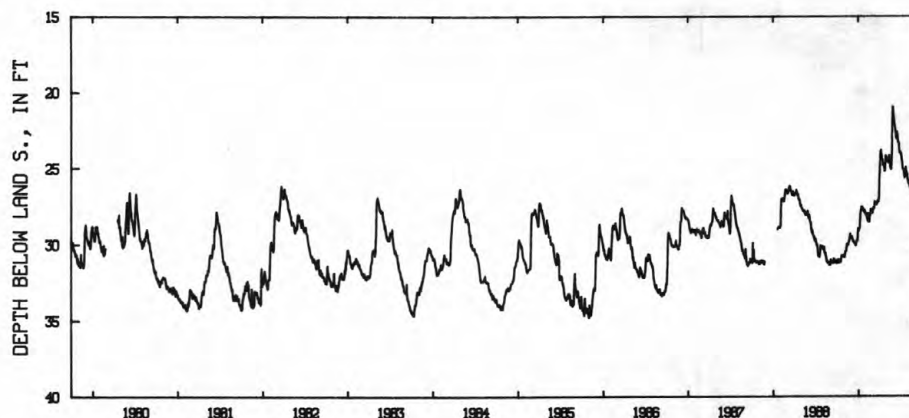
PERIOD OF RECORD.--April 1970 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 58.57 ft below land-surface datum, Nov. 24, 1974; minimum daily low, 20.96 ft below land-surface datum, May 29, 1989.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31.16	30.79	29.54	28.97	27.99	27.93	26.46	24.24	21.48	24.01	25.66	26.91
2	31.03	30.82	29.61	28.96	28.04	27.88	25.73	24.34	21.55	23.96	25.77	26.57
3	31.12	30.84	29.61	29.04	28.05	27.95	25.37	24.44	21.81	24.01	25.87	26.43
4	31.16	30.82	29.53	29.10	28.06	27.91	25.15	24.52	21.93	24.13	25.99	26.24
5	31.13	30.75	29.49	29.01	27.97	27.74	24.75	24.61	22.02	24.22	26.00	26.27
6	31.15	30.58	29.53	28.98	28.10	27.64	24.38	24.61	22.13	24.26	25.83	26.33
7	31.21	30.46	29.60	28.96	28.18	27.60	24.05	24.43	22.22	24.43	25.90	26.42
8	31.10	30.48	29.67	28.80	28.28	27.63	23.90	24.55	22.36	24.51	25.90	26.52
9	30.98	30.47	29.75	28.47	28.32	27.65	23.80	24.63	22.42	24.61	26.01	26.54
10	31.04	30.45	29.76	28.23	28.46	27.67	24.05	24.64	22.57	24.81	26.15	26.57
11	31.08	30.38	29.79	27.95	28.07	27.61	24.12	24.50	22.68	25.03	26.27	26.70
12	31.16	30.28	29.82	27.83	28.01	27.35	24.27	24.32	22.89	25.06	26.27	26.74
13	31.17	30.13	29.82	27.85	27.99	27.19	24.37	24.30	22.99	25.08	26.26	26.81
14	31.09	29.98	29.86	27.81	28.51	27.19	24.46	24.17	23.05	25.07	26.43	26.84
15	31.06	29.96	29.92	27.60	28.07	27.21	24.46	24.40	22.65	25.10	26.47	26.78
16	31.04	30.03	29.92	27.53	28.41	27.29	24.47	24.56	22.61	25.20	26.52	26.51
17	31.15	30.04	29.95	27.54	28.50	27.27	24.64	24.68	22.72	25.34	26.62	26.03
18	31.16	30.02	29.97	27.54	28.52	27.30	24.81	24.74	22.77	25.50	26.70	25.88
19	30.98	30.01	29.99	27.56	28.18	27.30	24.81	24.95	22.91	25.57	26.68	25.98
20	30.93	29.97	30.02	27.65	28.13	27.38	24.74	24.96	23.10	25.63	26.59	26.17
21	30.84	29.83	30.08	27.67	28.14	27.40	24.72	24.90	23.31	25.63	26.60	26.25
22	30.74	29.79	30.08	27.67	28.02	27.36	24.76	25.07	23.30	25.45	26.59	26.20
23	30.71	29.77	29.99	27.66	27.90	27.21	24.74	25.08	23.32	25.10	26.65	26.18
24	30.79	29.75	29.85	27.73	27.71	27.22	24.95	24.73	23.31	24.94	26.62	26.21
25	30.78	29.57	29.79	27.80	27.80	27.21	25.19	24.22	23.38	25.09	26.50	26.37
26	30.81	29.51	29.73	27.88	27.70	27.09	25.19	23.97	23.66	25.22	26.44	26.45
27	30.81	29.32	29.73	27.89	27.72	27.15	24.98	22.28	23.91	25.31	26.45	26.58
28	30.73	29.29	29.74	27.89	27.77	27.23	24.55	21.31	23.98	25.38	26.70	26.67
29	30.70	29.45	29.67	27.77	---	27.21	24.29	20.96	23.94	25.39	26.81	26.74
30	30.75	29.52	29.51	27.89	---	27.10	24.19	20.98	24.01	25.36	26.92	26.80
31	30.79	---	29.18	27.89	---	26.98	---	21.19	---	25.54	26.92	---
MAX	31.21	30.84	30.08	29.10	28.52	27.95	26.46	25.08	24.01	25.63	26.92	26.91

CAL YR 1988 LOW 31.37
WTR YR 1989 LOW 31.21



394012084151700 MT-55
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

MONTGOMERY COUNTY--Continued

394025084162800. Local number, MT-49.

LOCATION.--Lat 39° 40' 25", long 84° 16' 28", Hydrologic Unit 05080002, 1.2 mi west of city hall in West Carrollton.
Owner: Metal Shredders, Inc.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled test water table well, diameter 6 in., depth 220 ft, cased.

INSTRUMENTATION.--Digital recorder -- 60-minute punch.

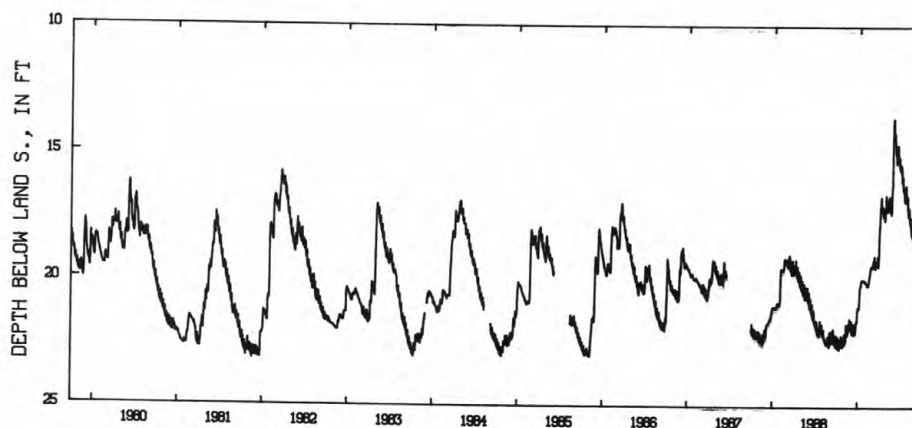
DATUM.--Elevation of land-surface datum is 714.61 ft above National Geodetic Vertical Datum of 1929. (Levels by Miami Conservancy District.) Measuring point: Floor of shelter 2.50 ft above land-surface datum.

PERIOD OF RECORD.--November 1947 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 36.30 ft below land-surface datum, Dec. 8, 1974; minimum daily low, 10.58 ft below land-surface datum, Jan. 23, 1959.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.36	22.51	21.90	21.08	20.07	19.49	18.27	16.96	14.25	15.63	17.20	18.34
2	22.16	22.50	21.92	21.07	20.07	19.46	17.87	17.11	14.39	15.46	17.28	18.03
3	22.43	22.54	21.70	21.08	20.09	19.46	17.92	17.20	14.17	15.78	17.37	17.81
4	22.59	22.55	21.59	21.12	20.08	19.49	17.61	17.24	14.29	15.58	17.46	17.79
5	22.55	22.32	21.87	21.07	20.06	19.47	17.18	17.25	14.48	15.94	17.22	18.22
6	22.62	22.11	21.98	21.01	20.10	19.35	17.05	17.01	14.58	16.05	17.13	18.31
7	22.66	22.38	22.08	20.97	20.12	19.23	17.00	16.88	14.74	16.11	17.33	18.38
8	22.40	22.46	22.11	20.74	20.19	19.22	16.78	17.22	14.88	15.90	17.50	18.46
9	22.23	22.43	22.09	20.39	20.19	19.23	16.70	17.17	15.00	15.90	17.60	18.21
10	22.50	22.37	21.86	20.27	20.18	19.19	17.02	16.85	14.82	16.29	17.70	18.16
11	22.63	22.27	21.74	20.26	20.17	19.14	17.06	16.78	15.02	16.42	17.77	18.49
12	22.68	21.93	21.70	20.23	20.23	19.04	17.16	16.88	15.24	16.39	17.52	18.61
13	22.72	21.74	21.95	20.23	20.20	19.23	17.21	16.69	15.38	16.41	17.49	18.66
14	22.72	22.05	22.07	20.15	20.20	19.25	17.26	16.67	15.28	16.51	17.84	18.68
15	22.47	22.08	22.14	20.04	20.14	19.48	17.09	17.09	14.82	16.54	17.96	18.51
16	22.32	22.12	21.95	19.99	20.10	19.52	17.08	17.22	14.91	16.28	18.05	18.06
17	22.58	22.16	21.74	19.98	20.00	19.52	17.38	17.22	14.64	16.70	18.15	17.88
18	22.55	22.16	21.72	19.96	19.91	19.30	17.47	17.27	14.80	16.78	18.22	18.30
19	22.59	21.94	22.03	19.97	19.84	19.24	17.47	17.26	15.08	16.86	17.96	18.41
20	22.55	21.73	22.07	20.00	19.83	19.42	17.39	17.04	15.19	16.89	17.85	18.53
21	22.59	21.98	22.11	20.00	19.76	19.43	17.41	17.03	15.25	16.79	18.21	18.59
22	22.33	21.99	22.02	19.95	19.68	19.30	17.23	17.38	15.37	16.58	18.32	18.63
23	22.18	21.99	21.92	19.97	19.55	19.35	17.16	17.26	15.38	16.24	18.31	18.41
24	22.47	21.78	21.74	19.97	19.53	19.38	17.50	16.57	15.13	16.67	18.32	18.38
25	22.56	21.88	21.65	19.98	19.48	19.17	17.62	16.34	15.51	16.79	18.31	18.73
26	22.61	21.62	21.63	20.01	19.44	19.05	17.53	16.24	15.51	16.89	18.08	18.76
27	22.58	21.51	21.66	20.03	19.44	19.36	17.08	14.38	15.61	16.91	17.96	18.89
28	22.61	21.92	21.55	20.02	19.47	19.43	17.07	13.80	15.39	16.91	18.30	18.95
29	22.39	21.87	21.40	20.00	---	19.45	16.77	13.62	15.65	16.66	18.25	18.95
30	22.22	21.92	21.18	19.99	---	19.26	16.63	13.62	15.65	16.67	18.43	18.68
31	22.46	---	21.11	20.00	---	18.82	---	14.09	---	17.09	18.41	---
MAX	22.72	22.55	22.14	21.12	20.23	19.52	18.27	17.38	15.65	17.09	18.43	18.95
CAL YR 1988	LOW 22.72											
WTR YR 1989	LOW 22.72											



394025084162800 MT-49
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

MONTGOMERY COUNTY--Continued

394425084113200. Local number, MT-3.

LOCATION.--Lat 39°44'25", long 84°11'32", Hydrologic Unit 05080002, Patterson Blvd. at Stewart St., in Dayton.

Owner: State of Ohio.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled test water table well, diameter 6 in., depth 80 ft, cased.

INSTRUMENTATION.--Digital recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 744 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 1.20 ft above land-surface datum.

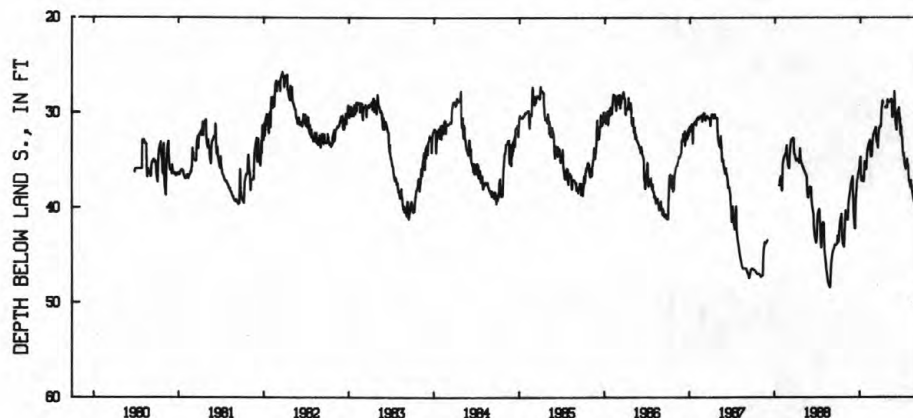
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--May 1945 to June 1974. Reactivated June 1980.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low 79.45 ft below land-surface datum, Apr. 6, 1971; minimum daily low, 25.72 ft below land-surface datum, Mar. 21, 1982.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN.	JUL	AUG	SEP
1	43.67	40.32	37.25	34.78	33.91	32.12	29.89	---	30.89	33.18	37.28	39.89
2	43.56	40.55	38.21	34.74	33.91	32.04	29.60	---	31.13	33.60	37.37	39.53
3	43.53	40.88	38.80	34.68	33.72	31.90	29.47	28.89	31.31	33.98	37.30	39.53
4	43.06	41.07	39.07	36.16	33.65	31.94	29.38	28.89	31.44	34.24	37.47	39.61
5	42.53	41.18	40.00	36.68	33.42	31.94	28.92	28.92	31.77	34.51	37.62	39.72
6	42.19	41.18	40.64	37.10	33.26	31.74	28.73	28.92	31.83	34.57	37.82	39.30
7	41.88	41.20	41.17	37.19	33.25	31.60	28.83	28.87	30.75	34.23	37.86	38.17
8	41.64	41.26	41.50	37.19	33.20	31.60	28.92	28.79	30.23	34.42	37.87	38.01
9	41.38	41.26	41.76	36.96	33.14	31.60	28.98	28.79	30.04	34.82	37.15	38.85
10	41.24	41.27	41.99	36.79	32.98	32.53	---	28.77	29.89	34.96	37.68	39.20
11	41.08	41.27	42.18	36.86	32.92	32.79	---	28.68	29.87	35.41	37.79	39.61
12	41.00	40.57	42.24	37.17	32.91	32.91	29.04	28.60	29.69	35.50	37.67	39.85
13	40.94	39.73	40.90	37.22	33.71	33.10	---	28.56	30.22	35.62	38.04	39.85
14	40.68	39.43	39.68	37.22	34.26	33.11	---	28.55	29.93	35.74	38.21	39.08
15	41.15	39.15	38.91	37.15	34.57	32.94	---	28.66	29.60	35.83	38.35	38.24
16	42.16	38.86	38.43	37.24	34.63	33.23	---	28.76	29.49	35.92	38.51	37.15
17	42.72	38.72	38.05	37.25	34.63	33.46	29.46	29.66	30.69	35.95	38.62	36.49
18	43.05	38.55	37.67	36.74	34.63	33.71	29.46	30.26	30.10	35.41	38.82	36.14
19	43.30	38.33	37.23	35.50	34.62	32.93	29.41	30.52	30.62	35.04	38.93	36.09
20	43.64	38.14	37.09	35.15	34.62	32.29	29.35	30.16	31.24	35.16	39.08	36.00
21	43.75	37.99	37.00	35.33	33.82	31.96	---	29.75	30.69	34.97	39.25	36.06
22	43.89	37.79	36.91	35.47	33.34	31.79	---	30.18	32.15	34.89	39.35	36.13
23	43.93	37.55	36.51	35.63	32.97	31.61	---	29.79	32.31	35.38	39.04	36.19
24	44.05	37.36	36.47	35.76	32.81	31.53	29.33	29.19	31.30	35.57	38.78	36.05
25	44.13	37.21	36.32	35.84	32.54	31.47	29.47	28.94	32.35	35.42	38.37	36.64
26	44.13	37.12	36.22	35.95	32.30	31.45	29.47	28.83	31.48	35.69	38.80	38.16
27	43.35	37.04	36.08	35.95	32.21	31.48	28.89	27.75	32.31	35.63	39.18	38.73
28	42.33	36.96	36.01	35.96	32.12	31.50	28.66	28.48	32.56	36.29	39.47	39.12
29	41.73	36.88	35.79	35.04	---	31.53	28.77	29.06	32.49	36.71	39.44	39.50
30	41.18	36.74	35.19	34.42	---	31.43	---	29.78	32.57	37.10	39.75	39.80
31	40.72	---	34.95	34.22	---	30.71	---	30.45	---	37.29	39.86	---
MAX	44.13	41.27	42.24	37.25	34.63	33.71	29.89	30.52	32.57	37.29	39.86	39.89
CAL YR 1988	LOW 48.40											
WTR YR 1989	LOW 44.13											



394425084113200 MT-3
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

281

MONTGOMERY COUNTY--Continued

394533084113800. Local number, MT-6.

LOCATION.--Lat 39 45'33", long 84 11'38", Hydrologic Unit 05080002, 3rd and Ludlow Sts., Dayton.

Owner: City of Dayton

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 in., depth 60 ft, cased.

INSTRUMENTATION.--Digital recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 740 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 13.00 ft below land-surface datum.

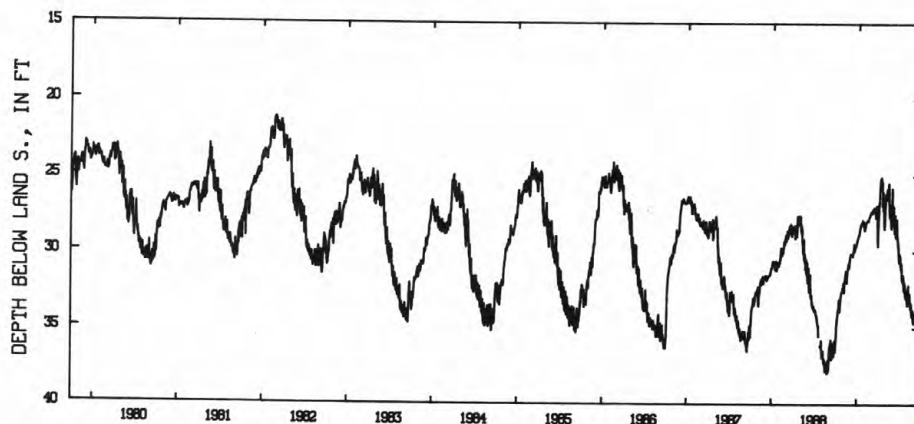
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--February 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 60.20 ft below land-surface datum, Oct. 2, 1970; minimum daily low, 21.23 ft below land-surface datum, Feb. 26, 1982.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36.21	32.15	30.27	29.12	28.50	27.34	27.41	26.18	27.77	30.50	32.94	34.66
2	35.82	32.11	30.21	29.07	28.40	27.29	26.91	26.15	28.17	30.14	33.03	34.51
3	35.60	32.01	30.10	29.01	28.25	27.32	26.77	26.19	28.23	30.35	33.22	34.21
4	35.35	32.47	30.10	29.02	28.20	27.41	26.79	26.35	26.97	30.27	33.48	33.96
5	34.90	32.65	30.13	28.90	28.08	27.32	26.41	26.52	27.77	30.57	33.41	34.04
6	34.62	32.43	30.17	28.82	28.02	27.17	25.91	26.32	27.97	30.91	33.09	34.05
7	34.40	32.10	30.17	28.82	27.98	27.15	25.54	25.88	28.00	31.03	32.86	34.24
8	34.25	31.92	30.17	28.84	27.99	27.14	25.33	25.99	28.23	31.11	32.16	34.32
9	34.08	31.77	30.13	28.70	27.98	27.13	25.17	25.82	28.71	30.73	33.02	34.31
10	33.97	31.65	30.09	28.56	27.91	27.16	25.13	25.80	28.27	31.12	33.08	34.14
11	33.86	31.57	30.10	28.48	27.89	27.10	25.07	25.89	27.55	31.61	33.09	34.12
12	33.73	31.43	30.27	28.35	27.92	27.05	25.16	25.88	28.20	31.76	33.25	34.45
13	33.78	31.21	30.02	28.31	27.86	27.10	25.19	25.65	28.78	31.91	32.72	34.32
14	33.35	31.42	29.99	28.23	27.92	27.26	25.49	25.46	29.03	31.91	33.06	34.49
15	33.23	31.63	30.01	28.15	27.94	27.20	25.38	25.84	28.90	31.70	33.21	33.85
16	33.10	32.03	29.74	28.09	27.93	27.16	25.39	26.67	28.79	31.48	33.39	33.62
17	33.75	31.78	29.52	28.05	27.86	27.40	26.95	27.13	28.10	31.60	33.56	33.28
18	33.90	31.51	29.44	28.04	27.77	27.27	26.03	27.42	27.82	31.81	33.71	33.16
19	33.62	31.30	29.65	28.02	27.69	27.19	26.02	27.69	28.52	32.12	33.63	33.32
20	33.35	31.17	29.83	27.99	27.63	27.73	26.23	27.11	28.85	32.31	33.34	33.66
21	33.19	31.09	29.90	27.99	27.63	27.00	27.25	26.84	29.02	32.53	33.58	33.91
22	33.03	30.93	29.76	27.88	27.61	26.94	26.84	27.68	29.11	32.49	33.84	33.92
23	32.89	30.81	29.68	27.89	27.55	27.00	26.47	27.41	29.38	32.02	34.08	33.37
24	32.73	30.71	29.63	27.96	27.50	27.12	26.81	28.04	29.66	32.26	34.19	32.80
25	32.67	30.94	29.59	27.97	27.45	27.01	27.98	28.27	29.41	32.48	34.16	32.62
26	32.66	31.02	29.54	28.24	27.39	26.93	28.44	28.40	29.78	32.78	34.03	32.60
27	32.55	30.91	29.45	28.23	27.34	28.61	28.17	27.22	30.13	32.98	33.79	32.39
28	32.52	30.60	29.46	28.07	27.34	29.34	27.33	26.63	30.36	33.02	34.10	32.33
29	32.45	30.49	29.40	27.98	---	29.59	26.97	25.79	30.64	32.91	34.21	32.38
30	32.33	30.34	29.27	28.49	---	28.33	26.56	26.84	30.58	32.46	34.42	32.35
31	---	---	29.19	28.54	---	27.90	---	27.40	---	32.76	34.60	---
MAX	36.21	32.65	30.27	29.12	28.50	29.59	28.44	28.40	30.64	33.02	34.60	34.66
CAL YR 1988	LOW 37.96											
WTR YR 1989	LOW 36.21											



394533084113800 MT-6
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

MUSKINGUM COUNTY

395804081593200. Local number, MU-1A.

LOCATION.--Lat 39° 58' 04", long 81° 59' 32", Hydrologic Unit 05040004, 2.2 mi northeast of the "Y" bridge in Zanesville.

Owner: Zanesville Water Department.

AQUIFER.--Sand and gravel of Quaternary Age.

WELL CHARACTERISTICS.--Drilled unused water table well, diameter 6 in., depth 109 ft, cased.

INSTRUMENTATION.--Digital recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 700 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 4.48 ft above land-surface datum.

REMARKS.--Water level affected by nearby municipal wells and by stage of the Muskingum River. Prior to water year 1978, well depth reported as 132 ft.

PERIOD OF RECORD.--May 1942 to current year.

