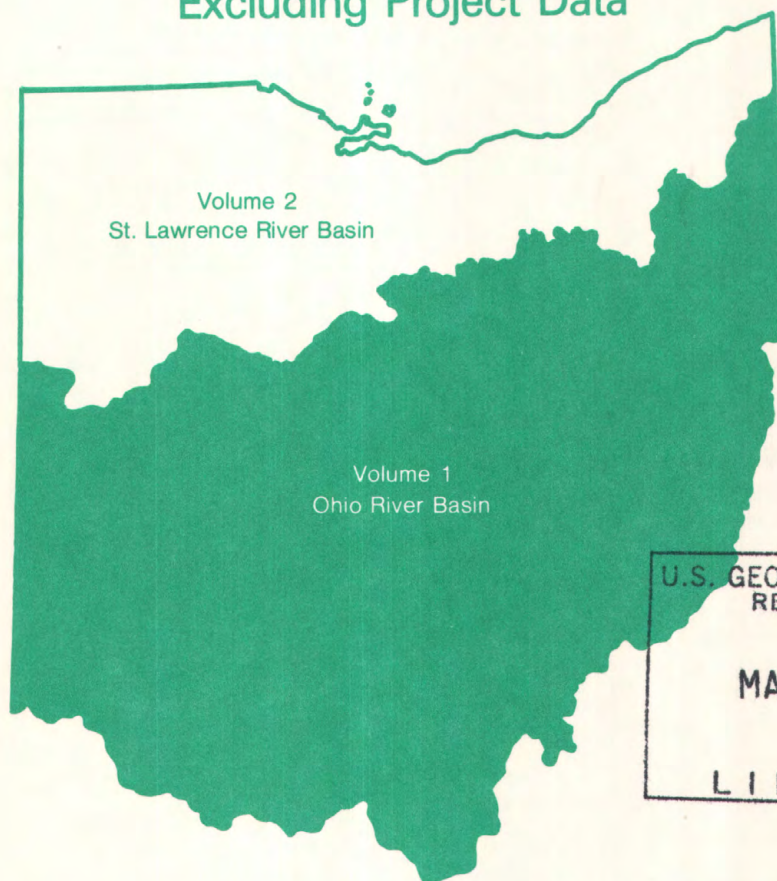


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pt. 1



# Water Resources Data Ohio Water Year 1990

Volume 1. Ohio River Basin  
Excluding Project Data



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Prepared in cooperation with the State of Ohio  
and with other agencies



# CALENDAR FOR WATER YEAR 1990

1989

## OCTOBER

S	M	T	W	T	F	S
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## NOVEMBER

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1990

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## SEPTEMBER

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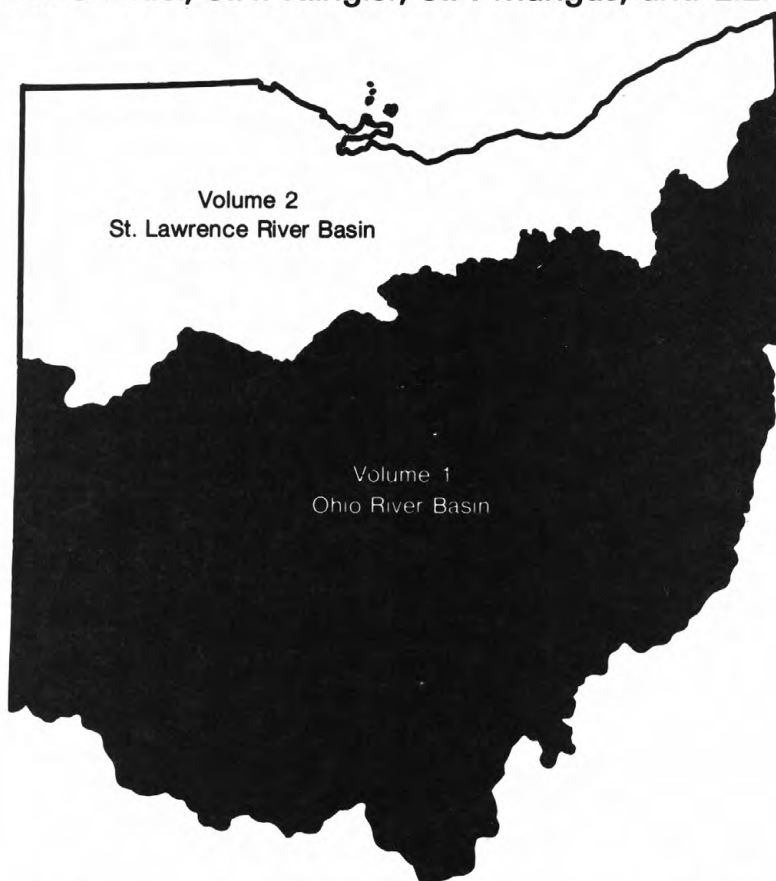


# Water Resources Data Ohio

## Water Year 1990

### 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-90-1  
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

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For information on the water program in Ohio write to:

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

1991



## 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:

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<b>16. Abstract (Limit: 200 words)</b>  Water-resources data for the 1990 water year for Ohio consists 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 131 gaging stations, 67 wells, and 39 partial-record sites; and water levels at 229 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.			
<b>17. Document Analysis a. Descriptors</b>  *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>b. Identifiers/Open-Ended Terms</b>          <b>c. COSATI Field/Group</b>			
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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	1921-74
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 BRIGGS DALE	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
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 ROCHESTER	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	Charac- teristic 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) .....	206
405425082173000	AS-3	Jerome Fork (l) .....	207
ATHENS COUNTY			
392004092071600	AT-2A	Athens (l) .....	208
392009082072200	AT-5	Athens (l) .....	209
AUGLAIZE COUNTY			
403233083574500	AU-3	Southwest of New Hampshire (l) .....	210
BELMONT COUNTY			
400118081082200	B-3	Mount Olivett (l) .....	211
BUTLER COUNTY			
391805084261800	BU-9	Northwest of Sharonville (l) .....	212
391904084371800	BU-12	East of Ross (l) .....	213
392017084345200	BU-7	Fairfield (l) .....	214
392021084340300	BU-56	Fairfield (l) .....	215
392048084311400	BU-8	East of Hamilton (l) .....	216
392445084333000	BU-36	Hamilton (c) .....	217
393202084241500	BU-15	Middletown (l) .....	218
392515084322000	BU-5	North of Hamilton (l) .....	219
392939084231700	BU-3	Middletown (l) .....	220
393103084240900	BU-2	Middletown (l) .....	221
CARROLL COUNTY			
403709081052800	C-1	North of Carrollton (l) .....	222
CHAMPAIGN COUNTY			
400638083453900	CH-3	Urbana (l) .....	223
CLARK COUNTY			
395639084012200	CL-9	New Carlisle (l) .....	224
395840083495200	CL-7	Northwest of Springfield (l) .....	225
COSHOCOTON COUNTY			
401256081525100	CS-3	North of Conesville (l) .....	226
401735081523800	CS-2	Coshocoton (l) .....	227
DARKE COUNTY			
400514084345700	D-2	East of Greenville (l) .....	228
DELAWARE COUNTY			
402126083040400	DL-3	Delaware (l) .....	229
FAIRFIELD COUNTY			
393450082403600	F-7	Southeast of Amanda (l) .....	230
394257082362900	F-6	Lancaster (l) .....	231
394544082271000	F-1	West Rushville (l) .....	232
395053082361900	F-5	Baltimore (l) .....	233
FAYETTE COUNTY			
393153083322000	FA-1	West of Washington Court House (l) .....	234
FRANKLIN COUNTY			
394956083002700	FR-18	South of Shadeville (l) .....	235
395118082573300	FR-3	Southwest of Rees (l) .....	236
395157083003500	FR-109	Columbus (l) .....	237
400101083021800	FR-10	Columbus (l) .....	238



Well number	Local number	Location	Page
GALLIA COUNTY			
383638082103300	G-2	East of Crown City (1) .....	239
GREENE COUNTY			
394330083531400	GR-11	Near Wilberforce (1) .....	240
394411083561300	GR-1	North of Xenia (1) .....	241
394425083551100	GR-10	North of Xenia (1) .....	242
HAMILTON COUNTY			
391039084291500	H-11	Cincinnati (1) .....	243
391101084172100	H-3	Southeast of Miamiaville (1) .....	244
391201084281600	H-10	Cincinnati (1) .....	245
391214084470100	H-1	Southeast of Harrison (1) .....	246
391324084272500	H-9	Cincinnati (1) .....	247
391341084275300	H-8	Wyoming (1) .....	248
391442084262900	H-7	Evendale (1) .....	249
391608084254400	H-6	Glendale (1) .....	250
391733084392400	H-2	South of Ross (1) .....	251
391748084393800	H-19	Southwest of Venice (c) .....	252
391817084393300	H-4	Southwest of Ross (1) .....	253
HARDIN COUNTY			
404218083503700	HN-1	Alger (1) .....	254
HOCKING COUNTY			
393200082235300	HK-1	Logan (1) .....	255
KNOX COUNTY			
402344082300700	K-1	Mt. Vernon (1) .....	256
MADISON COUNTY			
395301083272200	M-2	London (1) .....	257
395352083292100	M-5	Northwest of London (1) .....	258
395357083304400	M-4	Northwest of London (1) .....	259
395740083255700	M-3	North of London (1) .....	260
MAHONING COUNTY			
410042080453800	MA-1	Canfield (1) .....	261
MARION COUNTY			
403413083170500	MN-4	Southeast of New Bloomington (1) .....	262
403443083230400	MN-1	LaRue (1) .....	263
403601083110400	MN-2	West of Marion (1) .....	264
MEDINA COUNTY			
410120081431800	MD-3	Wadsworth (1) .....	265
MERCER COUNTY			
402833084375200	MR-2	Coldwater (1) .....	266
MIAMI COUNTY			
395848084085500	MI-3	Northeast of Tipp City (1) .....	267
400308084112900	MI-44	Troy (c) .....	268
MONTGOMERY COUNTY			
393757084173600	MT-928	Miamisburg (c) .....	269
394012084151700	MT-55	West Carrollton (1) .....	270
394025084162800	MT-49	West Carrollton (1) .....	271
394425084113200	MT-3	Dayton (1) .....	272
394533084113800	MT-6	Dayton (1) .....	273
394811084095000	MT-74	Dayton (1) .....	274
MUSKINGUM COUNTY			
395804081593200	MU-1A	Zanesville (1) .....	275

## GROUND-WATER STATIONS FOR WHICH RECORDS ARE PUBLISHED.--Continued

Well number	Local number	Location	Page
PICKAWAY COUNTY			
393327082571600	PK-7	South of Circleville (1) .....	276
393402082572500	PK-4	South of Circleville (1) .....	277
393638082572300	PK-6	Northwest of Circleville (1) .....	278
393438083072200	PK-8	Williamsport (1) .....	279
394742083094800	PK-9	Near Orient (1) .....	280
PIKE COUNTY			
390359083015100	PI-2	West of Piketon (1) .....	281
PORTAGE COUNTY			
411401081025000	PO-1	Windham (1) .....	282
PREBLE COUNTY			
394438084335900	PR-2	East of Eaton (1) .....	283
RICHLAND COUNTY			
404625082305100	R-4	Mansfield (1) .....	284
ROSS COUNTY			
391341083172200	RO-7	West of Bainbridge (1) .....	285
391913082580500	RO-8	Chillicothe (1) .....	286
SHELBY COUNTY			
401712084103500	SH-4	Sidney (1) .....	287
STARK COUNTY			
404939081203800	ST-5A	Canton (1) .....	288
405211081253500	ST-27	North Canton (1) .....	289
TRUMBULL COUNTY			
411604080505600	T-3	Near Warren (1) .....	290
TUSCARAWAS COUNTY			
403207081293800	TU-3	Dover (1) .....	291
403557081313600	TU-4	Strasburg (1) .....	292
403653081321800	TU-1	North of Strasburg (1) .....	293
403823081324200	TU-5	Near Strasburg (1) .....	294
UNION COUNTY			
401826083255200	U-4	Southeast of Raymond (1) .....	295
VINTON COUNTY			
391452082282900	V-1	McArthur (1) .....	296
WARREN COUNTY			
392712084191700	W-5	East of Monroe (1) .....	297
WASHINGTON COUNTY			
392553081281600	WA-2	Marietta (1) .....	298
WAYNE COUNTY			
404655081553200	WN-3	Near Wooster (1) .....	299
404802081583100	WN-2A	Near Wooster (1) .....	300
405745081510200	WN-7	Near Sterling (1) .....	301
405805081462300	WN-6	Rittman (1) .....	302

VOLUME 1: OHIO RIVER BASIN  
EXCLUDING PROJECT DATA

## INTRODUCTION

The Water Resources Division of the U.S. Geological Survey (USGS), in cooperation with State agencies, obtains a large amount of data pertaining to the water resources of 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 interested parties outside the USGS, the data are published annually in this report series entitled "Water Resources Data--Ohio."

This report (in two volumes) includes records on surface water and ground water in the State. Specifically, it contains: (1) Discharge records for 131 streamflow-gaging stations, 65 miscellaneous sites; (2) stage and content records for 8 streams, lakes, and reservoirs; (3) water-quality data for 35 streamflow-gaging stations, 67 wells, and 39 partial-record sites; and (4) water levels for 229 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 9.

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 can be consulted in the libraries of the principal cities of the United States, and can 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 USGS for all States. These official USGS reports are identified by means of a 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-90-1." 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 data since 1898. Organizations that assist in collecting data in this report are: Ohio Department of Natural Resources, Frances Buchholzer, Director; Ohio Environmental Protection Agency, R. L. Shank, Director; Ohio Department of Transportation, William Edwards, Research and Development; Miami Conservancy District, J. L. Rozelle, General Manager and Chief Engineer; City of Columbus Department of Public Service, J. R. Douth, Administrator; City of Canton Water Department, J. D. Williams, Superintendent; Ross County, James Kennard, Administrative Assistant; Seneca Soil and Water Conservation District, Norman Daniel, Board Chairman; University of Toledo, R. Gallagher; City of Fremont, R. W. Lash, Safety Service Director; 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; U.S. Air Force, Air Force Logistics Command, A. F. Sculimbrene, Office of Environmental Management; Toledo Metropolitan Area Council of Governments, K. Erickson, Director of Regional Planning; and Ohio State University, Ohio Agricultural Research and Development Center (OARDC), Professor Warren Dick; U.S. Department of Energy, Ronald O. Hultgren, Deputy Assistant Manager for Enriching Operations. Funds or services were provided by the U.S. Army Corps of Engineers in collecting data for 72 hydrologic-data stations in this report. The Miami Conservancy District, U.S. Army Corps of Engineers, and Ohio Department of Natural Resources aided in collecting data.



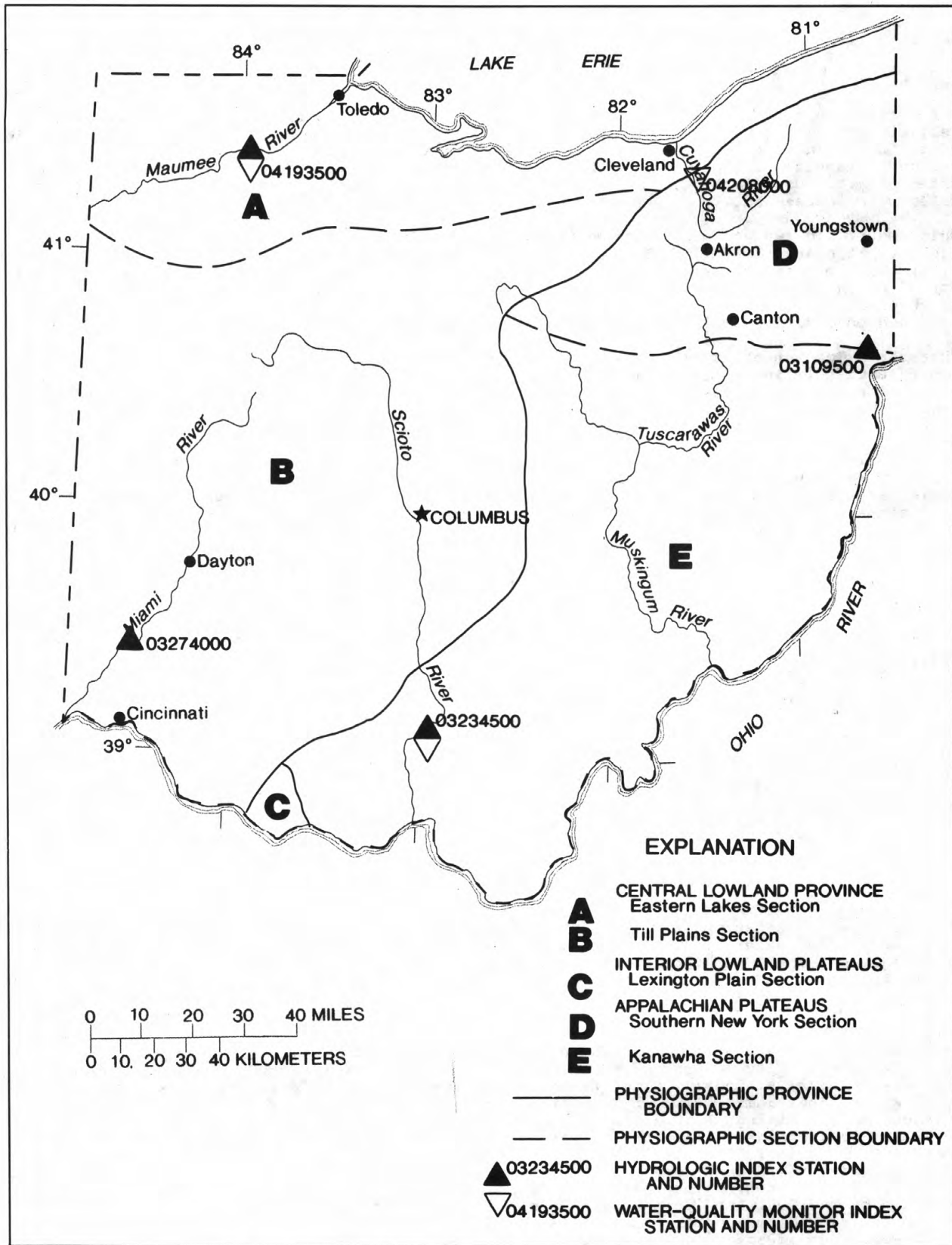


Figure 1.--Physiographic divisions and location of Hydrologic Index Stations.

## 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, 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 and a few 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 anomalous area of high precipitation (as much as 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 is as much as 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 are used to sample a wide variety of conditions. The drainage areas range from 12 to 7,420 square miles and represent a wide diversity of topography, and other physical characteristics. Streamflow ranges from unregulated to highly regulated.

Statewide streamflow, water year 1990

At the beginning of water year 1990, streamflow was above normal<sup>1</sup> in most of the State; streamflow during the preceding 3 months was generally normal, although scattered thunderstorms caused above-normal streamflow in some areas. Streamflow in October was above normal for most of the State except for the north-central area, where it was below normal. Streamflow in November continued above normal for most of the State except for the extreme eastern part; in the extreme southwestern and central parts of the State, streamflow was considered excessive. Streamflow in December declined to below normal in most of the State because of a combination of below-average precipitation and frozen ground. Streamflow in January was mostly above normal in response to precipitation and snowmelt at the very end of December. Streams continued to rise, and streamflow for February was excessive throughout the State; flooding occurred in the northwestern and northcentral parts of the State. March streamflow was below normal in most places. Streamflow in April was below normal for most of the State, but it was greater than the streamflow recorded in March. Although starting below normal throughout the State, streamflow in May was above normal by the end of the month mainly because of unusually heavy precipitation; streamflow was great enough to be considered excessive in all but a far eastern part of the State. Moderate to locally severe flooding occurred in May in the Scioto and Hocking River basins. Streamflow in June was above normal throughout most of the State except in the extreme north-central and northeastern parts; flooding occurred during the middle of the month in the central part of the State. Streamflow then declined toward the end of June.

In mid-July a series of localized thunderstorms caused severe damage in Jefferson, Harrison, and Belmont Counties in the eastern part of the State (This flooding is described in detail in the next section.) Statewide, streamflow increased throughout July and was generally above normal by the end of the month. Above-normal streamflow continued through August and September, although streamflow in September was less than that in August. During water year 1990, flood disaster declarations were issued in 20 of Ohio's 88 counties.

<sup>1</sup>Normal is defined as streamflow between the 25th and 75th percentiles as measured during the base period water years 1951 through 1980.

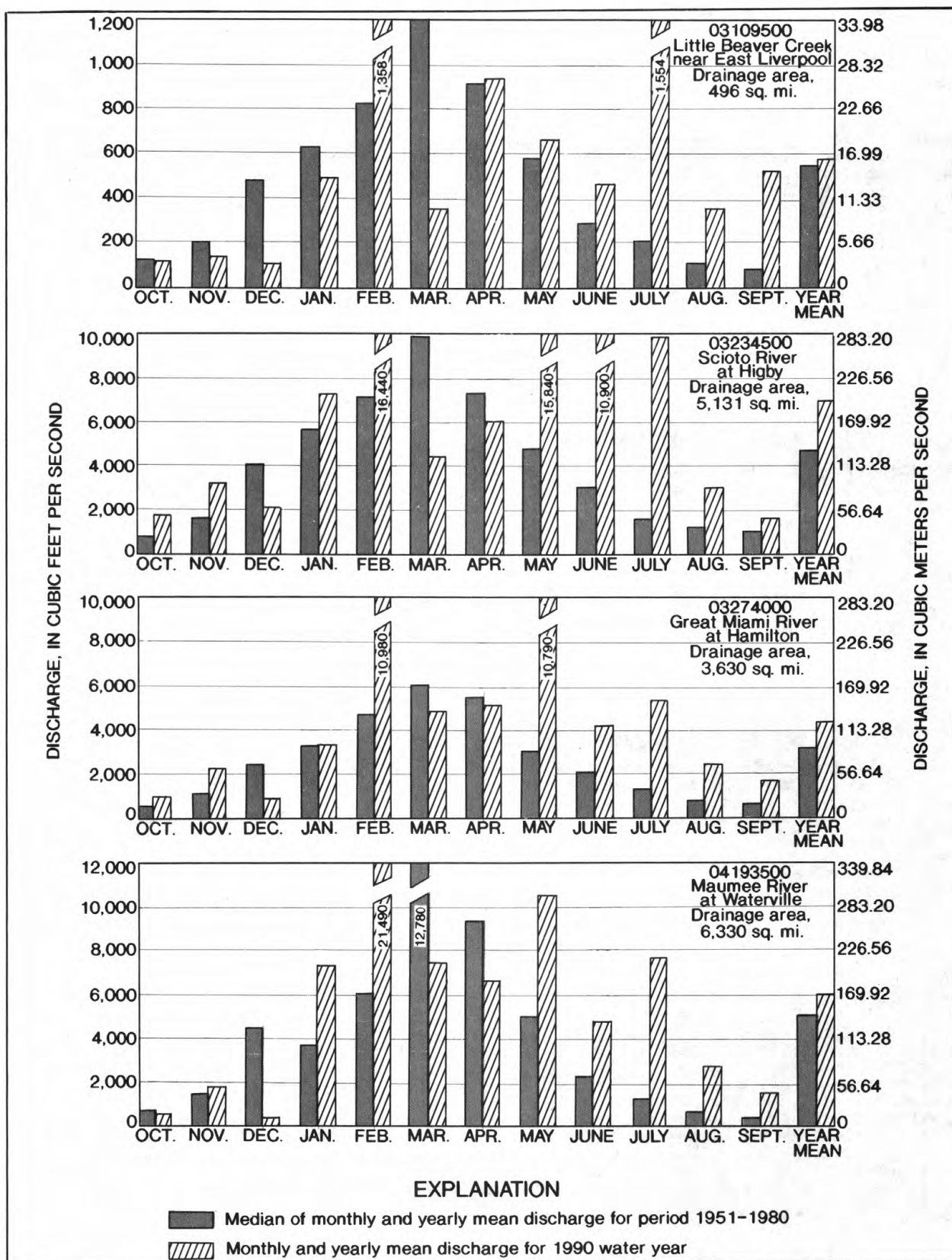


Figure 2.--Runoff during 1990 water year compared with median runoff for period 1951-1980 for four representative gaging stations.



Flood of June 14-15, 1990

A series of violent thunderstorms caused severe damage through the central and eastern parts of the State during a 24-hour period June 14-15. The hardest-hit areas were in Belmont, Harrison, and Jefferson Counties. In the Pipe and Wegee Creek basins in Belmont County, 26 deaths were reported and property damage exceeded \$11 million. Maximum discharge near the mouth of Pipe Creek (drainage area, 11-28 square miles) was determined by indirect measurement to be 15,000 cubic feet per second (1,330 cubic feet per second per square mile). Maximum discharge near the mouth of Wegee Creek (drainage area, 5.46 square miles) was determined by indirect measurement to be 12,000 cubic feet per second (2,200 cubic feet per second per square mile). Flooding was very localized; recurrence intervals for peak streamflows at stations within 22 miles of each other ranged from 2 years to greater than 100 years. Peak streamflow at a gaging station about 5 miles from the site of the Pipe Creek indirect measurement was 45.4 cubic feet per second per square mile, which corresponds to a 2-year recurrence interval.

## Water Quality

On a short-term basis, water-quality data in Ohio 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 are located in nine major river basins and one Hydrologic Benchmark station 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. Within the fixed-interval framework, sampling time is varied so that samples are collected over a range of streamflow conditions in any given year.

In figure 3, box plots for 11 years of record (1980-90) show statistical distributions of values for nitrite plus nitrate, dissolved oxygen, total phosphorus, and instantaneous discharge at four NASQAN sites, each representing physiographic and land-use characteristics of their drainage areas. The sites are Muskingum River at McConnellsville (principally cropland, pasture, and woodland), Great Miami River at New Baltimore (mostly row crops but some urban areas, pastures, and woodland), Cuyahoga River at Independence (pasture and woodlands in the headwaters and extensively urbanized and industrialized metropolitan area downstream), and Grand River near Painesville (orchard and nursery crops and some urban and industrial areas).

Water year 1990 was, according to the Ohio Department of Natural Resources, the seventh wettest year in 107 years of recordkeeping. Because water year 1990 was unusually wet, the mean instantaneous discharges for 1990 at each of the four sites in fig. 3 are high compared to the median instantaneous discharges for the entire 11 years. Only the mean discharge for the Muskingum River was less than 75th percentile for the 11-year period. Mean discharges ranged from a low of 1,083 cubic feet per second at the Sandusky River site to a high of 9,985 cubic feet per second at the Muskingum River site; the 11-year medians were 723 and 6,718 cubic feet per second, respectively.