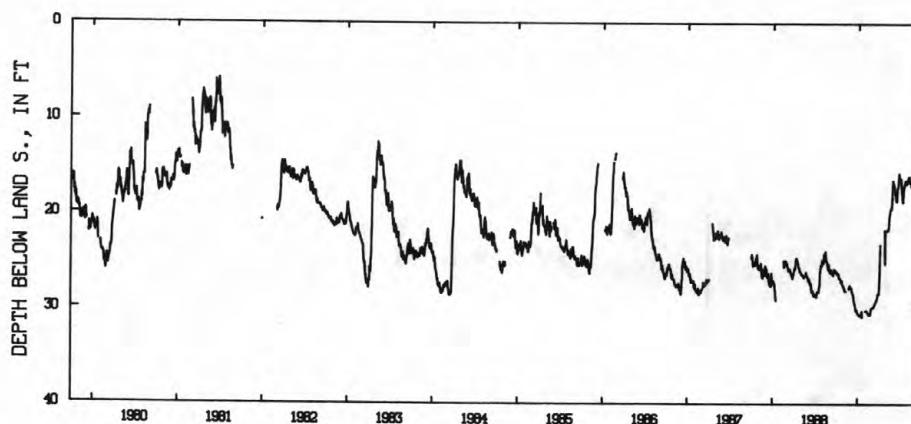
EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 37.25 ft below land-surface datum, Aug. 1-2, 1954; minimum daily low, 8.50 ft below land-surface datum, May 25, 1967.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26.22	27.73	27.72	30.51	---	29.86	28.33	21.71	16.64	16.21	16.42	17.28
2	26.10	27.79	27.83	30.51	30.21	29.88	27.76	21.74	16.87	16.21	16.56	17.30
3	26.13	27.86	27.85	30.51	30.22	29.88	26.87	21.75	16.91	16.29	16.69	17.10
4	26.24	27.94	27.86	30.55	30.18	29.86	26.35	21.73	16.90	16.30	16.59	16.97
5	26.30	28.14	27.97	30.57	30.16	29.85	25.26	21.82	17.03	16.64	16.24	17.12
6	26.36	28.16	28.17	30.66	30.17	29.75	24.29	21.82	17.28	17.12	16.12	17.33
7	26.42	28.13	28.26	30.64	30.19	29.80	23.26	21.64	17.23	17.53	16.11	17.45
8	26.41	28.14	28.28	30.70	30.25	29.74	---	21.66	17.41	17.76	16.26	17.51
9	26.31	28.13	28.39	30.73	30.29	29.80	---	21.63	17.74	17.85	16.06	17.52
10	26.38	28.13	28.50	30.75	30.33	29.78	---	21.68	17.96	18.20	16.49	17.41
11	26.62	---	28.50	30.73	30.34	29.65	---	21.75	17.99	18.55	16.64	17.44
12	26.75	---	28.52	30.70	30.41	29.63	---	21.61	18.18	18.74	16.69	17.61
13	26.69	---	28.74	30.67	30.46	29.52	---	21.49	18.43	18.77	16.69	17.54
14	26.75	---	29.09	30.54	30.47	29.50	---	21.15	18.66	18.01	16.52	17.67
15	26.83	---	29.16	30.53	30.57	29.41	---	20.69	18.60	17.84	16.66	17.76
16	26.77	---	29.28	30.52	30.61	29.42	---	20.32	18.67	17.27	16.93	17.77
17	26.82	---	29.41	30.51	30.64	29.33	---	20.19	18.44	17.22	17.05	17.45
18	26.91	---	29.37	30.24	30.60	29.28	---	19.99	17.77	17.02	17.15	17.26
19	26.94	---	29.49	30.88	30.57	29.14	---	19.78	17.30	16.95	17.19	17.38
20	27.21	---	29.75	---	30.51	29.08	---	19.70	17.26	16.86	16.90	17.38
21	27.25	---	29.90	---	30.61	29.05	---	19.48	17.28	16.89	16.96	17.53
22	27.13	27.86	30.06	---	30.64	29.06	---	19.41	17.17	16.60	17.09	17.45
23	27.00	27.89	30.10	---	30.56	28.93	---	19.46	16.92	16.50	17.01	17.62
24	27.08	27.85	30.21	---	30.48	28.90	---	19.57	16.46	16.57	17.01	17.67
25	27.29	27.60	30.21	---	30.24	28.66	---	19.47	16.11	16.63	17.01	17.36
26	27.42	27.60	30.09	---	30.04	28.51	21.74	19.26	15.76	16.81	17.05	17.40
27	27.49	27.54	30.09	---	29.97	28.41	25.20	18.88	15.91	16.87	16.90	17.55
28	27.59	27.69	30.27	---	29.92	28.51	25.31	18.26	16.13	16.84	16.79	17.72
29	27.54	27.69	30.36	---	---	28.52	21.87	17.46	16.30	16.65	16.83	17.70
30	27.62	27.76	30.44	---	---	28.46	21.76	16.68	16.37	16.56	17.04	17.72
31	27.74	---	30.49	---	---	28.41	---	16.52	---	16.39	17.16	---
MAX	27.74	28.16	30.49	30.88	30.64	29.88	28.33	21.82	18.67	18.77	17.19	17.77

CAL YR 1988 LOW 30.49

WTR YR 1989 LOW 30.88



— 395804081593200 MU-1A ZANESV WTR 1 MI N OF ZANESVILLE OH
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

283

PICKAWAY COUNTY

393327082571600. Local number, PK-7.

LOCATION.--Lat 39° 33' 27", long 82° 57' 16", Hydrologic Unit 05060002, 3.1 mi south of Circleville.

Owner: State of Ohio.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled test artesian well, diameter 6 in., depth drilled 172 ft, present depth 169 ft, cased to 164 ft.

INSTRUMENTATION.--Type F continuous recorder.

DATUM.--Elevation of land-surface datum is 705 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter, 3.00 ft above land-surface datum.

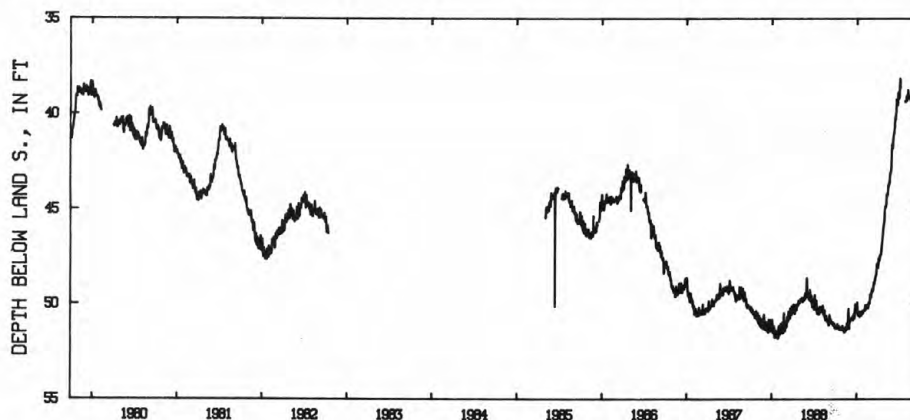
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--July 1972 to September 1982 continuous, October 1982 to April 1985 periodic, continuous thereafter.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 54.80 ft below land-surface datum, Sept. 15, 1977; minimum daily low, 38.14 ft below land-surface datum, July 4, 1989.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51.27	51.21	50.90	50.05	50.30	49.65	48.07	44.87	41.80	39.07	39.17	39.39
2	51.18	51.37	50.91	49.91	50.34	49.63	47.90	44.85	41.80	38.70	39.25	39.41
3	51.16	51.39	50.90	50.15	50.34	49.45	47.59	44.92	41.69	38.38	39.25	39.15
4	51.27	51.34	50.79	50.37	50.34	49.38	47.68	44.92	41.37	38.14	39.25	38.88
5	51.27	51.28	50.77	50.38	50.22	49.32	47.74	44.83	41.22	38.24	39.11	38.98
6	51.27	51.30	50.74	50.58	50.06	49.21	47.73	44.76	41.11	38.61	39.00	38.25
7	51.26	51.39	50.82	50.58	50.18	49.32	47.67	44.66	41.09	---	38.75	39.35
8	51.22	51.47	50.83	50.47	50.20	49.35	47.62	44.21	41.01	---	38.98	39.48
9	51.12	51.47	50.83	50.53	50.25	49.35	47.44	44.29	40.91	---	39.12	39.53
10	51.06	51.44	50.83	50.62	50.23	49.27	47.44	44.29	40.74	38.33	39.14	39.22
11	51.17	51.45	50.73	50.62	50.18	49.22	47.44	44.29	40.65	---	39.14	39.25
12	51.25	51.45	50.69	50.58	50.05	49.07	47.43	44.25	40.32	---	39.12	39.62
13	51.27	51.21	50.66	50.66	50.04	49.05	47.34	44.17	40.14	---	39.05	39.74
14	51.27	51.27	50.74	50.64	50.10	48.86	47.34	43.98	40.21	---	39.05	39.75
15	51.27	51.33	50.84	50.39	50.13	48.92	47.15	43.71	40.27	---	39.08	39.75
16	51.16	51.35	50.84	50.45	50.22	48.95	47.02	43.76	40.00	---	39.14	39.75
17	51.18	51.36	50.70	50.50	50.22	48.89	46.89	43.77	39.92	38.45	39.22	39.46
18	51.31	51.35	50.56	50.49	50.17	48.75	46.77	43.76	39.60	---	39.30	39.52
19	51.35	51.25	50.52	50.50	50.04	48.75	46.71	43.71	39.22	---	39.30	39.75
20	51.36	51.00	50.62	50.58	49.91	48.62	46.62	43.62	39.49	39.06	39.07	39.86
21	51.35	51.09	50.75	50.58	49.90	48.52	46.44	43.38	39.54	---	38.70	39.90
22	51.30	51.09	50.75	50.37	49.93	48.54	46.34	43.22	39.54	---	---	39.90
23	51.20	51.08	50.60	50.36	49.96	48.49	46.17	43.07	39.51	---	---	39.92
24	51.27	51.07	50.25	50.42	49.97	48.39	45.98	43.06	39.50	---	---	39.78
25	51.32	50.57	50.01	50.47	49.96	48.27	45.85	43.07	39.10	39.31	---	39.74
26	51.32	50.25	50.01	50.44	49.75	48.04	45.82	43.00	38.87	39.36	---	40.07
27	51.32	50.50	50.10	50.47	49.48	47.86	45.78	42.86	39.00	39.36	39.24	40.21
28	51.35	50.76	50.40	50.47	49.60	48.00	45.67	42.65	39.07	39.29	39.04	40.21
29	51.35	51.30	50.40	50.33	---	48.09	45.53	42.00	39.18	39.35	39.18	40.34
30	51.25	50.89	50.40	---	---	48.08	45.17	41.56	39.18	39.33	39.36	40.37
31	51.14	---	50.40	---	---	48.07	---	41.72	---	39.06	39.38	---
MAX	51.36	51.47	50.91	50.66	50.34	49.65	48.07	44.92	41.80	39.36	39.38	40.37

CAL YR 1988 LOW 51.80
WTR YR 1989 LOW 51.47

— 393327082571600 PK-7 ST OF OH DUPONT RD S OF CIRCLEVILLE OH
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

PICKAWAY COUNTY--Continued

393402082572500. Local number, PK-4.

LOCATION.--Lat 39° 34' 02", long 82° 57' 25", Hydrologic Unit 05060002, 2 mi south of Circleville.

Owner: E.I. DuPont DeNemours.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled test water table well, diameter 6 in., depth 136 ft, cased.

INSTRUMENTATION.--Type F continuous recorder.

DATUM.--Elevation of land-surface datum is 707 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 3.50 ft above land-surface datum.

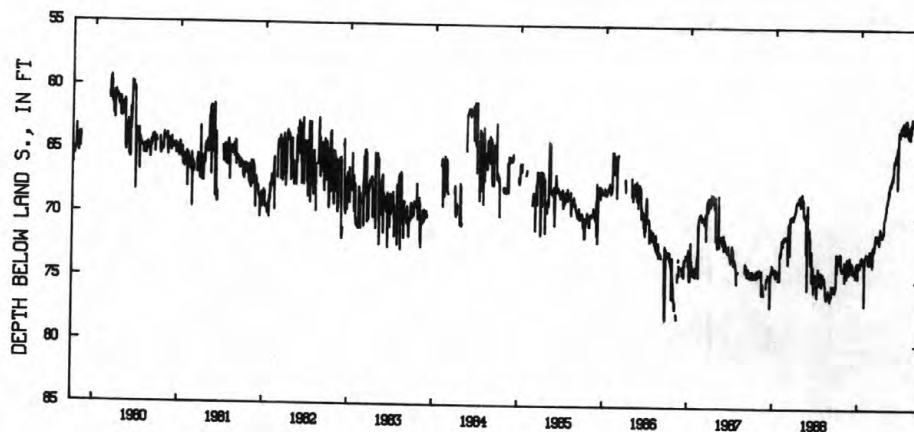
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--January, 1960 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 80.15 ft below land-surface datum, Nov. 3, 1972; minimum daily low, 47.40 ft below land-surface datum, Feb. 25, 1960.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72.80	73.40	73.45	73.45	72.75	73.55	71.25	68.80	65.55	62.80	63.30	62.95
2	72.85	74.95	73.50	73.45	73.00	72.35	70.75	68.45	65.40	62.80	63.00	63.00
3	72.85	73.85	73.50	73.65	72.75	72.80	70.80	68.60	65.00	62.55	62.90	62.85
4	72.90	73.60	74.30	73.80	72.80	72.15	71.00	68.40	65.00	62.40	63.65	62.95
5	73.00	74.05	73.85	73.60	72.80	72.40	71.00	68.30	64.95	62.35	62.85	63.00
6	73.05	74.05	73.60	73.80	72.90	72.35	71.15	68.20	64.90	62.40	62.55	63.65
7	72.95	73.90	74.20	73.65	72.85	72.55	71.00	67.70	64.80	62.40	62.75	62.95
8	73.55	74.05	74.30	73.50	73.00	72.45	71.10	67.85	64.80	62.45	63.15	63.20
9	73.20	73.60	74.05	73.35	73.20	72.25	71.40	68.05	64.70	63.30	62.60	63.10
10	73.10	74.70	74.00	73.10	73.50	72.20	71.45	67.65	64.65	62.40	62.50	63.10
11	72.80	73.70	74.35	73.20	72.80	71.75	71.45	67.40	64.35	63.10	62.25	63.00
12	72.85	73.45	74.00	73.10	72.95	71.55	71.30	67.30	64.25	62.90	62.05	63.10
13	72.80	73.15	74.25	73.45	73.60	71.50	71.35	67.25	67.60	62.35	62.30	63.15
14	72.75	73.55	74.10	73.00	73.30	71.25	71.00	67.15	66.90	62.25	62.40	62.70
15	72.80	73.65	74.40	73.30	72.80	71.80	71.10	67.15	64.00	62.85	62.50	62.85
16	72.85	73.80	74.15	73.25	73.05	71.80	71.15	67.40	63.25	62.70	62.20	62.90
17	73.65	74.40	74.10	73.20	72.55	71.80	71.15	67.20	63.20	62.85	62.60	63.00
18	73.85	73.60	74.10	73.45	72.65	71.55	70.80	67.30	63.05	63.20	62.40	62.85
19	73.95	73.75	74.65	73.45	72.55	71.50	70.25	67.05	63.30	62.20	62.35	63.10
20	74.05	73.35	73.75	73.55	73.10	71.30	70.00	66.80	63.50	62.15	62.25	63.15
21	73.85	74.30	74.25	73.40	72.75	71.25	69.95	66.75	63.25	62.40	62.45	62.90
22	74.15	74.30	73.55	73.40	72.60	71.50	69.90	66.80	63.15	62.80	62.35	62.70
23	74.10	73.05	73.60	73.20	72.90	71.25	69.90	66.60	63.05	62.85	62.70	63.35
24	74.00	73.05	74.65	73.35	73.55	71.30	69.80	66.95	63.00	63.40	62.70	63.30
25	74.05	73.40	73.45	76.85	72.70	71.40	69.50	66.50	62.75	63.20	62.80	63.10
26	74.00	73.45	73.60	73.00	72.45	71.40	69.45	66.30	63.10	63.15	62.70	63.20
27	73.85	73.55	73.50	73.50	72.65	71.40	69.35	65.80	63.25	62.70	62.30	63.30
28	74.00	73.45	74.70	72.95	73.80	71.75	69.25	65.40	63.20	62.80	62.45	63.20
29	73.85	73.60	73.75	72.95	---	72.00	68.80	65.40	62.75	63.60	62.65	63.00
30	73.95	73.65	73.50	---	---	71.80	68.80	65.50	62.60	62.95	62.80	63.15
31	73.70	---	73.55	---	---	71.30	---	65.55	---	62.70	62.65	---
MAX	74.15	74.95	74.70	76.85	73.80	73.55	71.45	68.80	67.60	63.60	63.65	63.65

CAL YR 1988 LOW 76.50
WTR YR 1989 LOW 76.85393402082572500 PK-4
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

285

PICKAWAY COUNTY--Continued

393638082572300. Local number, PK-6.

LOCATION.--Lat 39° 36'38", long 82° 57'23", Hydrologic Unit 05060002, Water Works Plant 1 mi northwest of Circleville.

Owner: Circleville Water Dept.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled unused water table well, diameter 6 in., depth 120 ft, cased.

INSTRUMENTATION.--Type F continuous recorder.

DATUM.--Elevation of land-surface datum is 672 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 3.00 ft above land-surface datum.

REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--July 1966 to current year.

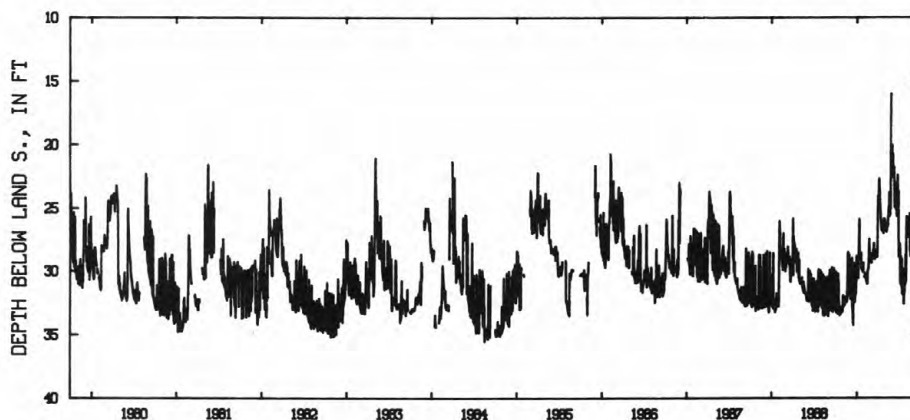
EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 37.32 ft below land-surface datum, Feb. 24, 1977; minimum daily low, 14.50 ft below land-surface datum, Feb. 2, 1969.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30.05	32.80	31.95	29.90	30.45	29.05	24.05	26.15	20.05	27.90	26.85	28.10
2	33.10	32.85	31.95	30.20	30.45	28.95	24.00	26.35	22.25	27.80	25.65	28.40
3	30.05	31.90	31.95	30.40	30.45	29.00	24.35	26.40	20.75	28.00	25.75	28.50
4	33.20	32.75	31.95	30.50	30.50	29.35	24.05	26.45	20.70	27.90	25.70	28.40
5	33.25	32.65	32.00	30.20	30.15	29.30	22.85	26.55	22.60	28.25	26.60	28.70
6	33.20	32.40	32.20	30.15	30.50	28.60	22.70	26.55	22.00	30.65	26.75	28.45
7	30.15	32.30	32.20	30.55	---	28.75	23.30	26.65	---	31.00	26.45	28.70
8	30.15	32.70	31.80	28.80	30.60	28.75	23.70	26.90	---	28.80	26.60	28.10
9	33.30	32.70	29.05	28.90	30.40	29.00	24.30	26.70	21.80	30.90	26.85	26.85
10	33.35	32.00	29.05	27.85	30.40	28.90	24.85	26.20	22.80	29.30	27.30	28.50
11	33.30	32.15	28.95	25.85	30.80	28.35	25.20	26.20	24.95	31.15	26.45	29.05
12	33.20	32.45	32.15	26.00	30.90	28.35	25.50	26.45	24.90	29.00	26.85	28.45
13	30.20	32.40	33.00	28.80	31.00	28.50	25.80	26.45	24.85	29.20	27.30	28.20
14	33.25	32.35	32.50	28.70	30.95	28.55	25.95	26.30	24.80	31.80	27.10	28.60
15	30.90	32.40	34.05	28.75	31.00	27.80	26.40	25.65	23.00	31.35	25.45	24.65
16	32.70	32.40	34.25	28.70	30.00	28.85	26.55	25.70	23.30	30.80	25.90	25.30
17	32.80	32.45	31.85	29.10	30.05	28.95	26.80	24.90	24.80	31.40	28.40	29.10
18	32.75	32.40	32.40	29.00	29.85	28.90	26.75	25.60	25.15	29.85	27.70	29.20
19	33.50	32.40	32.40	28.55	29.85	29.05	26.35	25.25	24.70	29.95	28.75	26.30
20	33.30	32.10	32.25	29.80	29.80	28.90	26.40	23.75	24.00	29.80	28.80	28.00
21	33.25	31.70	32.40	29.80	29.20	28.40	26.50	25.65	25.65	32.60	27.25	26.40
22	33.15	31.30	29.35	29.35	28.05	28.30	26.60	24.95	24.75	31.70	28.45	28.90
23	33.20	28.65	32.45	29.85	27.45	28.45	26.90	25.50	24.80	31.70	25.70	28.80
24	33.35	28.50	32.25	29.60	28.40	28.50	26.70	23.95	22.40	31.70	28.10	28.30
25	33.20	28.55	31.50	29.95	28.60	28.55	27.00	25.05	23.90	30.30	28.90	28.40
26	33.00	31.70	31.10	30.00	28.85	28.70	25.85	21.30	24.70	30.50	25.80	29.00
27	33.15	28.70	31.85	30.05	29.00	28.85	26.80	18.15	24.75	30.40	27.80	28.60
28	33.00	31.80	31.30	30.10	29.10	28.90	26.80	16.00	23.65	31.00	28.35	28.10
29	32.80	28.70	30.95	29.35	---	28.85	25.85	---	27.10	28.70	26.00	29.40
30	33.00	31.85	29.90	---	---	28.25	25.85	20.35	28.90	30.80	25.70	28.35
31	33.20	---	28.80	---	---	25.80	---	20.40	---	29.00	28.40	---
MAX	33.50	32.85	34.25	30.55	31.00	29.35	27.00	26.90	28.90	32.60	28.90	29.40

CAL YR 1988 LOW 34.25

WTR YR 1989 LOW 34.25



393638082572300 PK-6
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

PICKAWAY COUNTY--Continued

393438083072200. Local number, PK-8.

LOCATION.--Lat 39° 34' 38", long 83° 07' 22", Hydrologic Unit 05060002, 0.5 mi south of Williamsport.

Owner: Village of Williamsport.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled test water table well, diameter 10 in., depth 18 ft, cased.

INSTRUMENTATION.--Type F continuous recorder.

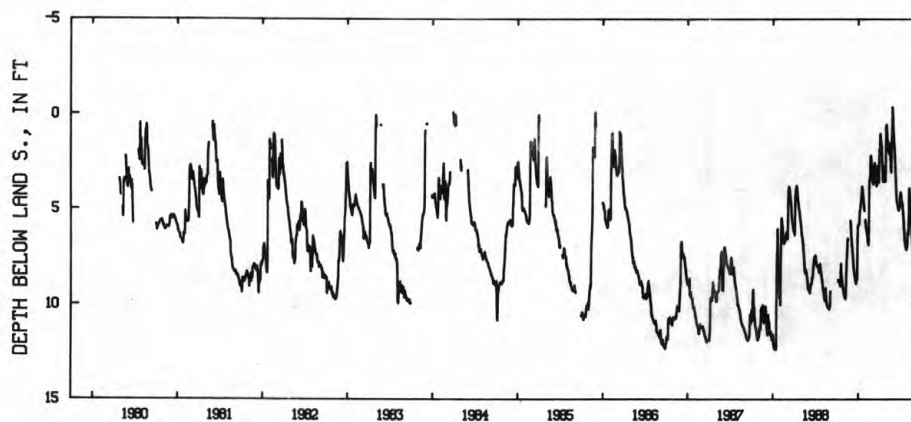
DATUM.--Elevation of land-surface datum is 723 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 0.9 ft above land-surface datum.

REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--April 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low 12.38 ft below land-surface datum, Jan. 9, 13-14, 1988;
minimum recorded daily low, 0.08 ft above land-surface datum, Mar. 29, 1984 and Nov. 29, 1985.DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	9.42	5.96	5.83	5.56	3.04	1.90	.56	1.02	4.20	6.30	7.68
2	---	9.49	6.14	5.79	5.69	3.21	1.82	.73	1.24	4.12	6.18	7.71
3	---	9.55	6.34	5.82	5.80	3.38	1.95	.87	1.43	4.20	6.22	7.70
4	---	9.60	6.55	5.84	5.90	3.55	1.96	1.10	1.65	4.28	6.32	7.59
5	---	9.64	6.75	5.85	6.00	3.69	1.03	1.40	1.70	4.39	6.34	7.54
6	---	9.66	6.92	5.84	6.10	3.70	1.14	1.40	1.92	4.54	5.85	7.44
7	8.71	9.70	7.05	5.46	6.18	3.35	1.31	1.45	2.20	4.71	4.00	7.44
8	8.75	9.72	7.20	5.17	6.25	3.07	1.43	1.73	2.50	4.72	3.90	7.54
9	8.78	9.68	7.34	5.03	6.36	3.02	1.53	1.96	2.78	4.66	3.99	7.60
10	8.85	9.35	7.47	5.02	6.45	2.78	1.70	1.96	3.08	4.79	4.11	7.69
11	8.86	8.84	7.65	4.91	6.54	2.57	1.91	1.70	3.41	4.95	4.30	7.80
12	8.85	8.34	7.86	4.81	6.67	2.65	2.15	1.87	3.80	5.10	4.52	7.90
13	8.86	7.91	7.99	4.65	6.83	2.77	2.40	1.99	4.06	5.25	4.75	7.94
14	8.87	7.60	8.13	4.54	6.88	2.89	2.67	2.12	4.39	5.42	5.00	8.00
15	8.88	7.40	8.30	4.35	6.90	3.03	2.91	2.12	4.58	5.61	5.25	7.86
16	8.98	6.97	8.34	3.92	6.17	3.19	3.15	1.65	4.68	5.82	5.50	7.68
17	9.06	6.55	8.39	3.81	3.90	3.35	3.40	1.55	4.72	6.03	5.76	7.64
18	9.07	6.57	8.49	3.84	3.45	3.51	3.57	1.80	4.75	6.23	6.01	7.69
19	8.32	6.62	8.58	3.92	3.40	3.67	3.57	2.13	4.79	6.43	6.22	7.77
20	7.86	6.64	8.67	4.02	3.48	3.80	2.83	2.39	4.85	6.59	6.41	7.80
21	8.29	---	8.76	4.15	3.50	3.80	2.76	2.68	4.93	6.74	6.60	7.78
22	8.44	---	8.85	4.29	2.67	3.04	2.88	2.97	5.01	6.82	6.78	7.96
23	8.58	---	8.92	4.43	2.18	2.72	3.05	3.09	5.08	6.95	6.98	8.13
24	8.73	---	8.93	4.57	2.22	2.79	3.26	2.19	5.08	7.04	7.08	8.25
25	8.83	---	8.92	4.70	2.35	2.93	3.45	1.30	4.96	7.09	7.15	8.38
26	8.93	---	8.84	4.83	2.49	3.10	3.53	.90	4.88	7.12	7.19	8.97
27	9.01	---	8.72	4.98	2.66	3.31	3.56	-.38	4.95	7.15	7.21	8.62
28	9.10	---	8.66	5.11	2.85	3.46	3.52	-.15	4.96	7.11	7.28	8.71
29	9.17	5.60	7.93	---	---	3.62	2.98	.17	4.38	7.00	7.35	8.79
30	9.25	5.75	6.54	---	---	3.63	.83	.54	4.38	6.92	7.45	8.84
31	9.35	---	6.00	---	---	2.93	---	.80	---	6.78	7.54	---
MAX	9.35	9.72	8.93	5.85	6.90	3.80	3.57	3.09	5.08	7.15	7.54	8.97

CAL YR 1988 LOW 12.38
WTR YR 1989 LOW 9.72393438083072200 PK-8 AT WELL FIELD NR WILLIAMSPORT OH
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

Hydrologic Unit 05060002, at Pickaway Correctional Institute near

394742083094800. Local number, PK-9.

LOCATION.--Lat 39°47'42", long 83°09'48", Hydrologic Unit 05060002, at Pickaway Correctional Institute near Orient, Ohio.

Owner: State of Ohio.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled unused water table well, diameter 8 in., depth 45 ft, cased.

INSTRUMENTATION.--Type F continuous recorder.

DATUM.--Elevation of land-surface datum is 770 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 4.00 ft above land-surface datum.

PERIOD OF RECORD.--October 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 26.10 ft below land-surface datum, Dec. 23, 1987; minimum daily low, 7.90 ft below land-surface datum, June 4, 1989.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.05	19.15	19.60	18.75	17.35	16.25	14.85	10.60	9.95	9.80	---	---
2	22.50	19.85	19.50	18.00	18.00	16.00	14.70	10.90	10.10	10.00	---	---
3	22.80	20.15	19.65	18.70	17.55	17.45	15.05	13.35	9.70	10.10	---	---
4	23.00	19.40	20.25	18.05	17.50	16.50	15.05	11.90	7.90	11.00	---	---
5	23.65	18.60	19.80	18.05	17.15	16.60	15.05	11.30	8.95	13.00	---	---
6	24.15	18.95	19.90	19.35	18.10	16.60	12.30	15.00	9.60	12.10	---	---
7	24.85	19.40	20.00	18.95	16.35	14.90	13.40	12.75	9.60	11.40	---	---
8	23.85	21.25	19.95	17.90	16.75	15.15	13.60	11.55	10.90	10.20	---	---
9	23.85	21.35	19.55	17.40	16.70	15.70	10.50	11.25	11.20	11.90	---	---
10	23.55	20.60	21.35	17.55	19.30	15.30	13.05	9.50	10.80	14.50	---	---
11	23.75	19.60	19.75	16.70	18.75	14.25	13.00	11.10	11.45	15.35	15.70	---
12	23.65	19.30	19.90	17.30	18.45	14.75	10.90	10.50	11.45	15.85	15.75	---
13	24.40	19.05	20.30	18.40	18.55	16.50	11.20	10.10	9.35	16.55	15.20	---
14	24.40	19.10	19.70	16.50	17.35	17.05	11.30	9.60	10.10	16.85	15.60	---
15	21.10	18.30	20.65	16.50	17.50	17.20	11.40	10.25	9.55	16.05	---	---
16	20.25	18.60	21.95	16.75	16.40	17.65	10.75	10.25	11.40	16.20	---	---
17	19.35	19.15	21.85	18.15	17.15	17.25	11.20	10.60	11.65	17.00	---	---
18	19.10	18.50	19.70	18.00	18.85	16.90	11.25	10.70	8.90	15.90	---	---
19	19.05	17.40	20.20	17.50	16.50	15.40	10.80	10.85	9.55	15.50	---	---
20	19.05	17.30	22.15	18.50	18.20	15.20	11.65	9.50	13.10	16.10	---	---
21	19.10	18.70	20.20	17.25	15.55	17.30	11.10	11.65	13.80	17.75	---	---
22	19.50	18.50	19.20	17.60	16.35	16.50	13.85	11.70	11.75	18.00	---	14.90
23	19.25	18.20	20.90	18.00	16.05	16.50	12.45	10.95	10.70	16.65	---	15.40
24	18.90	17.90	20.35	17.50	15.55	16.65	11.70	9.25	10.90	16.35	---	15.55
25	19.00	17.90	19.35	18.50	15.40	15.05	11.45	9.65	10.20	16.40	---	15.60
26	18.55	18.50	19.75	17.10	14.80	16.45	11.35	9.55	10.20	17.20	---	---
27	18.85	18.55	18.50	18.65	16.30	16.70	10.95	8.50	10.20	15.55	---	---
28	18.90	18.95	20.05	18.20	16.45	16.90	11.05	10.00	9.90	15.10	---	---
29	18.55	18.05	18.65	16.65	---	16.55	11.05	10.95	10.50	---	---	---
30	19.05	20.05	20.00	18.05	---	15.95	10.10	8.95	10.90	---	---	15.60
31	---	---	18.45	18.00	---	15.15	---	9.60	---	---	9.90	---
MAX	24.85	21.35	22.15	19.35	19.30	17.65	15.05	15.00	13.80	18.00	15.75	15.60
CAL YR 1988	LOW 25.50											
WTR YR 1989	LOW 2											

GROUND-WATER RECORDS

PIKE COUNTY

390359083015100. Local number, PI-2.

LOCATION.--Lat 39° 03' 59", long 83° 01' 51", Hydrologic Unit 05060002, 1 mi west of Piketon.

Owner: Goodyear Atomic Corporation.

AQUIFER.--Sand and gravel of Quaternary Age.

WELL CHARACTERISTICS.--Drilled test water table well, diameter 6 in., depth 60 ft, cased.

INSTRUMENTATION.--Digital recorder -- 60-minute punch.

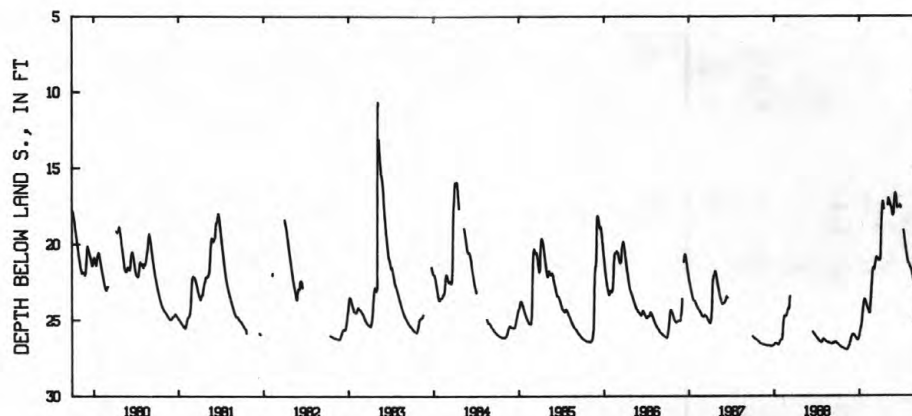
DATUM.--Elevation of land-surface datum is 550 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter, 3.00 ft above land-surface datum.

PERIOD OF RECORD.--September 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 27.46 ft below land-surface datum, Feb. 15, 1977; minimum daily low, 10.06 ft below land-surface datum, Mar. 1, 1979.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26.58	26.91	26.00	26.01	23.99	21.58	20.88	---	16.97	---	21.27	22.49
2	26.60	26.92	25.96	25.92	24.05	21.57	20.69	---	16.81	---	21.29	22.53
3	26.60	26.92	25.95	25.82	24.13	21.57	20.12	17.44	16.72	---	21.33	22.56
4	26.62	26.94	25.94	25.73	24.17	21.63	19.46	17.20	16.67	---	21.37	22.60
5	26.64	26.95	25.94	25.66	24.20	21.67	18.94	17.02	16.67	---	21.42	22.63
6	26.65	26.95	25.95	25.57	24.24	21.66	18.52	16.99	16.73	---	21.45	22.67
7	26.67	26.96	25.96	25.52	24.29	21.47	18.14	17.05	16.83	---	21.51	22.71
8	26.68	26.96	25.98	25.47	24.34	21.46	17.81	17.12	16.93	---	21.55	22.76
9	26.70	26.95	25.99	25.37	24.38	21.38	17.51	17.15	17.07	---	21.57	22.81
10	26.72	26.92	25.99	25.30	24.41	21.27	17.32	17.23	17.25	19.10	21.60	22.88
11	26.72	26.90	26.04	25.19	24.45	21.17	17.21	17.28	17.39	19.24	21.64	22.95
12	26.74	26.88	26.05	25.05	24.51	21.07	17.20	17.29	17.53	19.35	21.68	23.01
13	26.75	26.84	26.07	24.87	24.55	21.01	17.33	17.34	17.62	19.46	21.74	23.07
14	26.77	26.82	26.10	24.71	24.55	20.92	17.44	17.40	---	19.61	21.79	23.14
15	26.78	26.79	26.13	24.50	24.49	20.87	17.59	17.47	---	19.73	21.85	23.19
16	26.79	26.75	26.14	24.33	24.20	20.87	17.73	17.53	---	19.84	21.94	23.25
17	26.80	26.72	26.17	24.18	24.06	20.86	---	17.57	---	19.97	22.02	23.30
18	26.82	26.69	26.19	24.05	23.85	20.93	---	17.60	---	20.09	22.10	23.34
19	26.84	26.65	26.21	23.89	23.58	20.95	---	17.61	---	20.18	22.18	23.38
20	26.84	26.61	26.23	23.78	23.31	20.96	---	17.63	---	20.30	22.26	23.42
21	26.85	26.50	26.26	23.72	23.07	21.04	---	17.81	---	20.43	22.34	23.45
22	26.86	26.45	26.27	23.66	22.78	21.07	---	17.93	---	20.55	22.42	23.46
23	26.86	26.42	26.30	23.63	22.62	21.07	---	17.99	17.59	20.66	22.45	23.43
24	26.87	26.36	26.30	23.63	22.43	21.05	---	18.11	17.44	20.77	22.45	23.41
25	26.87	26.29	26.30	23.65	22.16	21.00	---	18.14	17.45	20.87	22.13	23.41
26	26.87	26.21	26.30	23.71	21.90	20.97	---	18.14	17.51	20.96	22.18	23.44
27	26.88	26.15	26.28	23.76	21.72	20.99	---	18.06	17.59	21.05	22.26	23.46
28	26.89	26.10	26.23	23.80	21.62	21.03	---	18.00	17.62	21.14	22.33	23.46
29	26.89	26.05	26.19	23.84	---	21.07	---	17.75	---	21.22	22.39	23.49
30	26.90	26.01	26.15	23.89	---	21.07	---	17.44	---	21.25	22.42	23.52
31	26.90	---	26.09	23.93	---	21.00	---	17.17	---	21.26	22.47	---
MAX	26.90	26.96	26.30	26.01	24.55	21.67	20.88	18.14	17.62	21.26	22.47	23.52

CAL YR 1988 LOW 26.96
WTR YR 1989 LOW 26.96390359083015100 PI-2
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

289

PORTAGE COUNTY

411401081025000. Local number, PO-1.

LOCATION.--Lat 41° 14' 01", long 81° 02' 50" Hydrologic Unit 05030103. Bauer Street in Windham.

Owner: Cristopher Minter.

AQUIFER.--Sandstone of Pennsylvanian Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in., depth 55 ft, cased.

INSTRUMENTATION.--Type F continuous recorder.

DATUM.--Elevation of land-surface datum is 980 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 0.60 ft above land-surface datum.

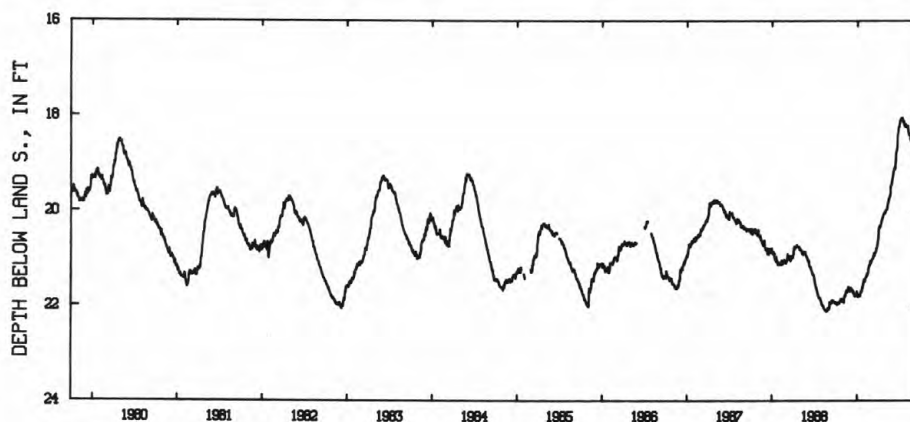
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--May 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 23.08 ft below land-surface datum, Feb. 22, 1954; minimum daily low, 14.59 ft below land-surface datum, June 24, 1947.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.92	21.87	21.66	21.73	21.48	21.10	20.58	20.05	19.32	18.16	18.23	18.75
2	21.94	21.90	21.66	21.74	21.48	21.09	20.56	20.00	19.27	18.14	18.24	18.85
3	21.94	21.90	21.67	21.74	21.48	21.04	20.44	20.01	19.24	18.10	18.24	18.87
4	21.95	21.87	21.69	21.82	21.48	21.03	20.37	20.01	19.20	18.10	18.21	18.88
5	21.96	21.93	21.65	21.78	21.43	21.03	20.35	19.97	19.18	18.10	18.22	18.89
6	21.98	21.81	21.62	21.78	21.41	21.02	20.35	19.98	19.14	18.09	18.26	18.90
7	21.96	21.82	21.65	21.78	21.39	21.02	20.32	19.98	19.13	18.07	18.29	18.90
8	21.95	21.82	21.66	21.76	21.39	21.02	20.31	19.97	19.13	18.06	18.35	18.92
9	21.93	21.81	21.65	21.76	21.39	21.00	20.33	19.96	19.09	18.05	18.37	18.93
10	21.93	21.77	21.66	21.78	21.35	20.99	20.35	19.94	19.11	18.05	18.40	18.94
11	21.95	21.79	21.69	21.80	21.32	20.95	20.31	19.91	19.12	18.08	18.40	19.01
12	21.96	21.79	21.69	21.76	21.36	20.96	20.29	19.86	19.06	18.07	18.39	19.05
13	21.96	21.73	21.68	21.80	21.35	20.95	20.27	19.84	18.97	18.04	18.40	19.05
14	21.94	21.72	21.68	21.77	21.34	20.89	20.26	19.83	18.96	18.10	18.41	19.05
15	21.93	21.70	21.74	21.73	21.32	20.94	20.20	19.81	18.75	18.12	18.41	19.08
16	21.93	21.67	21.73	21.73	21.33	20.95	20.20	19.75	18.74	18.10	18.46	19.07
17	21.94	21.70	21.72	21.72	21.30	20.90	20.20	19.75	18.75	18.12	18.52	19.12
18	21.90	21.72	21.73	21.67	21.25	20.90	20.18	19.75	18.73	18.13	18.53	19.15
19	21.89	21.70	21.75	21.67	21.20	20.90	20.16	19.73	18.70	18.10	18.52	19.15
20	21.90	21.69	21.75	21.70	21.19	20.87	20.15	19.70	18.69	18.14	18.50	19.16
21	21.88	21.69	21.80	21.69	21.15	20.86	20.12	19.70	18.56	18.19	18.54	19.16
22	21.89	21.67	21.80	21.62	21.15	20.86	20.11	19.67	18.43	18.21	18.55	19.15
23	21.88	21.62	21.76	21.60	21.15	20.83	20.11	19.66	18.40	18.22	18.57	19.22
24	21.85	21.60	21.76	21.61	21.15	20.79	20.08	19.49	18.35	18.22	18.60	19.26
25	21.87	21.60	21.80	21.61	21.12	20.78	20.07	19.47	18.33	18.23	18.62	19.23
26	21.89	21.61	21.80	21.54	21.06	20.78	20.05	19.45	18.29	18.22	18.62	19.29
27	21.89	21.63	21.75	21.53	21.07	20.76	20.05	19.45	18.23	18.18	18.66	19.32
28	21.91	21.69	21.76	21.51	21.07	20.74	20.04	19.46	18.22	18.22	18.67	19.29
29	21.91	21.70	21.75	21.48	---	20.70	20.03	19.41	18.24	18.23	18.66	19.28
30	21.91	21.64	21.70	21.45	---	20.66	20.05	19.36	18.20	18.22	18.73	19.31
31	21.90	---	21.75	21.44	---	20.61	---	19.35	---	18.22	18.75	---
MAX	21.98	21.93	21.80	21.82	21.48	21.10	20.58	20.05	19.32	18.23	18.75	19.32
CAL YR 1988	LOW 22.12											
WTR YR 1989	LOW 21.98											



411401081025000 PO-1
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

PREBLE COUNTY

394438084335900. Local number, PR-2.

LOCATION.--Lat 39° 44' 38", long 84° 33' 59", Hydrologic Unit 05080002, Stover Rd 4 mi east of Eaton.

Owner: Eaton Water Department.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in., depth 78.5 ft, cased.

INSTRUMENTATION.--Digital recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 900 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 1.50 ft above land-surface datum.

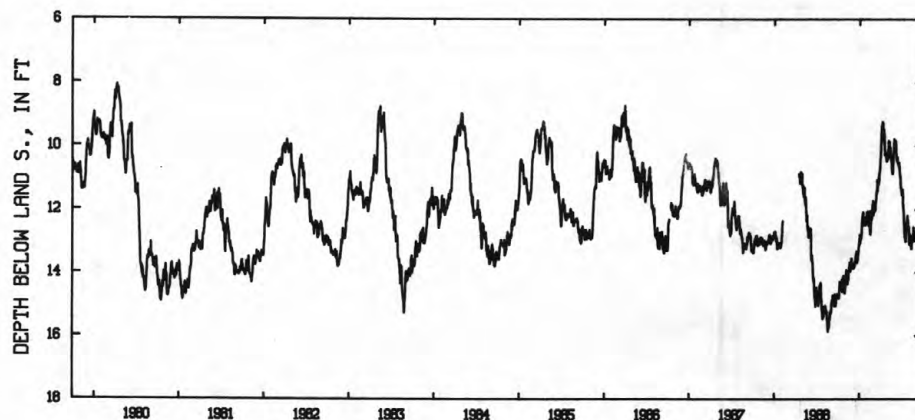
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--May 1972 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 15.86 ft below land-surface datum, Aug. 19, 1988; minimum daily low, 7.94 ft below land-surface datum, May 4, 1975.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.74	14.49	13.73	12.95	12.27	12.19	10.24	10.37	9.99	11.54	12.55	12.97
2	14.75	14.39	13.72	12.95	12.08	12.07	10.09	10.39	9.86	11.45	12.98	12.67
3	14.69	14.38	13.80	12.79	12.31	12.10	9.81	10.10	10.11	11.51	13.06	12.71
4	14.81	14.09	13.86	13.07	12.32	12.02	9.65	10.36	9.86	11.37	13.10	12.59
5	14.81	14.08	13.85	13.00	12.29	11.99	9.51	9.83	9.84	11.48	13.04	12.70
6	14.73	13.91	13.84	12.94	12.06	11.85	9.36	10.09	9.99	11.48	12.78	12.62
7	14.48	14.12	13.87	12.94	12.20	11.91	9.72	9.86	10.21	11.90	12.81	12.80
8	14.46	14.05	13.72	12.90	12.19	11.94	9.27	10.10	10.30	11.87	12.83	12.65
9	14.29	14.34	13.76	12.90	12.50	12.04	9.23	9.87	10.44	12.04	12.92	12.84
10	14.47	14.15	13.66	12.84	12.17	11.96	9.30	10.27	10.46	12.08	13.14	12.73
11	14.51	14.36	13.80	12.72	12.22	11.80	9.27	10.14	10.41	12.25	13.14	12.80
12	14.52	14.22	13.69	12.42	12.11	11.70	9.59	10.27	10.35	12.43	13.24	12.68
13	14.40	14.12	13.70	12.29	12.13	11.69	9.47	10.04	10.51	12.60	13.00	12.89
14	14.44	14.06	13.67	12.29	12.05	11.44	9.88	10.26	10.53	12.81	12.96	12.61
15	14.28	14.22	13.57	12.15	12.64	11.52	9.48	10.27	10.50	12.88	12.99	12.68
16	14.41	13.92	13.47	12.20	12.70	11.40	9.94	10.42	10.60	12.89	12.95	12.59
17	14.33	13.98	13.58	12.08	12.79	11.46	9.63	10.39	10.62	12.90	12.96	12.59
18	14.35	13.82	13.41	12.24	12.63	11.06	10.00	10.50	10.63	13.01	13.00	12.39
19	14.21	13.91	13.51	12.30	12.44	11.42	10.27	10.62	10.52	13.00	12.74	12.52
20	14.61	13.67	13.33	12.50	12.34	11.11	10.21	10.79	10.64	12.60	12.77	12.59
21	14.24	13.95	13.66	12.45	12.27	11.20	10.28	10.78	10.64	12.57	12.55	12.71
22	14.39	13.72	13.69	12.47	12.33	11.21	10.19	10.87	10.84	12.47	12.83	12.71
23	14.14	13.95	13.65	12.30	12.25	11.21	10.22	10.83	10.95	12.41	12.98	12.90
24	14.30	13.89	13.54	12.34	12.00	10.92	10.23	10.58	10.92	12.34	12.99	12.89
25	14.09	13.74	13.60	12.30	12.03	11.12	10.30	10.48	11.02	12.35	12.77	12.80
26	14.29	13.66	13.48	12.43	11.84	10.81	10.47	10.21	11.17	12.19	12.82	12.84
27	14.18	13.67	13.43	12.48	11.98	10.86	10.47	10.15	11.30	12.38	12.69	12.95
28	14.46	13.55	13.33	12.48	11.72	10.74	10.47	9.95	11.31	12.32	12.83	12.86
29	14.61	13.79	13.21	12.24	---	10.72	10.31	9.77	11.37	12.66	12.70	12.83
30	14.65	13.71	13.11	12.31	---	10.45	10.42	9.86	11.34	12.52	12.94	12.87
31	14.54	---	13.13	12.22	---	10.41	---	9.92	---	12.67	12.78	---
MAX	14.81	14.49	13.87	13.07	12.79	12.19	10.47	10.87	11.37	13.01	13.24	12.97
CAL YR 1988	LOW 15.86											
WTR YR 1989	LOW 14.81											



394438084335900 PR-2
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

291

RICHLAND COUNTY

404625082305100. Local number, R-4.

LOCATION.--Lat 40°46'25", long 82°30'51", Hydrologic Unit 05040002, at Ohio Brass Plant in Mansfield.