For water year 1990, concentrations of three selected chemical constituents are represented by solid circles on their respective box plots. Total-phosphorus concentrations generally were at or below the 11-year median concentration of 0.365 milligram per liter for the Great Miami River and 0.13 milligram per liter for the Cuyahoga River. Concentrations for the Great Miami River ranged from 0.20 to 0.6 milligram per liter. Concentrations for the Cuyahoga River ranged from 0.06 to 0.13 milligram per liter. Two of the six total-phosphorus concentrations measured in the Muskingum River were greater than the 11-year median of 0.1 milligram per liter; concentrations ranged from 0.041 to 0.12 milligram per liter. Total-phosphorus concentrations for the Sandusky River ranged from 0.08 to 0.21 milligram per liter; concentrations in two samples were greater than the 75th percentile.

Dissolved-oxygen concentrations for all four sites were greater than the 11-year median concentrations except for one concentration at the Great Miami River site and one concentration at the Cuyahoga River site. Median concentrations ranged from 8.0 milligrams per liter at the Muskingum River site to 10.0 milligrams per liter at the Great Miami River site. No concentrations below 4.0 milligrams per liter<sup>2</sup> were measured.

Nitrite plus nitrate concentrations differed among the four sites. Concentrations in the Muskingum and Cuyahoga Rivers did not vary greatly and were generally less than 3 milligrams per liter. Concentrations in the Sandusky River and the Great Miami River, however, were highly variable and ranged from 3.9 to 14.0 milligrams per liter.

Water-quality monitors at three of the NASQAN stations (fig. 3) continuously measure temperature, dissolved-oxygen concentration, pH, and specific conductance. Data from the three water-quality monitors were used to calculate annual median temperature, dissolved-oxygen concentration, pH, and specific conductance for water year 1990. These were compared with the average of annual medians from the 1982-89 reference period (fig. 4). Annual median specific conductance and temperature for 1990 were slightly less than the 1982-89 average at all three sites, but annual median dissolved-oxygen concentration for 1990 was higher than average at all three sites. Annual median pH for 1990 was slightly higher than the 1982-89 average at the Maumee River and Scioto River sites, although it was about average at the Cuyahoga River site.

<sup>2</sup>The Ohio Environmental Protection Agency dissolved-oxygen standard for warmwater habitat.

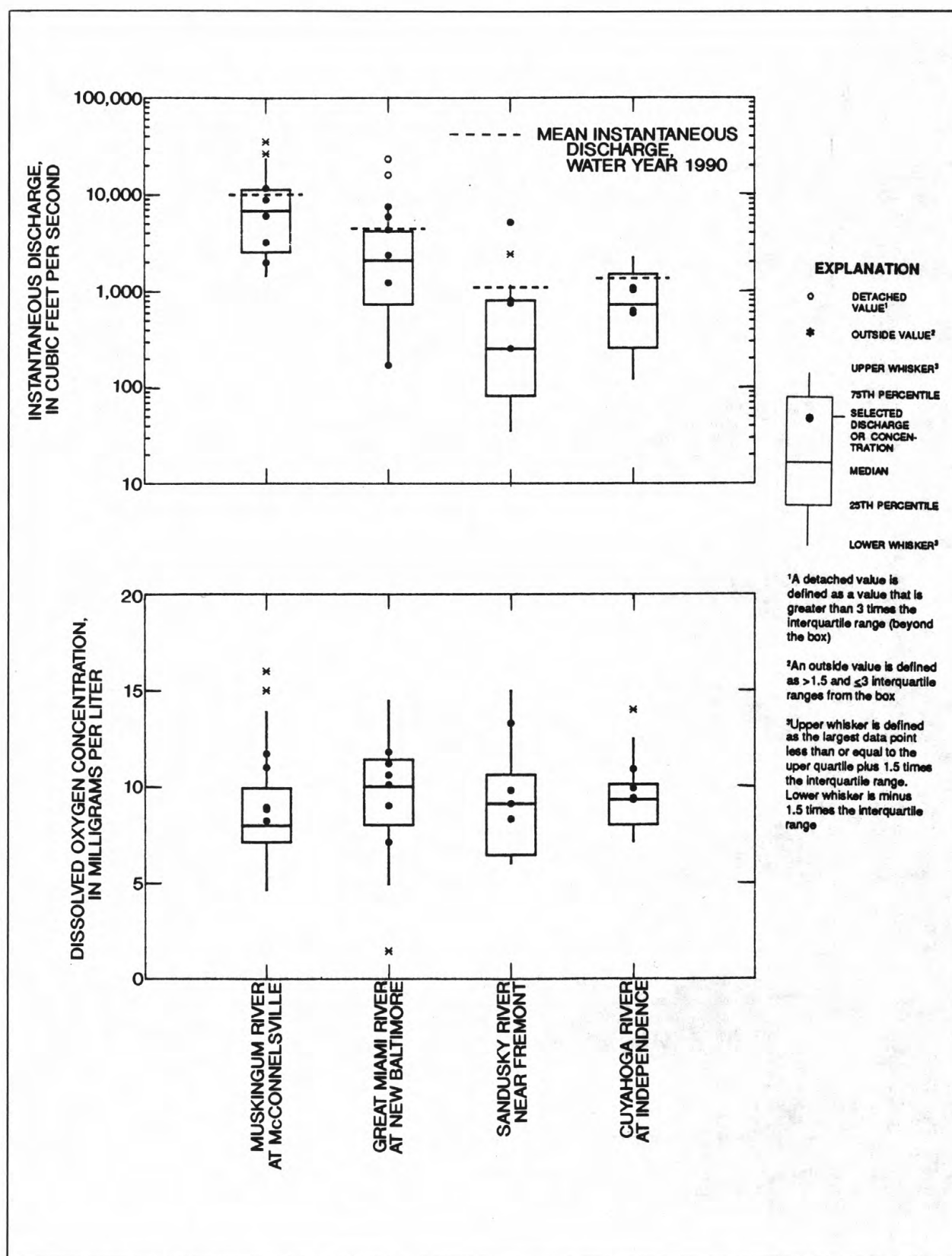


Figure 3.--Discharge and chemical concentrations measured in water year 1990 and the distribution of those constituents from measurements made during 1980-90 at selected NASQAN sites.

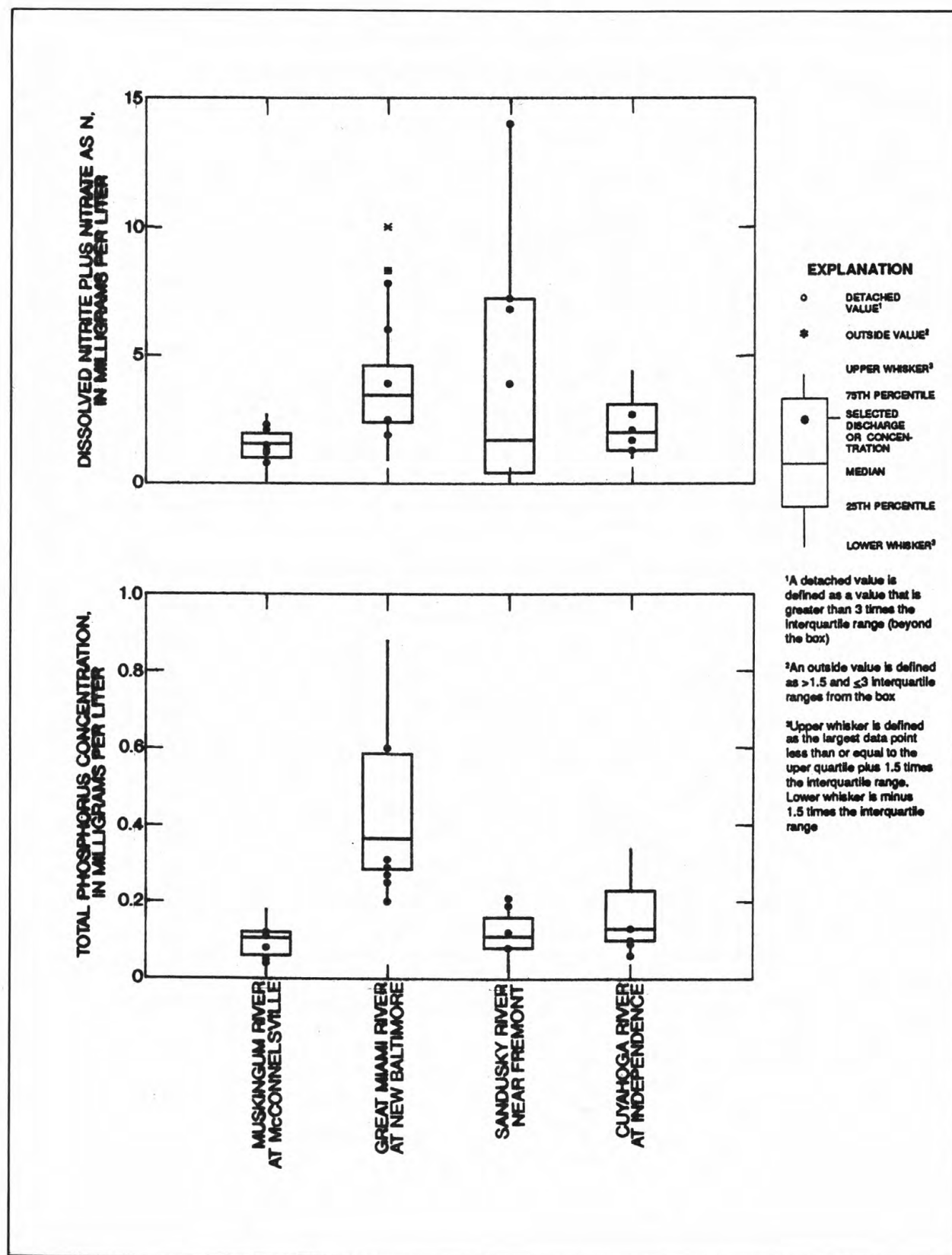


Figure 3.-- Discharge and chemical concentrations measured in water year 1990 and the distribution of those constituents from measurements made during 1980-90 at selected NASQAN sites--Continued.

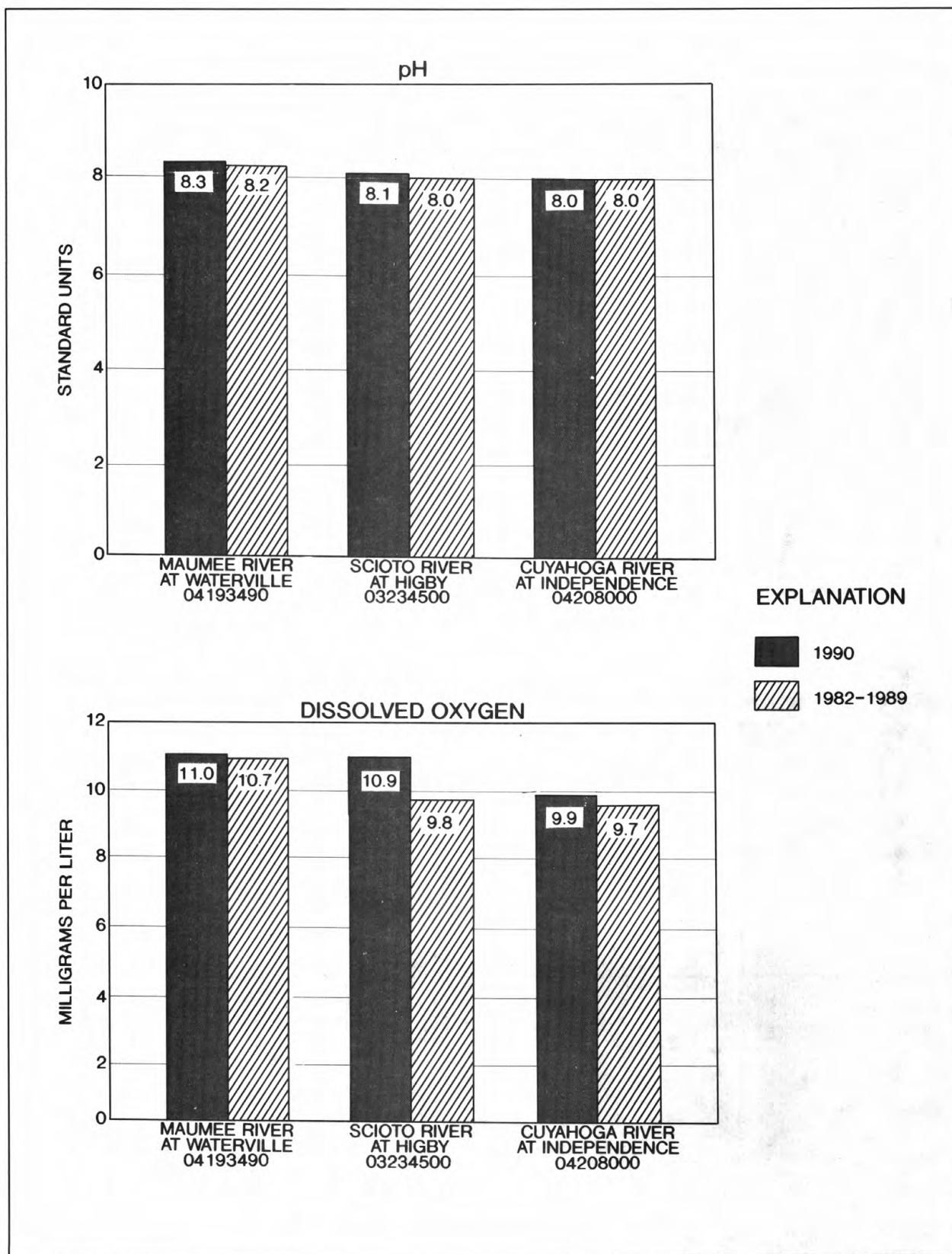


Figure 4.-- Comparison of 1990 mean values of pH, dissolved oxygen, temperature, and specific conductance with the average of annual mean values for 1982-1989 for three water-quality-monitor index stations in Ohio.



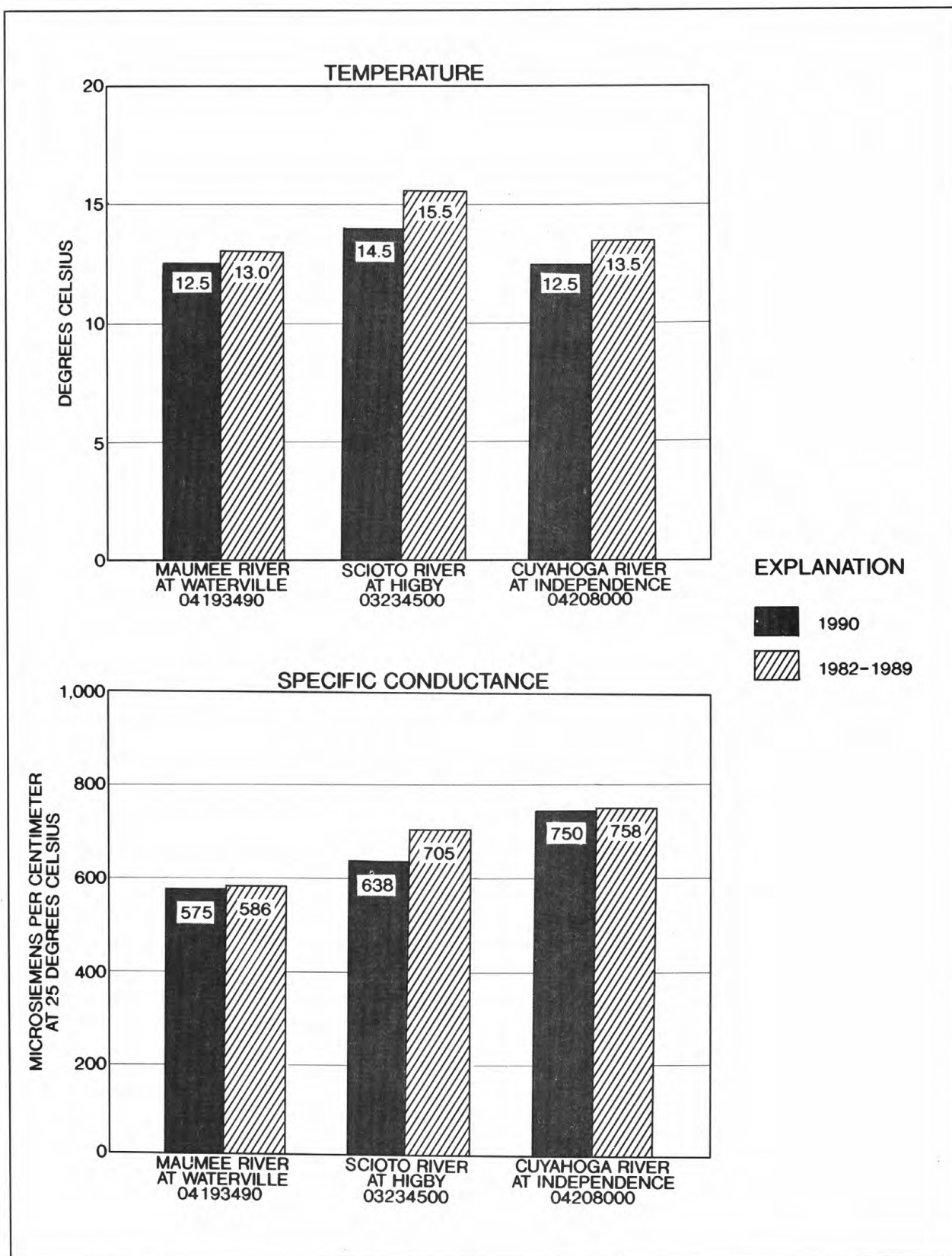


Figure 4.--Comparison of 1990 mean values of pH, dissolved oxygen, temperature, and specific conductance with the average of annual mean values for 1982-1989 for three water-quality-monitor index stations in Ohio--Continued.

### Ground Water

Ground water serves the needs of 42 percent of Ohio's population. An estimated 740 million gallons of ground water per day 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. 5) underlie glacial till, are locally confined under artesian pressure and are highly productive. Extensive kame-terrace deposits of water-bearing gravel and sand are widely used 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.

Ground-water supply for much of the unglaciated upland area of southeastern Ohio is from bedrock aquifers composed of shaly sandstone and thin limestone. 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 from fractured coal beds. Several sandstone aquifers in northeastern Ohio are of regional extent and are major 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. 5) that yields only small amounts of water to wells. Silurian-age limestone and dolomite and Devonian limestone comprise the carbonate aquifer system (fig. 5) 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 yield only very small amounts of ground water.

### 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. Sample 1-year and 5-year hydrographs of a well completed in an unconfined unconsolidated sand-and-gravel aquifer are shown in figure 6. The observation-well network also includes some bedrock wells in areas where consolidated aquifers are heavily used water supplies, such as the carbonate-rock region of northwestern Ohio and various sandstone units of eastern Ohio. Sample 1-year and 5-year hydrographs of a well completed in a confined carbonate-rock aquifer are shown in figure 7. 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 1990 water year were predominantly normal to above normal throughout the State with the exception of sand and gravel aquifers in areas of below-average precipitation. This condition prevailed until December when below average precipitation and temperatures caused declines into the normal or below-normal range through January. Ground-water levels returned to normal or above normal in February in response to well above average precipitation. Generally, normal to below normal levels prevailed through April. Higher than average precipitation in May caused ground-water levels to return to the normal or above-normal range. Seasonal declines prevailed for the remainder of the year, but ground-water levels generally remained above or near normal.

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<sup>3</sup>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.

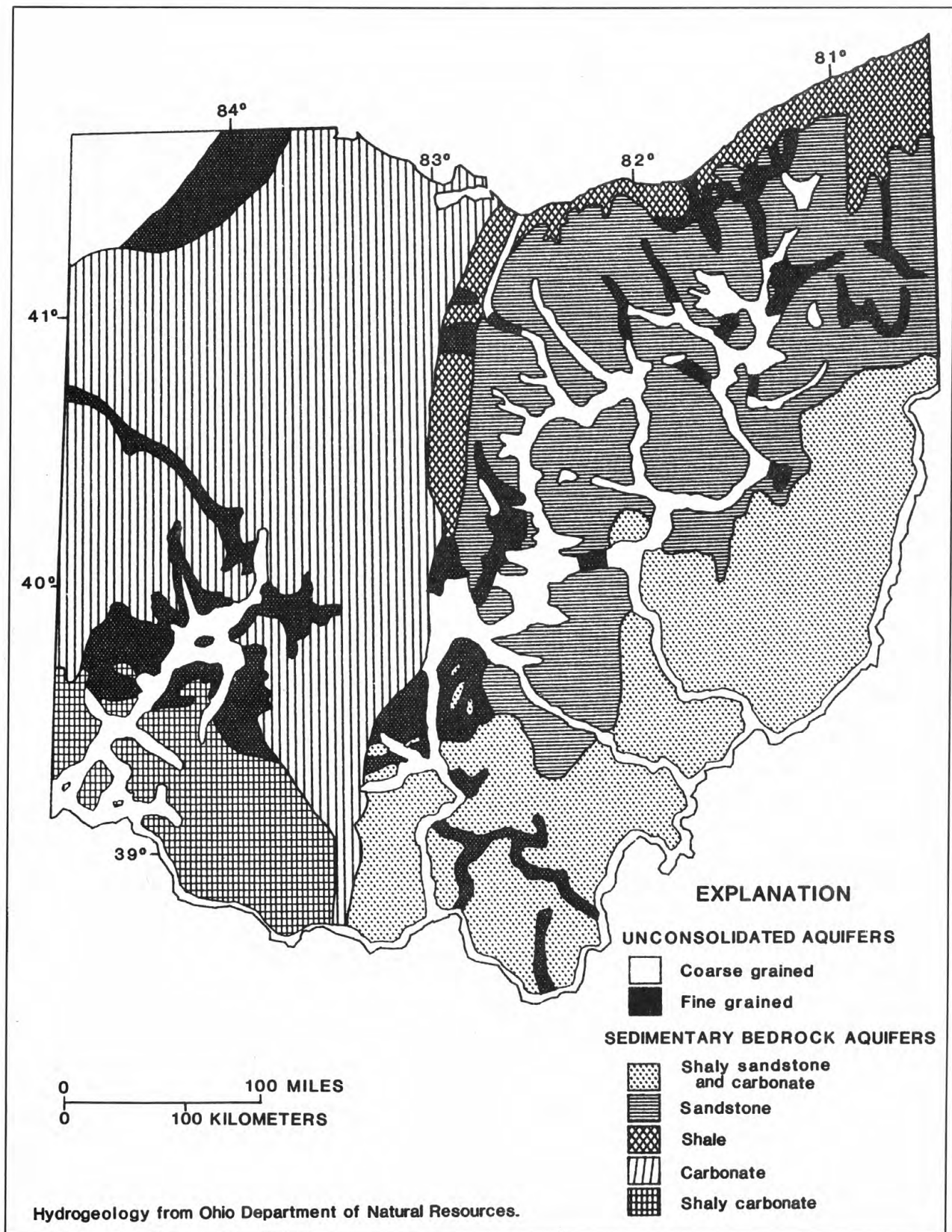


Figure 5.-- Geographic distribution of principal aquifers in Ohio.

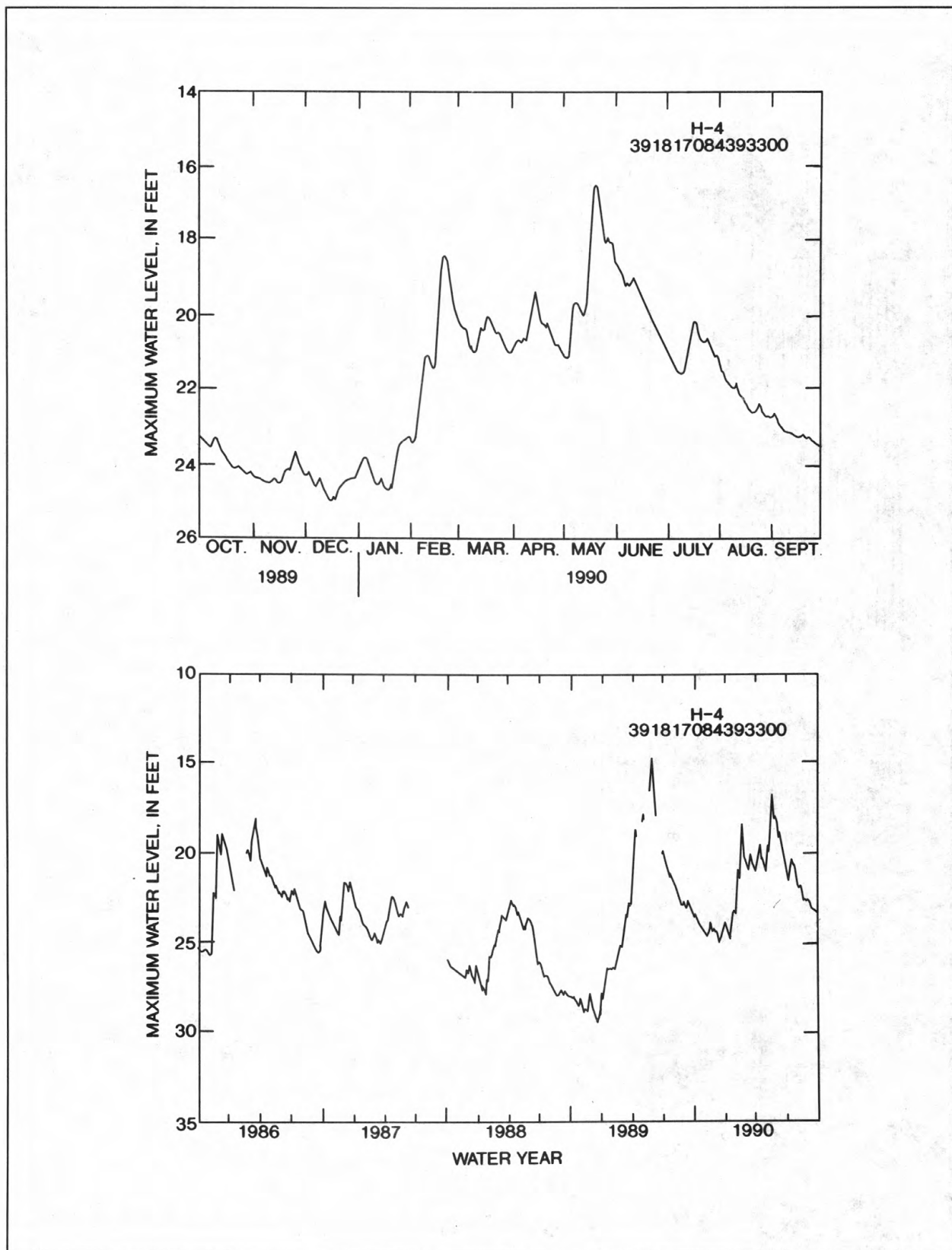


Figure 6.--Sample 1-year and 5-year hydrographs of a well completed in an unconfined unconsolidated aquifer.