Owner: Ohio Brass Company

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 14 in., depth 127 ft, cased.

INSTRUMENTATION.--Digital recorder -- 60-minute punch.

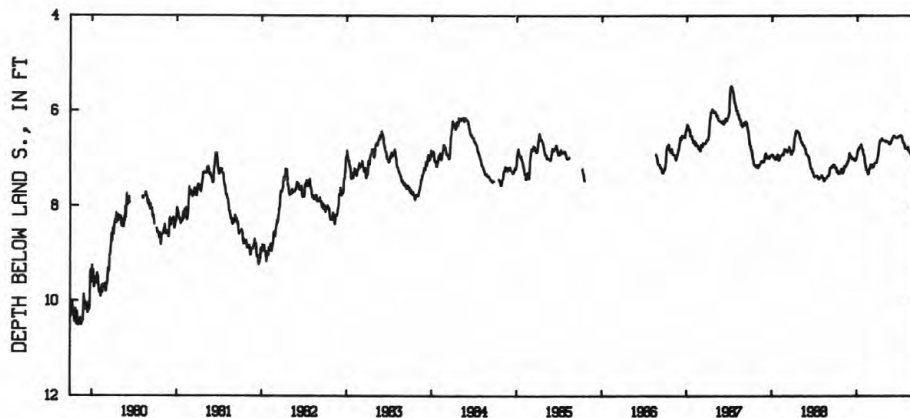
DATUM.--Elevation of land-surface datum is 1150 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of platform 5.00 ft above land-surface datum.

REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--May 1942 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 60.10 ft below land-surface datum, Oct. 12, 13, 19, 20, 1962;
minimum daily low, 5.48 ft below land-surface datum, July 9-10, 1987.DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.20	7.31	6.90	6.93	6.94	7.13	6.91	6.62	6.58	6.54	6.79	7.06
2	7.19	7.30	6.92	6.89	6.97	7.15	6.89	6.62	6.57	6.54	6.79	7.07
3	7.18	7.29	6.93	6.86	7.02	7.15	6.86	6.63	6.57	6.53	6.80	7.08
4	7.19	7.29	6.95	6.82	7.07	7.15	6.82	6.65	6.56	6.53	6.80	7.09
5	7.21	7.26	6.96	6.83	7.10	7.15	6.76	6.65	6.54	6.52	6.80	7.09
6	7.24	7.20	6.96	6.83	7.12	7.13	6.72	6.64	6.53	6.51	6.78	7.10
7	7.28	7.16	6.96	6.82	7.14	7.13	6.70	6.64	6.52	6.51	6.76	7.12
8	7.29	7.16	6.97	6.80	7.17	7.15	6.67	6.63	6.52	6.52	6.77	7.13
9	7.29	7.17	6.99	6.77	7.21	7.17	6.62	6.63	6.52	6.52	6.80	7.14
10	7.29	7.17	7.00	6.76	7.23	7.19	6.61	6.63	6.53	6.52	6.82	7.14
11	7.26	7.17	7.01	6.77	7.24	7.19	6.61	6.64	6.54	6.53	6.84	7.14
12	7.26	7.18	7.02	6.77	7.24	7.18	6.61	6.65	6.54	6.54	6.85	7.16
13	7.30	7.18	7.02	6.76	7.25	7.17	6.61	6.65	6.54	6.55	6.86	7.18
14	7.31	7.16	7.00	6.77	7.25	7.15	6.62	6.65	6.54	6.58	6.86	7.20
15	7.32	7.15	7.00	6.76	7.26	7.12	6.62	6.65	6.54	6.61	6.86	7.22
16	7.32	7.14	7.02	6.73	7.29	7.10	6.61	6.65	6.55	6.63	6.86	7.22
17	7.32	7.11	7.02	6.71	7.32	7.10	6.60	6.66	6.55	6.65	6.88	7.22
18	7.31	7.12	7.02	6.70	7.33	7.10	6.58	6.68	6.56	6.66	6.90	7.22
19	7.30	7.12	7.01	6.71	7.33	7.10	6.59	6.70	6.56	6.67	6.91	7.23
20	7.31	7.12	7.00	6.72	7.31	7.10	6.61	6.70	6.57	6.67	6.91	7.25
21	7.31	7.07	7.02	6.77	7.28	7.09	6.62	6.70	6.57	6.67	6.91	7.27
22	7.30	7.06	7.04	6.79	7.22	7.09	6.62	6.70	6.56	6.69	6.91	7.27
23	7.29	7.06	7.05	6.79	7.21	7.09	6.62	6.70	6.56	6.70	6.92	7.26
24	7.26	7.06	7.05	6.80	7.22	7.09	6.62	6.69	6.56	6.72	6.94	7.27
25	7.23	7.04	7.02	6.82	7.22	7.09	6.62	6.68	6.56	6.74	6.95	7.27
26	7.22	7.01	7.04	6.83	7.21	7.06	6.62	6.67	6.55	6.77	6.97	7.28
27	7.24	6.96	7.04	6.86	7.16	7.04	6.62	6.64	6.54	6.79	6.97	7.30
28	7.25	6.91	7.02	6.89	7.13	7.02	6.62	6.63	6.53	6.79	6.99	7.30
29	7.28	6.89	6.99	6.91	---	7.01	6.62	6.63	6.53	6.79	7.01	7.30
30	7.30	6.89	6.98	6.92	---	6.98	6.62	6.61	6.54	6.79	7.02	7.30
31	7.31	---	6.95	6.92	---	6.94	---	6.59	---	6.79	7.05	---
MAX	7.32	7.31	7.05	6.93	7.33	7.19	6.91	6.70	6.58	6.79	7.05	7.30

CAL YR 1988 LOW 7.47
WTR YR 1989 LOW 7.33404625082305100 R-4
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

ROSS COUNTY

391341083172200. Local number, RO-7.

LOCATION.--Lat 39°13'41", long 83°17'22", Hydrologic Unit 05060003, Highland County well field, 1 mi west of Bainbridge.

Owner: Highland County Water Company.

AQUIFER.--Sand and gravel of Quaternary Age.

WELL CHARACTERISTICS.--Drilled test water table well, diameter 6 in., depth 67 ft, cased.

INSTRUMENTATION.--Digital recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 740 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 3.00 ft above land-surface datum.

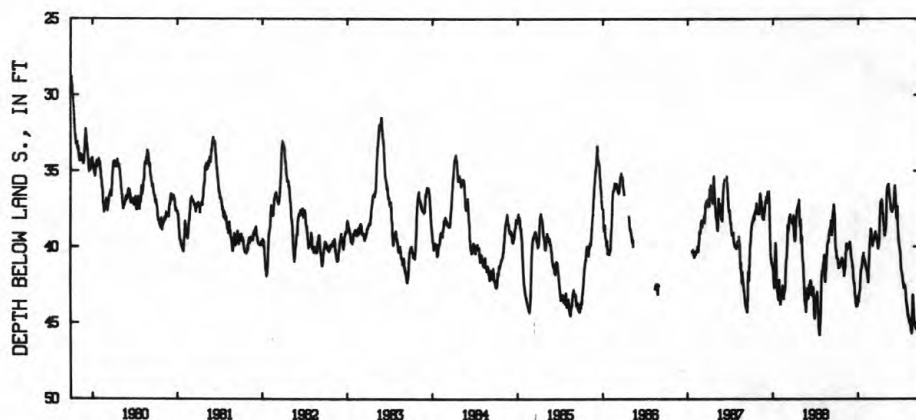
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--February 1971 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 45.81 ft below land-surface datum, July 20, 1988; minimum daily low, 20.93 ft below land-surface datum, Feb. 28, 1971.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40.23	41.38	40.18	43.23	41.01	39.32	39.82	38.78	37.46	40.26	44.17	44.95
2	40.57	41.38	40.26	43.28	41.22	39.33	39.52	38.43	37.33	40.38	44.38	45.00
3	40.74	41.92	40.52	43.59	41.15	39.47	39.40	37.61	37.19	40.79	44.55	45.17
4	40.67	41.81	40.65	43.65	41.16	39.82	38.68	36.80	36.97	41.08	44.67	45.31
5	40.75	41.57	40.78	43.30	41.28	39.93	38.09	36.42	37.05	41.32	44.53	45.35
6	40.79	41.50	40.78	43.29	41.42	39.89	37.72	36.04	36.43	41.52	44.58	45.38
7	40.80	41.40	41.03	43.03	41.44	39.58	37.37	35.96	36.28	41.58	44.78	45.43
8	41.02	41.28	41.06	42.97	41.58	39.60	37.05	36.10	35.96	41.63	44.88	45.42
9	41.01	40.83	41.42	42.86	41.65	39.52	36.97	35.93	35.96	41.74	44.98	45.45
10	41.36	40.53	41.23	42.83	41.57	39.63	37.22	35.97	36.28	41.87	45.04	45.45
11	41.42	40.29	41.35	42.37	41.78	39.46	37.23	35.96	36.78	41.92	44.72	45.46
12	41.32	40.03	41.83	42.10	42.10	39.41	36.89	35.86	37.09	41.93	44.86	45.40
13	41.21	39.79	42.11	41.92	42.07	39.39	36.91	36.07	37.46	42.21	45.04	45.40
14	41.29	39.81	42.23	41.53	42.35	39.15	37.04	36.30	37.89	42.41	45.17	45.11
15	41.22	39.87	42.31	41.55	42.03	39.27	37.21	36.37	37.97	42.35	45.28	45.11
16	41.24	40.21	42.50	41.43	41.42	39.18	37.49	36.56	38.15	42.54	45.41	44.85
17	41.32	40.15	42.39	41.36	41.27	38.99	37.69	36.74	37.38	42.65	45.56	44.88
18	41.09	40.11	42.71	41.22	40.91	39.18	37.78	36.82	37.49	42.73	45.65	44.88
19	41.01	40.08	43.01	41.12	40.59	39.28	37.85	36.93	37.35	42.60	45.72	44.90
20	40.97	40.07	43.19	40.94	40.05	39.46	38.22	37.04	37.84	42.52	45.57	44.75
21	40.93	40.07	43.30	40.73	39.71	39.48	38.34	37.17	38.48	42.53	45.16	44.84
22	40.90	40.01	43.47	40.75	39.48	39.22	38.41	37.49	38.91	42.64	44.69	44.84
23	40.84	39.93	43.75	40.78	39.54	39.45	38.52	37.51	38.98	42.62	43.84	44.36
24	40.76	39.85	43.77	40.53	39.27	39.36	38.91	37.58	39.35	42.81	43.18	44.15
25	40.74	39.76	43.95	40.40	38.81	39.55	39.13	37.61	39.58	43.08	43.20	44.20
26	40.76	39.70	43.75	40.84	38.82	39.67	39.25	37.66	39.72	43.29	43.38	44.23
27	40.79	39.68	43.75	40.85	39.03	40.00	39.27	37.70	39.78	43.63	43.89	44.03
28	40.81	39.72	43.86	40.84	39.17	40.06	39.18	37.67	39.89	43.69	44.26	44.04
29	41.06	39.73	43.91	40.84	---	40.12	38.87	37.63	40.12	43.87	44.55	43.89
30	41.15	40.06	43.73	40.82	---	40.01	38.88	37.47	40.16	44.01	44.74	43.88
31	41.44	---	43.32	40.99	---	39.92	---	37.48	---	43.98	44.92	---
MAX	41.44	41.92	43.95	43.65	42.35	40.12	39.82	38.78	40.16	44.01	45.72	45.46

CAL YR 1988 LOW 45.81
WTR YR 1989 LOW 45.72391341083172200 RO-7
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

293

ROSS COUNTY--Continued.

391913082580500. Local number, RO-8.

LOCATION.--Lat 39° 19' 13", long 82° 58' 05", Hydrologic Unit 05060003, Mead Paper wood yard in Chillicothe.

Owner: Mead Paper Corp.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled test water table well, diameter 6 in., depth 95 ft, cased.

INSTRUMENTATION.--Type F continuous recorder.

DATUM.--Elevation of land-surface datum is 631.30 ft above National Geodetic Vertical Datum of 1929. Measuring point: Floor of instrument shelter 3.30 ft above land-surface datum.

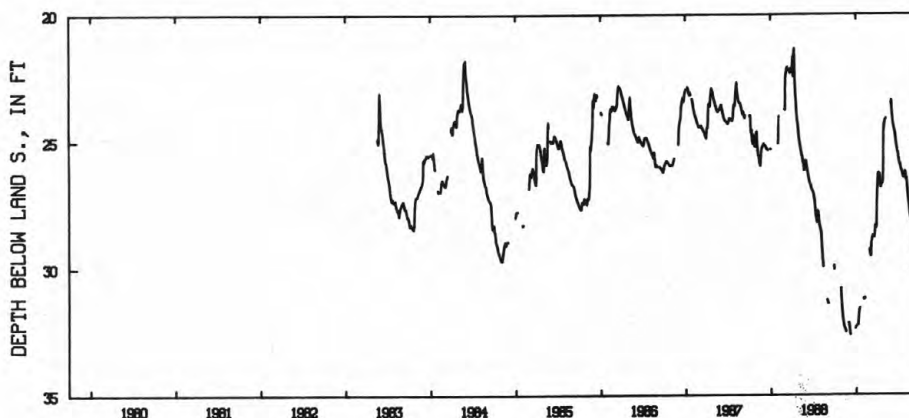
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--May 1983 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 32.65 ft below land-surface datum, Dec. 7, 1988; minimum daily low, 21.35 ft below land-surface datum, April 12, 1988.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	31.52	32.18	32.30	31.21	29.33	27.35	24.29	23.42	25.49	26.19	28.45
2	---	31.63	32.25	32.28	31.22	29.37	27.00	24.47	23.38	25.53	26.24	28.50
3	---	31.76	32.30	32.28	31.23	29.44	26.85	24.36	23.54	25.62	26.34	28.53
4	---	31.91	32.39	32.27	31.23	29.50	26.73	24.30	23.72	25.66	26.42	28.57
5	---	31.98	32.50	32.27	31.18	29.54	26.39	24.19	23.85	25.73	26.52	28.64
6	---	32.03	32.53	32.26	31.17	29.46	26.28	24.16	23.97	25.79	26.45	28.75
7	---	32.10	32.65	32.26	31.17	29.16	26.28	24.15	24.05	25.87	26.46	28.83
8	---	32.19	---	32.25	31.20	28.97	26.23	24.10	24.11	---	26.54	28.91
9	---	32.25	---	32.24	---	28.92	26.29	24.11	24.24	---	26.65	29.03
10	---	32.30	---	32.12	---	28.88	26.38	24.10	24.31	25.88	26.79	29.11
11	---	32.34	---	31.96	---	28.82	26.38	---	24.34	25.97	26.93	29.16
12	---	32.36	---	31.82	---	28.78	26.30	---	24.40	26.00	27.08	29.22
13	---	32.39	---	31.72	---	28.74	26.29	---	24.49	26.04	27.19	29.29
14	---	32.40	---	31.63	---	28.72	26.39	---	24.55	26.09	27.29	29.35
15	---	32.41	---	31.61	---	28.76	26.54	---	24.56	26.13	27.36	29.39
16	---	32.45	---	31.58	---	28.79	26.65	---	24.56	26.15	27.46	29.42
17	---	32.48	---	---	---	28.77	26.74	---	24.60	26.17	27.48	29.42
18	---	32.52	---	---	---	28.77	26.82	---	24.65	26.19	27.62	29.04
19	---	---	---	---	---	28.79	26.82	---	24.75	26.21	27.69	28.28
20	---	---	---	---	---	28.78	26.69	---	24.82	26.25	27.81	27.64
21	---	---	---	---	---	28.77	26.61	---	24.90	26.33	27.90	27.09
22	---	---	---	---	---	28.65	26.61	---	24.99	26.40	27.95	26.61
23	---	---	---	---	---	28.51	26.58	---	25.05	26.41	28.01	26.21
24	---	---	---	---	---	28.37	26.56	---	25.12	26.42	28.05	25.80
25	---	---	---	---	---	28.30	26.66	---	25.20	26.42	28.07	25.49
26	---	---	---	---	---	28.33	26.66	---	25.25	26.44	28.09	25.68
27	---	---	---	---	---	28.37	26.53	---	25.33	26.44	28.13	25.85
28	30.79	---	32.39	---	29.26	28.39	26.35	---	---	26.40	28.18	25.99
29	31.05	32.16	32.35	---	---	28.41	26.14	---	25.42	26.30	28.26	26.08
30	31.23	32.16	32.33	---	---	28.31	24.85	23.47	25.44	26.20	28.33	26.18
31	31.39	---	32.32	---	---	27.78	---	23.47	---	26.18	28.39	---
MAX	31.39	32.52	32.65	32.30	31.23	29.54	27.35	24.47	25.44	26.44	28.39	29.42

CAL YR 1988 LOW 32.65
WTR YR 1989 LOW 32.65391913082580500 RO-8 MEAD PAPER CORP AT CHILLICOTHE OH
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

SHELBY COUNTY

401712084103500. Local number, SH-4.

LOCATION.--Lat 40° 17' 12", long 84° 10' 35", Hydrologic Unit 05080001, State Route 47 in Sidney.

Owner: Stolle Corporation.

AQUIFER.--Limestone of Silurian Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 in., depth 280 ft, cased to 136 ft.

INSTRUMENTATION.--Digital recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 1,033.72 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of platform 4.50 ft above land-surface datum.

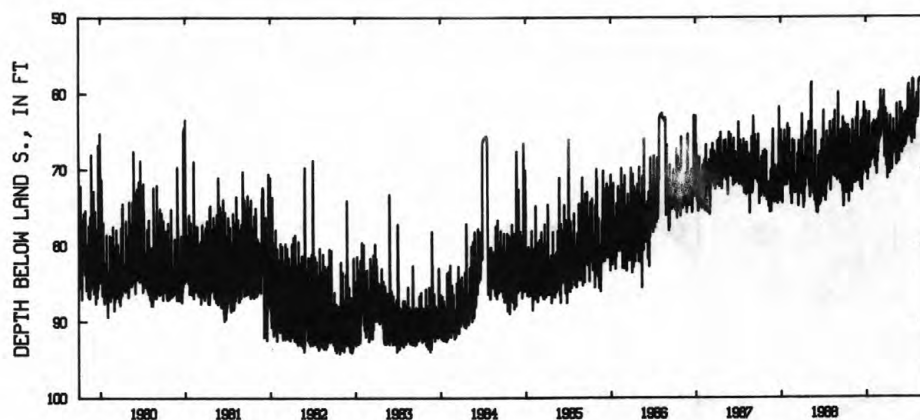
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--September 1979 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 94.19 ft below land-surface datum, Oct. 26, 1982; minimum daily low, 57.43 ft below land-surface datum, Sept. 9, 1989.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72.81	72.14	71.58	62.41	67.07	66.11	68.51	67.24	66.52	59.80	63.08	57.66
2	63.98	73.06	71.50	64.67	68.61	65.95	62.83	67.72	67.19	58.96	64.05	57.81
3	71.48	72.69	70.28	70.53	68.11	64.11	68.50	66.99	65.36	58.87	62.13	57.86
4	71.83	67.38	65.98	70.13	65.50	61.54	71.30	67.00	62.09	58.85	60.92	57.79
5	71.00	63.56	71.50	70.08	63.65	59.72	68.58	65.27	67.28	59.82	60.91	57.69
6	71.68	64.11	71.38	69.53	67.55	64.68	69.88	66.99	67.88	60.27	61.92	57.73
7	71.07	70.82	71.22	68.26	66.73	65.75	68.24	67.61	67.29	59.87	61.22	57.64
8	69.18	70.54	71.69	66.40	66.85	63.85	69.71	67.43	66.84	62.49	60.05	57.55
9	64.30	71.92	72.46	71.46	67.17	63.32	64.19	65.63	66.90	63.29	61.21	57.43
10	69.26	71.52	68.35	70.74	69.70	61.57	69.92	66.56	67.26	64.94	61.14	57.45
11	73.24	71.62	63.74	69.65	68.32	60.59	69.73	67.75	62.89	65.55	62.19	57.44
12	72.91	67.52	71.09	69.26	63.87	61.42	70.57	67.92	65.82	65.77	63.24	57.51
13	71.55	65.07	71.80	65.85	69.43	61.70	70.10	69.46	66.65	64.59	62.71	57.65
14	71.07	70.21	72.78	63.50	69.08	62.28	70.47	61.45	67.19	64.39	62.23	57.65
15	68.58	71.02	72.84	62.55	69.57	63.99	68.51	66.59	64.69	60.43	61.61	57.67
16	64.23	71.23	70.31	68.73	69.27	64.59	62.96	64.98	66.93	63.72	58.39	57.71
17	72.17	71.82	67.72	69.41	70.68	64.16	69.50	67.34	64.86	64.77	58.27	57.86
18	72.10	71.04	63.40	69.43	66.84	61.80	69.96	69.09	62.58	66.65	58.52	57.94
19	70.44	69.26	70.89	69.85	63.54	59.73	68.08	67.18	65.03	63.86	58.26	57.99
20	74.35	63.31	69.61	69.26	69.05	62.68	68.44	64.61	66.70	58.26	58.08	58.00
21	71.69	70.88	69.58	67.45	66.47	65.27	67.96	64.42	66.88	58.14	58.09	58.00
22	69.60	71.60	70.29	65.72	64.96	68.45	66.07	68.24	66.53	58.26	58.09	57.77
23	64.92	71.00	64.48	67.56	67.28	67.11	65.45	68.31	65.01	58.32	58.21	57.91
24	72.00	64.91	61.23	66.87	67.87	68.12	70.08	68.99	62.60	58.40	58.17	57.98
25	72.41	61.88	61.47	68.91	64.96	62.47	68.49	67.60	62.43	62.11	58.54	57.85
26	72.89	61.27	63.10	68.53	62.49	62.05	67.94	67.66	64.84	64.12	58.08	57.94
27	72.50	63.05	69.85	66.93	66.50	67.95	66.87	64.82	64.76	62.94	58.12	58.11
28	71.48	69.38	63.22	64.09	66.09	67.76	67.78	61.25	65.92	64.04	58.16	58.03
29	69.60	70.92	63.73	64.81	---	67.57	67.97	61.27	64.28	66.10	58.12	57.88
30	67.22	71.34	69.10	67.51	---	69.59	63.50	66.49	64.99	62.21	58.15	57.88
31	72.03	---	66.40	67.89	---	68.91	---	66.87	---	63.83	58.01	---
MAX	74.35	73.06	72.84	71.46	70.68	69.59	71.30	69.46	67.88	66.65	64.05	58.11

CAL YR 1988 LOW 75.82
WTR YR 1989 LOW 74.35401712084103500 SH-4 STOLLE CORP SIDNEY OH
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

295

STARK COUNTY

404939081203800. Local number, ST-5A.

LOCATION.--Lat 40°49'39", long 81°20'38", Hydrologic Unit 05040001, Northeast well field off Harrisburg Rd, Canton.
Owner: Canton Water Department.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled unused water table well, diameter 12 in., depth 132 ft, cased.

INSTRUMENTATION.--Type F continuous recorder.

DATUM.--Elevation of land-surface datum is 1060 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 1.00 ft above land-surface datum.

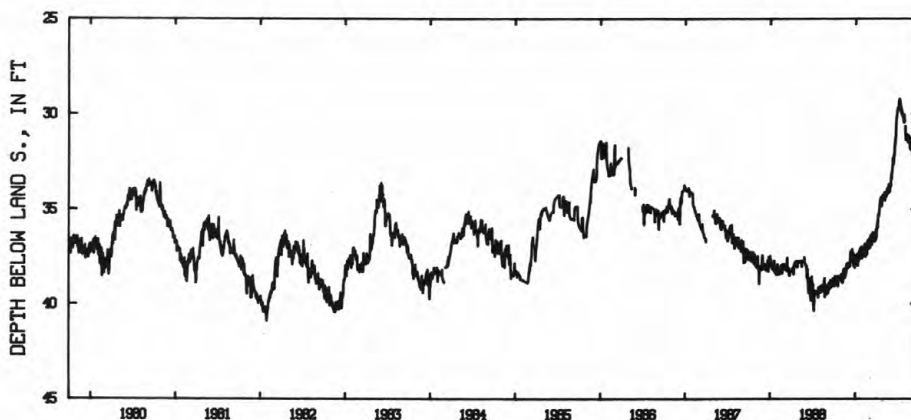
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--June 1949 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 54.00 ft below land-surface datum, Feb. 10, 1956; minimum daily low, 26.13 ft below land-surface datum, May 18, 1964.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39.00	38.65	38.05	37.49	37.35	36.56	36.51	34.45	33.81	29.85	30.64	32.15
2	39.02	38.43	38.00	37.47	37.50	36.56	36.10	34.46	33.30	29.74	31.08	32.21
3	39.08	38.53	37.87	37.42	37.44	37.02	36.10	34.43	33.12	29.63	31.37	32.10
4	39.07	38.56	38.02	37.42	37.50	37.06	35.80	34.14	33.41	29.64	31.24	32.02
5	39.07	38.50	38.05	37.46	37.50	36.97	35.80	34.12	33.10	29.39	31.25	32.07
6	38.54	38.86	38.05	37.41	37.45	36.42	35.63	34.12	33.11	29.28	31.25	32.34
7	38.53	38.90	38.04	37.60	37.40	36.43	35.94	34.54	32.84	29.28	31.22	32.42
8	38.59	38.50	37.97	37.80	36.97	36.38	35.47	34.41	32.78	29.19	31.08	32.45
9	38.60	38.83	37.98	37.38	36.95	36.40	35.25	34.37	32.33	29.33	31.11	32.49
10	38.62	38.75	37.70	37.57	36.83	36.38	35.33	34.35	32.32	29.77	31.13	32.27
11	38.62	38.18	37.30	37.90	37.33	36.63	35.36	34.29	32.59	29.30	31.20	32.31
12	38.66	38.25	37.23	37.97	37.45	36.89	35.25	34.36	32.64	29.53	31.49	32.63
13	38.68	38.61	37.50	37.57	37.50	36.44	35.07	34.33	32.15	29.55	31.21	32.47
14	38.69	38.62	37.52	37.32	37.52	36.27	34.81	34.22	32.26	29.60	31.27	32.75
15	38.72	38.14	37.74	37.77	37.39	36.28	34.88	34.01	32.21	29.67	31.28	32.84
16	38.53	38.49	37.62	37.34	37.28	36.30	34.56	33.93	31.96	29.98	31.14	32.85
17	38.61	38.50	37.20	37.25	37.30	36.22	34.49	34.15	31.58	29.78	31.43	32.76
18	39.05	38.61	37.12	37.22	37.00	36.41	34.80	34.20	31.48	29.80	31.20	32.96
19	39.09	38.25	37.25	37.65	37.32	36.25	34.42	33.95	31.63	30.08	31.20	33.15
20	38.64	38.48	37.77	37.30	37.38	36.25	34.36	33.91	31.22	30.06	31.27	32.83
21	38.62	38.45	37.48	37.07	36.85	36.62	34.86	34.07	31.34	29.95	31.81	32.98
22	38.63	38.27	37.43	37.59	36.72	36.70	34.66	33.76	31.05	30.01	31.40	33.04
23	38.62	38.32	37.33	37.62	36.75	36.72	34.64	33.70	30.60	30.02	31.87	33.08
24	38.53	37.90	37.80	37.13	36.63	36.36	34.84	34.11	30.38	30.10	31.73	33.23
25	38.54	38.14	37.99	37.07	37.01	36.41	34.58	34.11	30.25	30.34	31.50	33.45
26	38.57	38.06	37.47	37.01	37.10	36.57	34.52	34.05	30.13	30.45	31.56	33.56
27	38.61	38.14	38.00	36.99	36.95	36.67	34.55	34.00	30.03	30.47	31.60	33.33
28	38.65	38.14	37.59	37.49	36.58	36.62	34.25	34.08	29.92	30.05	31.65	33.33
29	38.74	37.85	38.03	37.50	---	36.42	34.52	33.68	29.83	30.34	31.85	33.32
30	38.76	37.84	38.09	37.60	---	36.06	34.50	33.70	29.70	30.37	31.93	33.35
31	38.71	---	37.60	37.06	---	36.05	---	33.74	---	---	31.77	---
MAX	39.09	38.90	38.09	37.97	37.52	37.06	36.51	34.54	33.81	30.47	31.93	33.56

CAL YR 1988 LOW 40.37
WTR YR 1989 LOW 39.09404939081203800 ST-5A
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

STARK COUNTY--Continued

405211081253500. Local number, ST-27.

LOCATION.--Lat 40° 52' 11", long 81° 25' 35", Hydrologic Unit 05040001, Dresler Rd near North Canton.

Owner: North Canton Water Department

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 in., depth 55 ft, cased.

INSTRUMENTATION.--Type F continuous recorder.

DATUM.--Elevation of land-surface datum is 1060 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 2.50 ft above land-surface datum.

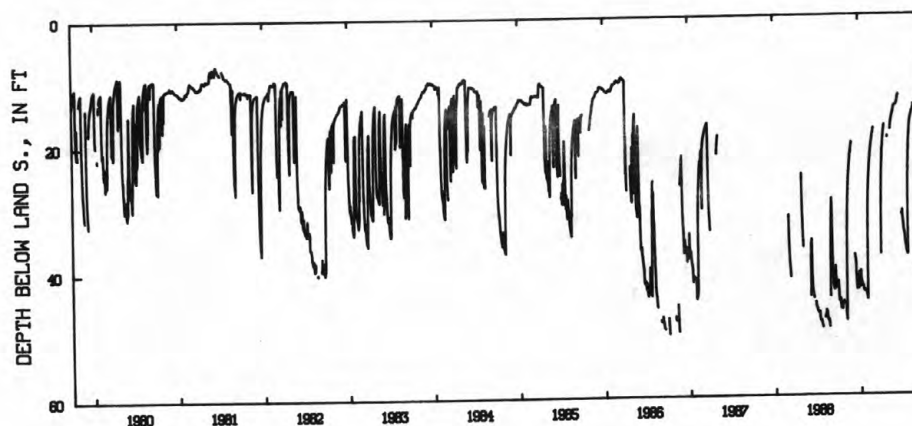
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--April 1975 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 50.10 ft below land-surface datum, Oct. 4, 1986; minimum daily low, 7.10 ft below land-surface datum, June 15, 1981.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44.50	47.40	---	42.95	44.95	18.55	33.75	---	---	31.70	19.75	---
2	45.20	47.90	---	42.10	37.80	18.20	30.00	19.52	---	31.00	19.50	---
3	45.20	48.20	---	40.45	33.50	18.02	28.05	19.35	---	31.95	18.90	---
4	44.95	41.45	---	41.45	31.20	---	26.40	---	---	32.40	18.40	---
5	---	36.65	---	41.85	29.60	---	25.15	---	---	32.40	17.90	---
6	---	34.00	---	42.00	28.20	---	24.05	---	---	32.90	17.50	---
7	44.85	32.05	---	42.20	27.25	---	23.10	---	---	33.30	17.10	---
8	45.60	30.55	---	42.40	26.45	---	22.20	---	14.40	33.85	16.85	---
9	46.15	29.50	37.90	42.50	25.70	---	21.50	---	14.30	34.30	16.55	---
10	46.40	28.50	38.15	42.70	25.00	---	20.90	---	---	34.35	16.35	---
11	---	27.60	38.45	42.75	24.40	---	20.40	---	14.15	34.40	16.20	---
12	46.20	26.90	38.65	42.80	23.85	---	19.85	---	14.00	34.70	16.00	---
13	---	26.10	38.90	42.90	23.50	---	19.40	---	13.85	35.25	15.85	15.28
14	---	25.50	40.35	43.05	22.95	---	19.00	---	13.75	35.80	15.70	15.25
15	46.40	24.95	41.75	43.30	22.60	---	18.70	18.20	13.45	36.20	15.55	15.20
16	45.40	24.45	42.35	43.45	22.20	---	18.40	17.75	13.10	36.20	15.40	15.20
17	---	23.85	43.00	43.65	21.85	---	18.10	17.40	12.95	36.50	15.30	15.05
18	---	23.45	43.35	43.65	21.50	---	17.80	17.05	12.85	36.65	15.25	14.95
19	---	23.15	43.35	43.60	21.15	---	17.55	16.80	12.75	37.00	15.20	14.90
20	---	22.70	42.45	43.60	20.75	---	---	16.50	---	37.35	15.05	14.80
21	45.25	22.25	42.70	43.75	20.50	---	---	16.30	---	37.60	14.95	14.80
22	45.60	22.00	43.00	43.75	20.20	---	---	16.15	---	37.75	14.90	14.75
23	45.50	21.70	43.10	43.60	20.00	---	---	16.00	---	37.85	14.30	14.55
24	---	21.40	43.20	43.50	19.75	---	---	15.85	---	37.95	---	14.55
25	---	21.10	43.25	43.70	19.50	---	---	15.70	---	37.95	---	14.55
26	---	20.80	41.10	43.75	19.15	---	---	15.55	---	29.20	---	14.50
27	---	20.50	40.70	43.70	18.90	---	---	15.30	---	26.10	---	14.45
28	---	20.20	42.30	43.55	18.75	---	---	15.15	---	24.25	---	14.45
29	---	---	42.51	44.40	---	---	---	14.95	31.50	22.90	19.71	14.40
30	45.45	---	42.80	43.75	---	---	---	14.70	31.70	21.90	---	14.40
31	46.85	---	42.90	44.95	---	37.80	---	14.55	---	20.95	---	---
MAX	46.85	48.20	43.35	44.95	44.95	37.80	33.75	19.52	31.70	37.95	19.75	15.28

CAL YR 1988 LOW 49.35
WTR YR 1989 LOW 48.20405211081253500 ST-27
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

297

TRUMBULL COUNTY

411604080505600. Local number, T-3

LOCATION.--Lat 41°16'04", long 80°50'56", Hydrologic Unit 05030103, N. River Rd near Warren.

Owner: Copperweld Steel Corp.

AQUIFER.--Sandstone of Mississippian Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 12 in., depth 125 ft, cased.

INSTRUMENTATION.--Digital recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 890 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 3.00 ft above land-surface datum.

REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--September 1969 to current year.

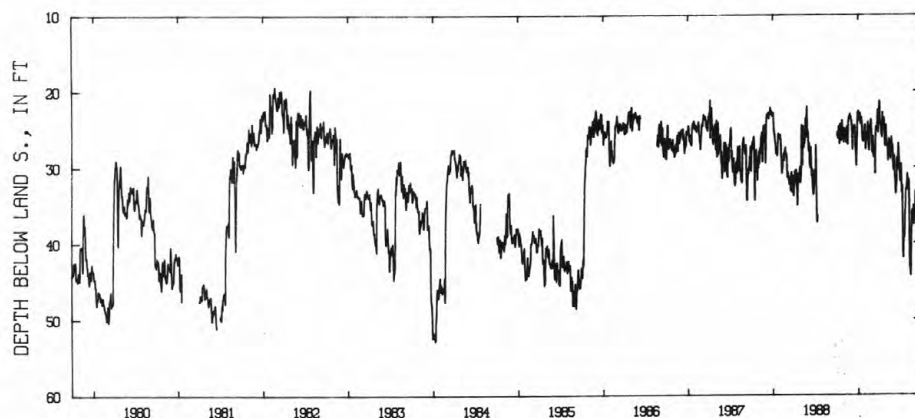
EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 60.30 ft below land-surface datum, July 2, 1975; minimum daily low, 19.35 ft below land-surface datum, Feb. 21, 1982.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	26.79	23.53	22.65	24.55	27.14	22.12	24.51	30.50	31.41	31.39	36.23
2	---	25.93	23.82	22.70	27.71	28.12	21.33	25.82	30.38	31.65	32.06	35.66
3	25.88	26.41	23.90	23.68	27.45	27.92	21.53	26.71	29.51	30.05	32.50	34.10
4	25.80	25.50	24.05	23.00	26.86	26.86	21.76	27.24	28.53	29.65	33.02	33.16
5	25.47	25.02	24.57	23.80	26.25	26.00	23.55	27.28	29.15	31.73	32.38	33.89
6	25.93	25.08	24.79	23.97	25.74	26.06	24.08	27.03	29.84	32.46	31.66	35.48
7	26.29	25.16	26.34	23.76	25.65	28.36	24.43	27.17	31.37	33.39	32.10	35.79
8	25.67	25.22	27.77	23.40	26.19	28.72	24.39	27.19	31.56	33.39	33.04	34.67
9	24.82	25.47	26.88	22.91	26.54	28.30	24.21	29.19	31.55	32.51	34.57	34.50
10	24.67	25.07	25.49	23.37	25.48	28.09	25.09	28.70	32.99	34.09	38.30	34.12
11	24.92	26.85	24.59	23.96	24.74	28.03	25.74	27.15	33.55	36.89	42.99	34.18
12	24.79	25.76	24.68	24.38	24.09	27.46	25.68	27.37	32.84	40.43	42.85	35.38
13	27.01	25.27	25.21	24.07	24.60	27.32	26.10	26.93	32.32	41.32	43.33	35.83
14	26.15	24.93	25.28	23.72	24.78	30.92	25.97	26.30	31.92	41.97	43.87	34.97
15	24.87	24.70	25.56	23.53	26.24	30.81	24.07	27.51	28.81	39.85	44.31	32.99
16	24.34	24.99	25.39	23.99	27.57	27.30	22.84	26.86	29.06	38.51	43.61	32.36
17	24.85	26.34	24.89	23.98	27.87	26.02	23.58	26.65	29.38	39.40	40.64	31.47
18	25.00	27.10	24.60	24.51	26.78	25.62	23.52	26.60	29.41	39.26	38.63	30.48
19	25.20	25.34	24.59	25.48	25.21	24.73	24.42	28.65	30.38	38.93	37.43	30.97
20	26.00	24.20	26.87	25.92	24.59	24.80	24.52	28.96	29.72	38.29	35.73	31.54
21	26.58	23.84	27.38	26.61	24.92	25.00	24.40	26.89	28.54	35.93	37.70	33.18
22	25.14	23.48	28.16	26.19	24.76	25.16	24.44	27.55	26.92	35.46	36.94	34.76
23	24.54	23.43	28.36	26.67	24.58	25.24	23.61	26.88	27.37	34.39	36.84	34.68
24	23.89	23.43	29.91	26.61	24.15	24.62	25.01	26.09	28.51	32.89	36.72	31.08
25	23.91	23.34	28.59	26.04	23.78	23.50	25.74	26.84	28.83	32.90	36.24	31.35
26	25.42	23.19	27.50	25.72	23.84	22.48	26.80	28.12	29.59	32.88	35.64	30.55
27	25.86	23.03	26.95	25.45	24.98	23.53	27.27	28.03	30.58	33.01	35.04	30.53
28	26.42	23.76	25.84	25.14	26.32	25.48	25.57	27.10	29.66	32.38	36.16	31.30
29	26.36	23.60	24.11	24.59	---	24.68	25.25	27.51	31.41	31.95	37.27	32.67
30	25.34	23.38	22.93	24.65	---	23.26	24.86	29.55	31.93	30.90	37.59	31.38
31	24.89	---	23.39	24.50	---	22.54	---	29.25	---	31.02	36.60	---
MAX	27.01	27.10	29.91	26.67	27.87	30.92	27.27	29.55	33.55	41.97	44.31	36.23

CAL YR 1988 LOW 37.29

WTR YR 1989 LOW 44.31

411604080505600 T-3
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

TUSCARAWAS COUNTY

403207081293800. Local number, TU-3.

LOCATION.--Lat 40° 32' 07", long 81° 29' 38", Hydrologic Unit 05040001, in the northwest part of Dover.

Owner: Dover City Water Department.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled unused water table well, diameter 6 in., depth 62 ft, cased.

INSTRUMENTATION.--Monthly measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 880 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 3.00 ft above land-surface datum.

PERIOD OF RECORD.--May 1960 to September 1982 continuous, periodic thereafter.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 19.35 ft below land-surface datum, Nov. 29-30, Dec. 6-8, 1962; minimum daily low, 3.20 ft below land-surface datum, July 15, 1969.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM
INSTANTANEOUS OBSERVATIONS

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 31, 1988	13.50	Jan. 31, 1989	11.58	Apr. 28, 1989	9.91	July 31, 1989	9.30
Nov. 29, 1988	12.32	Feb. 28, 1989	11.00	May 31, 1989	7.80	Aug. 31, 1989	10.70
Dec. 30, 1988	12.51	Mar. 31, 1989	10.60	June 30, 1989	7.07	Sept. 29, 1989	11.13

TUSCARAWAS COUNTY--Continued.

403557081313600. Local number, TU-4.

LOCATION.--Lat 40° 35' 57", long 81° 31' 36", Hydrologic Unit 05040001, near Fire Dept. building in Strasburg.

Owner: Strasburg Water Dept.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled unused water table well, diameter 6 in., depth 42.5 ft, cased.

INSTRUMENTATION.--Type F continuous recorder.

DATUM.--Elevation of land-surface datum is 920 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 3.50 ft above land-surface datum.

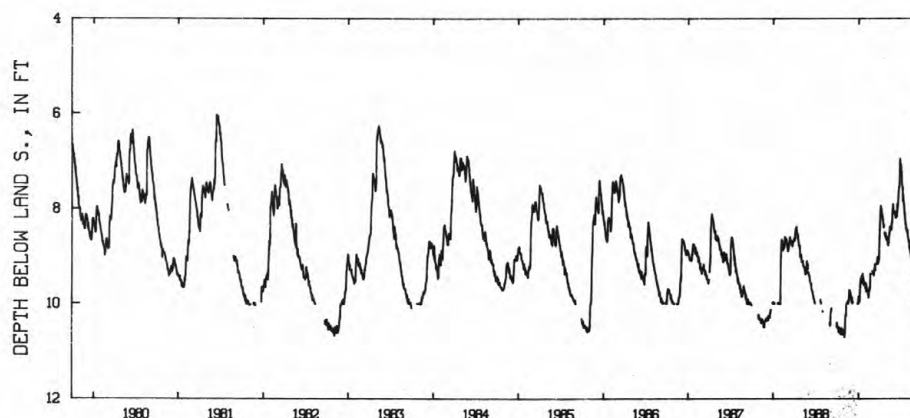
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--June 1960 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 10.71 ft below land-surface datum, Nov. 3, 1988; minimum daily low, 4.05 ft below land-surface datum, July 13, 1969.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.40	10.55	9.84	9.97	9.67	9.32	8.73	8.66	8.05	7.14	8.60	9.44
2	10.43	10.68	9.86	9.85	9.70	9.32	8.60	8.61	8.10	7.10	8.62	9.45
3	10.51	10.71	9.86	9.88	9.58	9.32	8.45	8.62	8.06	7.27	8.63	9.49
4	10.52	10.59	9.98	9.99	9.74	9.37	8.30	8.65	8.07	7.22	8.68	9.51
5	10.53	10.50	9.87	9.90	9.61	9.37	8.15	8.65	8.06	7.35	8.65	9.52
6	10.51	10.34	10.00	9.95	9.75	9.37	8.02	8.60	8.10	7.48	8.65	9.63
7	10.50	10.27	9.96	9.95	9.70	9.32	7.93	8.74	8.06	7.48	8.69	9.60
8	10.60	10.23	9.96	9.76	9.70	9.40	8.00	8.75	8.13	7.55	8.83	9.65
9	10.49	10.25	9.97	9.65	9.71	9.41	8.02	8.78	8.09	7.55	8.86	9.73
10	10.50	10.10	---	9.54	9.71	9.30	8.00	8.64	8.20	7.54	8.85	9.70
11	10.58	10.00	---	9.57	9.72	9.27	8.10	8.73	8.17	7.85	8.90	9.72
12	10.51	10.00	10.00	9.46	9.82	9.26	8.19	8.58	8.18	7.70	8.93	9.70
13	10.60	10.00	---	9.57	9.83	9.17	8.18	8.56	8.18	7.87	8.90	9.68
14	10.62	10.00	---	9.55	9.88	9.30	8.14	8.55	8.17	7.83	8.92	9.79
15	10.58	10.00	---	9.52	9.75	9.31	8.21	8.51	8.17	7.89	8.97	9.74
16	---	9.95	---	9.41	9.75	9.17	8.21	8.46	8.05	7.92	9.07	9.75
17	10.62	10.00	---	9.44	9.75	9.17	8.30	8.38	7.90	7.98	9.10	9.70
18	10.65	9.96	---	9.43	9.66	9.16	8.33	8.38	8.00	8.10	9.14	9.62
19	10.63	10.00	---	9.43	9.70	9.16	8.33	8.40	7.93	8.08	9.17	9.73
20	10.63	9.96	---	9.37	9.70	9.17	8.40	8.43	7.91	8.20	9.21	9.70
21	10.51	9.90	---	9.58	9.62	9.14	8.35	8.38	7.78	8.25	9.20	9.77
22	10.56	9.86	---	9.45	9.37	9.13	---	8.43	7.66	8.34	9.24	9.75
23	10.53	9.72	---	9.60	9.37	9.15	---	8.45	7.60	8.31	9.17	9.55
24	10.60	9.71	---	9.61	9.38	9.02	8.50	8.31	7.54	8.36	9.25	9.62
25	10.65	9.83	---	9.53	9.38	9.17	8.55	8.30	7.52	8.45	9.24	9.62
26	10.65	9.75	---	9.55	---	9.09	8.55	8.30	7.53	8.45	9.32	9.63
27	10.61	9.86	---	9.55	---	9.15	8.60	8.09	7.22	8.43	9.35	9.69
28	---	9.75	---	9.57	---	9.11	8.51	8.02	6.94	8.42	9.39	9.63
29	10.60	9.81	10.01	9.57	---	9.11	8.57	7.95	7.07	8.50	9.43	9.65
30	10.65	9.90	10.00	9.55	---	9.07	8.57	7.90	7.05	8.45	9.48	9.70
31	10.55	---	9.97	9.67	---	8.95	---	8.05	---	8.45	9.45	---
MAX	10.65	10.71	10.01	9.99	9.88	9.41	8.73	8.78	8.20	8.50	9.48	9.79

CAL YR 1988 LOW 10.71
WTR YR 1989 LOW 10.71403557081313600 TU-4
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

TUSCARAWAS COUNTY--Continued

403653081321800. Local number, TU-1.

LOCATION.--Lat 40° 36' 53", long 81° 32' 18", Hydrologic Unit 05040001, 1.3 mi north of Strasburg.

Owner: Ray Libert.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled unused water table well, diameter 4 in., depth 23 ft, cased.

INSTRUMENTATION.--Type F continuous recorder.

DATUM.--Elevation of land-surface datum is 928.24 ft above National Geodetic Vertical Datum of 1929. Measuring point: Floor of instrument shelter 0.90 ft above land-surface datum.

REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--July 1946 to current year.