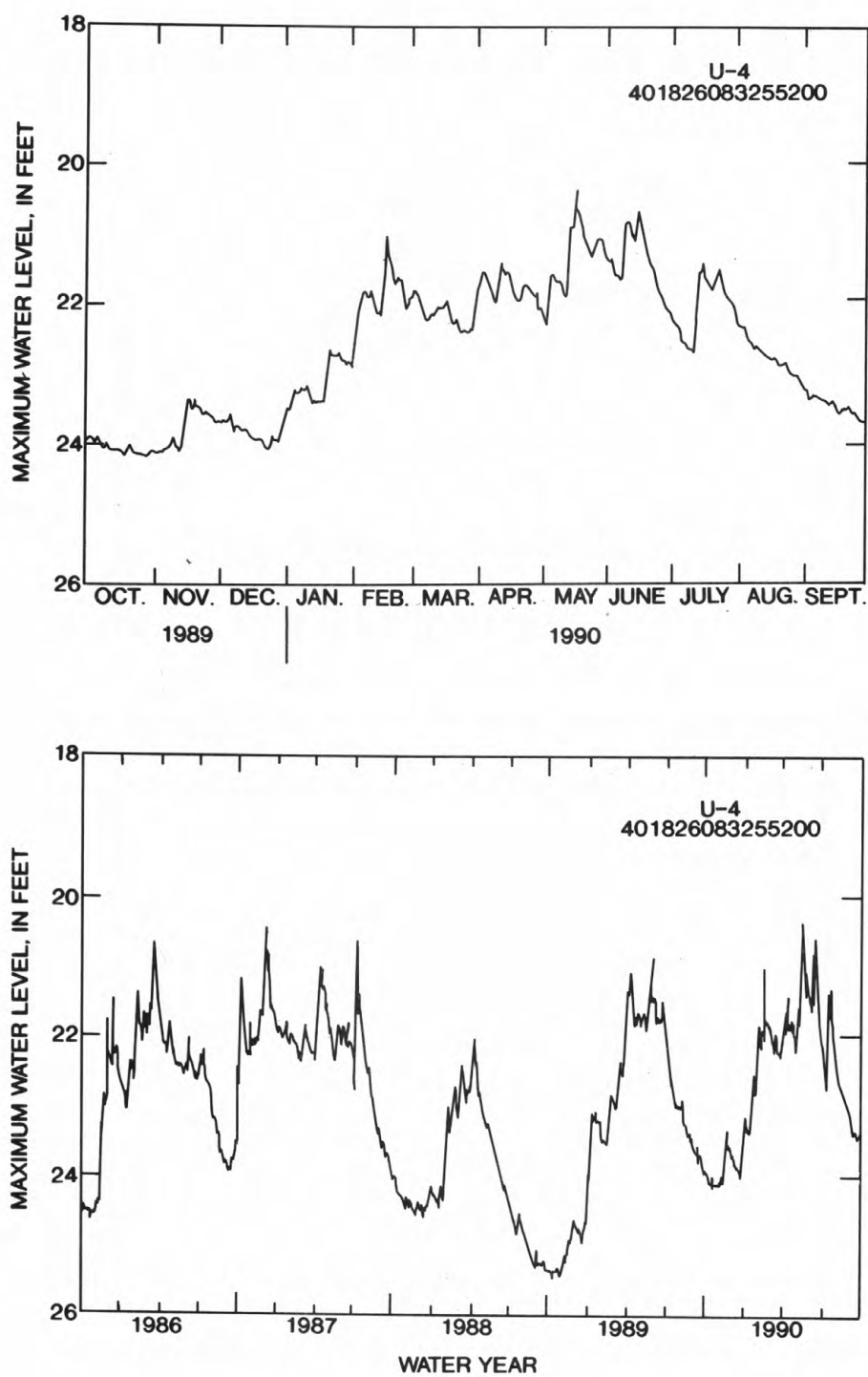


Figure 7.-- Sample 1-year and 5-year hydrographs of a well completed in a confined carbonate-rock aquifer.

## 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 indentation in a "List of Stations" in the front of the report. Each indentation represents one rank. This downstream order and system of indentation 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.

<sup>2</sup>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 longitude, the next seven digits denote degrees, minutes, and seconds of latitude, 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 8.)

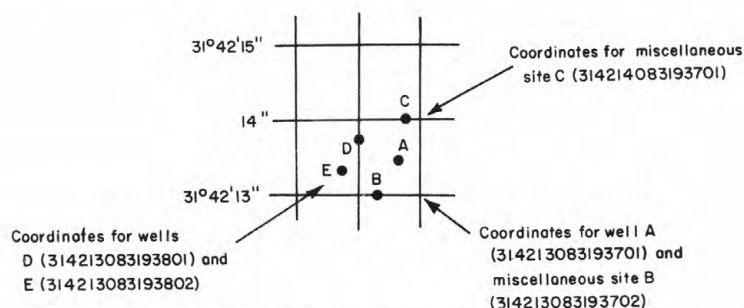


Figure 8.--System for numbering wells and miscellaneous sites (latitude and longitude)

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 9.

## 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 ft<sup>3</sup>/s; to the nearest tenth between 1.0 and 10 ft<sup>3</sup>/s; to whole numbers between 10 and 1,000 ft<sup>3</sup>/s; and to three significant figures for more than 1,000 ft<sup>3</sup>/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 9.

### 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)
M	Presence of material verified but not quantified
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 9. 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

**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 ( $\text{g/m}^3$ ), and periphyton and benthic organisms in grams per square meter ( $\text{g/m}^2$ ).

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,  $\text{ft}^3/\text{s}$ ) 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 ( $\text{CaCO}_3$ ).

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 ( $\text{m}^2$ ), 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 ( $1 \times 10^{-12}$ ) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields  $3.7 \times 10^{10}$  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 [mg C/(m<sup>2</sup>/time)] for periphyton and macrophytes and [mg C/(m<sup>3</sup>/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 [mg O<sub>2</sub>/(m<sup>2</sup>/time)] for periphyton and macrophytes and [mg O<sub>2</sub>/(m<sup>3</sup>/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 drainage 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<sub>10</sub>) 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 of 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 planimetered. All areas shown are those for the stage when the planimetered 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



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

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

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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.

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."

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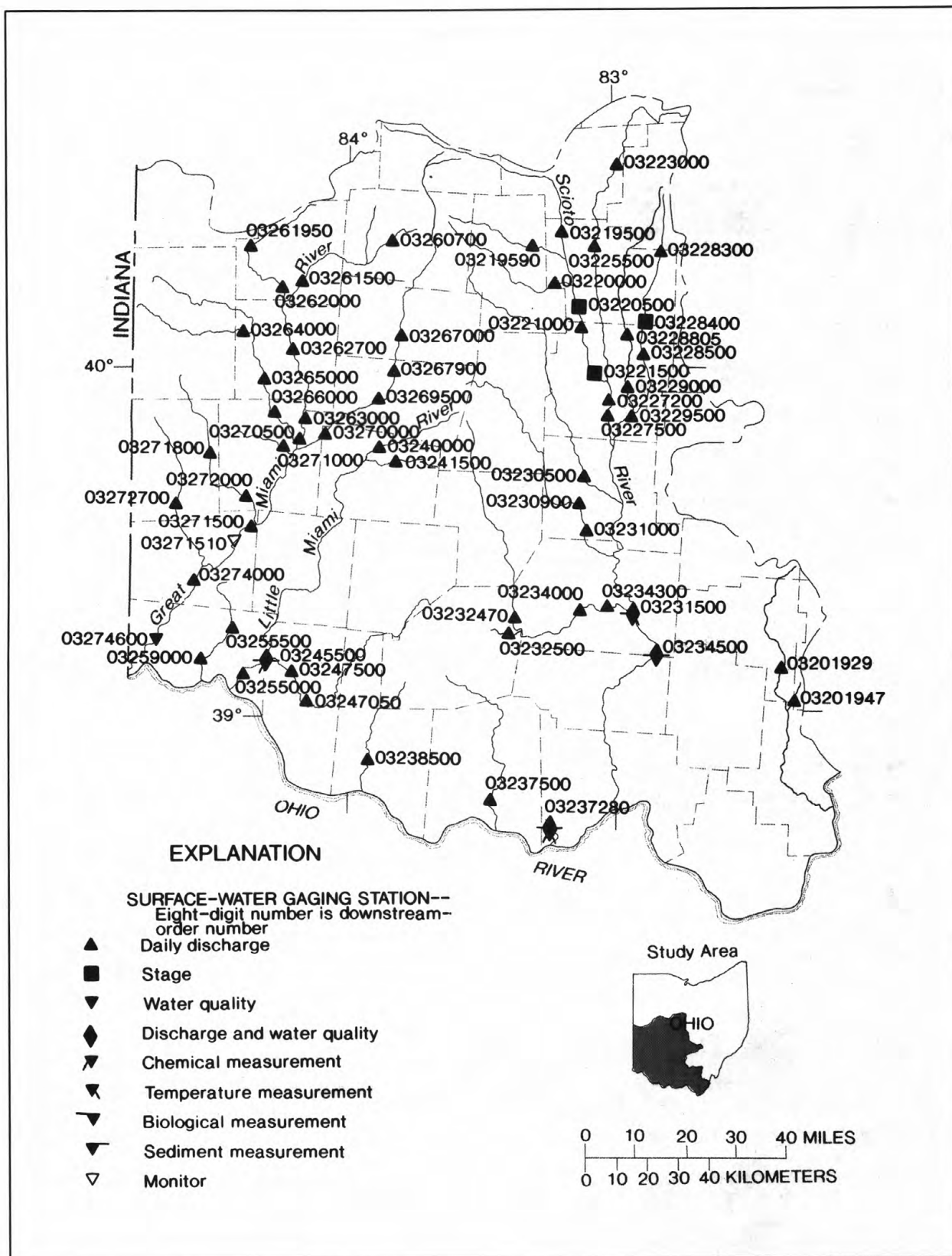


Figure 9a.--Location of data-collection stations.



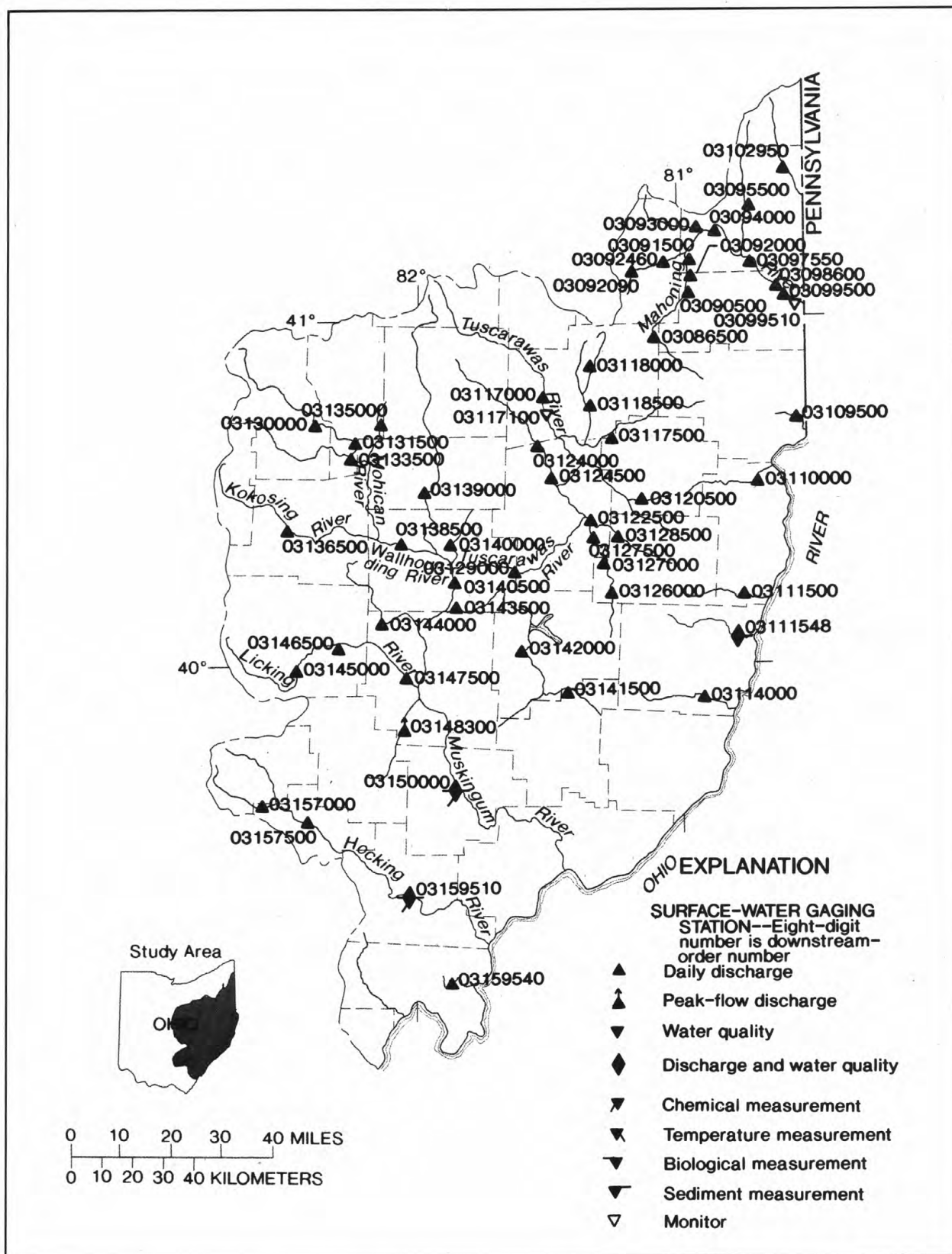


Figure 9b.—Location of data-collection stations.

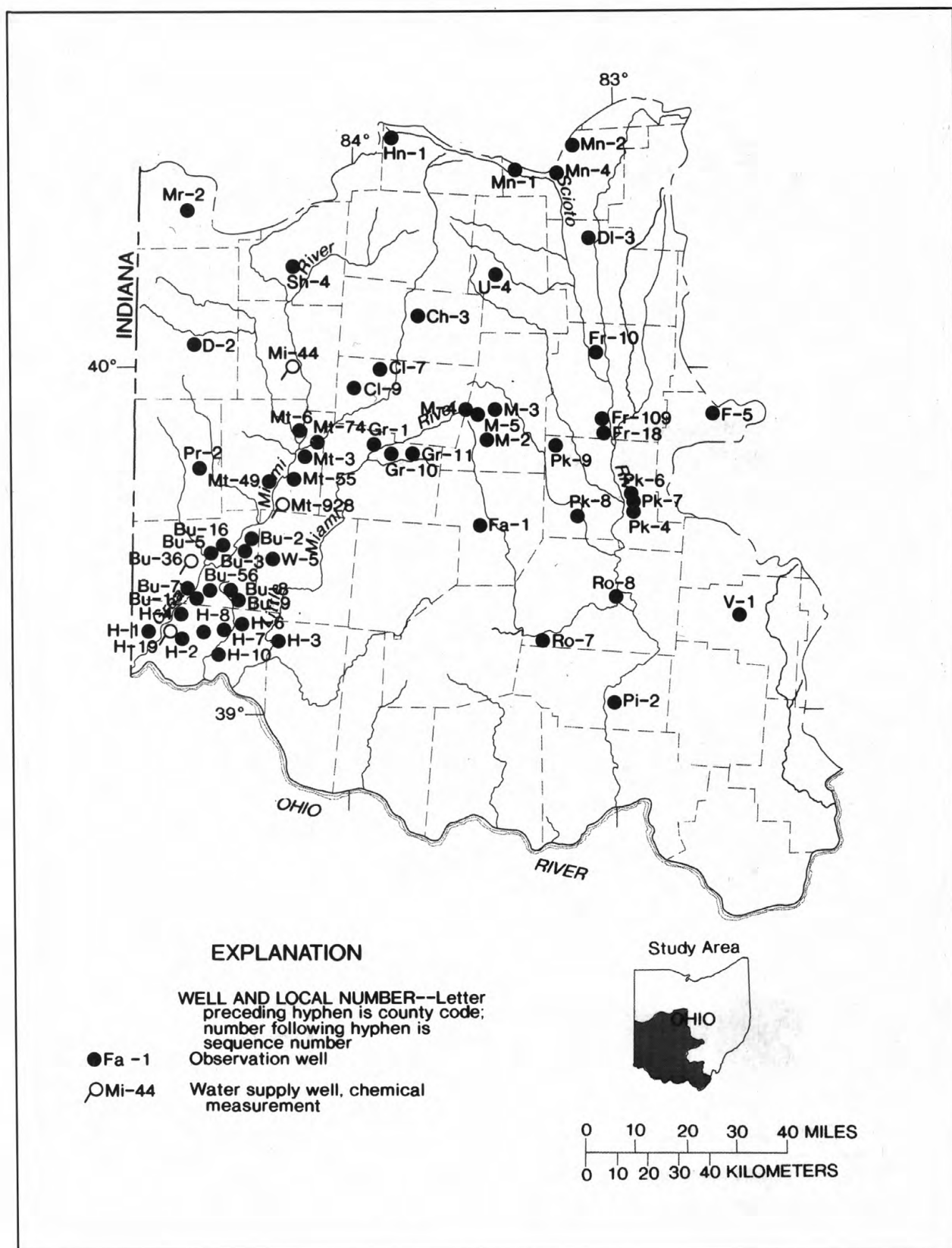


Figure 9c.—Location of wells.

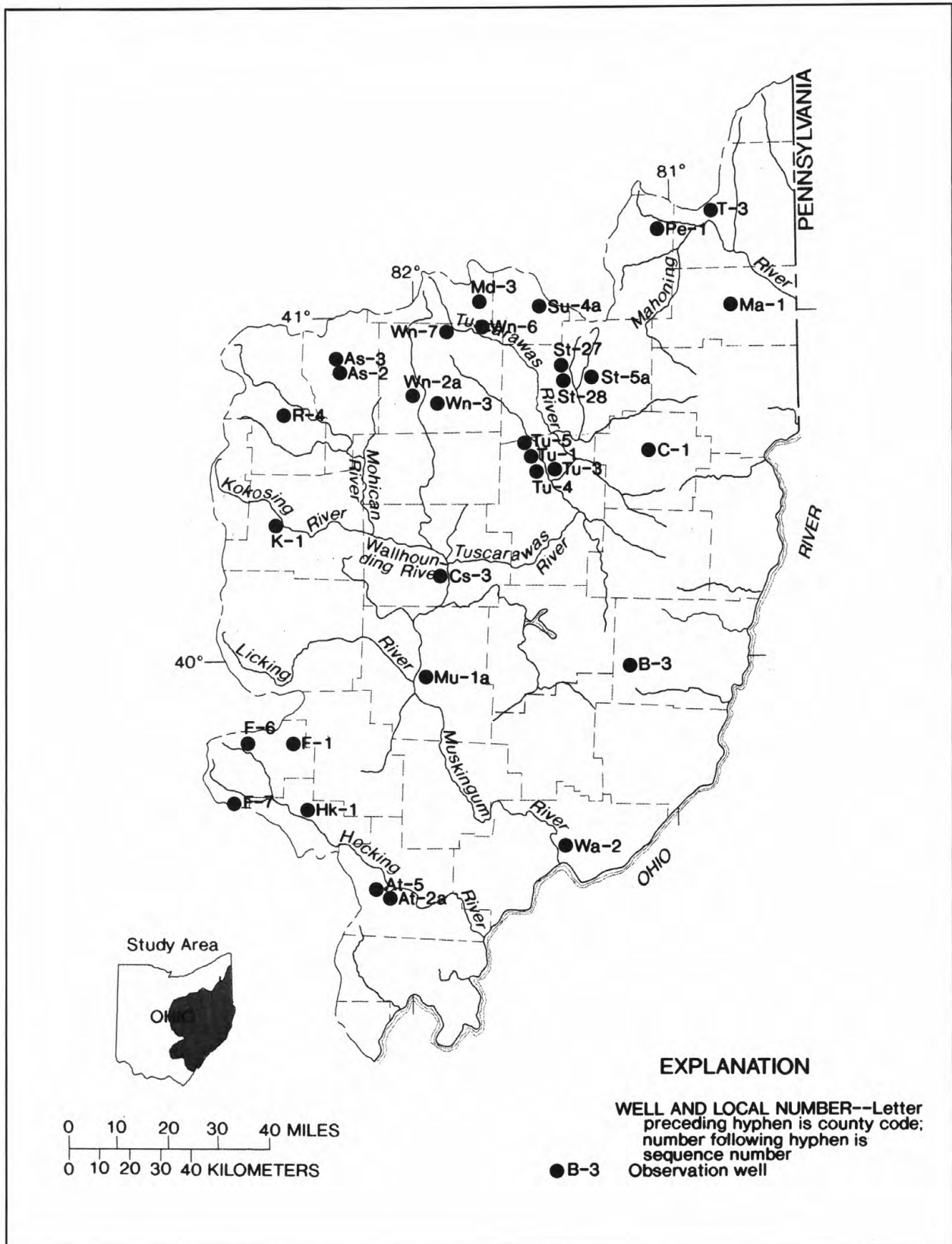


Figure 9d.--Location of wells.

## HYDROLOGIC-DATA STATION RECORDS

## 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 mi<sup>2</sup>.

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: Dec. 15-30, Jan. 4-8. 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.--49 years, 90.6 ft<sup>3</sup>/s, 13.80 in/yr, unadjusted for diversion 1941-55.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,740 ft<sup>3</sup>/s Jan. 21, 1959, gage height, 9.11 ft, from rating curve extended above 3,300 ft<sup>3</sup>/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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 4	2400	985	3.33	July 15	1600	933	3.26
Feb. 16	0830	*1,910	*4.51	July 23	2100	1,130	3.53
July 13	0900	1,330	3.82	Sept. 7	2300	1,170	3.59

Minimum daily discharge, 4.6 ft<sup>3</sup>/s July 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	32	22	769	136	93	42	33	62	7.7	26	12
2	22	28	20	362	510	91	114	35	45	8.9	20	13
3	25	30	19	116	688	93	105	28	41	7.9	16	18
4	20	34	17	110	630	81	92	40	38	6.8	15	16
5	18	32	19	190	763	57	82	98	36	5.9	94	16
6	15	28	21	120	307	54	64	84	35	6.3	54	25
7	12	35	31	90	255	39	52	56	171	5.5	31	702
8	13	48	23	60	184	38	47	40	377	5.1	21	825
9	12	51	21	42	133	45	39	30	755	6.6	16	333
10	16	42	19	70	240	68	120	23	321	4.6	15	496
11	19	32	18	79	195	62	694	21	113	14	12	193
12	19	31	18	66	132	61	464	23	70	418	10	96
13	15	25	15	48	117	56	201	84	52	1150	48	75
14	15	24	15	67	114	52	141	87	37	550	155	78
15	13	39	11	54	469	46	169	53	29	756	49	520
16	15	341	11	84	1580	42	116	125	23	610	25	370
17	17	183	10	95	693	57	95	285	18	183	18	144
18	20	79	9.8	104	271	59	85	207	14	89	14	84
19	41	49	9.5	96	177	43	64	94	9.8	47	26	112
20	54	38	9.2	104	124	45	60	65	10	37	206	225
21	33	30	8.8	273	100	42	379	51	13	93	202	106
22	30	29	8.6	170	105	37	444	44	8.3	103	303	252
23	28	23	8.4	136	132	32	171	38	7.9	737	107	158
24	24	21	8.2	128	124	30	103	28	9.3	732	65	79
25	23	21	8.0	101	91	29	74	25	12	277	44	52
26	21	25	7.8	98	76	26	57	79	8.8	104	35	40
27	21	27	7.8	72	84	25	54	66	6.2	61	25	34
28	21	28	7.6	66	114	24	42	46	5.2	48	21	32
29	22	31	7.4	65	---	24	36	222	8.1	39	19	27
30	23	24	7.4	119	---	24	34	263	8.1	33	22	71
31	31	---	254	122	---	30	---	109	---	36	16	---
TOTAL	678	1460	672.5	4076	8544	1505	4240	2482	2343.7	6182.3	1730	5204
MEAN	21.9	48.7	21.7	131	305	48.5	141	80.1	78.1	199	55.8	173
MAX	54	341	254	769	1580	93	694	285	755	1150	303	825
MIN	12	21	7.4	42	76	24	34	21	5.2	4.6	10	12
CFSM	.25	.55	.24	1.47	3.42	.54	1.58	.90	.88	2.24	.63	1.94
IN.	.28	.61	.28	1.70	3.56	.63	1.77	1.04	.98	2.58	.72	2.17

CAL YR 1989	TOTAL	35358.50	MEAN	96.9	MAX	1780	MIN	.00	CFSM	1.09	IN.	14.75
WTR YR 1990	TOTAL	39117.5	MEAN	107	MAX	1580	MIN	4.6	CFSM	1.20	IN.	16.31



## 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 mi<sup>2</sup>.

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.--Estimated daily discharges: Jan. 17 to Feb. 13. 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.--60 years, 239 ft<sup>3</sup>/s (unadjusted).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,630 ft<sup>3</sup>/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, 1,200 ft<sup>3</sup>/s July 25, gage height, 3.71 ft; minimum daily discharge, 30 ft<sup>3</sup>/s Dec. 15-30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	217	308	232	33	121	341	76	149	60	180	326	296
2	274	305	234	142	128	225	60	149	59	169	208	298
3	310	305	237	273	129	195	49	149	59	162	208	301
4	310	305	204	300	129	196	49	149	99	162	212	245
5	309	305	180	331	190	200	48	139	127	162	214	217
6	342	307	178	363	568	131	48	132	154	162	146	219
7	366	306	176	363	918	96	48	132	178	162	205	229
8	361	305	175	361	1110	96	48	140	179	162	296	222
9	354	305	172	359	1110	91	48	146	180	162	295	267
10	350	304	169	321	1110	88	74	149	194	162	294	426
11	350	302	143	295	1110	88	94	149	427	162	296	495
12	349	301	124	297	1100	88	112	149	844	124	296	726
13	349	265	104	251	1090	88	126	149	1060	95	299	1030
14	347	239	54	232	1090	88	127	76	890	96	301	1030
15	345	239	30	232	791	88	127	79	566	100	355	929
16	344	247	30	232	458	81	127	95	377	292	389	867
17	345	434	30	232	467	76	127	49	324	799	389	866
18	208	658	30	237	701	76	127	41	256	1040	389	1030
19	280	636	30	232	1020	76	127	40	237	852	386	1140
20	227	615	30	232	1080	76	127	66	235	604	383	1130
21	157	435	30	237	1120	76	131	83	232	484	383	1130
22	110	300	30	242	800	76	129	96	235	486	446	1130
23	112	298	30	242	803	76	141	106	236	373	485	1130
24	118	296	30	180	1110	76	149	130	237	542	430	1120
25	108	296	30	120	1100	76	149	146	218	1000	377	1040
26	114	268	30	91	1090	77	149	149	204	1190	377	984
27	121	233	30	91	1010	78	149	149	208	1190	382	807
28	121	232	30	91	674	78	149	149	193	1190	379	625
29	121	232	30	95	---	78	149	144	184	1180	383	509
30	217	232	30	95	---	77	149	93	182	999	330	464
31	310	---	34	111	---	76	---	60	---	641	296	---
TOTAL	7946	9813	2896	6913	22127	3328	3213	3632	8634	15084	10155	20902
MEAN	256	327	93.4	223	790	107	107	117	288	487	328	697
MAX	366	658	237	363	1120	341	149	149	1060	1190	485	1140
MIN	108	232	30	33	121	76	48	40	59	95	146	217

CAL YR 1989 TOTAL 107061 MEAN 293 MAX 2130 MIN 30  
WTR YR 1990 TOTAL 114643 MEAN 314 MAX 1190 MIN 30

## BEAVER RIVER BASIN

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 mi<sup>2</sup>.