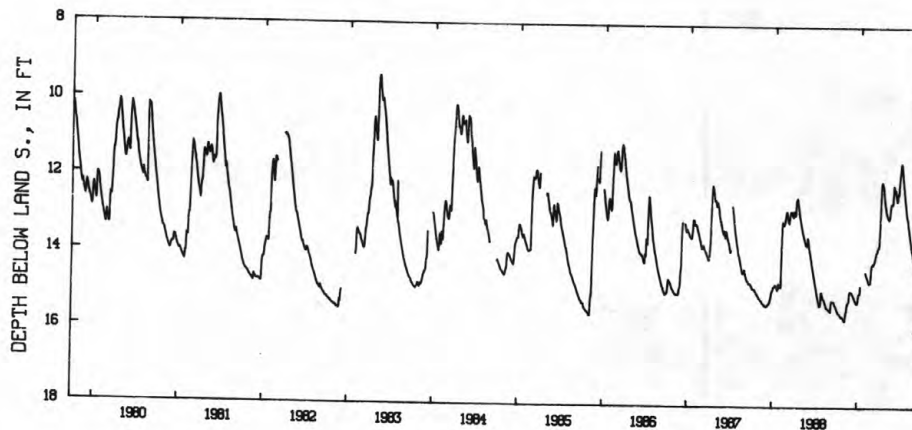
EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 15.71 ft below land-surface datum, Nov. 3-4, 1988; minimum daily low, 6.64 ft below land-surface datum, July 14, 1969.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.43	15.69	14.95	15.04	14.46	14.23	13.45	12.89	12.22	11.56	13.19	14.30
2	15.43	15.70	14.95	15.01	14.49	14.20	13.24	12.91	12.26	11.61	13.23	14.33
3	15.44	15.71	14.97	15.00	14.51	14.21	13.00	12.95	12.31	11.66	13.26	14.35
4	15.45	15.71	14.98	14.99	14.52	14.23	12.79	12.96	12.32	11.72	13.30	14.37
5	15.48	15.70	14.99	14.99	14.54	14.23	12.53	12.98	12.30	11.79	13.35	14.40
6	15.49	15.63	15.00	14.99	14.56	14.22	12.32	13.00	12.25	11.85	13.39	14.43
7	15.50	15.56	15.01	14.98	14.58	14.17	12.14	13.01	12.28	11.91	13.43	14.46
8	15.50	15.51	15.03	14.92	14.60	14.17	12.07	13.02	12.34	11.97	13.48	14.48
9	15.51	15.48	15.05	14.80	14.61	14.16	12.06	13.03	12.40	12.03	13.52	14.50
10	15.52	15.45	15.06	---	14.62	14.15	12.06	13.03	12.45	12.09	13.57	14.51
11	15.53	15.42	15.08	---	14.65	14.12	12.08	13.03	12.49	12.17	13.61	14.52
12	15.53	15.36	15.09	---	14.68	14.08	12.12	12.98	12.50	12.20	13.64	14.56
13	15.54	15.32	15.09	---	14.69	14.05	12.14	12.96	12.55	12.26	13.68	14.58
14	15.55	15.29	15.11	---	14.72	14.02	12.15	12.93	12.55	12.34	13.72	14.59
15	15.56	15.26	15.14	---	14.72	14.00	12.21	12.87	12.50	12.38	13.77	14.59
16	15.57	15.23	15.15	---	14.72	13.98	12.25	12.79	12.40	12.44	13.81	14.59
17	15.58	15.22	15.16	---	14.71	13.92	12.34	12.71	12.36	12.51	13.85	14.53
18	15.59	15.22	15.17	---	14.70	13.90	12.39	12.67	12.33	12.56	13.87	14.56
19	15.59	15.22	15.19	---	14.70	13.90	12.42	12.64	12.37	12.60	13.90	14.59
20	15.59	15.22	15.20	---	14.70	13.89	12.47	12.62	12.34	12.66	13.93	14.61
21	15.60	15.18	15.22	---	14.69	13.88	12.52	12.63	12.24	12.73	13.96	14.63
22	15.60	15.08	15.23	---	14.58	13.86	12.57	12.62	12.11	12.79	13.99	14.63
23	15.60	15.00	15.24	---	14.48	13.79	12.63	12.63	12.02	12.84	14.02	14.51
24	15.60	14.97	15.24	---	14.36	13.78	12.66	12.63	11.94	12.89	14.05	14.45
25	15.60	14.95	15.24	---	14.31	13.77	12.70	12.61	11.88	12.94	14.08	14.41
26	15.61	14.94	15.24	---	14.25	13.76	12.72	12.57	11.82	12.98	14.11	14.46
27	15.63	14.93	15.24	---	14.24	13.76	12.76	12.45	11.79	13.00	14.15	14.48
28	15.64	14.94	15.24	---	14.23	13.77	12.82	12.35	11.64	13.02	14.19	14.51
29	15.64	14.94	15.20	---	---	13.76	12.86	12.22	11.58	13.04	14.22	14.54
30	15.64	14.94	15.15	14.43	---	13.70	12.88	12.15	11.55	13.08	14.25	14.57
31	15.68	---	15.08	14.44	---	13.53	---	12.17	---	13.13	14.28	---
MAX	15.68	15.71	15.24	15.04	14.72	14.23	13.45	13.03	12.55	13.13	14.28	14.63

CAL YR 1988 LOW 15.71

WTR YR 1989 LOW 15.71

403653081321800 TU-1
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

301

TUSCARAWAS COUNTY--Continued.

403823081324200. Local number, TU-5.

LOCATION.--Lat 40° 38' 23", long 81° 32' 42", Hydrologic Unit 05040001, Sugar Creek well field near Strasburg.

Owner: Canton Water Dept.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled unused water table well, diameter 6 in., depth 100 ft, cased.

INSTRUMENTATION.--Type F continuous recorder.

DATUM.--Elevation of land-surface datum is 937.93 ft above National Geodetic Vertical Datum of 1929. Measuring point: Floor of instrument shelter 4.00 ft above land-surface datum.

REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--June 1960 to current year.

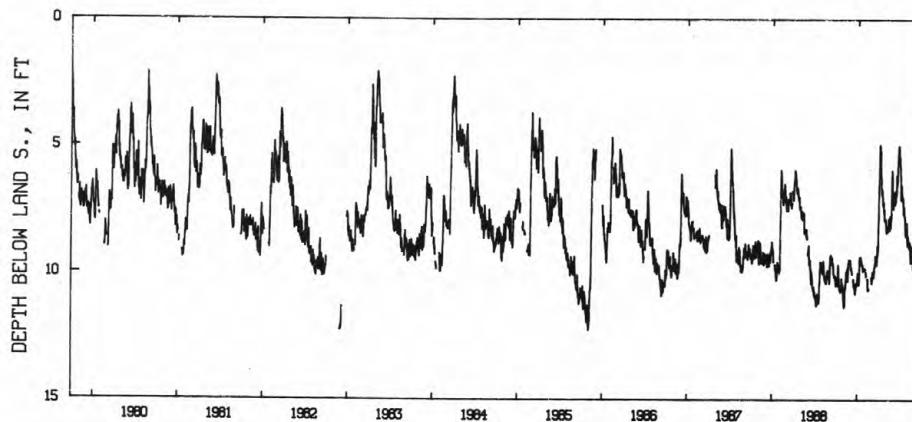
EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 12.68 ft below land-surface datum, Feb. 14, 24, 1977; minimum daily low, 1.05 ft below land-surface datum, July 9, 1969.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.30	11.05	9.47	10.21	9.83	10.17	7.88	---	7.14	5.50	8.03	9.95
2	10.20	10.99	9.62	10.00	9.83	10.33	6.79	7.86	7.43	5.45	8.34	9.75
3	10.44	11.25	9.75	10.25	9.83	10.40	6.58	7.96	7.45	5.77	8.66	9.80
4	10.26	11.35	9.85	10.33	9.84	10.30	6.05	8.23	6.83	5.80	8.90	9.56
5	10.18	11.30	9.81	10.45	---	10.06	5.03	8.40	6.92	6.12	8.83	9.92
6	10.49	11.25	9.81	10.45	9.96	10.07	4.95	8.18	6.83	6.15	8.50	9.92
7	10.28	10.78	9.91	10.45	10.14	9.95	4.98	8.20	6.87	6.97	8.56	9.92
8	10.47	10.51	10.05	10.25	---	10.07	5.60	8.18	7.03	7.09	8.72	10.02
9	9.97	10.46	---	9.86	---	---	5.17	8.35	7.30	6.52	8.79	9.94
10	9.66	10.59	---	9.36	---	10.17	5.98	8.32	7.28	6.64	8.81	10.00
11	10.16	10.41	---	9.36	---	10.17	6.20	8.35	6.78	6.85	8.92	9.76
12	10.21	10.27	---	9.37	10.22	10.03	6.25	8.12	7.14	6.92	9.01	10.05
13	10.29	10.02	10.30	9.57	10.22	10.00	6.72	8.23	7.21	7.15	8.96	10.10
14	10.47	9.94	10.23	9.63	10.68	9.77	6.88	8.19	6.90	7.00	8.77	9.68
15	10.60	10.10	10.52	9.35	10.58	9.76	6.66	7.85	6.95	7.07	8.90	9.88
16	10.64	10.04	10.41	9.40	10.67	9.75	6.71	8.07	6.90	7.05	8.87	9.88
17	10.59	10.09	10.53	9.46	10.63	9.62	6.75	7.96	6.75	7.24	9.45	9.46
18	10.58	9.83	10.46	9.50	10.62	9.67	6.95	7.84	6.13	7.67	9.59	9.52
19	10.72	10.31	10.57	9.68	---	9.30	7.06	8.23	6.58	7.54	9.50	9.89
20	10.72	10.30	10.63	9.63	10.76	9.62	7.30	8.28	6.37	7.37	9.26	9.93
21	10.58	9.98	10.74	9.63	---	9.56	7.31	7.74	6.38	7.55	8.94	10.08
22	10.62	9.61	10.82	9.67	---	9.48	7.33	8.20	5.89	7.73	9.10	10.32
23	10.51	9.58	10.72	9.69	---	9.65	7.20	8.20	5.67	7.75	9.05	10.35
24	10.20	9.58	10.62	9.92	---	9.68	7.46	7.94	5.35	7.77	9.45	9.70
25	10.59	9.45	10.39	9.87	---	9.53	7.61	7.86	5.00	8.07	9.25	9.34
26	10.45	9.57	10.42	9.87	---	9.35	7.47	7.79	4.99	8.26	9.03	9.79
27	10.39	9.50	10.52	9.82	---	8.93	7.91	7.20	5.68	8.53	9.51	9.77
28	10.55	9.47	10.45	9.81	---	9.25	7.87	6.43	5.38	8.28	9.47	9.55
29	10.50	9.56	10.45	9.80	---	9.08	7.91	5.94	5.00	7.99	9.83	10.02
30	10.70	9.53	10.31	9.90	---	9.03	7.94	6.35	5.45	8.04	9.78	10.03
31	10.79	---	10.28	9.89	---	8.27	---	6.80	---	---	9.92	---
MAX	10.79	11.35	10.82	10.45	10.76	10.40	7.94	8.40	7.45	8.53	9.92	10.35

CAL YR 1988 LOW 11.35

WTR YR 1989 LOW 11.35

403823081324200 TU-5
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

UNION COUNTY

401826083255200. Local number, U-4.

LOCATION.--Lat 40° 18' 26", long 83° 25' 52", Hydrologic Unit 05060001, 2.6 mi southeast of Raymond.

Owner: State of Ohio.

AQUIFER.--Limestone of Silurian Age.

WELL CHARACTERISTICS.--Drilled test artesian well, diameter 12 in., depth 350 ft, cased to 37 ft.

INSTRUMENTATION.--Digital recorder -- 60-minute punch.

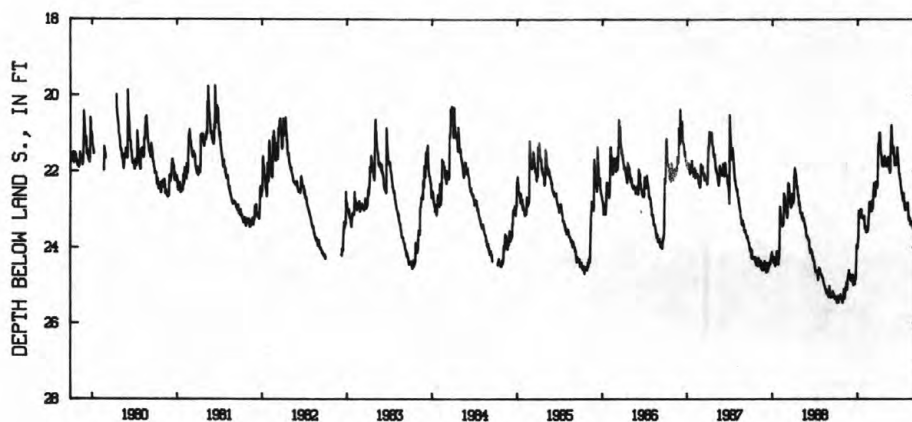
DATUM.--Elevation of land-surface datum is 1,040 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 3.00 ft above land-surface datum.

PERIOD OF RECORD.--January 1973 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 25.47 ft below land-surface datum, Oct. 6, 1988; minimum daily low, 19.32 ft below land-surface datum, Feb. 24, 1975.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25.33	25.32	24.83	23.98	23.28	23.06	21.43	21.70	21.43	22.06	23.01	23.44
2	25.29	25.35	24.83	24.03	23.37	23.05	21.42	21.75	21.50	22.15	23.00	23.58
3	25.35	25.36	24.78	24.01	23.51	22.99	21.32	21.85	21.54	22.17	23.00	23.66
4	25.37	25.25	24.88	23.91	23.50	23.05	21.00	21.87	21.42	22.17	22.97	23.64
5	25.43	25.10	24.83	23.87	23.46	23.03	20.99	21.75	21.38	22.27	22.87	23.65
6	25.47	25.17	24.74	23.73	23.44	22.77	21.07	21.73	21.35	22.35	22.82	23.66
7	25.40	25.32	24.79	23.36	23.46	22.91	20.98	21.87	21.45	22.36	22.87	23.66
8	25.36	25.35	24.87	23.04	23.56	22.95	21.03	21.85	21.56	22.44	22.99	23.69
9	25.29	25.34	24.87	23.14	23.61	22.97	21.27	21.85	21.61	22.43	23.08	23.66
10	25.28	25.13	24.79	23.18	23.51	22.83	21.44	21.66	21.77	22.50	23.28	23.71
11	25.33	25.17	24.88	23.23	23.46	22.56	21.49	21.70	21.85	22.58	23.17	23.77
12	25.41	25.17	24.92	23.08	23.57	22.49	21.50	21.66	21.82	22.58	23.19	23.83
13	25.45	25.04	24.72	23.13	23.52	22.42	21.58	21.63	21.71	22.54	23.24	23.81
14	25.39	25.05	24.76	23.11	23.59	22.31	21.57	21.62	21.70	22.63	23.25	23.79
15	25.32	25.03	25.00	23.01	23.53	22.49	21.64	21.68	21.62	22.72	23.23	23.62
16	25.30	24.92	24.96	23.05	23.53	22.53	21.73	21.76	21.65	22.74	23.24	23.55
17	25.29	25.05	24.86	23.04	23.49	22.49	21.81	21.86	21.73	22.76	23.40	23.65
18	25.29	25.12	24.85	23.00	23.36	22.63	21.86	21.93	21.82	22.79	23.35	23.71
19	25.32	25.02	24.81	23.02	23.22	22.67	21.65	21.95	21.84	22.75	23.34	23.71
20	25.35	24.90	24.83	23.19	23.21	22.60	21.64	21.87	21.62	22.57	23.32	23.74
21	25.24	24.82	24.98	23.21	23.00	22.26	21.67	22.04	21.36	22.71	23.34	23.74
22	25.27	24.80	24.98	23.16	22.81	22.33	21.75	22.03	21.41	22.84	23.36	23.65
23	25.27	24.76	24.76	23.17	22.96	22.33	21.82	21.93	21.51	22.93	23.32	23.84
24	25.27	24.70	24.76	23.19	23.00	22.31	21.87	21.21	21.61	22.95	23.35	23.94
25	25.30	24.70	24.81	23.24	22.95	22.35	21.84	21.20	21.67	23.02	23.36	23.83
26	25.36	24.68	24.84	23.20	22.80	22.44	21.67	20.82	21.77	23.01	23.39	23.91
27	25.37	24.60	24.68	23.22	22.86	22.42	21.63	20.79	21.83	22.84	23.44	23.98
28	25.41	24.76	24.48	23.25	22.97	22.40	21.67	21.00	21.83	22.83	23.48	23.93
29	25.44	24.81	24.00	23.23	---	22.31	21.60	21.06	22.00	22.94	23.44	23.87
30	25.46	24.69	23.94	23.18	---	21.87	21.69	21.20	22.08	22.89	23.48	23.92
31	25.44	---	23.98	23.17	---	21.29	---	21.35	---	22.93	23.49	---
MAX	25.47	25.36	25.00	24.03	23.61	23.06	21.87	22.04	22.08	23.02	23.49	23.98
CAL YR 1988	LOW 25.47											
WTR YR 1989	LOW 25.47											



401826083255200 U-4
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

303

VINTON COUNTY

391452082282900. Local number, V-1.

LOCATION.--Lat 39° 14' 52", long 82° 28' 29", Hydrologic Unit 05090101, State Highway garage in McArthur.

Owner: Vinton County School Board.

AQUIFER.--Sandstone of Mississippian Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in., depth 218 ft, cased.

INSTRUMENTATION.--Digital recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 730 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring Point: Top of platform 2.50 ft below land-surface datum.

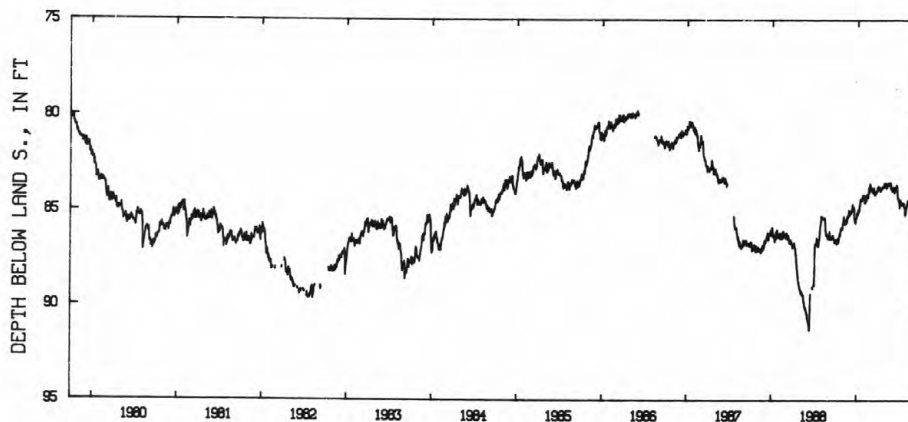
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--September 1959 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 93.23 ft below land-surface datum, Apr. 12, 1979; minimum daily low, 49.55 ft below land-surface datum, Mar. 20, 1963.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	86.60	85.64	85.15	85.11	84.19	83.86	83.87	83.65	83.89	84.54	84.77	84.32
2	86.49	85.69	85.18	85.10	84.36	83.86	83.86	83.63	83.96	84.82	84.68	84.39
3	86.53	85.69	85.13	85.07	84.59	83.80	83.70	83.72	83.88	84.67	84.65	84.44
4	86.63	85.56	85.16	85.18	84.59	83.89	83.71	83.73	83.94	84.49	84.61	84.40
5	86.75	85.31	85.13	85.18	84.53	83.92	83.83	83.53	83.83	84.42	84.59	84.41
6	86.60	85.32	85.04	84.94	84.40	83.91	83.84	83.56	83.75	84.42	84.57	84.41
7	86.76	85.55	84.98	84.93	84.41	83.82	83.77	83.72	83.82	84.44	84.45	84.37
8	86.71	85.69	85.07	84.98	84.42	83.95	83.74	83.80	83.87	84.53	84.57	84.30
9	86.62	85.70	85.08	85.04	84.47	84.02	83.79	83.77	83.89	84.57	84.63	84.22
10	86.47	85.62	84.96	84.98	84.26	84.00	83.93	83.68	83.99	84.53	84.65	84.21
11	86.43	85.70	84.85	84.98	84.14	83.94	83.96	83.66	84.04	84.69	84.65	84.24
12	86.61	85.71	84.91	84.74	84.23	83.99	83.96	83.64	83.98	84.70	84.62	84.35
13	86.66	85.53	84.67	84.74	84.18	83.97	83.91	83.62	83.76	84.65	84.64	84.35
14	86.58	85.56	84.72	84.72	84.18	83.80	83.90	83.62	83.76	84.63	84.69	84.33
15	86.44	85.52	84.94	84.41	84.15	84.04	83.87	83.59	83.76	84.70	84.63	84.27
16	86.37	85.43	84.95	84.42	84.31	84.08	83.81	83.52	83.76	84.70	84.63	84.25
17	86.27	85.56	84.89	84.41	84.31	84.07	83.80	83.57	83.80	84.64	84.70	84.26
18	86.19	85.61	84.89	84.40	84.22	84.14	83.81	83.64	83.83	84.67	84.70	84.27
19	86.23	85.54	84.82	84.36	84.05	84.16	83.81	83.62	83.70	84.66	84.71	84.25
20	86.28	85.31	84.95	84.46	83.99	84.13	83.79	83.56	83.64	84.59	84.60	84.23
21	86.20	85.37	85.37	84.49	83.75	84.03	83.72	83.65	83.64	84.63	84.60	84.23
22	86.03	85.38	85.46	84.43	83.82	84.08	83.73	83.59	83.71	84.78	84.65	84.09
23	86.04	85.34	85.55	84.34	83.96	84.07	83.77	83.52	83.95	84.86	84.60	84.13
24	85.89	85.25	85.56	84.30	84.00	83.95	83.78	83.53	84.22	84.84	84.48	84.22
25	85.92	85.18	85.60	84.30	83.94	83.94	83.75	83.51	84.33	84.88	84.42	84.09
26	85.95	85.12	85.64	84.18	83.57	84.00	83.67	83.59	84.29	85.21	84.37	84.06
27	85.98	84.96	85.46	84.20	83.57	83.95	83.64	83.78	84.33	85.20	84.37	84.12
28	85.93	85.14	85.36	84.24	83.72	83.98	83.60	83.86	84.36	85.01	84.36	84.09
29	85.97	85.25	85.41	84.20	---	83.92	83.55	83.79	84.49	84.99	84.34	84.00
30	85.93	85.06	85.32	84.18	---	83.81	83.67	83.77	84.48	84.88	84.33	83.98
31	85.84	---	85.23	84.18	---	83.77	---	83.85	---	84.78	84.35	---
MAX	86.76	85.71	85.64	85.18	84.59	84.16	83.96	83.86	84.49	85.21	84.77	84.44

CAL YR 1988 LOW 91.29
WTR YR 1989 LOW 86.76391452082282900 V-1
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

WARREN COUNTY

392712084191700. Local number, W-5.

LOCATION.--Lat 39° 27' 12", long 84° 19' 17", Hydrologic Unit 05080002, Union Rd., 2 mi east of Monroe.

Owner: Bob Proeschel.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 12 in., depth 121 ft, cased.

INSTRUMENTATION.--Type F continuous recorder.

DATUM.--Elevation of land-surface datum is 660 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 3.50 ft above land-surface datum.

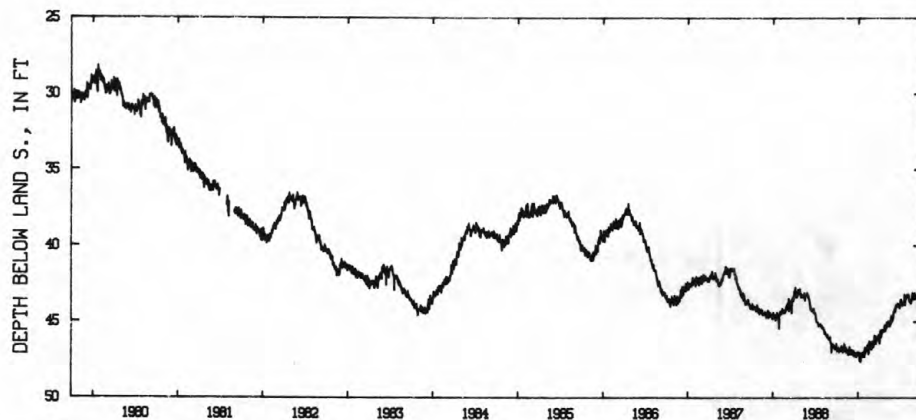
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--March 1972 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 47.60 ft below land-surface datum, Jan. 13, 1989; minimum daily low, 17.70 ft below land-surface datum, Apr. 30, 1975.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46.45	46.65	47.05	47.00	46.80	46.80	46.20	45.40	44.75	43.80	43.20	43.10
2	46.70	46.80	47.05	47.10	47.00	46.50	46.00	45.30	44.60	43.60	43.20	43.45
3	46.75	46.60	47.00	47.00	47.05	46.30	45.95	45.40	44.40	43.60	43.30	43.30
4	46.85	46.45	47.10	47.15	46.95	46.45	46.40	45.25	44.40	43.60	43.25	43.40
5	46.90	46.50	46.90	47.05	46.70	46.50	46.25	45.05	44.30	43.55	43.20	43.50
6	46.85	46.75	46.85	47.10	46.80	46.50	45.95	45.20	44.30	43.65	43.20	43.40
7	46.85	46.85	46.95	47.00	46.75	46.65	45.70	45.30	44.20	43.70	43.30	43.25
8	46.80	46.90	47.10	47.45	46.80	46.65	45.60	45.10	44.20	43.70	43.40	43.30
9	46.75	46.80	47.00	47.55	46.70	46.60	45.90	45.00	44.10	43.80	43.55	43.35
10	46.70	46.80	47.05	47.40	46.65	46.50	46.00	45.15	44.35	43.90	43.60	43.20
11	46.85	46.95	47.15	47.35	46.55	46.25	46.00	45.05	44.25	43.95	43.70	43.30
12	46.95	46.70	47.10	47.30	46.75	46.40	45.70	44.95	43.95	43.95	43.60	43.30
13	47.00	47.00	46.90	47.60	46.50	46.10	45.80	45.00	43.90	43.70	43.70	43.20
14	46.80	47.00	47.00	47.10	46.80	45.90	45.60	45.05	43.95	43.80	43.70	42.95
15	46.85	46.90	47.25	47.20	46.90	46.30	45.50	45.10	43.90	43.80	43.70	43.10
16	46.90	46.85	47.20	47.25	47.10	46.40	45.65	45.15	44.05	43.80	43.80	43.10
17	46.80	47.00	47.15	47.15	47.00	46.20	45.60	45.30	44.05	43.80	43.70	43.30
18	46.90	47.00	47.00	47.05	46.55	46.35	45.55	45.30	43.90	43.85	43.60	43.20
19	46.90	46.85	47.00	47.10	46.40	46.45	45.65	44.95	43.90	43.70	43.50	43.20
20	46.90	47.05	47.00	47.30	46.30	45.95	45.60	45.10	43.90	43.20	43.50	43.20
21	46.65	47.15	47.25	47.30	46.30	46.20	45.55	45.15	43.80	43.35	43.35	43.15
22	46.75	47.10	47.20	47.15	46.50	46.25	45.60	45.10	43.90	43.90	43.25	43.00
23	46.60	47.00	47.10	47.05	46.75	46.15	45.55	44.70	43.90	43.50	43.10	43.40
24	46.80	46.95	47.10	47.00	46.80	46.15	45.55	44.65	43.90	43.50	43.50	43.55
25	46.85	46.85	47.30	47.00	46.40	46.10	45.30	44.60	43.90	43.40	43.55	43.35
26	46.90	46.65	47.25	47.00	46.55	46.05	45.40	44.80	43.90	43.50	43.40	43.35
27	46.95	46.85	47.25	47.00	46.50	46.10	45.30	45.00	43.85	43.30	43.40	43.50
28	47.00	47.10	47.25	46.95	46.70	46.05	45.20	44.95	43.95	43.30	43.50	43.25
29	47.00	47.05	47.20	47.30	---	45.95	45.55	44.70	44.10	43.40	43.30	43.20
30	46.95	46.90	47.00	47.10	---	45.85	45.60	44.65	44.05	43.35	43.50	43.30
31	46.80	---	47.10	46.70	---	46.00	---	44.85	---	43.20	43.26	---
MAX	47.00	47.15	47.30	47.60	47.10	46.80	46.40	45.40	44.75	43.95	43.80	43.55
CAL YR 1988	LOW 47.30											
WTR YR 1989	LOW 47.60											



392712084191700 W-5
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

305

WASHINGTON COUNTY

392553081281600. Local number, WA-2.

LOCATION.--Lat 39 25'53", long 81 28'16", Hydrologic Unit 05040004 near county fairgrounds north of Marietta.

Owner: Marietta Water Dept.

AQUIFER.--Sand and gravel of Quaternary Age.

WELL CHARACTERISTICS.--Drilled unused water table well, diameter 8 in., depth, 50 ft, cased.

INSTRUMENTATION.--Type F continuous recorder.

DATUM.--Elevation of land-surface datum is 605 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 3.00 ft above land-surface datum.

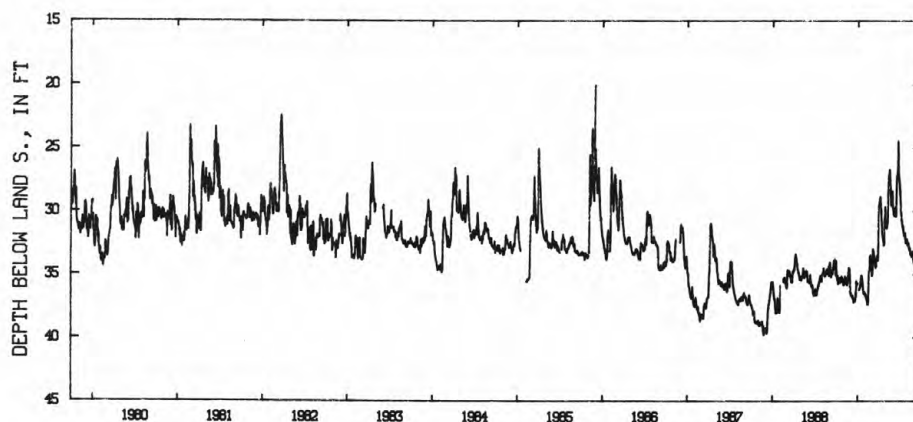
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--August 1971 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 39.75 ft below land-surface datum, Nov. 26, 1987; minimum daily low, 18.72 ft below land-surface datum, June 28, 1972.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34.50	35.75	36.35	35.70	36.45	34.60	30.20	30.70	29.40	28.05	32.20	34.10
2	33.95	35.85	36.55	35.70	36.50	34.65	29.50	30.95	29.70	28.65	32.30	34.10
3	34.75	35.75	36.45	---	36.50	35.05	29.60	31.25	29.80	28.40	32.60	34.20
4	35.10	35.75	36.45	---	36.70	35.10	29.60	31.25	29.90	29.15	32.55	34.20
5	35.00	35.80	36.70	---	36.60	34.95	29.25	31.15	30.20	29.40	32.70	34.30
6	35.40	35.75	36.70	---	36.55	34.85	29.00	31.35	30.20	29.95	32.50	34.40
7	35.15	35.55	36.65	---	36.75	34.00	28.95	31.15	30.35	30.10	32.60	34.50
8	35.05	35.15	36.65	36.25	36.85	33.00	28.85	31.05	30.05	30.20	32.55	34.55
9	35.35	35.30	36.75	36.15	36.90	33.00	28.95	31.00	29.90	30.60	32.85	34.50
10	35.75	35.40	36.75	36.10	37.05	33.20	29.45	30.70	29.90	30.70	32.85	34.50
11	35.75	35.30	36.70	36.10	37.10	33.20	29.75	30.30	29.70	30.90	32.95	34.50
12	35.50	35.45	36.90	36.00	37.05	33.35	29.95	29.30	29.90	31.05	33.10	34.30
13	35.50	35.35	36.80	35.90	37.35	33.50	30.60	28.00	30.30	31.20	32.90	34.30
14	35.40	35.25	36.95	35.95	37.20	33.65	30.80	27.45	30.40	31.10	33.10	34.20
15	35.35	35.30	37.15	35.60	37.35	33.90	30.95	27.20	30.35	31.35	33.10	34.25
16	35.30	35.75	37.20	35.30	37.10	34.00	31.30	27.05	29.25	31.20	33.40	34.20
17	35.25	35.85	37.05	35.10	36.25	34.10	31.70	26.75	28.25	31.50	33.40	34.00
18	35.50	35.75	37.00	35.05	35.25	34.20	31.85	26.70	27.30	31.60	33.40	34.05
19	35.50	35.70	37.00	35.15	34.70	34.25	32.00	26.75	27.15	31.70	33.30	34.10
20	35.65	35.60	37.15	35.30	34.70	34.45	32.05	27.30	27.15	31.90	33.50	34.15
21	35.55	35.45	37.15	35.50	34.65	34.30	32.30	27.60	27.00	31.95	33.60	34.20
22	35.40	35.25	37.05	35.60	34.60	33.90	32.30	28.20	26.60	31.70	33.60	34.15
23	35.25	34.80	36.95	35.65	33.60	33.75	32.40	29.00	24.45	31.70	33.55	34.10
24	35.25	34.90	36.70	35.95	33.65	33.85	32.70	29.25	25.15	31.70	33.30	33.80
25	35.15	34.45	36.40	36.15	33.50	33.70	32.60	29.50	25.50	32.05	33.20	33.70
26	35.20	34.50	36.75	36.25	33.50	33.50	32.45	29.55	27.00	32.30	33.40	33.65
27	35.30	34.55	35.50	36.45	34.00	33.70	30.70	29.25	27.25	32.50	33.65	33.80
28	35.45	34.85	35.90	36.55	34.25	33.70	30.50	28.45	27.65	32.25	33.65	34.00
29	35.40	35.10	35.85	36.45	---	33.90	30.50	28.40	27.45	32.30	33.80	34.00
30	35.35	35.50	35.80	36.40	---	33.20	29.65	28.40	27.65	32.30	33.90	34.05
31	35.50	---	35.75	36.45	---	31.90	---	28.90	---	32.20	34.05	---
MAX	35.75	35.85	37.20	36.55	37.35	35.10	32.70	31.35	30.40	32.50	34.05	34.55

CAL YR 1988 LOW 38.10
WTR YR 1989 LOW 37.35392553081281600 WA-2
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

WAYNE COUNTY

404655081553200. Local number, WN-3.

LOCATION.--Lat 40° 46' 55", long 81° 55' 32", Hydrologic Unit 05040003, OARDC-OSU Experiment Station near Wooster.
Owner: OARDC-OSU.

AQUIFER.--Shale of Mississippian Age.

WELL CHARACTERISTICS.--Drilled test water table well, diameter 8 in., depth 20 ft, cased.

INSTRUMENTATION.--Digital recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 1040 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 3.50 ft above land-surface datum.

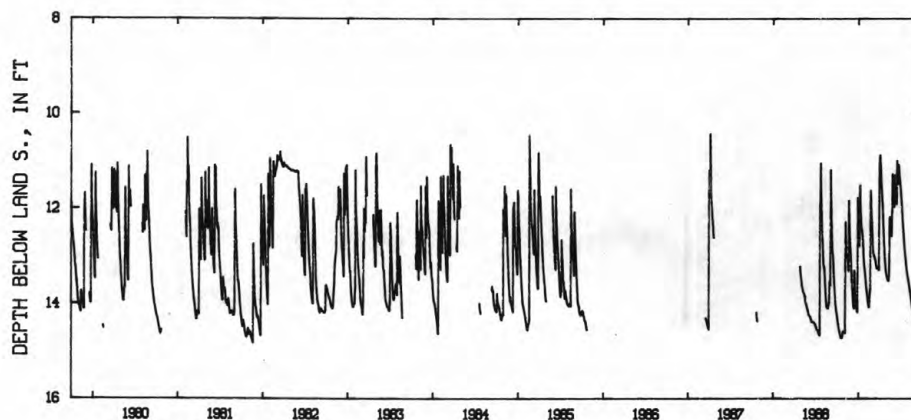
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--June 1955 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 16.17 ft below land-surface datum, Jan. 27, 29, 1956; minimum daily low, 10.43 ft below land-surface datum, Apr. 6, 1987.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.24	14.59	13.19	12.22	13.48	12.44	11.09	13.38	11.83	11.58	13.44	14.39
2	14.27	14.61	13.30	12.37	13.54	12.58	10.97	13.40	11.89	11.65	13.47	14.41
3	14.31	14.62	13.41	12.51	13.59	12.71	10.93	13.43	11.97	11.71	13.49	14.43
4	14.35	14.62	13.51	12.70	13.64	12.83	10.88	13.45	11.97	11.77	13.53	14.44
5	14.38	14.62	13.61	12.79	13.69	12.92	10.99	13.47	11.30	11.86	13.56	14.46
6	14.42	13.30	13.69	12.65	13.73	12.93	11.09	13.49	11.46	11.94	13.59	14.47
7	14.45	12.28	13.76	11.56	13.77	12.95	11.15	13.50	11.55	12.02	13.62	14.48
8	14.49	12.42	13.81	11.51	13.83	12.97	11.33	13.50	11.62	12.09	13.64	14.49
9	14.52	12.59	13.93	11.79	13.88	12.99	11.49	13.52	11.69	12.17	13.68	14.49
10	14.55	12.72	13.99	11.97	13.92	13.01	11.58	13.52	11.74	12.24	13.71	14.49
11	14.57	12.83	14.04	12.11	13.96	13.02	11.67	13.52	11.78	12.32	13.74	14.49
12	14.60	12.96	14.09	12.19	14.00	13.03	11.74	13.44	11.86	12.39	13.77	14.49
13	14.62	13.01	14.10	12.29	14.04	13.05	11.82	13.36	11.91	12.46	13.79	14.47
14	14.64	13.01	13.31	12.37	14.07	13.07	11.88	13.11	11.92	12.53	13.85	14.45
15	14.66	13.02	13.31	12.41	14.08	13.09	11.96	12.23	10.99	12.61	13.89	14.44
16	14.68	13.06	13.35	12.46	14.08	13.11	12.09	12.18	11.09	12.68	13.92	14.21
17	14.70	13.12	13.49	12.46	13.96	13.15	12.21	12.22	11.24	12.74	13.96	13.98
18	14.72	13.21	13.64	12.52	13.83	13.18	12.33	12.27	11.38	12.80	14.00	13.83
19	14.72	13.29	13.75	12.59	13.74	13.21	12.44	12.34	11.48	12.87	14.03	13.79
20	14.73	13.31	13.82	12.66	13.70	13.25	12.55	12.41	11.49	12.92	14.06	13.80
21	14.73	11.83	13.96	12.74	13.67	13.26	12.66	12.47	11.09	12.97	14.10	13.82
22	14.73	12.02	14.03	12.84	11.90	13.26	12.76	12.53	11.08	13.02	14.12	13.83
23	14.71	12.18	14.07	12.93	11.62	13.25	12.86	12.58	11.12	13.07	14.15	13.60
24	14.68	12.35	14.10	13.02	11.81	13.23	12.96	12.49	11.19	13.14	14.18	12.30
25	14.63	12.50	14.12	13.10	11.96	13.23	13.06	12.08	11.26	13.19	14.21	12.34
26	14.60	12.64	14.15	13.19	12.09	13.25	13.13	12.09	11.34	13.24	14.24	12.41
27	14.59	12.76	14.17	13.23	12.19	13.26	13.19	11.28	11.40	13.29	14.26	12.49
28	14.58	12.86	14.18	13.27	12.30	13.28	13.25	11.48	11.40	13.32	14.29	12.58
29	14.58	12.97	11.77	13.32	---	13.29	13.29	11.59	11.46	13.35	14.32	12.68
30	14.58	13.08	11.94	13.37	---	13.29	13.34	11.67	11.52	13.39	14.35	12.77
31	14.59	---	12.09	13.42	---	11.93	---	11.74	---	13.41	14.37	---
MAX	14.73	14.62	14.18	13.42	14.08	13.29	13.34	13.52	11.97	13.41	14.37	14.49

CAL YR 1988 LOW 14.73
WTR YR 1989 LOW 14.73404655081553200 WN-3
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

307

WAYNE COUNTY--Continued.

404802081583100. Local number, WN-2A.

LOCATION.--Lat 40°48'02", long 81°58'31", Hydrologic Unit 05040003, in well field by Killbuck Creek near Wooster.

Owner: Wooster Water Dept.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled test water table well, diameter 6 in., depth 65 ft, cased.

INSTRUMENTATION.--Digital recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 855 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 6.00 ft above land-surface datum.

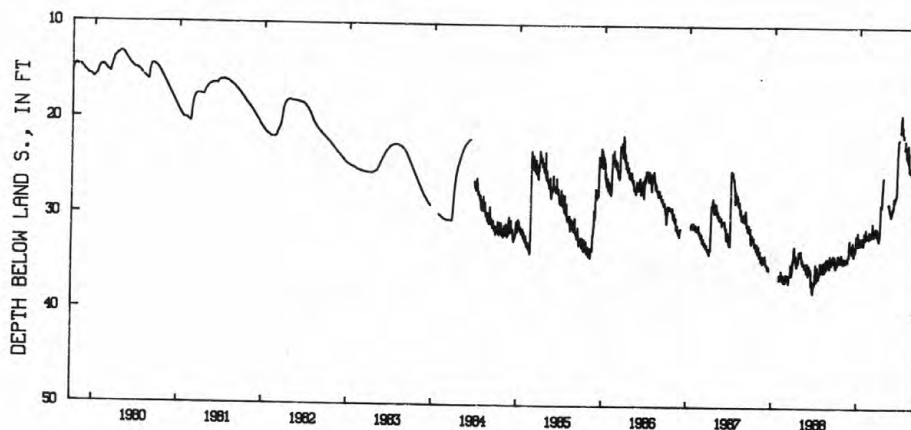
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--July 1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 37.95 ft below land-surface datum, June 23, 1988; minimum daily low, 2.35 ft below land-surface datum, Jan. 28, 1952.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35.12	34.62	33.51	31.98	32.17	31.95	32.39	---	29.04	20.48	22.66	---
2	34.54	34.82	33.32	31.53	32.30	31.61	31.94	---	29.02	19.49	22.30	---
3	34.65	34.84	33.35	32.41	32.15	31.43	31.85	---	28.87	20.53	23.75	26.28
4	34.89	34.85	32.91	32.60	31.82	31.46	32.12	---	27.91	19.19	24.19	---
5	34.98	34.84	33.50	32.93	31.17	30.54	31.65	---	27.96	19.82	23.06	---
6	34.88	34.50	33.71	32.81	31.74	30.98	31.54	---	28.17	20.38	23.19	---
7	34.64	34.31	33.77	32.62	32.01	31.29	30.67	---	28.30	20.32	25.04	---
8	34.37	34.56	33.76	32.10	32.03	31.58	30.11	---	28.25	20.47	25.02	---
9	33.96	34.56	33.75	32.56	32.11	31.89	28.60	---	28.01	20.93	24.66	---
10	34.09	34.78	33.61	32.66	32.04	31.93	28.85	---	27.99	21.21	24.85	---
11	34.57	34.64	32.59	32.72	31.98	31.92	28.90	28.47	27.73	---	25.14	---
12	34.56	34.50	33.08	32.82	31.84	31.17	28.91	28.64	27.77	21.51	25.00	27.87
13	34.66	34.37	33.54	32.85	31.72	31.37	28.81	28.48	27.75	21.24	25.00	27.88
14	34.72	34.56	33.64	32.81	32.06	31.45	28.43	28.57	27.65	21.51	25.21	28.37
15	34.75	34.51	34.05	32.31	32.16	31.64	27.57	28.78	27.48	---	25.15	28.54
16	34.14	34.60	34.07	32.14	32.12	31.67	27.19	29.04	26.61	---	25.07	27.92
17	34.08	34.60	33.75	32.45	32.18	31.67	26.90	29.07	25.32	---	25.38	27.43
18	34.35	34.64	33.02	32.57	32.20	31.37	25.98	29.28	23.53	22.65	25.47	28.74
19	34.57	34.66	33.18	32.62	31.41	31.06	25.78	29.36	22.64	22.57	25.58	28.43
20	34.64	34.18	33.49	32.76	31.49	31.34	---	29.42	22.64	22.71	25.00	27.98
21	34.66	34.10	33.46	32.76	31.80	31.69	---	29.38	21.85	21.88	26.10	27.91
22	34.50	34.10	33.57	32.05	32.02	31.66	---	29.69	21.81	---	25.96	28.26
23	33.88	34.15	33.43	32.58	32.07	31.88	---	29.83	21.76	---	25.29	27.99
24	34.33	33.96	32.76	32.80	32.08	31.73	---	29.69	21.74	22.48	26.21	27.64
25	34.51	33.08	32.51	32.85	31.73	31.45	---	29.69	---	22.81	26.06	28.10
26	34.40	32.75	31.89	32.65	31.65	31.13	---	29.48	---	23.45	26.85	27.65
27	34.83	32.37	32.60	32.40	31.52	31.46	---	29.50	---	23.68	26.93	27.62
28	34.83	33.29	32.92	32.20	31.89	31.86	---	29.05	---	23.54	26.38	27.87
29	34.69	33.52	32.88	31.57	---	32.05	---	29.19	---	23.54	26.83	27.87
30	34.20	33.37	32.61	32.03	---	32.23	---	28.91	20.97	23.23	26.99	28.08
31	34.26	---	32.26	32.09	---	32.26	---	29.03	---	23.86	---	---
MAX	35.12	34.85	34.07	32.93	32.30	32.26	32.39	29.83	29.04	23.86	26.99	28.74

CAL YR 1988 LOW 37.95
WTR YR 1989 LOW 35.12404802081583100 WN-2A
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

WAYNE COUNTY--Continued

405745081510200. Local number, WN-7.

LOCATION.--Lat 40° 57' 45", long 81° 51' 02", Hydrologic Unit 05040001, in well field along Steele Ditch near Sterling.

Owner: Rittman Water Department

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 in., depth 123 ft, cased.

INSTRUMENTATION.--Type F continuous recorder.

DATUM.--Elevation of land-surface datum is 965 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 5.00 ft above land-surface datum.

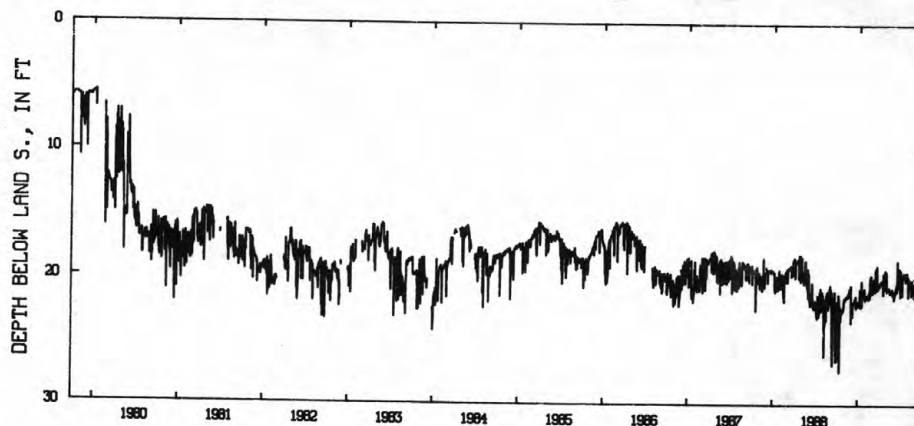
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--April 1979 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 27.40 ft below land-surface datum, Oct. 14, 1988; minimum daily low, 5.38 ft below land-surface datum, Jan. 17, 1980.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.85	22.25	20.80	21.85	21.35	20.70	20.65	19.50	21.30	19.30	19.80	20.40
2	22.25	21.80	20.55	22.15	21.70	21.15	20.60	19.45	21.30	21.40	19.95	21.25
3	26.50	21.70	23.50	21.90	21.55	20.85	20.60	19.45	21.30	20.60	20.05	21.25
4	26.15	21.60	22.40	22.05	21.55	21.00	20.60	19.65	21.00	19.30	19.90	21.05
5	22.70	21.55	21.85	21.95	21.50	21.10	20.35	21.00	21.65	20.30	21.40	20.50
6	21.90	21.60	21.90	21.75	21.45	20.95	20.30	20.95	21.15	21.25	20.00	21.55
7	22.60	21.70	21.80	21.80	21.40	20.95	20.25	20.70	21.40	20.00	20.05	20.45
8	22.80	21.60	21.85	21.90	21.30	20.80	20.25	20.85	21.30	20.15	20.00	21.30
9	22.60	21.65	23.00	21.90	21.50	20.05	20.25	20.85	21.20	19.70	20.20	21.40
10	21.25	21.50	22.00	20.85	21.40	20.00	20.30	20.65	21.15	21.30	20.30	20.35
11	23.30	21.55	21.90	22.20	21.55	20.15	20.20	20.75	21.10	20.00	20.30	21.20
12	21.55	21.50	21.85	21.80	21.55	20.10	20.25	20.70	20.75	19.80	20.35	20.55
13	25.55	21.40	21.90	20.85	21.45	20.10	20.20	20.80	20.90	19.80	20.15	20.45
14	27.40	21.50	21.85	21.65	21.60	20.00	20.15	20.70	20.65	19.65	20.20	20.45
15	26.90	21.50	22.00	21.80	21.50	20.90	20.30	20.70	20.50	19.70	20.40	20.10
16	23.75	21.40	21.95	22.25	21.40	21.00	20.10	20.90	20.80	19.55	20.65	20.40
17	22.20	21.45	21.85	20.20	21.15	20.45	20.55	21.00	21.00	19.85	21.25	20.40
18	22.65	21.50	21.60	22.15	21.35	19.30	20.30	21.00	20.50	19.80	21.30	20.40
19	23.30	21.35	21.80	21.60	21.40	19.25	20.30	21.10	20.25	19.60	21.20	20.60
20	22.65	21.20	21.70	20.85	21.55	20.50	21.25	21.00	18.60	19.55	21.00	20.50
21	22.55	21.35	21.80	20.95	20.90	20.90	19.60	21.15	20.05	19.80	20.10	20.55
22	22.80	21.40	21.70	20.85	21.35	20.60	20.30	21.05	20.50	19.55	20.80	20.60
23	22.65	21.30	21.40	20.90	20.00	19.25	20.15	21.00	20.15	19.70	20.35	20.30
24	22.70	21.15	22.30	20.90	19.95	19.00	20.25	20.85	20.20	20.20	20.50	20.45
25	22.55	21.00	22.15	20.85	19.90	20.70	20.30	21.05	20.45	20.10	20.45	20.75
26	22.35	20.95	22.30	20.85	19.75	20.75	20.30	20.85	20.50	20.00	20.50	20.75
27	22.45	20.80	21.95	21.00	19.75	20.65	20.80	21.00	20.15	19.75	20.40	20.50
28	22.45	20.95	22.10	20.85	20.80	20.80	19.45	20.80	19.15	19.80	20.70	20.50
29	22.55	20.80	21.95	20.80	---	20.65	19.35	20.90	20.70	19.80	20.55	20.40
30	22.45	20.85	21.80	21.50	---	20.65	19.55	21.10	20.75	19.50	21.45	20.50
31	22.35	---	22.15	21.50	---	20.50	---	21.30	---	19.70	20.55	---
MAX	27.40	22.25	23.50	22.25	21.70	21.15	21.25	21.30	21.65	21.40	21.45	21.55
CAL YR 1988	LOW 27.40											
WTR YR 1989	LOW 27.40											



405745081510200 WN-7
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS

309

WAYNE COUNTY--Continued

405805081462300. Local number, WN-6.

LOCATION.--Lat 40° 58' 05", long 81° 46' 23", Hydrologic Unit 05040001, Salt Street, Rittman.