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: Dec. 18-30. 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.--61 years, 263 ft<sup>3</sup>/s (unadjusted).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,770 ft<sup>3</sup>/s Jan. 25, 1937, gage height, 15.01 ft, from rating curve extended above 4,200 ft<sup>3</sup>/s on basis of velocity-area studies; minimum daily, 0.4 ft<sup>3</sup>/s Nov. 9, 1941, Feb. 19, 20, Oct. 11, 1945.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,370 ft<sup>3</sup>/s July 25, gage height, 5.44 ft; minimum daily discharge, 17 ft<sup>3</sup>/s Mar. 18-20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	256	481	275	66	130	411	71	122	137	243	412	324
2	290	481	275	159	138	261	60	122	137	240	218	324
3	368	481	275	288	136	206	39	122	137	239	182	324
4	404	481	242	317	138	206	30	141	151	239	182	275
5	404	481	219	340	238	180	30	89	161	239	201	242
6	404	481	219	362	634	84	28	44	163	218	190	240
7	404	481	219	362	1140	57	27	64	166	203	347	240
8	404	481	219	364	1290	80	27	94	170	203	555	245
9	408	481	219	365	1280	80	27	129	175	203	447	264
10	408	481	219	365	1280	80	56	144	213	192	350	466
11	408	480	198	365	1280	80	46	144	488	185	341	690
12	408	477	181	365	1270	45	32	144	1030	191	341	930
13	408	428	166	365	1270	22	31	144	1300	185	346	1140
14	402	397	84	321	1260	21	31	46	1160	184	344	1060
15	402	398	45	292	1010	20	31	25	765	183	382	998
16	404	402	51	292	640	19	30	61	425	408	411	996
17	404	615	62	285	640	18	30	34	425	957	411	992
18	404	896	61	301	890	17	30	32	380	1290	411	1080
19	404	890	60	315	1200	17	30	32	311	1090	411	1130
20	402	884	59	316	1230	17	39	44	236	666	408	1150
21	400	645	58	321	1260	27	50	83	236	472	410	1150
22	400	485	58	377	980	33	48	105	236	476	488	1150
23	312	485	57	415	955	55	48	104	236	420	560	1150
24	208	485	56	334	1250	69	47	122	236	631	418	1150
25	175	485	56	205	1250	69	64	137	240	1170	384	1040
26	175	430	56	206	1230	69	75	137	241	1370	384	954
27	175	371	56	206	1140	69	91	137	242	1350	384	767
28	175	371	55	206	768	70	104	137	243	1320	384	625
29	175	343	55	161	---	71	105	137	245	1310	384	629
30	263	294	55	131	---	71	118	137	245	1180	357	625
31	437	---	68	130	---	71	---	137	---	788	324	---
TOTAL	10691	15071	3978	8897	25927	2595	1475	3150	10530	18045	11367	22350
MEAN	345	502	128	287	926	83.7	49.2	102	351	582	367	745
MAX	437	896	275	415	1290	411	118	144	1300	1370	560	1150
MIN	175	294	45	66	130	17	27	25	137	183	182	240

CAL YR 1989 TOTAL 124190 MEAN 340 MAX 2290 MIN 21  
WTR YR 1990 TOTAL 134076 MEAN 367 MAX 1370 MIN 17

## 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 mi<sup>2</sup>.

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: Dec. 14-30. Records fair except those for periods of estimated discharge, which are poor. Water-quality data collected at this site 1965 to 1977.

AVERAGE DISCHARGE.--50 years, 23.3 ft<sup>3</sup>/s, 14.45 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,890 ft<sup>3</sup>/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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 2	2000	661	4.90	July 23	0900	*1,090	*6.23
Feb. 4	1730	521	4.38	Aug. 5	1600	1,080	6.18
Feb. 16	0200	839	5.49	Sept. 7	1900	547	4.48

Minimum daily discharge, 0.11 ft<sup>3</sup>/s July 9-10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.15	1.9	14	164	22	24	4.3	1.9	15	1.3	17	1.8
2	23	1.9	17	47	449	13	16	1.6	7.3	1.0	6.6	1.8
3	14	1.7	15	32	232	13	26	1.0	3.9	.63	3.2	1.8
4	2.4	2.3	11	31	316	9.2	20	1.3	2.5	1.2	3.0	1.7
5	.66	2.8	8.5	108	110	6.9	17	15	1.9	.93	776	1.5
6	.37	4.1	7.8	75	46	6.3	13	16	1.4	.55	108	2.2
7	.25	4.2	7.4	33	46	5.7	10	11	14	.37	45	272
8	.21	3.7	6.9	21	34	5.3	8.1	6.2	23	.21	22	71
9	.19	5.3	6.7	17	24	7.1	6.0	3.9	175	.11	8.6	120
10	.37	21	14	23	64	19	28	3.6	105	.11	4.6	73
11	.88	27	27	34	44	17	186	2.8	28	.51	3.1	15
12	1.6	34	13	22	26	14	44	1.6	14	76	2.2	7.6
13	2.5	14	8.5	16	19	11	25	6.7	7.5	58	35	5.3
14	2.7	8.3	5.0	13	17	10	17	16	3.7	15	64	7.2
15	2.8	6.0	4.0	13	237	8.5	35	11	2.0	181	12	120
16	3.6	4.5	3.2	35	451	7.0	22	78	1.1	41	5.6	25
17	6.7	3.1	2.9	31	69	7.3	15	123	.74	11	3.2	19
18	8.9	21	2.6	32	28	9.6	15	59	.84	4.5	2.4	10
19	10	227	2.4	26	19	7.6	11	28	.66	2.5	2.9	6.7
20	34	51	2.2	22	15	6.3	8.2	16	.61	2.0	5.3	7.4
21	33	24	2.0	120	11	5.6	175	11	.87	58	6.6	6.6
22	18	15	1.8	52	10	4.9	67	8.6	.94	128	9.5	11
23	17	12	1.7	45	20	4.5	27	5.6	.70	821	5.3	11
24	7.3	11	1.7	42	25	3.7	15	3.4	.84	67	3.8	5.7
25	3.5	9.4	1.6	28	22	3.5	9.8	2.3	1.6	15	2.9	4.3
26	2.1	8.6	1.5	25	21	3.0	7.2	7.6	1.2	7.2	2.5	3.2
27	1.4	8.0	1.4	18	12	2.7	5.4	14	.90	3.9	3.8	2.9
28	1.3	7.6	1.3	15	23	2.5	4.2	6.9	.87	2.5	2.6	2.7
29	1.1	8.3	1.3	13	---	2.5	3.1	145	1.2	1.9	2.4	3.3
30	1.2	13	1.2	14	---	2.7	2.6	129	1.2	18	2.2	7.3
31	1.5	---	166	15	---	3.2	---	33	---	109	2.0	---
TOTAL	202.68	561.7	360.6	1182	2412	246.6	842.9	770.0	418.47	1629.42	1173.3	828.0
MEAN	6.54	18.7	11.6	38.1	86.1	7.95	28.1	24.8	13.9	52.6	37.8	27.6
MAX	34	227	166	164	451	24	186	145	175	821	776	272
MIN	.15	1.7	1.2	13	10	2.5	2.6	1.0	.61	.11	2.0	1.5
CFSM	.30	.85	.53	1.74	3.93	.36	1.28	1.13	.64	2.40	1.73	1.26
IN.	.34	.95	.61	2.01	4.10	.42	1.43	1.31	.71	2.77	1.99	1.41

CAL YR 1989 TOTAL 9448.71 MEAN 25.9 MAX 701 MIN .10 CFSM 1.18 IN. 16.05  
WTR YR 1990 TOTAL 10627.67 MEAN 29.1 MAX 821 MIN .11 CFSM 1.33 IN. 18.05



## BEAVER RIVER BASIN

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 mi<sup>2</sup>.

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: Oct. 23 to Nov. 2, Nov. 6-7, 11-15, Nov. 20 to Dec. 30. 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.--25 years, 28.0 ft<sup>3</sup>/s, 17.44 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,810 ft<sup>3</sup>/s Sept. 14, 1979, inside gage height 8.63 ft, outside gage height, 9.34 ft; minimum, 0.02 ft<sup>3</sup>/s July 7, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 450 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 31	1900	671	5.32	Apr. 10	2400	480	4.68
Feb. 2	1300	701	5.41	July 19	1930	724	5.48
Feb. 4	0930	462	4.61	July 23	0100	475	4.66
Feb. 15	2130	995	6.21				

Minimum daily discharge, 1.3 ft<sup>3</sup>/s June 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.4	1.8	8.6	326	27	35	21	3.5	13	2.4	7.7	2.7
2	21	1.6	8.0	74	506	34	59	3.1	8.2	1.8	5.8	2.6
3	5.5	1.6	7.0	39	171	38	30	2.7	7.7	1.7	4.9	2.5
4	2.5	3.5	7.6	102	310	22	25	20	6.2	1.9	7.3	2.4
5	1.8	6.6	7.0	119	103	17	25	64	4.5	2.1	146	2.9
6	1.9	6.0	6.4	36	57	15	20	26	3.9	2.2	38	14
7	2.0	4.6	12	21	60	14	12	13	3.6	2.2	41	674
8	2.6	11	13	15	42	11	9.7	7.6	22	3.3	23	80
9	1.7	20	10	12	35	25	7.5	5.2	68	4.4	13	142
10	2.7	14	8.0	28	103	36	116	4.3	34	6.9	10	76
11	3.0	12	7.4	29	43	26	236	3.3	13	19	7.9	30
12	3.1	10	7.0	23	28	21	60	3.4	7.7	102	6.9	18
13	2.9	8.4	6.6	19	21	17	39	61	6.1	43	21	14
14	2.6	7.6	6.2	17	22	14	30	35	3.2	32	18	17
15	2.8	7.0	6.0	16	402	11	32	18	2.7	36	8.5	38
16	6.0	80	5.8	44	385	10	22	144	2.3	18	6.2	28
17	37	25	5.5	42	80	13	21	145	1.9	10	5.4	32
18	17	10	5.3	95	43	12	16	55	1.6	6.8	5.2	17
19	28	6.5	5.1	43	35	9.1	12	26	1.3	170	8.1	18
20	38	5.4	5.0	43	24	8.3	14	18	1.5	136	8.7	19
21	20	4.4	4.8	125	18	7.3	144	24	1.9	44	8.0	13
22	15	3.8	4.6	58	46	6.8	50	13	2.2	82	7.1	16
23	14	3.3	4.4	40	77	6.7	26	8.2	69	227	6.3	12
24	13	2.8	4.2	41	54	6.2	16	6.0	35	45	5.5	17
25	14	2.5	4.0	29	33	5.6	12	4.9	28	22	4.8	12
26	9.2	3.5	3.8	32	31	5.1	9.8	24	9.7	13	4.3	9.8
27	6.0	11	3.7	16	29	4.8	7.7	12	4.8	9.8	3.6	13
28	4.0	12	3.6	13	47	4.4	6.0	7.2	6.2	7.9	3.5	19
29	3.2	13	3.5	11	---	4.5	4.8	170	5.5	6.7	3.2	26
30	2.5	10	3.4	13	---	5.8	4.2	84	3.2	9.4	3.0	49
31	2.0	---	328	12	---	6.2	---	25	---	14	2.7	---
TOTAL	291.4	308.9	515.5	1533	2832	451.8	1087.7	1036.4	377.9	1082.5	444.6	1416.9
MEAN	9.40	10.3	16.6	49.5	101	14.6	36.3	33.4	12.6	34.9	14.3	47.2
MAX	38	80	328	326	506	38	236	170	69	227	146	674
MIN	1.7	1.6	3.4	11	18	4.4	4.2	2.7	1.3	1.7	2.7	2.4
CFSM	.43	.47	.76	2.27	4.64	.67	1.66	1.53	.58	1.60	.66	2.17
IN.	.50	.53	.88	2.62	4.83	.77	1.86	1.77	.64	1.85	.76	2.42

CAL YR 1989 TOTAL 9531.5 MEAN 26.1 MAX 694 MIN 1.2 CFSM 1.20 IN. 16.26  
WTR YR 1990 TOTAL 11378.6 MEAN 31.2 MAX 674 MIN 1.3 CFSM 1.43 IN. 19.42

## 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 right bank 200 ft upstream from bridge on Wayland Road, 0.4 mi downstream from Michael J. Kirwan Dam, and 0.2 mi south of Wayland.

DRAINAGE AREA.--81.7 mi<sup>2</sup>.

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.--22 years, 104 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,380 ft<sup>3</sup>/s Feb. 25, 1971, gage height, 11.82 ft present datum; minimum daily, 2.5 ft<sup>3</sup>/s Apr. 9, 1969.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 611 ft<sup>3</sup>/s Feb. 10, gage height, 7.87 ft; minimum daily, 20 ft<sup>3</sup>/s Mar. 19-21.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	103	140	64	44	111	71	40	74	26	63	124	31
2	107	139	49	39	118	47	31	74	25	63	100	31
3	104	139	49	40	82	46	23	74	25	63	119	31
4	105	138	48	44	94	46	22	75	62	63	120	67
5	105	138	47	62	183	45	22	60	95	62	141	101
6	106	130	48	75	379	45	22	45	96	91	121	103
7	106	123	47	56	536	45	22	44	97	112	199	126
8	107	123	46	43	602	44	32	54	100	111	275	105
9	107	123	45	42	598	45	39	70	103	111	275	186
10	91	122	45	44	602	45	48	78	100	112	217	188
11	80	121	45	43	591	44	36	80	60	112	179	326
12	97	121	44	43	586	33	24	80	24	92	179	491
13	110	120	40	42	581	22	23	83	24	65	184	489
14	110	120	41	42	578	21	23	52	23	64	182	493
15	112	121	40	43	373	21	23	42	23	65	181	498
16	115	128	40	43	129	21	23	54	23	41	112	499
17	121	126	40	43	121	21	23	31	23	23	35	495
18	121	132	39	45	220	21	22	27	23	22	34	491
19	127	131	39	43	379	20	33	26	47	21	33	493
20	127	131	39	46	417	20	41	26	65	21	33	490
21	126	131	39	47	410	20	49	37	65	23	33	487
22	126	131	39	44	230	31	31	45	65	30	33	487
23	126	130	39	62	156	39	23	55	66	38	32	487
24	119	129	39	110	242	39	33	72	66	85	32	488
25	124	129	39	85	285	39	41	79	66	271	31	487
26	124	129	39	77	284	39	41	80	65	445	31	485
27	132	128	39	107	283	39	51	80	64	498	31	483
28	137	129	39	107	187	39	59	80	64	498	31	480
29	138	121	38	107	---	39	68	91	64	497	31	479
30	139	97	38	107	---	39	74	54	63	437	31	485
31	140	---	53	106	---	39	---	26	---	289	31	---
TOTAL	3592	3820	1336	1881	9357	1125	1042	1848	1712	4488	3190	10582
MEAN	116	127	43.1	60.7	334	36.3	34.7	59.6	57.1	145	103	353
MAX	140	140	64	110	602	71	74	91	103	498	275	499
MIN	80	97	38	39	82	20	22	26	23	21	31	31
CAL YR 1989	TOTAL 40536	MEAN 111	MAX 807	MIN 21								
WTR YR 1990	TOTAL 43973	MEAN 120	MAX 602	MIN 20								

## BEAVER RIVER BASIN

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 mi<sup>2</sup>.

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: Dec. 14-30. 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.--61 years, 112 ft<sup>3</sup>/s, 15.59 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,150 ft<sup>3</sup>/s Sept. 15, 1979, gage height, 13.71 ft; minimum daily, 0.9 ft<sup>3</sup>/s Aug. 4, 1939.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,300 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 3	0630	2,510	11.57	Feb. 16	1230	*3,260	*12.15
Feb. 5	0400	1,300	9.80	Apr. 11	1800	1,340	9.89

Minimum daily 19 ft<sup>3</sup>/s Sept. 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	32	47	602	91	156	64	54	105	40	88	21
2	84	32	43	779	727	156	257	49	80	36	54	21
3	87	36	41	332	1920	201	200	46	69	32	41	20
4	42	40	42	270	890	130	126	48	62	30	37	19
5	30	38	41	640	1010	98	116	230	58	28	433	20
6	27	35	40	534	370	90	92	139	53	26	337	21
7	24	38	58	209	284	79	76	88	50	25	170	323
8	22	72	64	138	242	75	78	67	54	24	112	823
9	21	99	48	105	181	89	68	58	268	24	69	278
10	21	93	41	131	336	185	124	52	379	25	53	592
11	26	71	35	194	304	160	969	49	121	28	44	167
12	27	60	34	151	169	128	616	45	78	248	39	86
13	23	51	33	105	130	105	225	153	63	414	43	64
14	22	44	29	115	117	94	156	278	55	133	99	55
15	22	44	27	94	448	83	189	114	50	339	57	196
16	21	256	26	164	2410	74	144	376	46	175	42	162
17	130	290	25	230	985	76	113	1070	42	86	37	227
18	143	119	24	305	283	80	106	692	40	59	35	112
19	98	75	23	263	202	68	88	254	37	47	35	78
20	211	60	23	156	145	63	79	137	34	178	38	86
21	142	55	22	413	107	59	269	150	36	85	37	69
22	107	50	22	408	119	55	280	116	35	96	37	59
23	82	46	21	243	299	53	135	88	144	568	35	58
24	62	43	21	202	290	52	101	73	126	391	34	70
25	50	41	21	161	163	50	86	65	113	101	32	77
26	43	45	20	156	157	48	77	90	74	67	31	53
27	40	60	20	112	128	46	70	98	51	51	29	43
28	36	61	20	95	178	44	65	70	44	42	28	38
29	33	68	20	87	---	44	59	314	54	37	26	36
30	31	56	20	89	---	47	57	758	44	45	24	45
31	30	---	158	86	---	51	---	234	---	182	23	---
TOTAL	1758	2110	1109	7569	12685	2739	5085	6055	2465	3662	2199	3919
MEAN	56.7	70.3	35.8	244	453	88.4	169	195	82.2	118	70.9	131
MAX	211	290	158	779	2410	201	969	1070	379	568	433	823
MIN	21	32	20	86	91	44	57	45	34	24	23	19
CFSM	.58	.72	.37	2.50	4.64	.91	1.74	2.00	.84	1.21	.73	1.34
IN.	.67	.80	.42	2.88	4.83	1.04	1.94	2.31	.94	1.40	.84	1.49

CAL YR 1989 TOTAL 44485 MEAN 122 MAX 2160 MIN 15 CFSM 1.25 IN. 16.96  
WTR YR 1990 TOTAL 51355 MEAN 141 MAX 2410 MIN 19 CFSM 1.44 IN. 19.57

## 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 mi<sup>2</sup>.

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: Dec. 19-30. Records good except for periods of estimated record and Oct. 1 to Jan. 1, 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.--50 years, 588 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,300 ft<sup>3</sup>/s Jan. 22, 1959, gage height, 19.37 ft; minimum daily, 60 ft<sup>3</sup>/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, 5,890 ft<sup>3</sup>/s Feb. 16, gage height 12.43 ft; minimum daily, 130 ft<sup>3</sup>/s Dec. 26-30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	365	563	455	1660	463	1020	232	263	360	276	1480	330
2	537	560	410	1480	2020	675	461	250	267	264	537	329
3	567	566	393	1110	3810	545	479	247	233	257	382	327
4	515	570	376	946	2570	474	366	267	213	253	354	316
5	486	569	338	1360	2540	400	308	470	271	250	1980	301
6	473	570	335	1330	1650	334	254	371	288	243	2270	327
7	465	561	366	864	2010	214	212	246	304	258	874	1020
8	461	597	382	672	2340	238	191	218	359	267	1090	1670
9	459	676	346	617	2280	284	188	229	834	267	956	1440
10	463	667	337	653	2490	413	308	268	1290	270	727	2160
11	451	622	321	804	2560	409	1800	273	680	272	587	1370
12	448	597	286	738	2260	353	1610	269	1340	717	554	1390
13	461	571	273	625	2150	252	617	379	1080	1070	643	1720
14	465	510	253	556	2110	215	387	613	553	521	957	1740
15	463	510	159	521	2730	194	449	278	427	1010	687	2000
16	466	1050	140	655	5200	175	388	748	414	854	650	1940
17	587	1450	155	772	3540	183	295	1740	335	898	513	1900
18	637	1330	151	873	1670	193	265	1410	273	1350	451	1750
19	615	1230	140	913	1920	170	221	629	264	1330	450	1800
20	735	1180	140	731	2030	155	204	316	275	1040	451	1820
21	679	1090	140	1240	2010	149	680	341	406	755	455	1780
22	608	761	140	1290	1990	156	1050	332	379	888	483	1760
23	544	716	135	1050	1490	169	442	272	302	2720	587	1760
24	420	703	135	977	2000	197	290	256	402	2400	571	1740
25	339	695	135	772	2000	197	245	286	376	1510	427	1740
26	326	701	130	592	1900	191	241	342	341	1870	406	1530
27	318	623	130	555	1850	188	223	381	292	1960	401	1460
28	324	637	130	512	1740	185	244	322	282	1910	405	1160
29	326	632	130	485	---	186	238	815	292	1880	404	1120
30	334	554	130	424	---	193	251	1630	292	1970	397	1140
31	470	---	476	427	---	200	---	843	---	2940	342	---
TOTAL	14807	22061	7567	26204	63323	8907	13139	15304	13424	32470	21471	40840
MEAN	478	735	244	845	2262	287	438	494	447	1047	693	1361
MAX	735	1450	476	1660	5200	1020	1800	1740	1340	2940	2270	2160
MIN	318	510	130	424	463	149	188	218	213	243	342	301

CAL YR 1989 TOTAL 261190 MEAN 716 MAX 5410 MIN 130  
WTR YR 1990 TOTAL 279517 MEAN 766 MAX 5200 MIN 130



## BEAVER RIVER BASIN

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 mi<sup>2</sup>.

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.--50 years, 88.3 ft<sup>3</sup>/s (unadjusted).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,890 ft<sup>3</sup>/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, 501 ft<sup>3</sup>/s Feb. 19, gage height, 3.09 ft, minimum daily 2.1 ft<sup>3</sup>/s Oct. 14-22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	49	180	24	28	474	5.3	5.3	118	19	90	33
2	26	50	177	24	15	439	5.3	5.6	118	29	155	33
3	27	51	177	24	4.0	339	5.3	5.9	118	47	193	33
4	27	51	177	26	4.0	187	5.3	5.9	117	54	193	33
5	27	50	177	52	92	123	5.2	5.9	79	65	194	33
6	27	49	177	79	324	123	5.3	5.9	28	82	194	33
7	27	49	177	85	460	92	5.3	5.9	8.9	90	193	33
8	26	49	177	85	477	75	5.3	5.6	8.9	90	192	33
9	26	49	174	85	475	75	5.3	5.3	8.9	90	193	34
10	12	49	171	85	474	65	5.3	5.3	8.4	90	192	70
11	2.7	49	171	85	475	58	5.3	5.3	8.2	89	192	153
12	2.5	49	176	85	473	26	5.3	5.8	7.2	53	192	190
13	2.2	49	177	85	471	5.9	5.3	5.9	7.0	29	192	190
14	2.1	49	177	85	470	5.8	5.3	6.1	6.4	29	192	190
15	2.1	49	177	85	269	5.3	5.3	6.4	6.4	29	191	192
16	2.1	49	177	85	107	5.3	5.3	6.4	5.6	117	191	192
17	2.1	92	177	85	107	5.3	5.3	7.0	5.6	192	191	192
18	2.1	152	119	86	276	5.3	5.3	64	5.4	192	192	258
19	2.1	152	83	87	464	5.3	5.3	157	5.3	193	128	298
20	2.1	152	82	87	481	5.3	5.4	185	5.3	193	89	379
21	2.1	152	83	87	481	5.3	5.9	193	5.3	194	89	428
22	2.1	151	83	87	324	5.1	5.9	198	5.3	193	89	426
23	12	170	83	87	347	4.9	5.9	198	5.3	128	89	425
24	26	183	83	87	481	4.9	5.9	198	5.2	154	89	427
25	40	181	83	51	478	5.2	5.9	200	5.3	193	89	346
26	49	182	83	28	478	5.3	5.9	201	5.1	193	89	230
27	49	181	83	28	478	5.3	5.9	201	4.7	193	53	189
28	49	182	82	28	477	5.3	5.7	118	11	192	34	189
29	49	181	46	28	---	5.3	5.3	58	15	192	34	189
30	49	180	24	28	---	5.3	5.3	95	17	193	34	189
31	49	---	24	28	---	5.3	---	118	---	131	33	---
TOTAL	649.3	3081	4037	1991	9490.0	2176.7	163.6	2283.5	754.7	3728	4261	5640
MEAN	20.9	103	130	64.2	339	70.2	5.45	73.7	25.2	120	137	188
MAX	49	183	180	87	481	474	5.9	201	118	194	194	428
MIN	2.1	49	24	24	4.0	4.9	5.2	5.3	4.7	19	33	33
(+)	20.5	19.9	20.3	19.8	20.6	19.8	20.6	21.4	21.9	21.1	21.5	21.7
CAL YR 1989	TOTAL 42027.1 MEAN 115 MAX 701 MIN 1.5 (+) 21.3											
WTR YR 1990	TOTAL 38255.8 MEAN 105 MAX 481 MIN 2.1 (+) 20.8											

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

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.

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

REMARKS.--Estimated daily discharges: Dec. 16-30. Records good, except estimated record, which is fair. 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 CURRENT YEAR.--Maximum discharge, 6,490 ft<sup>3</sup>/s Feb. 16, gage height 9.55; minimum daily discharge, 220 ft<sup>3</sup>/s Dec. 27-30.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	423	689	724	1810	707	1750	315	337	793	402	2270	443
2	837	719	656	1720	2690	1320	587	331	626	378	858	442
3	842	738	621	1200	4460	1090	761	325	589	369	600	438
4	688	739	606	1030	3920	946	640	363	529	374	565	440
5	615	739	578	1480	3240	748	542	520	531	380	2200	434
6	586	739	560	1590	2150	596	438	560	562	389	3140	468
7	568	744	602	1140	2230	479	361	381	645	383	1370	1280
8	560	799	625	891	2720	407	324	326	894	400	1260	1860
9	553	930	592	807	2800	453	313	315	1830	401	1230	1990
10	567	916	563	848	3000	599	527	347	2390	414	1010	2820
11	550	848	542	981	3130	657	2570	351	1220	465	879	1930
12	522	793	521	961	2810	585	2580	357	1030	1200	813	1580
13	524	760	491	844	2650	449	1140	467	1360	1690	1070	1860
14	535	705	479	754	2610	359	732	709	1420	950	1340	2000
15	531	731	448	730	3660	326	758	521	1160	1800	1060	2520
16	530	1730	240	812	6070	300	688	926	702	1710	919	2550
17	692	1920	320	977	5440	328	527	2210	508	1210	828	2350
18	781	1560	300	1130	2430	349	453	2020	487	1460	730	2060
19	809	1440	280	1240	2130	313	394	1080	427	1530	720	2020
20	990	1340	270	1050	2400	278	353	691	376	1280	670	2070
21	950	1270	260	1610	2460	259	1170	694	359	1200	647	2050
22	818	990	250	1770	2490	257	1600	675	355	1360	645	2090
23	736	884	240	1430	2050	253	849	592	368	3960	721	2090
24	591	873	230	1290	2260	260	543	530	506	3890	740	2080
25	479	879	230	1100	2480	279	425	544	502	1990	644	2080
26	447	898	230	865	2360	275	384	641	446	2020	582	1880
27	447	860	220	741	2280	268	355	691	393	2100	575	1720
28	440	867	220	686	2250	263	347	658	423	2020	545	1400
29	440	864	220	664	---	269	340	990	446	1960	518	1290
30	438	817	220	638	---	282	327	2030	428	2160	511	1320
31	533	---	753	639	---	281	---	1450	---	3650	479	---
TOTAL	19022	28781	13091	33428	79877	15278	21343	22632	22305	43495	30139	49555
MEAN	614	959	422	1078	2853	493	711	730	743	1403	972	1652
MAX	990	1920	753	1810	6070	1750	2580	2210	2390	3960	3140	2820
MIN	423	689	220	638	707	253	313	315	355	369	479	434

CAL YR 1989	TOTAL 369182	MEAN 1011	MAX 7270	MIN 220
WTR YR 1990	TOTAL 378946	MEAN 1038	MAX 6070	MIN 220

## BEAVER RIVER BASIN

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 mi<sup>2</sup>.

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.--Estimated daily discharges: Dec. 16-30, Feb. 1-5. Records good except estimated record, which is fair. 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 ft<sup>3</sup>/s June 15, 1989, gage height 12.76 ft; minimum daily discharge 181 ft<sup>3</sup>/s Oct. 17, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 8,150 ft<sup>3</sup>/s July 15; gage height 10.81 ft; minimum daily discharge 240 ft<sup>3</sup>/s Dec. 28-30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	457	721	748	2160	900	1890	429	407	851	512	2680	519
2	880	757	685	1910	3500	1440	878	405	646	466	1100	512
3	961	771	649	1330	5400	1220	1030	389	609	451	772	510
4	773	784	626	1140	5000	1070	886	436	562	464	730	498
5	676	783	608	1560	4500	872	752	682	516	473	2500	505
6	639	780	600	1650	2610	719	612	724	599	473	3660	548
7	613	789	647	1240	2470	601	493	510	1240	479	1850	2150
8	598	887	656	961	2940	500	425	412	1210	508	1480	2370
9	594	1010	623	865	3010	560	396	378	2450	522	1380	2790
10	599	997	591	915	3330	716	766	393	2730	589	1140	3600
11	611	914	572	1050	3430	794	3360	413	1480	688	980	2370
12	567	859	557	1040	3040	722	3210	401	1140	2290	897	1730
13	556	818	524	901	2820	594	1500	586	1400	2260	1400	1930
14	568	757	508	799	2780	467	954	810	1490	1520	1700	2160
15	566	808	437	776	5050	417	953	675	1270	5590	1320	3130
16	563	2140	280	852	7980	387	888	1090	861	3160	1070	2960
17	714	2060	350	1010	6920	470	714	2530	626	1780	961	2570
18	814	1580	330	1170	2960	517	616	2360	601	1710	840	2210
19	890	1440	310	1280	2300	441	532	1300	547	1730	824	2130
20	1080	1330	300	1130	2520	392	469	836	482	1510	781	2210
21	1050	1270	280	1720	2560	358	1640	811	465	1730	792	2160
22	892	1030	270	1880	2630	334	1950	787	447	1870	769	2310
23	793	907	260	1530	2310	335	1130	700	437	6360	810	2250
24	659	890	260	1380	2380	325	740	630	574	5140	838	2170
25	539	896	250	1200	2610	344	589	613	636	2410	761	2150
26	479	918	250	957	2380	339	518	779	553	2220	676	1950
27	475	894	250	803	2360	330	473	781	481	2250	661	1780
28	465	902	240	739	2360	324	440	719	513	2150	640	1490
29	462	890	240	719	---	320	433	1100	570	2080	609	1360
30	457	843	240	723	---	336	405	2130	531	2350	595	1420
31	526	---	1180	733	---	343	---	1570	---	4150	569	---
TOTAL	20516	30425	14321	36123	93050	18477	28181	26357	26517	59885	35785	56442
MEAN	662	1014	462	1165	3323	596	939	850	884	1932	1154	1881
MAX	1080	2140	1180	2160	7980	1890	3360	2530	2730	6360	3660	3600
MIN	457	721	240	719	900	320	396	378	437	451	569	498

CAL YR 1989 TOTAL 421215 MEAN 1154 MAX 9290 MIN 240  
WTR YR 1990 TOTAL 446079 MEAN 1222 MAX 7980 MIN 240

## 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 mi<sup>2</sup>.

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.--Estimated daily discharges: Dec. 21-30. Records good except for estimated discharges, which are fair. 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.--48 years, 1,129 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 21,000 ft<sup>3</sup>/s Jan. 21, 1959, gage height, 14.43 ft; minimum daily, 155 ft<sup>3</sup>/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, 16,300 ft<sup>3</sup>/s July 15, gage height, 11.91 ft; minimum daily, 300 ft<sup>3</sup>/s, Dec. 29-30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	533	838	924	2950	1090	2430	512	494	1040	565	3140	517
2	964	881	838	2520	4370	1800	1240	482	757	504	1300	506
3	1140	909	794	1730	5850	1520	1310	455	710	476	858	499
4	928	906	768	1430	6410	1320	1120	539	672	484	782	493
5	810	898	744	1950	4750	1070	939	875	565	492	2710	533
6	761	890	726	2110	3340	879	752	895	693	492	4160	556
7	729	934	805	1590	3030	740	587	631	1950	495	2400	2930
8	711	1080	808	1210	3440	596	490	499	1710	526	1690	2690
9	698	1200	764	1070	3550	682	443	444	3280	538	1550	3540
10	725	1170	714	1160	3990	861	1150	448	3440	711	1270	4170
11	740	1070	692	1300	4040	967	4340	476	1950	858	1070	2790
12	673	990	671	1300	3610	875	3890	454	1330	3240	948	1920
13	660	942	627	1130	3330	740	1950	728	1580	2960	1860	2100
14	671	880	608	988	3310	558	1250	921	1730	1910	2090	2520
15	668	874	542	955	6030	495	1230	845	1500	10500	1550	3800
16	664	2830	439	1040	9130	457	1140	1200	1060	4290	1190	3360
17	847	2720	456	1250	7710	597	944	2990	713	2290	1050	2890
18	971	2010	464	1460	3780	620	802	2980	672	1980	893	2470
19	1150	1790	439	1610	2840	536	681	1690	615	1970	865	2360
20	1320	1640	380	1460	3050	462	599	1030	538	1740	834	2460
21	1260	1550	360	2230	3070	408	2320	978	533	2260	864	2370
22	1060	1310	340	2500	3080	366	2600	927	486	2270	817	2660
23	944	1100	330	2070	2970	368	1530	819	479	8660	841	2530
24	797	1070	330	1800	2870	344	984	718	634	6180	875	2410
25	641	1070	320	1570	3130	365	770	682	776	2920	805	2350
26	565	1100	320	1280	2910	359	661	940	631	2470	698	2150
27	560	1080	310	1050	2880	347	591	909	532	2500	682	1930
28	544	1090	310	968	2880	336	548	836	569	2390	666	1620
29	538	1080	300	950	---	329	541	1300	655	2280	625	1430
30	533	1030	300	991	---	355	500	2560	606	2510	605	1560
31	605	---	1730	1000	---	369	---	1980	---	4510	577	---
TOTAL	24410	36932	18153	46622	110440	22151	36414	31725	32406	75971	40265	64114
MEAN	787	1231	586	1504	3944	715	1214	1023	1080	2451	1299	2137
MAX	1320	2830	1730	2950	9130	2430	4340	2990	3440	10500	4160	4170
MIN	533	838	300	950	1090	329	443	444	479	476	577	493

CAL YR 1989 TOTAL 504717 MEAN 1383 MAX 11000 MIN 300  
WTR YR 1990 TOTAL 539603 MEAN 1478 MAX 10500 MIN 300



## BEAVER RIVER BASIN

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 mi<sup>2</sup>.

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, 14.6 mg/L Feb. 21, 1990; minimum, 0.0 mg/L June 1, 1975, June 17, 1977.

## EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 1040 microsiemens Dec. 30; minimum, 212 microsiemens July 15.

pH: Maximum, 8.4 units March 27, 28; minimum, 7.1 units April 20.

WATER TEMPERATURES: Maximum, 27.5°C July 5; minimum, 2.0°C Dec. 17, 22, Jan. 1-3.

DISSOLVED OXYGEN: Maximum, 14.6 mg/L Feb. 21; minimum, 5.6 mg/L Sept. 6.

## BEAVER RIVER BASIN

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

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	550	528	534	546	510	525	482	470	474	766	578	676
2	538	484	514	518	496	507	486	478	482	570	466	498
3	486	398	445	500	494	498	488	482	484	474	432	452
4	472	450	457	502	490	497	500	488	492	464	428	444
5	500	470	480	500	486	493	516	494	502	502	466	489
6	508	498	503	494	482	487	524	502	513	488	446	462
7	508	498	502	488	474	484	560	526	545	442	424	430
8	506	494	500	490	470	485	540	530	534	478	434	447
9	498	492	494	502	490	495	526	516	519	506	480	489
10	502	490	496	498	482	489	524	512	515	540	506	523
11	498	486	491	496	488	492	522	506	511	556	542	549
12	512	496	502	506	490	496	532	522	528	554	536	545
13	512	498	504	508	494	500	540	522	529	560	538	549
14	514	506	510	506	494	499	538	520	524	560	546	553
15	514	502	506	508	500	504	528	506	516	580	558	565
16	512	502	506	492	432	458	526	516	520	590	582	585
17	510	494	502	450	414	436	526	510	517	582	570	576
18	496	472	488	426	414	422	518	506	512	594	560	573
19	486	464	476	440	404	421	530	512	522	558	522	544
20	492	478	486	450	438	443	540	532	535	560	502	520
21	482	472	477	464	450	456	574	536	553	564	544	558
22	488	468	473	472	456	462	594	576	587	540	492	510
23	496	480	485	480	466	471	594	584	589	496	486	492
24	508	496	500	478	460	468	610	592	601	512	486	495
25	536	510	523	470	460	465	608	592	600	528	504	510
26	546	526	537	468	456	461	600	590	594	550	522	531
27	550	540	544	464	456	461	624	590	600	554	540	546
28	552	538	545	476	462	469	624	590	606	562	536	547
29	554	540	547	474	468	471	642	606	618	616	544	560
30	550	542	545	476	466	470	1040	642	866	720	624	641
31	560	538	544	---	---	---	990	756	874	720	664	686
MONTH	560	398	504	546	404	476	1040	470	560	766	424	534
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	702	648	677	436	422	428	652	566	633	594	586	590
2	646	526	584	442	434	439	632	574	610	600	590	593
3	---	---	---	450	438	443	610	542	567	604	592	599
4	---	---	---	454	444	449	542	520	531	618	572	605
5	---	---	---	472	454	459	536	518	523	582	542	571
6	---	---	---	512	472	485	546	524	534	582	532	562
7	---	---	---	540	512	518	558	534	544	566	540	547
8	---	---	---	560	536	545	568	560	563	570	560	564
9	---	---	---	596	550	565	586	572	580	594	574	585
10	---	---	---	598	570	584	606	490	577	594	574	586
11	---	---	---	578	538	557	518	390	463	616	588	598
12	414	404	409	544	530	537	384	340	355	606	590	596
13	422	410	415	552	534	539	388	340	361	600	562	581
14	450	420	433	578	554	566	446	390	407	576	534	562
15	460	412	441	604	580	584	458	438	444	530	506	514
16	406	300	351	618	608	615	480	456	464	538	496	524
17	294	260	273	642	624	632	494	472	479	492	370	426
18	382	294	340	648	634	641	524	494	506	368	326	346
19	410	384	399	654	632	642	554	524	535	362	332	347
20	426	412	422	656	622	636	558	548	554	400	364	377
21	422	412	417	652	628	642	560	462	495	424	402	413
22	426	418	421	644	628	637	482	420	442	426	416	419
23	438	422	429	654	642	648	450	420	436	434	422	428
24	440	424	432	668	646	662	454	450	453	448	428	434
25	432	410	420	664	648	657	---	---	---	468	446	453
26	422	410	414	652	638	645	---	---	---	470	450	464
27	422	414	419	650	634	641	---	---	---	480	464	469
28	428	422	424	642	628	635	---	---	---	478	460	467
29	---	---	---	640	634	637	---	---	---	476	450	464
30	---	---	---	660	638	651	586	584	584	466	390	435
31	---	---	---	652	636	642	---	---	---	386	366	372
MONTH	702	260	427	668	422	579	652	340	506	618	326	500

## BEAVER RIVER BASIN

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

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	396	364	374	552	522	538	338	308	317	526	512	519
2	436	398	411	560	544	550	412	340	373	524	508	516
3	458	438	449	562	548	555	458	414	437	516	506	510
4	488	458	470	564	552	560	460	446	456	516	504	508
5	498	480	492	562	546	557	440	344	397	520	486	504
6	500	452	492	552	524	539	342	244	290	516	502	509
7	514	310	454	554	530	537	344	272	311	504	332	430
8	476	446	465	556	510	527	362	346	353	408	374	392
9	452	368	417	516	508	510	402	364	380	366	298	327
10	418	372	398	600	430	547	428	404	415	314	290	306
11	404	364	380	512	444	493	444	428	434	314	286	294
12	416	406	411	490	380	434	448	430	438	374	316	346
13	450	408	425	426	412	420	442	324	413	398	374	386
14	454	446	450	440	336	429	406	382	399	400	316	387
15	466	450	456	358	212	320	408	398	402	404	364	380
16	490	466	475	392	360	378	420	408	412	372	356	364
17	510	492	499	426	394	411	440	418	424	372	356	364
18	536	512	520	442	416	423	446	434	439	382	372	377
19	546	524	531	458	442	453	452	442	446	394	382	387
20	546	534	539	474	446	461	458	446	449	396	390	392
21	568	546	558	470	372	419	466	450	458	392	384	390
22	574	566	568	438	340	420	478	462	471	404	378	395
23	588	568	578	368	284	336	486	472	479	402	390	395
24	590	540	573	340	282	301	480	470	473	390	386	387
25	554	520	538	344	298	327	476	464	469	392	386	388
26	538	520	530	408	346	385	484	470	475	394	386	390
27	534	516	522	420	412	418	486	474	479	398	388	392
28	532	508	522	426	418	419	482	478	480	412	392	402
29	560	526	544	418	414	416	502	484	491	412	404	407
30	564	518	537	420	384	411	514	500	507	406	398	404
31	---	---	---	384	326	348	518	506	511	---	---	---
MONTH	590	310	486	600	212	447	518	244	428	526	286	405
YEAR	1040	212	490									

PH (STANDARD UNITS), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	7.8	7.5	7.7	7.7	7.6	7.6	7.8	7.6	7.7	7.6	7.5	7.6
2	7.7	7.6	7.7	7.7	7.7	7.7	7.8	7.7	7.8	7.7	7.5	7.6
3	7.8	7.6	7.7	7.8	7.7	7.8	7.9	7.7	7.8	7.7	7.4	7.6
4	7.8	7.7	7.8	7.8	7.8	7.8	8.0	7.7	7.8	7.7	7.6	7.6
5	7.8	7.6	7.7	7.8	7.7	7.8	7.7	7.6	7.7	---	---	---
6	7.7	7.6	7.7	7.8	7.7	7.7	7.9	7.7	7.8	---	---	---
7	7.7	7.6	7.7	7.9	7.7	7.8	7.9	7.6	7.8	---	---	---
8	7.8	7.7	7.8	7.8	7.6	7.7	8.0	7.7	7.8	---	---	---
9	7.9	7.7	7.8	7.8	7.6	7.7	8.0	7.7	7.9	---	---	---
10	7.9	7.8	7.9	7.8	7.8	7.8	7.9	7.8	7.8	---	---	---
11	7.8	7.7	7.8	7.8	7.7	7.8	7.8	7.8	7.8	---	---	---
12	7.8	7.7	7.8	7.8	7.7	7.8	8.1	7.8	7.9	---	---	---
13	7.8	7.5	7.7	7.9	7.7	7.8	8.0	7.9	8.0	---	---	---
14	7.8	7.6	7.7	7.7	7.7	7.7	7.9	7.6	7.7	---	---	---
15	7.9	7.7	7.8	7.8	7.7	7.7	7.7	7.6	7.7	---	---	---
16	7.8	7.8	7.8	7.8	7.6	7.7	8.0	7.6	7.7	---	---	---
17	7.8	7.6	7.7	7.8	7.7	7.8	8.1	7.7	7.9	---	---	---
18	7.7	7.6	7.7	7.8	7.7	7.7	8.1	8.0	8.0	---	---	---
19	7.8	7.5	7.7	7.9	7.7	7.8	8.1	7.9	8.0	---	---	---
20	7.8	7.6	7.7	7.8	7.7	7.8	8.0	7.7	7.9	---	---	---
21	7.8	7.7	7.8	8.0	7.8	7.9	7.9	7.5	7.8	---	---	---
22	7.7	7.6	7.7	8.0	7.9	7.9	8.1	7.8	8.0	---	---	---
23	7.8	7.7	7.7	7.9	7.9	7.9	8.1	7.9	8.0	---	---	---
24	7.7	7.7	7.7	7.9	7.3	7.7	8.1	8.0	8.0	---	---	---
25	7.7	7.6	7.7	7.6	7.6	7.6	8.0	8.0	8.0	---	---	---
26	7.7	7.6	7.7	7.6	7.2	7.5	8.0	7.6	7.9	---	---	---
27	7.7	7.6	7.7	7.7	7.4	7.5	8.3	7.3	7.9	---	---	---
28	7.8	7.6	7.7	7.8	7.5	7.7	7.9	7.5	7.8	---	---	---
29	7.7	7.6	7.7	7.8	7.5	7.6	7.8	7.5	7.7	---	---	---
30	7.7	7.6	7.7	7.8	7.6	7.7	7.6	7.4	7.5	---	---	---
31	7.7	7.6	7.6	---	---	---	7.6	7.5	7.6	---	---	---
MONTH	7.9	7.5	7.7	8.0	7.2	7.7	8.3	7.3	7.8	7.7	7.4	7.6

PH (STANDARD UNITS), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	---	---	---	7.8	7.7	7.7	7.9	7.6	7.7	7.7	7.4	7.5
2	---	---	---	7.8	7.7	7.8	7.9	7.5	7.8	7.7	7.3	7.5
3	---	---	---	7.8	7.7	7.8	7.8	7.7	7.8	7.7	7.5	7.6
4	---	---	---	7.8	7.7	7.8	7.9	7.6	7.8	7.6	7.4	7.5
5	---	---	---	7.8	7.8	7.8	7.9	7.7	7.8	7.6	7.3	7.4
6	---	---	---	7.8	7.6	7.8	7.9	7.7	7.8	7.6	7.5	7.6
7	---	---	---	7.9	7.7	7.8	7.9	7.7	7.8	7.8	7.6	7.7
8	---	---	---	7.9	7.7	7.8	8.0	7.7	7.8	7.7	7.4	7.6
9	---	---	---	7.8	7.7	7.7	8.1	7.7	7.8	7.6	7.5	7.5
10	---	---	---	7.8	7.7	7.7	7.7	7.6	7.7	7.6	7.4	7.5
11	---	---	---	7.8	7.7	7.7	7.8	7.6	7.7	7.8	7.4	7.6
12	---	---	---	7.8	7.7	7.8	7.6	7.5	7.6	7.6	7.4	7.5
13	---	---	---	7.9	7.7	7.8	7.6	7.5	7.6	7.6	7.4	7.5
14	7.9	7.8	7.9	8.0	7.7	7.8	7.8	7.6	7.6	7.9	7.6	7.7
15	7.9	7.8	7.8	8.1	7.6	7.8	7.8	7.6	7.7	7.7	7.6	7.6
16	7.8	7.5	7.7	7.8	7.6	7.7	7.8	7.6	7.7	7.6	7.5	7.6
17	7.7	7.5	7.5	7.7	7.6	7.6	7.8	7.7	7.8	7.5	7.4	7.5
18	7.7	7.6	7.7	8.0	7.7	7.8	8.0	7.7	7.8	7.4	7.4	7.4
19	7.8	7.5	7.8	7.8	7.7	7.7	8.1	7.7	7.9	7.4	7.4	7.4
20	7.9	7.8	7.9	7.9	7.6	7.8	7.8	7.1	7.7	7.5	7.4	7.4
21	7.9	7.8	7.8	8.2	7.7	8.0	8.0	7.6	7.7	7.5	7.4	7.5
22	7.8	7.7	7.8	8.2	7.8	8.0	7.8	7.6	7.7	7.5	7.5	7.5
23	7.8	7.7	7.7	8.0	7.8	7.9	7.7	7.5	7.6	7.6	7.5	7.5
24	7.7	7.7	7.7	8.0	7.7	7.8	7.7	7.5	7.6	7.5	7.5	7.5
25	7.8	7.7	7.8	8.1	7.7	7.9	---	---	---	7.6	7.5	7.5
26	7.9	7.8	7.8	8.1	7.7	7.9	---	---	---	7.6	7.4	7.5
27	7.8	7.7	7.8	8.4	7.8	8.1	---	---	---	7.7	7.5	7.6
28	7.8	7.7	7.8	8.4	7.9	8.1	---	---	---	7.7	7.5	7.6
29	---	---	---	8.2	7.8	8.0	---	---	---	7.7	7.5	7.6
30	---	---	---	8.2	7.8	7.9	7.8	7.4	7.6	7.6	7.5	7.6
31	---	---	---	8.0	7.7	7.8	---	---	---	7.6	7.5	7.5
MONTH	7.9	7.5	7.8	8.4	7.6	7.8	8.1	7.1	7.7	7.9	7.3	7.5
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE				JULY			AUGUST			SEPTEMBER		
1	7.6	7.5	7.5	8.0	7.6	7.8	7.6	7.5	7.5	8.1	7.7	7.9
2	7.5	7.4	7.5	8.0	7.7	7.9	7.7	7.5	7.6	8.2	7.8	8.0
3	7.7	7.4	7.5	8.0	7.7	7.9	7.9	7.7	7.8	8.1	7.8	8.0
4	7.6	7.4	7.5	8.0	7.7	7.8	8.0	7.7	7.8	8.0	7.8	7.9
5	7.7	7.5	7.6	7.9	7.7	7.8	7.8	7.6	7.7	7.9	7.6	7.8
6	7.6	7.5	7.6	7.8	7.7	7.7	7.6	7.4	7.5	7.9	7.6	7.7
7	7.6	7.5	7.5	7.9	7.7	7.8	7.6	7.5	7.6	7.8	7.5	7.7
8	7.5	7.4	7.5	8.1	7.7	7.9	7.7	7.6	7.7	7.7	7.6	7.7
9	7.5	7.4	7.5	7.9	7.7	7.8	7.8	7.7	7.7	7.7	7.6	7.6
10	7.7	7.5	7.6	7.9	7.5	7.8	7.9	7.7	7.8	7.6	7.6	7.6
11	7.5	7.2	7.4	7.7	7.5	7.6	8.0	7.8	7.9	7.7	7.6	7.6
12	7.5	7.5	7.5	7.8	7.6	7.7	8.1	7.8	7.9	7.7	7.6	7.7
13	7.5	7.5	7.5	7.8	7.7	7.7	7.8	7.6	7.8	7.9	7.7	7.8
14	7.5	7.4	7.5	7.8	7.7	7.8	7.8	7.7	7.7	7.9	7.7	7.8
15	7.5	7.4	7.5	7.8	7.7	7.7	7.7	7.7	7.7	7.9	7.7	7.8
16	7.8	7.4	7.6	7.8	7.5	7.7	7.7	7.7	7.7	7.8	7.7	7.8
17	7.8	7.7	7.8	7.7	7.6	7.7	7.8	7.5	7.7	7.8	7.8	7.8
18	7.8	7.4	7.7	7.7	7.6	7.7	8.1	7.7	7.8	7.9	7.8	7.9
19	7.7	7.5	7.6	7.8	7.7	7.8	7.8	7.7	7.8	7.9	7.8	7.8
20	7.7	7.6	7.7	7.8	7.7	7.8	7.8	7.7	7.8	7.9	7.8	7.9
21	7.8	7.6	7.7	7.8	7.6	7.7	7.7	7.6	7.7	7.9	7.8	7.9
22	7.7	7.7	7.7	8.0	7.6	7.8	7.7	7.4	7.6	7.9	7.8	7.9
23	7.7	7.6	7.7	7.8	7.7	7.7	8.0	7.7	7.8	7.9	7.9	7.9
24	7.7	7.6	7.7	7.7	7.5	7.6	7.8	7.7	7.8	8.0	7.7	7.9
25	7.8	7.6	7.7	7.6	7.4	7.6	8.2	7.7	7.8	8.0	7.9	7.9
26	7.8	7.7	7.7	7.7	7.6	7.7	8.1	7.8	7.9	8.0	7.9	7.9
27	7.7	7.6	7.7	7.8	7.6	7.7	8.0	7.6	7.9	8.1	7.9	8.0
28	7.7	7.6	7.7	8.1	7.7	7.8	8.1	7.8	7.9	8.0	7.9	7.9
29	7.9	7.6	7.7	7.8	7.7	7.8	8.0	7.8	7.9	7.9	7.9	7.9
30	7.8	7.6	7.7	7.8	7.6	7.8	8.0	7.8	7.9	7.9	7.7	7.9
31	---	---	---	7.9	7.6	7.7	8.1	7.7	7.9	---	---	---
MONTH	7.9	7.2	7.6	8.1	7.4	7.8	8.2	7.4	7.8	8.2	7.5	7.8
YEAR	8.4	7.1	7.7									