Owner: Tenneco, Inc.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 in., depth 180 ft, cased.

INSTRUMENTATION.--Digital recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 960 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 2.30 ft above land-surface datum.

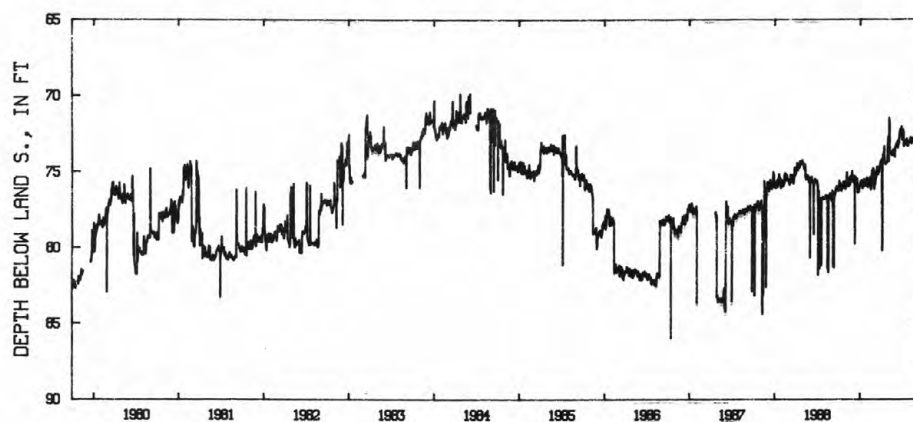
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--May 1971 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 92.80 ft below land-surface datum, July 21, 1971; minimum daily low, 69.87 ft below land-surface datum, Apr. 22, 1984.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76.14	75.66	75.49	75.78	75.54	76.09	74.59	72.70	73.38	72.42	73.04	72.54
2	75.99	75.63	75.59	75.70	75.67	76.16	74.58	72.98	73.32	72.28	73.04	72.83
3	76.06	75.64	75.40	75.71	76.01	75.54	74.29	73.15	73.29	72.24	72.95	73.31
4	75.59	75.40	75.70	75.90	76.01	75.39	74.20	74.33	73.23	72.27	72.81	72.69
5	76.10	75.04	75.56	75.86	75.85	75.02	80.19	71.46	73.22	72.45	72.76	72.57
6	76.22	75.26	75.30	75.58	75.72	75.68	80.21	71.78	73.17	72.46	72.79	72.49
7	76.21	75.71	75.28	75.63	75.75	75.86	79.71	72.03	73.15	73.32	72.90	72.41
8	76.12	75.87	75.55	75.72	75.82	75.52	73.90	73.79	73.12	73.36	73.06	77.29
9	75.92	75.94	79.75	75.92	75.95	75.48	73.87	73.79	73.05	73.31	73.16	77.33
10	75.77	75.61	75.39	75.92	75.63	75.37	74.08	73.77	73.36	73.28	73.18	77.53
11	75.82	75.97	75.67	76.11	75.39	75.11	74.02	73.83	73.45	73.12	73.09	77.62
12	76.18	75.99	75.77	75.74	75.68	75.07	73.90	73.73	73.25	73.06	72.97	77.08
13	76.27	75.63	75.39	76.02	75.65	75.04	73.86	73.74	72.96	72.95	72.91	76.35
14	76.19	75.65	75.35	76.02	75.68	74.66	73.33	73.78	72.95	73.06	72.94	72.82
15	75.95	75.68	75.84	75.54	75.77	74.93	74.32	73.78	73.21	73.14	72.83	72.73
16	75.98	75.37	75.87	75.58	76.18	75.11	74.42	73.81	73.06	73.05	72.79	72.61
17	76.00	75.70	75.49	75.52	76.15	75.00	74.37	73.91	72.80	73.01	72.95	72.67
18	75.90	75.90	75.56	75.51	75.93	75.06	74.46	73.95	72.68	73.06	72.97	72.82
19	75.98	75.73	75.46	75.50	75.44	75.20	74.52	73.86	72.45	73.04	72.95	72.83
20	76.07	75.31	75.74	75.79	75.23	75.03	74.52	73.62	72.37	72.86	72.82	72.76
21	75.95	75.68	76.31	75.95	74.92	74.89	74.49	73.75	72.25	73.08	72.80	72.71
22	75.64	75.69	76.40	75.80	75.23	75.03	74.49	73.69	72.22	73.26	72.82	72.61
23	75.64	75.54	75.95	75.77	75.48	74.99	74.46	73.57	72.25	73.29	72.75	72.57
24	75.64	75.47	75.93	75.79	75.57	74.75	74.44	73.56	72.22	73.28	72.79	72.67
25	75.75	75.38	76.21	75.92	75.37	74.63	74.39	73.67	72.26	73.34	72.83	77.65
26	75.87	75.26	76.36	75.64	74.78	74.71	74.35	73.85	72.16	73.26	72.77	77.48
27	76.00	74.97	76.24	75.76	74.86	74.58	74.38	73.97	72.04	73.09	72.78	77.66
28	76.00	75.26	75.96	75.75	74.94	74.46	74.38	73.83	72.25	73.02	72.83	77.55
29	76.11	75.63	76.06	75.68	---	74.44	73.16	73.62	72.39	73.12	72.68	77.46
30	76.16	75.36	75.92	75.40	---	74.29	73.29	74.03	72.96	73.04	72.69	77.44
31	76.10	---	75.84	75.42	---	74.30	---	73.39	---	72.99	72.75	---
MAX	76.27	75.99	79.75	76.11	76.18	76.16	80.21	74.33	73.45	73.36	73.18	77.66

CAL YR 1988 LOW 81.83
WTR YR 1989 LOW 80.21405805081462300 WN-6
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

INDEX

	Page		Page
Access to WATSTORE.....	18	Darbyville, Big Darby Creek at	127
Accuracy of the records.....	14	Dayton, Great Miami River at	199
Acre-foot, definition of	19	Dayton, Mad River near	198
Adenosine triphosphate (ATP), definition of.	19	Dayton, Wolf Creek at	200
Africa, Alum Creek at	124	DeGraff, Bokengehalas Creek near	186
Algae, definition of.....	19	Deer Creek, at Williamsport.. ..	129
Algal growth potential, definition of	19	near Pancoastburg	128
Alliance, Mahoning River at	33	Definition of terms	19
Alum Creek, at Africa	124	Delaware, Olentangy River near	119
at Columbus	125	Diatoms, definition of	22
Aquifer, definition of	19	Dillon Falls, Licking River near	97
Armstrongs Mills, Captina Creek at	60	Dillonvale, Short Creek near	55
Artesian, definition of	19	Discharge, definition of	20
Artificial substrate, definition of	24	Discontinued stations	VIII
Ash mass, definition of	19	Dissolved, definition of	20
Athens, Hocking River below	107	Dissolved-solids concentration,	
		definition of	20
Bacteria, definition of	19	Dover, Tuscarawas River near	73
Bainbridge, Paint Creek		Downstream order system	10
below Paint Creek Dam near	138	Drainage area, definition of	20
Barretts Mills, Rocky Fork near	139	Drainage basin, definition of	20
Batavia, East Fork Little Miami River near..	179	Dry mass, definition of	19
Beach City, Sugar Creek below Beach City		Dublin, Scioto River near	117
Dam near	74	O'Shaughnessy Reservoir near	158
Beaver River basin,			
gaging-station records in	33	Eagle City, Mad River at St. Paris Pike at .	186
Bed load, definition of	23	Eagle Creek at Phalanx Station	39
Bed load discharge, definition of	23	East Fork Little Miami River near Batavia ..	179
Bed material, definition of	19	East Fork Little Miami River at Perintown ..	180
Bellepoint, Mill Creek near	116	East Liverpool, Little Beaver Creek near ...	53
Berlin Center, Mahoning River near	34	Englewood, Stillwater River at	194
Big Darby Creek, at Darbyville	127	Enterprise, Hocking River at	106
Big Walnut Creek, at Central College	123	Ewingtown, Strong Run near	113
at Rees	126	Explanation, of ground-water level records..	17
at Sunbury	122	of stage and water-discharge records	11
Biochemical oxygen demand, definition of ...	19	of water-quality records	14
Biomass, definition of	19		
Black Fork, at Loudonville	82	Factors for converting U.S. customary units	
below Charles Mill Dam, near Mifflin.....	81	to International System (SI) units .Inside back cover	
Blaine, Wheeling Creek below	56	Fecal-coliform bacteria, definition of	19
Blue-green algae, definition of	22	Fecal streptococcal bacteria, definition of.	19
Bokengehalas Creek near DeGraff	186	Frazesburg, Wakatomika Creek near	94
Bokes Creek near Warrensburg.....	115		
		Gage height, definition of	20
Bottom material (see Bed material).....	20	Gaging Station, definition of	20
Bourneville, Paint Creek near	140	Gaging-stations, in downstream order,	
Bradford, Greenville Creek near	192	for which records are published	33
		Georgetown, Whiteoak Creek near	169
Cambridge, Wills Creek at	91	Germantown, Twin Creek near	210
Salt Fork Lake near Cambridge	92	Great Miami River basin, gaging-station	
Camden, Sevenmile Creek at	211	records in	183
Canton, Middle Branch Nimishillen Creek at .	70	at Hamilton	212
Captina Creek at Armstrong Mills	60	near Linden Avenue at Miamisburg	202
Carpenter, Leading Creek below	111	at Miamisburg	201
Carthage, Mill Creek at	182	at Dayton	199
Cells/volume, definition of	20	at New Baltimore	213
Central College, Big Walnut Creek at	123	below Indian Lake in Russels Point	185
Hoover Reservoir at	158	at Sidney	187
Cfs-day, definition of	20	at Taylorsville	191
Chemical oxygen demand, definition of	20	at Troy	190
Chester, Shafer River near	110		
Chillicothe, Scioto River at	130	Green algae, definition of	22
Chillicothe, Paint Creek at	141	Greenville Creek near Bradford	192
Chlorophyll, definition of	20	Griggs Reservoir near Columbus	158
Claridon, Olentangy River at	118	Ground water records	
Clear Creek near Rockbridge.....	105	Data Collection and Computation,	
Clear Fork below Pleasant Hill Dam,		explanation of	17
near Perrysville	83	Data Presentation, explanation of	17
Color Unit, definition of	20	Ground-water stations for which records	
Columbus, Alum Creek at	125	are published	215
Griggs Reservoir near	158		
Scioto River at	121	Hamilton, Great Miami River at	212
Scioto River at Broad Street	120	Hammondsville, Yellow Creek near	54
Contents, definition of	20	Hardness of water, definition of	21
Control, definition of	20	Hebron, South Fork Licking River near	95
Control structure, definition of	20	Higby, Scioto River at	149
Cooperation	1	Hocking River at Enterprise	106
Cortland, Mosquito Creek near.....	41	below Athens	107
Coshocton, Mill Creek near	88	Hocking River basin, gaging-station	
Muskingum River near	89	records in	106
Cubic feet per second per square mile,		Hoover Reservoir at Central College	158
definition of	20		
Cubic foot per second, definition of	20		

INDEX

	Page		Page
Huntsville, South Fork Great Miami River near	184	Miamisburg, Great Miami River at	201
Hydrologic bench-mark station, explanation of	21	Great Miami River near Linden Avenue at ..	202
Hydrologic conditions for 1988 water year ..	3	Micrograms per gram, definition of	21
Hydrologic Data station records	33	Micrograms per kilogram, definition of	21
Hydrologic Index stations	21	Micrograms per liter, definition of	21
Hydrologic unit, definition of	21	Middle Branch Nimishillen Creek at Canton ..	70
Indian Lake, North Fork Great Miami River near	183	Mifflin, Black Fork near	81
Ingomar, Twin Creek near	209	Milford, Little Miami River at	172
Instantaneous discharge, definition of	20	Mill Creek basin, gaging-station records in ..	181
Introduction	1	Mill Creek (Mill Creek basin) at Carthage ..	182
Kale Creek near Princetown	36	at Reading	181
Killbuck, Killbuck Creek at	87	Mill Creek (Muskingum River basin) near Coshocton	88
Killbuck Creek, at Killbuck	87	Mill Creek (Scioto River basin) near Bellepoint	116
Kinsman, Pymatuning Creek at	52	Milligrams of carbon per area or volume per unit time, definition of	23
Kokosing River at Mount Vernon	85	Milligrams of oxygen per unit area or volume per unit time, definition of	23
Lake Fork below Mohicanville Dam near Mohicanville	84	Milligrams per liter, definition of	21
Lakes and reservoirs:		Mohicanville, Lake Fork near	84
Griggs Reservoir	158	Mosquito Creek below Mosquito Creek Dam near Cortland	41
Hoover Reservoir	158	Mount Vernon, Kokosing river at	85
O'Shaughnessy Reservoir	158	Muskingum River at McConnellsville	98
Salt Fork Lake, near Cambridge	92	near Coshocton	89
Leading Creek below Carpenter	111	Muskingum River basin, gaging station records in	61
Leavittsburg, Mahoning River at	40	National Geodetic Vertical Datum of 1929 (NGVD), explanation of	21
Leesville, McGuire Creek below Leesville Dam near	72	National stream-quality accounting network (NASQAN), definition of	21
Licking River below Dillon Dam near Dillon Falls	97	Natural substrate, definition of	24
near Newark	96	Navarre, Tuscarawas River at	62
South Fork, near Hebron	95	Nellie, Walhonding River at	86
List of gaging-stations in downstream order, for which records are published	VI	New Baltimore, Great Miami River at	213
List of ground water stations for which records are published	XII	Newark, Licking River near	96
Little Beaver Creek, near East Liverpool ..	53	Newcomerstown, Tuscarawas River at	80
Little Beaver Creek, basin, gaging-station records in	53	Newport, Loramie Creek near	188
Little Miami River basin, gaging station records in	170	Niles, Mahoning River at	42
Little Miami River at Milford	172	Nimishillen Creek, at North Industry	71
East Fork, at Perintown	180	North Fork Great Miami River near Indian Lake	183
near Batavia	179	North Industry, Nimishillen Creek at	71
near Oldtown	170	Numbering system for wells and miscellaneous sites	11
Little Stillwater Creek, below Tappan Dam at Tappan	79	O'Shaughnessy Reservoir, near Dublin	158
Lockington, Loramie Creek at	189	Ohio Brush Creek near West Union	168
Loramie Creek at Lockington	189	Oldtown, Little Miami River near	170
near Newport	188	Olentangy River at Claridon	118
Loudonville, Black Fork at	82	near Delaware	119
Lowellville, Mahoning River at	44	Organic mass, definition of	19
Mad River near Urbana	195	Organism, definition of	21
at St. Paris Pike at Eagle City	186	count/area, definition of	21
near Springfield	197	count/volume, definition of	21
near Dayton	198	Other records available	14
Mahoning River at Alliance	33	Paint Creek, below Paint Creek Dam, near Bainbridge	138
below Berlin Dam, near Berlin Center	34	near Bourneville	140
at Pricetown	35	at Chillicothe	141
at Leavittsburg	40	Pancoastburg, Deer Creek near	128
at Lowellville	44	Parameter code, definition of	22
at Niles	42	Partial-record station, definition of	22
at OH-PA State Line, below Lowellville ..	45	Particle-size, definition of	22
at Youngstown	43	Particle-size classification, definition of ..	22
Massies Creek at Wilberforce	171	Percent composition, definition of	22
Massillon, Tuscarawas River at	61	Perintown, East Fork Little Miami River at ..	180
McConnellsville, Muskingum River at	98	Periphyton, definition of	22
McGaw, Upper Twin Creek at	159	Perryville, Clear Fork near	83
McGuire Creek below Leesville Dam near Leesville	72	Pesticides, definition of	22
Mean concentration, definition of	23	Pesticide program, explanation of	22
Mean discharge, definition of	20	Phalanx Station, Eagle Creek at	39
Measuring point (MP), definition of	21	Phytoplankton, definition of	22
Metamorphic stage, definition of	21	Picocurie, definition of	22
Methylene blue active substance, definition of	21	Piedmont, Stillwater Creek at	76
		Plankton, definition of	22
		Pleasant Hill, Stillwater River at	193
		Preface	III

INDEX

	Page		Page
Pricetown, Kale Creek near	36	Water Temperature, explanation of	15
Mahoning River at	35	Sediment, explanation of	15
Primary productivity, definition of	23	Laboratory Measurements, explanation of ..	16
Prospect, Scioto River near	114	Data Presentation, explanation of	16
Publications on techniques of		Surficial bed material, definition of	24
water-resources investigations.....	26	Suspended, definition of.....	24
Pymatuning Creek at Kinsman	52	Suspended recoverable, definition of	24
		Suspended sediment, definition of.....	23
Radcliff, Zinns Run near	112	Suspended sediment concentration,	
Radiochemical program, definition of	23	definition of	23
Ravenna, West Branch Mahoning River near ...	37	Suspended sediment discharge, definition of.	23
Reading, Mill Creek at	181	Suspended sediment load, definition of	23
Records of discharge collected by agencies		Suspended total, definition of	24
other than the Geological Survey	14		
Recoverable from bottom material,		Tappan, Little Stillwater Creek at.....	79
definition of	23	Taxonomy, definition of	24
Rees, Big Walnut Creek at	126	Taylorville, Great Miami River at.....	191
Return period, definition of	23	Terms, definition of	19
Rockbridge, Clear Creek near	105	Thermograph, definition of	25
Rocky Fork near Barretts Mills	139		
Runoff in inches, definition of	23	Time-weighted average, definition of	25
Russells Point, Great Miami River below		Tippecanoe, Stillwater Creek at	77
Indian Lake near	185	Tons per acre foot, definition of	25
		Tons per day, definition of	25
Salt Fork Lake near Cambridge	92	Total, definition of	25
Sandy Creek at Waynesburg	69	Total coliform bacteria, definition of	19
Scioto River at Chillicothe	130	Total discharge, definition of	25
at Broad Street Columbus	120	Total in bottom material, definition of	25
at Columbus	121	Total load, definition of	25
at Higby	149	Total organism count, definition of	21
below O'Shaughnessy Dam, near Dublin	117	Total recoverable, definition of	25
near Prospect	114	Total sediment discharge, definition of	23
Scioto River basin, gaging-station			
records in	114	Troy, Great Miami River at	190
reservoir records in	158	Tuscarawas River at Massillon	61
Sediment, data collection	15	at Navarre.....	62
Sediment, definition of.....	23	at Newcomerstown	80
Seneca Fork below Senecaville Dam,		below Dover Dam, near Dover	73
near Senecaville	90	Twin Creek, near Germantown	210
Senecaville, Seneca Fork near.....	90	near Ingomar	209
Seven-day, 10-year, definition of	23		
Sevenmile Creek at Camden	211	Uhrichsville, Stillwater Creek at	78
		Upper Twin Creek at McGaw	159
Shade River basin, gaging-station records in.	110	Upper Twin Creek basin	
Shade River near Chester.....	110	gaging-station records in	159
Short Creek near Dillonvale	55	Urbana, Mad River near	195
Sidney, Great Miami River at	187		
Sodium-adsorption ratio (SAR), definition of.	24	Wakatomika Creek near Frazeytsburg	94
Solute, definition of.....	24	Walhonding River below Mohawk Dam, at Nellie.	86
South Fork Great Miami River near Huntsville.	184	Warrensburg, Bokes Creek near	115
South Fork Licking River near Hebron	95	Water temperature, data collection.....	15
Special networks and programs	10	Water year, definition of	25
Specific conductance, definition of	245	Wayland, West Branch Mahoning River at.....	38
Springfield, Mad River near	197	Waynesburg, Sandy Creek at	69
Stage-discharge relation, definition of	24	Weighted average, definition of	25
Station identification numbers	10		
Stillwater Creek, at Piedmont	76	West Branch Mahoning River near Ravenna	37
at Tippecanoe	77	West Branch Mahoning River below	
at Uhrichsville	78	Michael J. Kirwan Dam, at Wayland	38
Stillwater River, at Englewood	194	West Union, Ohio Brush Creek near	168
at Pleasant Hill	193	Wet mass, definition of	20
Strasburg, Sugar Creek at	75	Wheeling Creek below Blaine	56
Streamflow, definition of	24	Whiteoak Creek basin gaging-stations in	169
Strong Run near Ewingtown	113	Whiteoak Creek near Georgetown	169
Substrate, definition of	24		
Sugar Creek (Muskingum River basin)		Wilberforce, Massies Creek at	171
at Strasburg	75	Williamsport, Deer Creek at	129
below Beach City Dam, near Beach City	74	Wills Creek, at Cambridge	91
Summary of Hydrologic Conditions	3	below Wills Creek Dam at Wills Creek	93
Sunbury, Big Walnut Creek at	122	Wolf Creek at Dayton	200
Surface area, definition of	24		
Surface Water Records		WDR, definition of	25
Data Collection and Computation,		WRD, definition of	25
explanation of	11	WSP, definition of	25
Data Presentation, explanation of.....	12		
Surface Water Quality		Yellow Creek basin gaging-stations in	54
Classification of Records, explanation of.	14	Yellow Creek near Hammondsville	54
Arrangement of Records, explanation of ...	15	Youngstown, Mahoning River at	43
Onsite measurement and sample collection,			
explanation of	15	Zinns Run near Radcliff	112
		Zooplankton, definition of	22

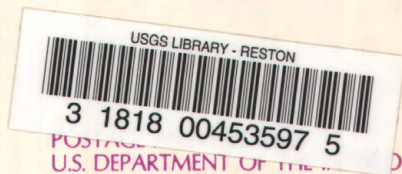
FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI).

Multiply inch-pound units	By	To obtain SI units
<i>Length</i>		
inches (in)	2.54×10^1	millimeters (mm)
	2.54×10^{-2}	meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^0	kilometers (km)
<i>Area</i>		
acres	4.047×10^3	square meters (m ²)
	4.047×10^{-1}	square hectometers (hm ²)
	4.047×10^{-3}	square kilometers (km ²)
square miles (mi ²)	2.590×10^0	square kilometers (km ²)
<i>Volume</i>		
gallons (gal)	3.785×10^0	liters (L)
	3.785×10^0	cubic decimeters (dm ³)
	3.785×10^{-3}	cubic meters (m ³)
million gallons	3.785×10^3	cubic meters (m ³)
	3.785×10^{-3}	cubic hectometers (hm ³)
cubic feet (ft ³)	2.832×10^1	cubic decimeters (dm ³)
	2.832×10^{-2}	cubic meters (m ³)
cfs-days	2.447×10^3	cubic meters (m ³)
	2.447×10^{-3}	cubic hectometers (hm ³)
acre-feet (acre-ft)	1.233×10^3	cubic meters (m ³)
	1.233×10^{-3}	cubic hectometers (hm ³)
	1.233×10^{-6}	cubic kilometers (km ³)
<i>Flow</i>		
cubic feet per second (ft ³ /s)	2.832×10^1	liters per second (L/s)
	2.832×10^1	cubic decimeters per second (dm ³ /s)
	2.832×10^{-2}	cubic meters per second (m ³ /s)
gallons per minute (gal/min)	6.309×10^{-2}	liters per second (L/s)
	6.309×10^{-2}	cubic decimeters per second (dm ³ /s)
	6.309×10^{-5}	cubic meters per second (m ³ /s)
million gallons per day	4.381×10^1	cubic decimeters per second (dm ³ /s)
	4.381×10^{-2}	cubic meters per second (m ³ /s)
<i>Mass</i>		
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons

U.S. DEPARTMENT OF THE INTERIOR
Geological Survey
975 West Third Avenue
Columbus, OH 43212

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE \$300
SPECIAL 4TH CLASS BOOK RATE



POSTAGE
U.S. DEPARTMENT OF THE INTERIOR
INT 413