## BEAVER RIVER BASIN

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

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	20.0	19.5	20.0	17.0	15.5	16.5	7.0	6.5	7.0	5.5	2.0	3.5
2	22.0	19.5	21.0	15.5	14.0	14.5	7.0	6.5	6.5	2.5	2.0	2.0
3	21.5	18.5	19.5	14.0	13.0	13.5	6.5	4.5	6.0	3.5	2.0	3.0
4	18.5	17.5	18.0	13.0	12.0	12.5	4.5	4.0	4.0	5.0	3.0	4.0
5	18.5	17.0	17.5	13.0	12.0	12.5	5.0	4.0	4.5	5.0	3.5	4.5
6	18.5	17.5	18.0	13.5	12.5	13.0	7.0	5.0	6.0	3.5	2.5	3.0
7	18.0	17.5	18.0	13.5	12.5	13.0	7.0	5.5	6.5	4.0	2.5	3.0
8	17.5	16.5	17.0	13.5	13.0	13.5	5.5	5.5	5.5	4.5	3.0	4.0
9	17.0	16.0	16.5	14.0	13.0	13.5	5.5	4.5	5.0	6.0	4.5	5.0
10	16.5	15.5	16.0	12.5	12.0	12.5	5.0	4.5	4.5	6.0	6.0	6.0
11	17.0	15.5	16.5	11.5	11.0	11.5	5.5	5.0	5.5	6.0	5.5	6.0
12	18.0	16.0	17.0	11.5	11.0	11.5	5.5	5.5	5.5	5.5	4.5	5.0
13	18.5	17.5	18.0	12.0	10.5	11.5	5.5	5.0	5.5	4.5	4.0	4.5
14	19.5	18.0	18.5	13.0	11.0	12.0	5.5	5.0	5.5	5.0	4.0	4.5
15	20.0	19.0	19.5	13.5	12.5	13.0	5.0	3.0	4.0	6.0	5.0	5.5
16	20.5	19.5	20.0	13.5	10.5	12.0	3.0	2.5	3.0	7.5	6.0	6.5
17	20.5	19.0	20.0	10.5	8.5	9.5	3.0	2.0	2.5	8.0	7.0	7.5
18	19.0	17.0	18.0	8.5	7.0	8.0	3.5	2.5	3.0	8.0	6.0	7.5
19	17.0	15.0	15.5	7.0	6.5	6.5	4.0	3.0	3.5	6.0	5.5	6.0
20	15.0	13.0	14.0	8.0	6.5	7.0	4.0	3.0	4.0	5.5	5.0	5.0
21	13.0	12.0	12.5	7.5	7.0	7.5	3.5	2.5	3.0	5.5	4.5	5.0
22	13.0	12.0	12.5	7.0	6.5	7.0	3.0	2.0	2.5	4.5	4.0	4.5
23	13.5	12.0	13.0	7.0	6.5	6.5	3.5	2.5	3.0	4.5	4.0	4.5
24	14.5	13.0	14.0	6.5	6.0	6.5	4.0	2.5	3.5	6.0	4.5	5.5
25	15.5	14.0	15.0	7.0	6.0	6.5	4.0	3.5	3.5	6.5	5.5	6.0
26	16.5	15.5	16.0	8.0	7.0	7.5	4.0	3.0	4.0	6.0	5.0	6.0
27	17.5	16.0	17.0	8.5	7.0	7.5	4.0	3.0	3.5	6.0	4.5	5.0
28	18.0	16.5	17.5	9.0	8.0	8.5	5.0	4.0	4.5	6.0	5.5	5.5
29	18.0	16.5	17.5	8.5	7.0	7.5	6.5	5.0	6.0	5.5	5.0	5.0
30	18.0	16.5	17.0	7.0	7.0	7.0	7.5	6.5	7.5	5.5	4.5	5.0
31	17.5	17.0	17.0	---	---	---	7.5	6.0	6.5	5.5	4.5	5.0
MONTH	22.0	12.0	17.0	17.0	6.0	10.5	7.5	2.0	4.5	8.0	2.0	5.0
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	5.5	5.0	5.5	5.0	3.5	4.0	15.5	14.5	15.0	22.5	21.5	22.0
2	6.0	---	5.5	6.0	4.0	5.0	14.5	13.0	14.0	21.5	20.0	21.0
3	---	---	---	6.0	5.0	5.5	14.0	11.0	12.5	20.5	19.0	19.5
4	---	---	---	5.5	5.0	5.0	11.5	10.5	11.0	19.5	18.5	19.0
5	---	---	---	5.5	4.5	5.0	12.0	10.5	11.5	18.5	17.5	18.0
6	---	---	---	7.0	5.5	6.0	12.0	10.5	11.5	18.5	17.5	18.0
7	---	---	---	7.0	5.0	6.0	11.5	10.5	11.0	17.5	15.5	16.5
8	---	---	---	7.5	6.0	6.5	13.0	10.0	11.5	20.0	16.5	18.0
9	---	---	---	9.0	7.5	8.0	14.0	11.5	12.5	21.0	18.5	20.0
10	---	---	---	10.5	9.0	9.5	13.5	12.0	13.0	21.0	20.0	20.5
11	---	---	---	11.0	10.0	10.5	12.0	10.0	11.0	20.5	18.0	19.5
12	5.0	---	4.5	12.0	10.0	11.0	10.0	9.0	9.5	19.5	17.5	18.5
13	6.0	4.5	5.5	13.5	12.0	12.5	10.5	9.0	9.5	17.0	16.0	17.0
14	6.0	5.5	5.5	15.0	13.0	14.0	10.5	9.5	10.0	18.0	15.0	16.5
15	5.5	5.0	5.0	17.0	14.5	16.0	12.0	10.0	11.0	18.5	17.0	18.0
16	6.0	5.5	5.5	17.0	16.0	16.5	12.0	10.0	11.0	20.0	17.5	18.5
17	5.5	5.0	5.5	17.0	15.0	16.0	12.0	11.0	11.5	20.0	18.0	18.5
18	5.5	4.5	5.0	15.0	14.0	14.5	13.0	10.5	12.0	17.5	17.0	17.5
19	6.0	5.0	5.5	14.0	12.0	13.0	14.0	11.5	12.5	17.5	16.0	17.0
20	5.0	4.5	5.0	12.0	11.0	11.5	13.5	13.0	13.5	18.0	16.5	17.5
21	5.0	4.5	4.5	12.0	10.0	11.5	16.0	13.0	14.0	18.0	17.0	17.5
22	5.5	5.0	5.0	13.5	11.5	12.5	14.5	13.0	14.0	19.0	16.5	17.5
23	6.0	5.5	6.0	13.5	11.5	12.5	16.0	13.5	14.5	18.0	16.5	17.5
24	6.0	4.5	5.5	12.0	11.0	11.5	17	15.0	16.5	18.5	16.5	17.5
25	4.5	2.5	3.5	13.0	10.5	12.0	---	---	---	19.0	17.5	18.5
26	3.0	2.5	2.5	12.5	11.5	12.0	---	---	---	19.0	18.0	18.5
27	4.0	2.5	3.5	12.5	10.5	11.5	---	---	---	19.5	18.0	19.0
28	4.5	4.0	4.0	12.5	10.5	11.5	---	---	---	19.5	18.5	19.0
29	---	---	---	12.5	12.0	12.0	---	---	---	18.5	17.0	17.5
30	---	---	---	14.0	12.0	13.0	23	23.0	23.5	17.0	16.0	17.0
31	---	---	---	14.5	14.0	14.0	---	---	---	17.0	15.0	16.0
MONTH	6.0	2.5	5.0	17.0	3.5	10.5	23.0	9.0	12.5	22.5	15.0	18.5

## BEAVER RIVER BASIN

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

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	18.5	15.5	17.0	24.5	23.0	24.0	22.0	21.0	21.5	25.5	23.5	24.5
2	20.5	18.0	19.0	25.0	22.5	23.5	23.0	20.5	22.0	26.0	25.0	25.5
3	22.5	20.0	21.0	25.5	22.5	24.0	24.0	21.5	23.0	26.0	24.5	25.0
4	21.5	19.0	20.0	27.0	23.0	25.0	24.5	23.0	24.0	25.5	24.0	24.5
5	20.5	18.0	19.5	27.5	26.5	27.0	24.0	22.5	23.5	24.5	24.0	24.5
6	20.5	19.5	20.0	26.5	25.0	25.5	22.5	21.0	22.0	25.5	24.0	24.5
7	20.0	18.5	19.5	26.5	24.0	25.0	22.0	21.0	21.5	24.5	22.5	23.0
8	20.5	20.0	20.0	26.5	24.5	25.5	22.5	21.0	21.5	22.5	21.5	22.0
9	21.0	20.0	20.5	26.0	25.5	26.0	22.5	21.0	21.5	21.5	20.5	21.0
10	20.5	19.5	20.5	26.5	25.0	26.0	23.5	21.5	22.5	21.0	20.0	20.5
11	21.0	19.0	20.0	25.5	23.5	25.0	24.0	23.0	23.5	21.0	20.0	20.5
12	20.5	19.0	20.0	23.5	21.0	22.0	25.0	23.0	24.0	22.5	20.5	21.5
13	22.0	20.0	20.5	21.0	20.0	20.5	24.0	22.0	23.0	22.5	21.5	22.0
14	23.0	20.5	22.0	20.5	19.0	20.0	22.5	22.0	22.5	23.0	21.5	22.5
15	24.5	22.0	23.0	21.0	19.5	20.5	23.5	21.5	22.5	22.0	21.0	21.5
16	25.0	22.5	23.5	21.5	20.0	21.0	23.5	22.0	23.0	20.5	19.0	20.0
17	25.5	23.5	24.5	23.0	21.0	22.0	24.5	23.5	24.0	19.0	18.5	19.0
18	27.0	24.5	25.5	24.5	22.5	23.5	23.5	23.0	23.5	18.5	18.0	18.5
19	26.0	23.5	24.5	25.5	23.5	24.5	23.5	23.0	23.5	18.5	18.0	18.0
20	23.5	22.5	23.0	25.0	24.0	24.5	23.0	22.5	23.0	19.0	18.5	19.0
21	24.5	22.0	23.0	24.5	22.5	23.5	22.5	22.0	22.5	19.5	18.5	19.0
22	24.0	23.0	23.5	23.0	22.0	22.5	22.5	22.0	22.5	19.5	18.5	19.0
23	23.5	22.0	22.5	22.0	21.5	21.5	22.5	22.0	22.5	19.0	17.5	18.5
24	22.0	21.0	21.5	21.5	20.5	21.0	23.5	22.5	23.0	18.0	17.5	17.5
25	22.5	20.5	21.5	22.0	21.0	21.5	24.5	22.5	23.5	18.0	17.0	17.5
26	23.5	21.0	22.0	23.5	21.5	22.5	25.5	23.5	24.5	18.5	17.5	18.0
27	24.5	22.5	23.5	23.5	22.5	23.0	26.0	24.5	25.0	19.0	18.0	18.5
28	25.0	24.0	24.5	23.5	22.5	23.0	27.0	25.0	26.0	19.5	18.0	19.0
29	25.5	23.5	24.5	24.0	23.0	23.5	26.5	25.5	26.0	19.5	18.5	19.0
30	25.0	24.0	24.5	24.5	23.5	23.5	26.0	24.0	25.0	19.5	18.5	19.0
31	---	---	---	23.0	21.5	22.5	26.0	24.0	25.0	---	---	---
MONTH	27.0	15.5	22.0	27.5	19.0	23.5	27.0	20.5	23.3	26.0	17.0	20.5
YEAR	27.5	2.0	14.5									

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	7.6	6.9	7.2	12.5	10.1	11.5	13.5	12.7	13.0	12.4	12.2	12.3
2	7.8	7.2	7.4	13.2	12.1	12.6	13.1	12.3	12.8	14.0	12.0	12.7
3	8.8	7.2	8.1	13.0	12.2	12.7	12.3	12.0	12.2	13.6	11.9	12.6
4	9.1	7.9	8.3	13.3	12.2	12.7	12.7	11.9	12.4	13.5	11.6	12.9
5	9.9	7.8	8.7	14.2	12.4	13.2	12.8	12.3	12.5	14.0	13.4	13.6
6	9.6	8.9	9.1	13.5	12.4	13.1	12.5	11.6	12.1	13.7	13.2	13.5
7	9.0	8.5	8.8	12.4	11.3	12.2	12.2	11.4	11.8	13.9	12.9	13.4
8	9.0	8.4	8.7	12.0	11.1	11.6	12.1	11.3	11.7	13.3	12.5	12.9
9	9.3	8.1	8.6	12.2	11.2	11.6	12.7	11.1	11.7	13.0	12.3	12.6
10	8.4	7.9	8.2	11.2	10.7	11.0	11.8	11.4	11.6	12.2	10.9	11.6
11	9.9	8.2	8.8	11.3	10.3	10.8	11.9	11.4	11.7	11.9	11.4	11.7
12	10.1	8.2	9.0	11.7	10.1	10.9	11.3	9.8	10.6	11.7	11.1	11.4
13	10.4	8.5	9.1	12.6	9.9	10.9	10.5	9.5	9.9	11.7	10.7	11.2
14	10.4	8.5	9.2	11.1	9.9	10.6	10.2	9.6	9.9	12.1	10.7	11.3
15	10.5	8.7	9.4	11.1	9.6	10.5	9.8	9.4	9.6	11.6	11.2	11.4
16	10.3	8.6	9.3	9.7	9.2	9.5	10.4	9.3	9.7	11.6	11.0	11.3
17	9.1	8.4	8.8	9.8	9.3	9.5	10.3	9.1	9.7	11.2	10.9	11.0
18	8.4	8.3	8.3	9.6	9.1	9.4	10.8	9.2	9.8	11.0	9.5	10.2
19	9.6	8.2	8.8	9.6	8.9	9.3	10.6	9.4	10.0	9.5	9.2	9.4
20	9.2	8.9	9.0	10.4	9.5	9.9	11.0	10.1	10.4	9.2	9.1	9.2
21	9.1	8.8	9.0	9.5	9.0	9.2	10.7	9.8	10.2	9.2	9.1	9.2
22	11.1	9.1	9.8	9.2	8.9	9.0	10.9	9.4	10.0	10.9	9.1	9.9
23	11.7	8.9	10.0	9.2	8.7	8.9	11.2	10.1	10.5	11.2	10.7	11.0
24	11.6	9.5	10.3	11.9	8.5	10.1	11.5	9.8	10.6	11.5	11.0	11.2
25	12.0	9.7	10.5	12.2	11.5	11.9	11.1	10.6	10.8	11.2	10.7	11.0
26	11.9	9.6	10.4	12.4	11.5	12.0	11.5	10.5	11.0	10.9	10.6	10.7
27	11.8	9.6	10.3	11.5	11.2	11.3	11.3	10.4	10.9	11.5	10.6	11.0
28	11.8	9.4	10.3	11.4	10.7	11.0	12.3	11.2	11.6	11.2	10.9	11.0
29	11.6	9.4	10.2	12.7	11.4	12.2	12.3	11.3	11.7	11.0	10.7	10.9
30	11.6	9.4	10.3	12.7	12.2	12.4	11.7	11.5	11.6	11.6	10.7	11.0
31	10.6	8.8	9.9	---	---	---	12.4	11.7	12.1	11.8	10.5	11.0
MONTH	12.0	6.9	9.2	14.2	8.5	11.0	13.5	9.1	11.1	14.0	9.1	11.4

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

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	12.1	10.3	11.2	13.2	12.2	12.6	9.6	8.5	8.9	7.4	6.4	6.9
2	12.6	11.8	12	13.0	12.2	12.6	9.2	8.6	8.9	7.7	6.4	7.0
3	---	---	---	12.4	12.1	12.3	10.0	8.9	9.4	7.6	6.6	7.1
4	---	---	---	12.7	12.0	12.3	10.6	10.0	10.2	7.3	6.8	7.1
5	---	---	---	13.0	12.3	12.6	10.7	10.0	10.3	7.2	6.6	6.9
6	---	---	---	12.9	12.3	12.6	10.7	9.9	10.2	7.7	6.9	7.3
7	---	---	---	13.2	12.1	12.6	10.6	9.9	10.2	8.1	7.0	7.5
8	---	---	---	12.3	11.3	12.0	11.0	9.8	10.3	8.1	7.2	7.6
9	---	---	---	11.4	11.0	11.2	11.0	9.4	10.1	7.8	6.8	7.2
10	---	---	---	11.6	10.9	11.2	9.3	9.0	9.2	7.5	6.7	7.0
11	---	---	---	11.6	10.9	11.2	9.5	9.0	9.3	7.5	6.6	7.0
12	11.1	10.0	10.3	11.9	10.9	11.3	9.4	9.2	9.3	7.1	6.5	6.8
13	11.7	10.5	11.2	11.8	10.7	11.2	9.8	9.2	9.5	7.2	6.6	6.9
14	12.0	10.5	10.9	12.0	10.4	11.0	9.6	9.3	9.4	8.0	7.0	7.4
15	13.3	10.5	11.8	12.0	10.0	10.8	9.9	9.3	9.6	7.7	7.2	7.4
16	13.4	12.3	13.1	10.8	9.6	10.1	10.1	9.3	9.7	8.8	7.0	7.7
17	12.4	12.1	12.2	10.1	9.4	9.7	9.6	9.2	9.4	8.6	8.2	8.4
18	13.6	12.1	12.9	10.3	9.3	9.8	10.0	9.0	9.4	8.6	8.2	8.3
19	13.6	13.0	13.3	10.9	9.4	10.0	10.3	9.0	9.6	8.8	8.1	8.4
20	14.0	12.8	13.3	11.7	10.4	11.0	9.6	9.2	9.3	8.7	8.3	8.5
21	14.6	12.9	13.6	12.0	9.5	10.7	9.4	8.9	9.2	8.4	8.0	8.2
22	13.5	10.7	11.8	10.6	9.2	9.8	9.7	9.2	9.4	8.7	8.0	8.3
23	11.5	10.3	10.7	9.5	9.0	9.2	9.7	9.0	9.4	8.6	8.0	8.3
24	12.1	11.2	11.6	9.5	8.8	9.1	9.6	8.7	9.2	8.6	7.9	8.2
25	11.7	11.3	11.5	10.0	8.7	9.3	---	---	---	8.8	7.9	8.3
26	12.8	11.3	11.9	9.7	8.7	9.2	---	---	---	8.4	7.9	8.1
27	12.9	12.3	12.7	10.3	8.7	9.4	---	---	---	8.7	8.0	8.3
28	12.9	12.4	12.7	10.4	8.9	9.6	---	---	---	8.5	7.9	8.2
29	---	---	---	10.0	8.9	9.4	---	---	---	8.0	7.8	7.9
30	---	---	---	10.3	8.9	9.5	8.6	7.3	8.4	8.4	7.8	8.1
31	---	---	---	9.6	8.8	9.1	---	---	---	8.8	7.8	8.2
MONTH	14.6	10.0	12.0	13.2	8.7	10.7	11.0	7.3	9.5	8.8	6.4	7.7
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE				JULY			AUGUST			SEPTEMBER		
1	8.9	7.9	8.3	8.4	7.5	8.0	7.8	7.1	7.4	8.1	6.7	7.3
2	8.7	8.0	8.3	8.6	7.6	8.0	8.0	7.2	7.6	8.3	6.6	7.3
3	8.8	7.9	8.3	8.8	7.5	8.1	8.1	7.4	7.7	8.1	6.8	7.3
4	8.0	7.6	7.8	8.9	7.6	8.2	8.0	7.4	7.7	8.0	6.8	7.3
5	8.4	7.5	7.9	8.5	7.7	8.1	7.7	7.2	7.5	7.1	5.7	6.7
6	8.3	7.6	7.9	8.2	7.4	7.7	7.5	7.3	7.4	7.4	5.6	6.5
7	8.4	7.6	8.0	8.5	7.3	7.8	8.3	7.3	7.8	7.0	6.1	6.7
8	8.1	7.7	7.9	8.8	7.5	8.1	8.6	7.8	8.1	7.4	7.1	7.3
9	8.3	7.9	8.0	8.2	7.7	8.0	8.5	7.8	8.1	7.5	7.3	7.4
10	8.0	7.8	7.9	7.1	5.7	6.8	8.6	7.9	8.2	7.6	7.4	7.5
11	8.1	7.6	7.9	6.6	5.7	6.1	8.7	8.0	8.3	7.7	7.6	7.6
12	8.8	7.5	8.2	6.6	6.1	6.4	8.6	7.8	8.2	7.7	7.3	7.6
13	9.1	8.2	8.6	6.6	6.5	6.5	8.1	7.6	7.8	7.6	7.4	7.5
14	9.2	8.4	8.7	6.9	6.5	6.7	8.1	7.7	7.8	7.6	6.8	7.5
15	9.0	8.4	8.7	7.0	6.7	6.9	8.2	7.5	7.9	7.4	6.8	7.2
16	9.1	8.2	8.6	7.2	6.8	7.0	8.3	7.6	7.9	7.7	7.4	7.5
17	9.1	8.2	8.6	7.4	7.0	7.2	8.4	7.8	8.0	8.1	7.7	7.9
18	8.9	8.2	8.4	7.5	7.1	7.3	8.0	7.7	7.9	8.3	8.1	8.2
19	8.3	7.9	8.1	7.7	7.3	7.4	8.1	7.6	7.8	8.2	8.0	8.1
20	8.3	7.7	8.0	7.6	7.4	7.5	7.9	7.6	7.8	8.2	7.9	8.1
21	8.7	7.5	8.1	7.7	7.3	7.6	7.7	7.4	7.5	8.2	8.0	8.1
22	8.4	7.9	8.1	7.7	7.0	7.3	7.6	7.4	7.5	8.1	7.6	7.9
23	8.0	7.6	7.9	7.3	7.0	7.2	7.7	7.5	7.6	8.2	7.9	8.0
24	7.9	7.7	7.8	7.9	7.2	7.5	8.1	7.6	7.8	8.5	8.1	8.3
25	8.6	7.5	8.0	8.1	7.6	7.8	8.3	7.7	7.9	8.5	8.3	8.4
26	8.6	7.8	8.2	8.2	7.5	7.8	8.5	7.7	8.0	8.4	8.2	8.3
27	8.5	7.8	8.1	8.1	7.5	7.8	8.0	6.9	7.7	8.4	8.1	8.3
28	8.4	7.8	8.1	8.0	7.5	7.8	8.1	6.5	7.1	8.4	8.1	8.2
29	8.8	7.4	8.1	8.1	7.5	7.8	7.8	6.5	7.0	8.1	7.9	8.0
30	8.7	7.3	8.0	7.9	7.4	7.6	7.6	6.6	7.0	8.1	7.3	7.8
31	---	---	---	7.4	7.2	7.3	8.2	6.3	7.1	---	---	---
MONTH	9.2	7.3	8.1	8.9	5.7	7.5	8.7	6.3	7.7	8.5	5.6	7.7
YEAR	14.6	5.6	9.4									

## 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 mi<sup>2</sup>.

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: Dec. 13-30. 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.--25 years, 129 ft<sup>3</sup>/s, 18.12 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,740 ft<sup>3</sup>/s Nov. 6, 1985, gage height, 12.40 ft from rating curve extended above 800 ft<sup>3</sup>/s; minimum daily discharge, 0.05 ft<sup>3</sup>/s July 10, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 2	2400	904	10.86	Feb. 16	0700	*1,360	*11.25

Minimum daily discharge, 3.8 ft<sup>3</sup>/s July 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.5	32	121	472	83	147	50	23	88	13	108	6.8
2	41	34	92	540	527	141	159	19	50	11	104	5.7
3	73	36	78	569	868	154	235	18	38	8.7	63	5.5
4	62	36	79	549	851	159	272	22	34	7.2	32	4.8
5	43	35	67	593	688	146	269	62	33	5.7	106	4.4
6	30	33	64	500	536	118	222	96	27	4.9	116	4.5
7	22	32	80	432	422	94	173	112	24	4.3	73	85
8	16	51	93	331	306	79	124	86	24	3.8	46	134
9	15	91	80	219	219	80	89	53	35	3.9	30	326
10	14	102	57	166	220	116	97	35	31	7.4	21	608
11	18	107	50	163	241	162	452	28	25	9.3	16	463
12	33	100	47	159	240	185	528	25	20	105	12	418
13	34	85	44	136	193	165	475	57	17	178	13	337
14	28	70	40	134	140	131	337	111	14	120	27	234
15	22	60	37	107	296	102	249	130	12	365	24	251
16	18	170	33	132	1250	81	196	186	10	424	19	233
17	52	260	30	159	1080	79	148	421	9.1	333	14	266
18	90	236	28	211	641	91	118	564	7.8	272	11	259
19	105	205	26	254	435	82	90	558	6.7	183	10	242
20	165	152	24	258	284	74	70	442	5.9	90	11	221
21	181	120	22	331	185	63	101	320	6.7	53	11	183
22	171	107	20	344	140	55	163	214	6.1	40	15	159
23	132	98	19	319	170	48	187	125	10	105	18	139
24	95	85	18	280	223	44	143	76	24	107	16	157
25	72	79	16	221	222	38	97	53	63	55	13	164
26	56	87	15	178	215	34	68	57	53	37	11	167
27	46	105	15	137	158	31	53	56	31	27	9.3	142
28	41	142	14	110	145	30	41	46	19	19	9.4	103
29	37	161	13	93	---	28	33	103	16	14	11	69
30	32	150	13	85	---	30	27	224	14	12	9.3	85
31	28	---	128	80	---	36	---	156	---	77	7.9	---
TOTAL	1780.5	3061	1463	8262	10978	2823	5266	4478	754.3	2695.2	986.9	5476.7
MEAN	57.4	102	47.2	267	392	91.1	176	144	25.1	86.9	31.8	183
MAX	181	260	128	593	1250	185	528	564	88	424	116	608
MIN	8.5	32	13	80	83	28	27	18	5.9	3.8	7.9	4.4
CFSM	.59	1.06	.49	2.76	4.05	.94	1.82	1.49	.26	.90	.33	1.89
IN.	.68	1.18	.56	3.18	4.22	1.09	2.03	1.72	.29	1.04	.38	2.11

CAL YR 1989 TOTAL 44655.7 MEAN 122 MAX 993 MIN 3.5 CFSM 1.27 IN. 17.18  
WTR YR 1990 TOTAL 48024.6 MEAN 132 MAX 1250 MIN 3.8 CFSM 1.36 IN. 18.47



## 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 mi<sup>2</sup>.

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. 11-30, July 12-13. 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.--75 years, 521 ft<sup>3</sup>/s, 14.26 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,000 ft<sup>3</sup>/s July 19, 1941, gage height, 17.4 ft, from rating curve extended above 16,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 12 ft<sup>3</sup>/s several days in 1918, 1930, 1932, 1936.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,000 ft<sup>3</sup>/s and maximum (\*).

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 16	1800	5,060	8.77	July 12	2000	7,040	10.02
Apr. 11	0400	5,220	8.88	July 15	0700	*20,600	*15.89

Minimum discharge, 56 ft<sup>3</sup>/s Dec. 28-30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	79	118	109	1850	665	510	316	390	572	523	477	151
2	86	119	103	941	1470	481	475	362	471	257	368	141
3	104	121	112	508	2080	473	564	332	426	175	315	152
4	105	118	143	438	2310	420	494	358	393	144	284	140
5	90	114	135	553	2510	389	500	688	360	130	548	141
6	81	113	110	469	1490	375	458	642	319	127	648	156
7	75	109	117	338	1270	346	407	497	525	123	778	1310
8	72	120	113	298	1030	321	377	409	1120	110	498	1510
9	70	155	128	284	848	340	340	362	2090	162	348	1080
10	70	162	151	266	1210	403	712	341	1190	242	291	1760
11	78	150	115	294	1170	377	4330	327	780	248	279	789
12	86	136	90	275	884	353	2300	296	580	4310	251	492
13	83	126	80	223	778	333	1420	464	477	4390	287	427
14	77	121	76	209	777	315	1120	586	425	1920	915	356
15	69	119	72	275	2250	301	1200	419	620	10500	474	697
16	66	222	70	223	5010	287	951	1040	426	5440	318	675
17	72	394	68	248	3140	471	822	2100	335	2050	258	522
18	109	238	66	285	1630	585	735	1610	288	1290	230	396
19	161	178	64	293	1260	468	611	997	253	926	237	385
20	234	155	64	330	969	530	560	748	238	764	651	646
21	211	143	62	910	787	465	2010	699	246	2110	456	470
22	168	136	60	794	749	422	1880	576	228	1930	611	555
23	145	130	60	604	799	400	1230	477	209	2990	417	652
24	130	126	60	546	745	369	955	413	209	2390	348	421
25	130	126	60	482	614	345	792	364	229	1280	300	341
26	127	124	58	440	486	321	666	713	206	860	259	296
27	121	129	58	374	554	300	583	636	174	661	226	266
28	117	141	56	355	541	283	518	484	158	551	206	245
29	114	147	56	398	---	275	460	835	180	472	193	230
30	112	122	56	834	---	276	429	1140	210	433	182	495
31	106	---	764	720	---	301	---	745	---	672	164	---
TOTAL	3348	4412	3336	15057	38026	11835	28215	20050	13937	48180	11817	15897
MEAN	108	147	108	486	1358	382	940	647	465	1554	381	530
MAX	234	394	764	1850	5010	585	4330	2100	2090	10500	915	1760
MIN	66	109	56	209	486	275	316	296	158	110	164	140
CFSM	.22	.30	.22	.98	2.74	.77	1.90	1.30	.94	3.13	.77	1.07
IN.	.25	.33	.25	1.13	2.85	.89	2.12	1.50	1.05	3.61	.89	1.19

CAL YR 1989 TOTAL 197159 MEAN 540 MAX 7340 MIN 53 CFSM 1.09 IN. 14.79  
WTR YR 1990 TOTAL 214110 MEAN 587 MAX 10500 MIN 56 CFSM 1.18 IN. 16.06

## 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 mi<sup>2</sup>.

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. 12-30. Records good except for estimated daily discharges, which are 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.--50 years, 161 ft<sup>3</sup>/s, 14.87 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,580 ft<sup>3</sup>/s Jan. 27, 1952, gage height, 12.17 ft; minimum, 0.8 ft<sup>3</sup>/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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Sept. 7	2300	*2,260	*6.26	No other peaks above base.			
Minimum daily discharge, 13 ft <sup>3</sup> /s Dec. 27-29.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	29	33	838	330	133	101	126	304	51	90	28
2	22	32	30	330	437	134	140	105	229	44	72	26
3	28	27	32	201	503	134	141	91	213	38	62	29
4	22	26	38	171	791	118	136	96	184	35	56	28
5	18	25	31	231	800	116	135	193	153	34	57	26
6	16	23	29	173	530	107	125	177	129	33	81	26
7	16	22	39	134	408	94	117	144	176	30	60	1270
8	16	24	48	119	312	94	110	123	718	28	53	849
9	15	32	53	111	266	101	101	110	1040	26	45	303
10	15	40	37	106	399	103	175	103	531	26	43	202
11	17	47	28	99	361	95	1490	97	346	39	42	140
12	22	45	24	91	311	93	749	88	245	357	55	112
13	18	40	21	79	265	87	456	138	195	442	47	104
14	16	37	20	99	275	84	354	170	157	197	79	89
15	15	36	19	94	835	82	404	127	483	1210	58	94
16	20	77	18	86	1540	80	312	245	233	523	44	84
17	20	112	17	90	924	146	282	723	167	269	38	78
18	26	73	17	144	560	180	239	590	133	166	35	66
19	79	57	16	160	430	154	201	350	114	121	88	81
20	116	48	16	244	315	178	182	260	105	101	101	134
21	90	44	15	736	249	160	859	414	104	178	83	95
22	75	38	15	476	233	152	753	287	89	480	120	101
23	60	35	15	312	228	147	521	215	84	782	81	98
24	44	34	14	252	212	131	397	173	80	433	68	82
25	32	29	14	201	173	122	311	144	76	254	59	72
26	28	31	14	184	143	114	239	365	65	171	54	65
27	27	31	13	147	151	104	206	293	56	129	44	62
28	25	36	13	142	150	97	180	225	52	107	39	58
29	28	46	13	205	---	93	158	583	57	93	36	55
30	29	37	83	680	---	91	141	713	57	83	34	175
31	28	---	362	449	---	95	---	438	---	136	31	---
TOTAL	999	1213	1137	7384	12131	3619	9715	7906	6575	6616	1855	4632
MEAN	32.2	40.4	36.7	238	433	117	324	255	219	213	59.8	154
MAX	116	112	362	838	1540	180	1490	723	1040	1210	120	1270
MIN	15	22	13	79	143	80	101	88	52	26	31	26
CFSM	.22	.28	.25	1.62	2.95	.79	2.20	1.73	1.49	1.45	.41	1.05
IN.	.25	.31	.29	1.87	3.07	.92	2.46	2.00	1.66	1.67	.47	1.17

CAL YR 1989	TOTAL 75347	MEAN 206	MAX 2280	MIN 10	CFSM 1.40	IN. 19.07
WTR YR 1990	TOTAL 63782	MEAN 175	MAX 1540	MIN 13	CFSM 1.19	IN. 16.14

## SHORT CREEK BASIN

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 mi<sup>2</sup>.

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. 14-30. Records fair except for those for periods of estimated record 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.--49 years, 130 ft<sup>3</sup>/s, 14.35 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,200 ft<sup>3</sup>/s June 15, 1990, gage height, 12.27 ft; minimum daily discharge, 2.8 ft<sup>3</sup>/s Sept. 21, 27, 1947.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 31	2200	1,810	6.49	July 12	2230	4,200	9.75
Apr. 11	0300	1,380	5.65	July 15	0730	1,420	6.00
June 15	0830	*8,200	*12.27				

Minimum daily discharge, 23 ft<sup>3</sup>/s Dec. 29, 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	65	54	568	223	148	109	137	275	150	137	79
2	69	55	51	237	289	139	187	136	233	129	124	75
3	48	54	49	160	264	133	164	132	214	119	116	75
4	41	52	58	165	635	119	149	159	195	109	111	69
5	38	48	70	226	445	115	137	247	171	103	150	73
6	45	49	52	151	300	112	130	213	154	112	150	75
7	48	57	68	117	249	104	127	171	204	103	119	426
8	42	65	50	103	211	103	118	153	294	96	109	235
9	38	110	43	91	204	114	106	146	554	98	103	233
10	45	81	87	95	366	111	210	151	356	112	154	255
11	68	72	79	86	278	104	829	141	253	183	105	157
12	51	64	52	76	243	104	371	138	203	1490	97	130
13	42	57	43	64	214	97	282	185	177	1420	117	119
14	39	56	41	59	344	94	256	190	262	571	195	122
15	38	60	38	74	569	95	297	152	3500	1100	110	229
16	40	158	36	78	544	92	240	430	621	564	92	152
17	51	146	34	77	389	192	221	685	395	376	85	144
18	61	100	33	130	300	171	197	372	369	296	87	119
19	141	82	32	118	263	140	178	245	289	250	438	131
20	140	74	31	417	222	151	172	261	260	229	377	142
21	104	64	30	558	198	131	223	446	249	293	348	111
22	88	58	28	291	194	123	195	247	209	391	305	137
23	70	57	27	203	190	116	174	193	207	434	210	121
24	59	51	27	179	196	111	163	164	191	298	179	102
25	56	49	26	150	167	106	158	143	172	233	148	92
26	55	54	25	137	146	97	159	490	150	199	127	86
27	48	54	24	115	158	93	153	311	141	177	112	82
28	47	67	24	112	163	89	148	262	149	163	104	78
29	44	68	23	384	---	89	142	828	274	152	100	74
30	42	56	23	561	---	86	140	529	208	144	98	143
31	45	---	815	285	---	93	---	345	---	163	87	---
TOTAL	1785	2083	2073	6067	7964	3572	6135	8402	10929	10257	4794	4066
MEAN	57.6	69.4	66.9	196	284	115	204	271	364	331	155	136
MAX	141	158	815	568	635	192	829	828	3500	1490	438	426
MIN	38	48	23	59	146	86	106	132	141	96	85	69
CFSM	.47	.56	.54	1.59	2.31	.94	1.66	2.20	2.96	2.69	1.26	1.10
IN.	.54	.63	.63	1.83	2.41	1.08	1.86	2.54	3.31	3.10	1.45	1.23

CAL YR 1989 TOTAL 53372 MEAN 146 MAX 1770 MIN 23 CFSM 1.19 IN. 16.14  
WTR YR 1990 TOTAL 68127 MEAN 187 MAX 3500 MIN 23 CFSM 1.52 IN. 20.60

## 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 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

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

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. 12-30. Records good except periods of estimated record, which are fair. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--6 years, 108 ft<sup>3</sup>/s, 15.01 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,840 ft<sup>3</sup>/s July 12, 1990, gage height, 7.72 ft; minimum daily discharge, 7.0 ft<sup>3</sup>/s, Sept. 21-23, 1985.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 31	1200	2,490	5.64	July 12	1700	*4,840	*7.72
June 15	0800	4,720	7.63				

Minimum daily discharge, 16 ft<sup>3</sup>/s Dec. 29, 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	44	35	347	170	110	125	93	227	69	78	33
2	60	39	34	117	217	105	260	89	179	64	70	32
3	41	39	35	81	192	101	164	89	173	59	66	33
4	32	38	53	87	596	91	128	108	144	55	63	32
5	29	36	44	116	352	88	113	174	123	66	72	33
6	30	36	35	79	230	85	106	163	111	142	78	32
7	31	36	40	64	193	80	102	122	159	63	63	223
8	30	40	36	57	163	77	96	103	248	56	65	128
9	29	56	41	53	184	82	89	92	526	51	55	184
10	30	46	77	54	412	81	182	98	256	52	60	204
11	44	41	59	51	240	81	645	90	170	142	56	96
12	35	39	34	47	206	78	246	83	140	1270	50	79
13	30	37	29	43	183	73	188	115	126	826	53	71
14	31	37	27	44	339	69	178	124	358	335	64	115
15	29	43	26	44	465	68	217	99	2340	819	50	313
16	28	131	25	44	583	67	162	185	384	353	44	121
17	34	93	24	43	331	170	151	488	247	217	41	102
18	43	62	23	62	250	122	137	224	343	162	42	84
19	123	52	22	56	219	99	120	134	209	133	110	88
20	92	49	22	384	187	105	114	117	170	128	138	91
21	63	48	21	532	162	92	157	199	147	203	213	78
22	56	44	20	209	154	85	130	126	127	391	117	106
23	46	42	20	137	153	82	112	101	139	464	83	95
24	43	39	19	118	151	81	109	89	116	215	69	78
25	39	37	18	100	126	80	105	80	104	176	61	70
26	37	39	18	89	114	73	124	557	90	127	55	64
27	36	39	17	77	114	68	107	271	84	112	47	58
28	35	41	17	74	123	66	104	223	80	101	42	56
29	34	41	16	559	---	66	100	823	81	91	39	52
30	34	37	16	517	---	66	97	446	75	87	41	106
31	36	---	917	224	---	68	---	294	---	98	36	---
TOTAL	1294	1401	1820	4509	6809	2659	4668	5999	7676	7127	2121	2857
MEAN	41.7	46.7	58.7	145	243	85.8	156	194	256	230	68.4	95.2
MAX	123	131	917	559	596	170	645	823	2340	1270	213	313
MIN	28	36	16	43	114	66	89	80	75	51	36	32
CFSM	.43	.48	.60	1.49	2.49	.88	1.59	1.98	2.62	2.35	.70	.97
IN.	.49	.53	.69	1.72	2.59	1.01	1.78	2.28	2.92	2.71	.81	1.09

CAL YR 1989 TOTAL 44071 MEAN 121 MAX 1930 MIN 16 CFSM 1.24 IN. 16.78  
WTR YR 1990 TOTAL 48940 MEAN 134 MAX 2340 MIN 16 CFSM 1.37 IN. 18.63



## WHEELING CREEK BASIN

03111548 WHEELING CREEK BELOW BLAINE, OH--Continued

## SEDIMENT ANALYSIS

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

## 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, 1,760 mg/L July 6; minimum daily mean, 10 mg/L Sept. 26.  
SEDIMENT LOADS: Maximum daily, 10,900 tons June 15; minimum daily, 1.1 ton Oct. 5, 30, 31.

## WHEELING CREEK BASIN

03111548 WHEELING CREEK BELOW BLAINE, OH--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

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	34	19	1.9	44	16	1.9	35	28	2.6
2	60	41	6.9	39	17	1.9	34	29	2.7
3	41	23	2.5	39	16	1.7	35	31	2.9
4	32	17	1.5	38	15	1.5	53	63	9.5
5	29	14	1.1	36	12	1.2	44	63	7.7
6	30	22	1.8	36	13	1.3	35	47	4.4
7	31	23	1.9	36	16	1.5	40	35	3.8
8	30	19	1.6	40	21	2.3	36	52	5.0
9	29	22	1.8	56	34	5.2	41	55	6.1
10	30	20	1.6	46	23	2.9	77	22	4.7
11	44	26	3.1	41	25	2.7	59	59	9.4
12	35	19	1.8	39	17	1.7	34	38	3.5
13	30	26	2.1	37	21	2.1	29	37	2.9
14	31	30	2.6	37	17	1.7	27	41	3.0
15	29	21	1.7	43	30	3.5	26	42	3.0
16	28	16	1.2	131	137	57	25	42	2.9
17	34	23	2.1	93	52	14	24	43	2.8
18	43	29	3.4	62	27	4.5	23	43	2.7
19	123	170	64	52	29	4.1	22	43	2.5
20	92	60	16	49	27	3.6	22	43	2.6
21	63	30	5.1	48	20	2.6	21	43	2.5
22	56	19	2.8	44	25	3.0	20	43	2.3
23	46	24	3.0	42	22	2.5	20	44	2.4
24	43	17	1.9	39	28	3.0	19	44	2.2
25	39	14	1.5	37	37	3.7	18	44	2.1
26	37	13	1.3	39	28	2.9	18	44	2.1
27	36	16	1.6	39	21	2.1	17	44	2.0
28	35	14	1.3	41	18	2.0	17	45	2.0
29	34	15	1.4	41	15	1.7	16	45	1.9
30	34	12	1.1	37	20	2.0	16	45	1.9
31	36	11	1.1	---	---	---	917	1270	4200
TOTAL	1294	---	142.7	1401	---	141.8	1820	---	4306.1
JANUARY			FEBRUARY			MARCH			
1	347	262	329	170	41	19	110	50	15
2	117	42	14	217	54	32	105	45	13
3	81	29	6.3	192	48	25	101	51	14
4	87	41	9.7	596	204	402	91	46	11
5	116	47	15	352	90	92	88	43	10
6	79	37	7.9	230	49	31	85	40	9.1
7	64	33	5.6	193	46	24	80	38	8.1
8	57	34	5.3	163	42	18	77	43	8.9
9	53	38	5.5	184	102	57	82	39	8.8
10	54	36	5.3	412	601	717	81	37	8.1
11	51	38	5.3	240	247	164	81	48	10
12	47	33	4.2	206	87	49	78	33	7.1
13	43	44	5.1	183	78	38	73	28	5.5
14	44	52	6.2	339	256	395	69	33	6.1
15	44	47	5.5	465	206	281	68	45	8.3
16	44	30	3.6	583	309	558	67	40	7.2
17	43	31	3.7	331	91	82	170	160	83
18	62	48	8.1	250	71	48	122	49	17
19	56	42	6.4	219	61	36	99	34	9.2
20	384	454	741	187	56	28	105	46	13
21	532	335	526	162	49	21	92	36	9.0
22	209	70	42	154	56	24	85	27	6.2
23	137	46	17	153	60	25	82	26	5.7
24	118	41	13	151	54	22	81	25	5.4
25	100	35	9.3	126	54	18	80	24	5.2
26	89	34	8.1	114	57	18	73	29	5.7
27	77	42	8.7	114	53	16	68	26	4.8
28	74	40	8.1	123	46	15	66	26	4.6
29	559	197	526	---	---	---	66	28	4.9
30	517	213	346	---	---	---	66	25	4.4
31	224	69	43	---	---	---	68	26	4.8
TOTAL	4509	---	2739.9	6809	---	3255	2659	---	333.1

## WHEELING CREEK BASIN

03111548 WHEELING CREEK BELOW BLAINE, OH--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

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	125	145	129	93	39	9.8	227	69	42
2	260	452	340	89	42	10	179	48	23
3	164	61	29	89	34	8.1	173	47	22
4	128	23	7.8	108	43	14	144	38	15
5	113	34	10	174	85	40	123	36	12
6	106	26	7.5	163	74	32	111	34	10
7	102	34	9.5	122	74	25	159	101	46
8	96	34	8.9	103	114	32	248	175	156
9	89	26	6.2	92	48	12	526	615	1060
10	182	92	126	98	44	12	256	293	204
11	645	516	1190	90	31	7.5	170	69	32
12	246	53	37	83	37	8.4	140	47	18
13	188	34	17	115	33	10	126	42	14
14	178	27	13	124	45	15	358	259	1640
15	217	21	12	99	25	6.6	2340	1450	10900
16	162	17	7.3	185	205	130	384	226	260
17	151	17	7.1	488	531	873	247	116	78
18	137	21	7.6	224	116	77	343	442	487
19	120	26	8.4	134	51	19	209	125	74
20	114	32	9.8	117	68	22	170	60	27
21	157	56	24	199	456	278	147	73	29
22	130	48	17	126	69	24	127	65	22
23	112	41	13	101	51	14	139	80	30
24	109	46	13	89	39	9.3	116	73	23
25	105	51	15	80	28	6.1	104	58	16
26	124	50	17	557	422	831	90	57	14
27	107	48	14	271	215	159	84	48	11
28	104	48	14	223	102	66	80	45	9.7
29	100	55	15	823	342	818	81	50	11
30	97	42	11	446	141	182	75	49	9.8
31	---	---	---	294	63	50	---	---	---
TOTAL	4668	---	2136.1	5999	---	3800.8	7676	---	15295.5
JULY			AUGUST			SEPTEMBER			
1	69	37	7.0	78	50	11	33	31	2.8
2	64	32	5.5	70	54	10	32	29	2.5
3	59	52	8.4	66	55	9.9	33	26	2.3
4	55	47	7.0	63	46	7.9	32	25	2.2
5	66	98	30	72	64	13	33	22	2.0
6	142	1760	821	78	46	9.9	32	28	2.4
7	63	134	24	63	38	6.5	223	702	640
8	56	46	7.0	65	89	17	128	201	91
9	51	38	5.2	55	54	8.0	184	470	541
10	52	46	6.4	60	65	11	204	605	428
11	142	684	285	56	62	9.6	96	91	24
12	1270	1090	8130	50	36	5.0	79	53	11
13	826	403	1380	53	48	7.3	71	57	11
14	335	91	83	64	54	9.6	115	186	229
15	819	661	1680	50	39	5.3	313	762	863
16	353	74	75	44	30	3.6	121	145	48
17	217	53	31	41	28	3.2	102	49	14
18	162	43	19	42	31	3.8	84	25	5.6
19	133	49	18	110	219	76	88	35	8.4
20	128	140	57	138	709	314	91	39	9.7
21	203	539	311	213	605	396	78	25	5.2
22	391	652	856	117	398	132	106	48	14
23	464	550	831	83	113	25	95	32	8.2
24	215	340	218	69	73	14	78	19	4.0
25	176	117	56	61	81	13	70	16	3.1
26	127	84	29	55	64	9.5	64	10	1.7
27	112	80	24	47	63	7.9	58	17	2.6
28	101	77	21	42	57	6.5	56	14	2.1
29	91	51	13	39	47	4.9	52	20	2.8
30	87	50	12	41	28	3.1	106	89	30
31	98	57	15	36	30	2.8	---	---	---
TOTAL	7127	---	15065.5	2121	---	1156.3	2857	---	3011.6
YEAR	48940		51400.5						

## CAPTINA CREEK BASIN

63

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 mi<sup>2</sup>.

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. 14-30. 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.--41 years, 165 ft<sup>3</sup>/s, 16.72 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,900 ft<sup>3</sup>/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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 31	1300	3,770	8.02	May 26	1030	3,050	7.23
Jan. 29	1930	4,060	8.32	June 14	2300	*6,080	*10.05
May 5	0600	3,500	7.74				

Minimum daily discharge, 19 ft<sup>3</sup>/s Dec. 27-30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	68	58	974	377	136	128	69	259	54	113	38
2	151	56	57	377	476	133	258	65	192	47	78	30
3	76	53	55	249	455	128	192	60	229	39	64	62
4	54	54	61	281	1360	112	180	131	163	35	54	44
5	45	49	59	331	753	105	163	1330	133	33	60	31
6	42	47	56	229	456	98	147	585	112	45	65	28
7	52	46	65	177	390	86	135	340	104	33	94	367
8	47	47	53	152	311	83	120	213	173	29	59	161
9	51	69	54	135	445	93	108	161	1430	25	49	454
10	47	69	57	131	1080	90	138	152	555	27	94	479
11	107	58	58	117	581	87	820	124	274	51	51	154
12	70	53	50	107	449	86	355	101	183	314	42	119
13	56	47	38	92	346	79	244	142	149	308	42	567
14	47	45	32	102	393	75	227	152	427	191	73	309
15	42	56	29	100	594	71	351	114	1770	756	46	900
16	38	491	27	103	1660	70	236	447	402	288	36	249
17	45	281	25	97	745	286	206	1100	231	146	30	164
18	73	169	24	115	459	226	171	447	214	99	28	113
19	377	130	23	105	358	168	143	242	158	76	52	118
20	360	117	22	711	263	170	132	184	128	67	77	142
21	221	102	22	968	212	141	147	165	117	315	173	102
22	166	89	21	523	197	128	135	132	98	900	103	124
23	123	82	20	324	188	120	115	110	192	492	70	189
24	104	75	20	262	194	111	104	93	120	240	60	132
25	89	70	20	211	154	109	100	83	94	165	48	102
26	80	71	20	182	153	98	102	1290	76	110	41	84
27	72	71	19	151	149	91	88	550	66	86	35	70
28	65	75	19	148	153	86	82	323	58	70	30	60
29	60	73	19	1540	---	83	77	1330	54	59	141	54
30	55	62	19	1280	---	79	73	819	51	280	259	151
31	53	---	1980	548	---	97	---	404	---	294	62	---
TOTAL	2912	2775	3082	10822	13351	3525	5477	11458	8212	5674	2229	5597
MEAN	93.9	92.5	99.4	349	477	114	183	370	274	183	71.9	187
MAX	377	491	1980	1540	1660	286	820	1330	1770	900	259	900
MIN	38	45	19	92	149	70	73	60	51	25	28	28
CFSM	.70	.69	.74	2.61	3.56	.85	1.36	2.76	2.04	1.37	.54	1.39
IN.	.81	.77	.86	3.00	3.71	.98	1.52	3.18	2.28	1.58	.62	1.55

CAL YR 1989	TOTAL	82880.5	MEAN	227	MAX	2030	MIN	4.8	CFSM	1.69	IN.	23.01
WTR YR 1990	TOTAL	75114	MEAN	206	MAX	1980	MIN	19	CFSM	1.54	IN.	20.85



## MUSKINGUM RIVER BASIN

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 mi<sup>2</sup>.

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. 16-30. Records good except those for periods of estimated record which are 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.--53 years, 445 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,700 ft<sup>3</sup>/s July 5, 1969, gage height, 16.43 ft; minimum daily, 49 ft<sup>3</sup>/s July 17, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,220 ft<sup>3</sup>/s Feb. 16, gage height, 9.95 ft; minimum daily, 76 ft<sup>3</sup>/s Dec. 28-30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	182	229	241	2160	464	728	284	263	502	192	339	222
2	382	241	222	1530	2300	662	501	241	395	177	334	208
3	409	248	216	730	3260	632	480	226	399	160	252	195
4	286	236	205	636	3520	556	406	255	319	146	199	193
5	234	216	222	1050	3510	497	388	610	283	134	1640	191
6	197	212	243	737	2530	451	324	561	288	126	1870	238
7	162	226	274	513	1680	391	287	431	491	114	1030	1820
8	148	318	248	432	1090	361	272	309	1070	113	636	2330
9	144	368	203	376	825	391	263	256	1890	114	443	2480
10	168	330	205	391	1320	539	406	235	1210	123	364	2140
11	260	290	194	450	1030	496	1880	228	651	204	288	1280
12	235	268	190	417	765	455	1630	209	413	1880	243	759
13	197	224	177	352	636	435	971	363	327	2580	379	495
14	176	195	168	312	606	412	673	554	286	1730	703	618
15	164	232	104	309	1820	341	590	414	264	1360	435	2250
16	162	1430	98	428	4100	307	509	1280	227	707	303	1440
17	346	1730	94	537	3850	369	429	2080	199	441	265	1090
18	417	939	90	749	2580	378	390	2120	188	325	256	710
19	454	556	88	640	1390	324	333	1320	176	265	1210	739
20	1050	439	86	594	921	297	327	697	177	248	2720	822
21	828	373	84	1330	698	295	1560	598	207	266	2470	602
22	610	304	82	984	656	284	2220	476	191	851	2120	1020
23	491	270	82	769	903	271	1360	385	444	3260	1210	845
24	426	252	80	660	940	234	775	321	435	2180	681	586
25	380	241	80	578	735	214	516	289	328	1040	487	467
26	284	255	78	584	637	223	416	531	250	562	414	374
27	231	293	78	460	597	216	364	503	226	422	363	324
28	211	308	76	404	742	208	331	375	216	319	347	301
29	196	335	76	398	---	211	299	1060	202	252	338	295
30	193	275	76	414	---	226	278	1320	188	274	294	322
31	197	---	1140	415	---	242	---	747	---	437	244	---
TOTAL	9820	11833	5500	20339	44105	11646	19462	19257	12442	21002	22877	25356
MEAN	317	394	177	656	1575	376	649	621	415	677	738	845
MAX	1050	1730	1140	2160	4100	728	2220	2120	1890	3260	2720	2480
MIN	144	195	76	309	464	208	263	209	176	113	199	191

CAL YR 1989 TOTAL 191969 MEAN 526 MAX 3930 MIN 76  
WTR YR 1990 TOTAL 223639 MEAN 613 MAX 4100 MIN 76

MUSKINGUM RIVER BASIN

65

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 mi<sup>2</sup>.

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, 1,910 microsiemens Dec. 28; minimum, 318 microsiemens Aug. 19.

pH: Maximum, 8.6 units March 15, 27, 28, April 8, 9; minimum, 7.3 units Nov. 16-18.

WATER TEMPERATURES: Maximum, 27.0°C July 4; minimum, 0.5°C Dec. 17, 18, 22, Feb. 26.

DISSOLVED OXYGEN: Maximum, 17.1 mg/L March 28; minimum, .5 mg/L July 15.

## MUSKINGUM RIVER BASIN

03117100 TUSCARAWAS RIVER AT NAVARRE, OH

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER				NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	1310	1260	1290	1120	1050	1090	720	600	625
2	---	---	---	1330	1150	1240	1160	1120	1140	744	630	686
3	---	---	---	1210	1080	1130	1210	1150	1170	876	750	791
4	972	912	925	1130	1080	1110	1240	1210	1230	852	825	836
5	1090	981	1030	1130	1090	1110	1270	1220	1240	819	699	741
6	1150	1100	1120	1180	1130	1160	1310	1270	1280	783	714	736
7	1170	1100	1140	1220	1130	1200	1310	1160	1200	894	786	826
8	1400	1180	1320	1210	1090	1150	1190	1150	1170	945	876	902
9	1420	1340	1390	1050	924	966	1240	1160	1190	999	948	968
10	1450	1240	1390	1020	969	988	1330	1250	1280	1030	996	1010
11	1660	1260	1400	1030	975	993	1300	1250	1270	1020	930	971
12	1540	990	1100	1090	1030	1040	1300	1270	1290	1030	948	976
13	1170	1090	1120	1090	1050	1070	1320	1290	1300	1050	975	999
14	1220	1170	1190	1200	1020	1080	1410	1280	1330	1090	1040	1060
15	1270	1220	1250	1320	939	1260	1450	1390	1420	1230	1100	1160
16	1350	1270	1310	978	474	687	1420	1350	1390	1180	1060	1140
17	1360	1070	1220	588	495	534	1630	1360	1460	1050	927	1000
18	1190	873	946	729	594	657	1650	1440	1560	918	840	875
19	894	804	840	828	729	774	1590	1460	1530	864	831	851
20	831	657	726	927	834	872	1550	1490	1520	867	810	851
21	705	645	667	987	912	931	1560	1520	1540	789	687	732
22	777	702	739	1020	966	993	1550	1460	1520	759	705	725
23	840	777	807	1120	1020	1060	1540	1500	1520	816	759	790
24	915	846	877	1170	1120	1150	1650	1510	1590	870	819	840
25	942	903	920	1210	1170	1190	1660	1600	1640	885	864	874
26	948	909	936	1210	1190	1210	1690	1620	1660	903	885	892
27	1190	912	1060	1220	1110	1190	1690	1670	1680	945	882	901
28	1210	1160	1190	1100	1070	1080	1910	1630	1750	1000	948	971
29	1240	1220	1230	1150	969	1050	1630	1570	1600	1120	999	1020
30	1330	1240	1290	1040	966	995	1770	1590	1660	1090	1020	1040
31	1340	1260	1300	---	---	---	1600	789	1210	1400	1080	1180
MONTH	1660	645	1090	1330	474	1040	1910	789	1400	1400	600	902
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	1390	990	1180	903	840	863	1270	1170	1220	1190	1160	1170
2	927	459	649	891	858	872	1200	903	1090	1220	1180	1200
3	561	459	499	900	858	883	906	843	871	1240	1180	1220
4	573	489	539	912	882	893	966	912	935	1240	1060	1210
5	573	480	518	954	915	935	1010	969	994	1370	702	1010
6	621	576	605	1020	957	977	1040	966	992	798	696	744
7	666	612	637	1080	996	1020	1120	1050	1080	903	789	854
8	741	654	703	1120	1080	1100	1150	1100	1120	972	903	938
9	792	744	769	1130	1110	1120	1160	1080	1130	1160	987	1090
10	---	---	---	1120	933	1040	1180	768	1090	1230	1160	1200
11	---	---	---	939	906	915	966	501	643	1310	1220	1250
12	---	---	---	990	951	978	624	519	565	1320	1140	1260
13	---	---	---	1010	981	994	729	627	678	1270	1020	1130
14	---	---	---	1050	1000	1020	795	726	756	1220	783	917
15	624	408	569	1200	999	1080	831	795	816	921	813	869
16	405	351	375	1250	1060	1180	876	834	859	972	489	726
17	480	408	442	1310	1130	1230	969	867	899	495	468	483
18	591	483	525	1100	1050	1060	1020	963	989	531	468	493
19	708	591	649	1090	1060	1080	1060	981	1010	657	534	588
20	795	687	728	1340	1030	1150	1100	1020	1070	777	660	702
21	849	777	813	1330	1160	1200	1020	423	711	813	786	800
22	891	849	867	1270	1160	1190	537	426	481	894	804	837
23	897	750	811	1230	1120	1210	660	540	595	981	897	933
24	759	717	742	1250	1200	1230	768	666	717	1040	987	1010
25	894	753	820	1330	1160	1240	897	765	808	1100	1040	1070
26	915	864	889	1400	1330	1360	966	906	938	1160	870	981
27	963	921	939	1380	1320	1350	1040	969	1000	966	720	773
28	936	897	921	1330	1290	1310	1070	1040	1050	894	786	850
29	---	---	---	1380	1320	1350	1110	1060	1080	882	603	733
30	---	---	---	1380	1340	1360	1160	1100	1130	618	570	591
31	---	---	---	1350	1260	1290	---	---	---	738	624	678
MONTH	1390	351	704	1400	840	1110	1270	423	911	1370	468	913

## MUSKINGUM RIVER BASIN

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03117100 TUSCARAWAS RIVER AT NAVARRE, OH

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	852	741	788	1360	1290	1320	---	---	---	1340	1310	1330
2	1060	855	893	1480	1290	1380	---	---	---	1350	1260	1320
3	1060	813	919	1360	1320	1340	---	---	---	1390	1300	1360
4	999	939	973	1420	1350	1380	---	---	---	1430	1390	1410
5	1120	1010	1080	1450	1390	1410	---	---	---	1430	1400	1420
6	1140	1100	1120	1510	1460	1490	---	---	---	1440	1030	1370
7	1080	777	938	1580	1520	1550	---	---	---	1120	420	688
8	930	570	711	1610	1540	1580	---	---	---	546	447	503
9	573	492	518	1710	1580	1640	---	---	---	564	474	535
10	627	549	573	1700	1610	1660	---	---	---	612	537	573
11	759	627	699	1690	1170	1510	---	---	---	678	594	638
12	924	771	835	1190	387	706	---	---	---	789	681	712
13	1050	930	992	573	432	511	1220	912	1100	1020	810	938
14	1130	1060	1100	636	579	602	1160	660	805	1030	489	966
15	1200	1100	1160	654	621	630	861	708	782	636	456	553
16	1220	1170	1200	753	657	702	975	870	927	651	585	617
17	1250	1200	1220	822	756	790	1270	945	1090	684	630	657
18	1340	1250	1310	987	828	891	1330	885	1160	792	675	731
19	1430	1340	1380	1100	924	1040	1100	318	805	822	741	775
20	1470	1410	1430	1150	1090	1110	429	360	390	759	744	754
21	1420	1380	1410	1110	1090	1100	462	405	443	849	753	803
22	1490	1330	1430	1100	1090	1100	570	444	497	846	618	753
23	1590	690	1280	1110	1090	1100	678	570	622	732	624	674
24	792	624	700	1100	1090	1100	855	678	738	885	735	810
25	975	801	893	1110	1090	1100	975	867	918	981	891	936
26	1030	972	994	1110	1090	1100	1020	978	992	1050	984	1010
27	1330	1010	1130	---	---	---	1080	1010	1060	1240	1020	1160
28	1360	1190	1240	---	---	---	1190	1080	1130	1280	1220	1240
29	1230	1200	1220	---	---	---	1120	1030	1080	1270	1200	1250
30	1340	1150	1230	---	---	---	1170	1080	1110	1310	1150	1210
31	---	---	---	---	---	---	1310	1120	1200	---	---	---
MONTH	1590	492	1050	1710	387	1150	1330	318	887	1440	420	923
YEAR	1910	318	1010									

PH (STANDARD UNITS), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

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



03117100 TUSCARAWAS RIVER AT NAVARRE, OH

PH (STANDARD UNITS), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

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

## MUSKINGUM RIVER BASIN

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03117100 TUSCARAWAS RIVER AT NAVARRE, OH

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	---	---	---	13.0	11.5	12.0	5.0	3.5	4.5	2.0	1.0	2.0
2	---	---	---	11.5	10.5	11.5	4.5	3.5	4.0	4.0	1.5	2.5
3	---	---	---	11.0	9.5	10.5	4.0	2.5	3.0	3.5	1.5	2.5
4	16.0	14.0	15.0	9.5	8.0	9.0	2.5	2.0	2.5	4.5	2.5	3.5
5	15.0	13.0	14.0	10.0	8.0	9.0	3.0	2.0	2.5	4.5	3.5	4.0
6	15.5	14.0	14.5	11.5	10.0	10.5	4.0	3.0	3.5	4.0	3.0	3.5
7	14.5	13.0	14.0	11.0	9.5	10.5	4.0	3.0	3.5	3.5	2.0	2.5
8	13.5	12.0	13.0	11.0	10.0	10.5	3.0	2.5	3.0	3.5	2.0	3.0
9	13.5	10.5	12.0	11.5	10.0	10.5	3.0	1.5	2.5	4.5	3.0	3.5
10	13.0	11.0	11.5	10.0	9.0	9.5	2.5	2.0	2.5	4.5	4.0	4.0
11	13.5	10.5	12.0	9.0	8.0	8.5	3.5	2.5	3.0	4.5	3.5	4.0
12	15.0	11.5	13.0	9.0	7.5	8.5	3.0	2.0	3.0	3.5	2.5	3.0
13	16.0	13.5	14.5	10.5	7.5	9.0	3.5	1.0	2.0	2.5	1.5	2.0
14	17.5	14.5	16.0	11.0	9.5	10.0	2.5	1.5	2.0	2.0	1.0	1.5
15	18.5	15.5	17.0	13.0	11.0	12.0	1.5	1.0	1.5	4.0	2.0	3.0
16	19.0	16.0	17.5	13.0	10.0	11.5	2.0	1.0	1.5	5.0	3.0	4.0
17	18.5	16.5	17.5	9.5	7.0	8.5	1.5	.5	1.0	6.5	4.5	5.5
18	16.0	13.5	15.0	7.5	5.0	6.5	2.0	.5	1.0	6.5	6.0	6.5
19	13.0	11.0	11.5	5.0	4.0	4.5	2.5	1.0	1.5	6.0	4.0	5.0
20	10.5	9.5	10.0	6.5	4.5	5.5	2.0	1.5	2.0	4.0	3.5	4.0
21	9.5	9.0	9.0	6.0	5.0	5.5	2.0	1.0	1.5	4.0	3.5	3.5
22	10.5	8.5	9.5	5.0	4.5	5.0	1.5	.5	1.0	4.0	3.5	3.5
23	11.5	9.0	10.0	4.5	3.5	4.0	2.0	1.0	1.5	4.0	3.0	3.5
24	13.0	10.5	11.5	4.5	3.0	3.5	1.5	.5	1.0	5.0	4.0	4.5
25	14.5	11.5	12.5	5.5	3.5	4.5	1.5	1.0	1.5	6.0	4.5	5.5
26	14.5	12.0	13.5	7.0	5.5	6.0	1.5	1.0	1.5	5.5	4.0	4.5
27	15.0	12.5	13.5	8.0	5.5	6.5	2.0	1.0	1.5	4.5	3.0	3.5
28	14.5	12.5	13.5	8.5	7.0	8.0	2.5	2.0	2.0	4.5	3.5	4.0
29	14.5	12.0	13.0	7.0	5.5	6.5	2.5	1.5	2.0	4.0	3.5	4.0
30	14.5	12.0	13.0	5.5	4.5	5.0	2.5	2.0	2.5	4.5	2.5	3.5
31	14.0	12.5	13.0	---	---	---	2.5	1.5	2.0	4.5	2.5	3.5
MONTH	19.0	8.5	13.0	13.0	3.0	8.0	5.0	.5	2.0	6.5	1.0	3.5
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	4.5	3.0	3.5	4.5	3.0	3.5	12.5	11.5	12.0	19.0	17.5	18.0
2	4.5	3.5	4.0	5.5	3.5	4.5	11.5	10.0	11.0	17.5	16.0	17.0
3	4.0	3.5	3.5	5.0	4.5	5.0	10.0	7.5	9.0	16.5	15.0	15.5
4	4.0	3.0	3.5	5.0	3.5	4.0	9.5	7.0	8.0	14.5	14.0	14.5
5	3.0	2.5	3.0	5.0	3.5	4.0	10.5	7.5	9.0	14.5	13.5	14.0
6	3.5	3.0	3.5	6.0	4.0	4.5	10.5	8.0	9.0	14.5	12.5	13.5
7	5.0	3.5	4.5	6.5	3.0	4.5	9.5	7.5	8.5	16.5	12.5	14.5
8	6.5	5.0	5.5	6.0	3.5	5.0	10.5	7.0	8.5	19.0	14.5	16.5
9	7.5	6.0	7.0	7.0	5.5	6.5	12.0	8.0	10.0	20.0	16.5	18.0
10	---	---	---	8.0	6.5	7.0	11.5	11.0	11.0	19.0	16.5	18.0
11	---	---	---	9.5	7.5	8.5	10.5	8.5	9.5	18.0	14.5	16.0
12	---	---	---	12.5	9.0	11.0	9.0	8.0	8.5	16.0	13.5	14.5
13	---	---	---	15.0	11.5	13.0	9.5	7.5	8.5	14.5	13.5	14.0
14	---	---	---	16.0	13.0	14.5	9.0	8.5	9.0	16.5	13.0	14.5
15	5.0	4.5	4.5	16.5	14.0	15.5	11.0	8.5	9.5	17.5	15.0	16.0
16	6.0	5.0	6.0	15.5	15.0	15.5	12.5	9.0	11.0	17.5	16.5	17.0
17	6.0	4.5	5.5	15.0	13.0	14.5	12.5	11.0	11.5	17.5	16.5	17.0
18	4.5	3.5	4.0	13.0	10.5	11.5	13.0	9.5	11.0	17.0	16.0	16.5
19	5.0	4.0	4.5	10.0	8.0	9.0	13.0	9.5	11.0	17.0	15.5	16.5
20	5.0	4.0	4.5	8.0	6.5	7.5	13.0	12.0	12.5	17.5	16.5	17.0
21	5.0	3.5	4.0	9.0	5.5	7.0	13.0	12.0	12.5	17.5	16.0	17.0
22	6.5	4.5	5.5	10.5	7.0	8.5	14.5	12.5	13.5	17.5	15.0	16.0
23	7.0	6.0	6.5	10.0	8.5	9.5	16.5	13.5	15.0	18.0	14.5	16.0
24	6.0	3.0	5.0	8.5	7.5	8.0	18.0	15.5	16.5	19.0	15.0	17.0
25	3.0	1.0	2.0	9.5	6.0	7.5	20.0	16.5	18.0	18.5	16.5	17.5
26	2.0	.5	1.0	9.0	6.5	7.5	22.0	18.0	20.0	18.0	16.5	17.5
27	4.0	1.5	2.5	9.5	6.0	7.5	23.0	19.0	20.5	19.0	16.5	17.5
28	4.5	2.5	3.5	10.0	6.5	8.0	22.0	20.0	21.0	18.5	17.0	17.5
29	---	---	---	10.0	8.0	9.0	20.0	18.5	19.5	17.5	15.0	16.0
30	---	---	---	12.5	9.0	10.5	20.5	17.0	18.5	16.5	14.5	15.5
31	---	---	---	12.0	11.5	11.5	---	---	---	18.5	15.5	16.5
MONTH	7.5	.5	4.0	16.5	3.0	8.5	23.0	7.0	12.5	20.0	12.5	16.0

## MUSKINGUM RIVER BASIN

03117100 TUSCARAWAS RIVER AT NAVARRE, OH

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	20.0	16.5	18.0	25.0	22.5	24.0	23.5	20.5	22.0	24.0	21.0	22.0
2	21.0	18.5	19.5	25.0	21.0	23.0	24.5	20.0	22.0	24.0	21.5	22.5
3	22.5	19.5	21.0	25.0	21.0	23.0	24.5	20.5	22.5	24.0	21.5	22.5
4	20.5	17.5	18.5	27.0	21.5	24.0	23.5	21.5	22.5	23.0	20.0	21.5
5	19.0	15.5	17.0	26.5	24.0	25.0	22.0	21.5	22.0	22.5	20.5	21.5
6	18.0	16.0	17.0	25.0	22.0	23.0	22.0	21.0	21.5	23.0	21.0	22.0
7	20.0	17.5	18.5	24.0	20.0	22.0	21.5	20.5	21.0	22.0	20.5	21.5
8	19.5	18.5	19.0	25.0	21.0	23.0	22.0	20.0	21.0	21.0	20.0	20.5
9	20.5	19.0	19.5	25.0	22.5	23.5	23.0	19.5	21.0	20.5	19.5	20.0
10	20.5	19.5	20.0	26.0	22.5	24.0	24.0	20.5	22.0	20.0	19.0	19.5
11	21.0	18.5	20.0	25.0	21.0	22.5	24.0	21.5	22.5	21.5	19.5	20.5
12	20.0	18.0	19.0	21.0	19.0	20.0	24.0	21.5	23.0	21.5	19.5	20.5
13	22.0	18.0	20.0	19.0	18.5	18.5	26.5	21.5	23.0	22.0	19.5	20.5
14	22.0	19.5	21.0	18.5	18.0	18.0	22.5	21.0	21.5	22.0	20.0	21.0
15	24.5	21.0	22.5	19.0	18.0	18.5	24.0	20.5	22.0	19.5	18.0	18.5
16	25.5	21.0	23.0	20.0	18.0	19.0	23.5	21.0	22.0	18.0	17.5	18.0
17	26.5	22.5	24.5	21.5	18.5	19.5	24.5	21.5	23.0	18.0	16.0	17.0
18	26.5	24.0	25.0	25.5	19.5	22.0	23.5	22.5	23.0	16.5	15.5	15.5
19	25.0	21.0	22.5	25.5	22.5	24.0	23.0	22.0	22.5	16.0	15.0	15.5
20	21.0	19.5	20.0	24.5	23.0	24.0	22.5	22.0	22.0	17.0	15.5	16.0
21	23.0	19.0	20.5	24.0	23.0	23.5	22.0	20.5	21.0	18.0	16.0	17.0
22	21.5	20.0	21.0	23.5	22.0	23.0	20.5	20.5	20.5	18.0	17.0	17.0
23	20.5	19.0	20.0	22.0	20.5	21.0	20.5	20.0	20.5	16.5	15.5	16.5
24	18.5	17.5	18.0	21.0	20.5	21.0	21.0	20.0	20.5	16.0	14.5	15.0
25	21.0	16.5	18.5	21.5	20.5	21.0	22.5	20.0	21.0	16.5	14.0	15.0
26	22.5	18.0	20.0	24.0	20.5	22.0	23.5	20.5	22.0	18.0	14.5	16.0
27	24.0	20.0	22.0	24.5	21.5	23.0	25.0	21.5	23.0	18.5	15.5	16.5
28	23.5	21.5	22.5	25.5	21.5	23.5	26.0	22.5	24.0	18.0	16.0	17.0
29	24.5	21.5	23.0	25.5	22.0	24.0	24.5	22.5	23.5	17.5	17.0	17.5
30	25.5	22.0	23.5	24.5	23.0	24.0	23.5	21.0	22.5	17.5	17.0	17.5
31	---	---	---	23.5	22.0	22.5	23.5	20.5	22.0	---	---	---
MONTH	26.5	15.5	20.5	27.0	18.0	22.0	26.5	19.5	22.0	24.0	14.0	18.5
YEAR	27.0	.5	13.0									

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER				NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	9.8	8.3	8.9	11.7	10.3	10.9	11.3	9.5	10.2
2	---	---	---	9.8	8.7	9.1	11.5	10.5	10.9	11.1	8.9	10.1
3	---	---	---	10.3	8.8	9.4	11.7	10.4	10.9	12.0	10.0	11.1
4	9.0	7.5	8.1	11.1	9.4	10.1	12.3	10.6	11.4	11.8	10.1	10.7
5	9.6	8.0	8.7	11.5	9.7	10.4	12.7	11.2	11.9	11.6	9.8	10.4
6	9.4	7.8	8.6	11.2	9.5	10.2	12.2	11.3	11.8	12.0	9.9	10.7
7	9.8	8.0	8.7	9.9	8.4	9.2	12.5	10.9	11.7	12.6	11.5	12.2
8	10.2	8.3	9.1	9.4	8.6	8.9	12.5	11.1	11.7	13.0	12.1	12.5
9	10.6	8.7	9.5	9.6	8.1	8.8	12.9	11.4	12.0	12.1	11.5	11.8
10	9.9	8.5	9.1	9.9	8.7	9.3	12.7	11.5	12.0	12.3	11.3	12.0
11	9.9	8.6	9.1	11.0	9.4	10.1	12.2	11.2	11.6	12.1	11.4	11.7
12	9.9	8.0	8.8	11.9	9.7	10.6	12.6	10.9	11.6	12.6	11.6	12.0
13	9.9	7.8	8.7	12.0	10.0	10.8	12.5	11.1	11.8	13.2	12.1	12.6
14	10.2	7.8	8.8	11.2	9.5	10.3	12.8	10.9	11.9	13.5	12.6	13.0
15	10.2	7.8	8.9	10.3	9.0	9.6	11.9	10.9	11.4	13.1	12.4	12.8
16	9.8	7.7	8.6	9.4	7.8	8.7	12.3	10.5	11.3	12.7	11.8	12.2
17	8.5	7.0	7.5	10.3	9.0	9.6	12.0	10.6	11.3	11.8	11.4	11.6
18	8.0	7.0	7.5	10.1	8.7	9.6	12.0	10.1	10.9	11.8	10.5	11.3
19	9.4	7.9	8.7	11.0	10.4	10.8	12.2	10.0	11.2	12.0	10.4	11.4
20	9.2	8.5	8.8	10.9	10.3	10.7	12.3	9.9	11.2	12.4	11.9	12.1
21	9.6	8.6	9.3	10.7	10.2	10.4	13.5	9.8	11.7	12.0	11.3	11.7
22	10.1	9.5	9.9	11.3	9.8	10.7	13.3	10.7	12.0	11.6	11.3	11.5
23	10.3	10.0	10.1	11.8	10.9	11.3	13.2	10.6	11.9	12.4	11.4	11.9
24	10.2	9.5	10.0	12.0	11.2	11.5	12.9	10.7	11.8	12.6	11.8	12.2
25	10.0	9.2	9.6	11.7	10.7	11.3	12.4	10.6	11.6	11.9	11.6	11.7
26	10.3	9.0	9.5	11.3	10.5	10.8	12.9	10.7	11.6	12.6	11.7	12.1
27	9.9	8.8	9.3	10.9	9.9	10.4	12.3	10.3	11.3	13.8	12.4	13.0
28	10.0	8.7	9.2	9.7	9.1	9.5	13.1	10.1	11.4	13.7	12.8	13.2
29	10.0	8.7	9.2	10.4	9.3	9.7	13.0	10.4	11.5	13.4	12.7	13.0
30	10.0	8.5	9.2	10.9	9.6	10.2	12.5	10.6	11.4	14.4	12.8	13.4
31	9.2	8.4	8.8	---	---	---	12.0	9.4	11.2	14.7	13.2	13.8
MONTH	10.6	7.0	9.0	12.0	7.8	10.0	13.5	9.4	11.5	14.7	8.9	11.9

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OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	13.9	13.0	13.5	12.3	11.6	12.0	11.5	7.9	9.3	8.7	5.7	7.1
2	13.0	11.0	12.3	11.9	11.3	11.6	9.4	7.6	8.3	8.4	4.7	6.9
3	11.6	7.8	9.4	11.6	10.9	11.2	9.7	7.9	8.7	8.2	6.1	7.0
4	7.7	7.0	7.5	12.4	11.0	11.6	12.5	9.1	10.5	7.4	5.6	6.5
5	7.9	6.8	7.4	12.6	11.3	11.8	12.6	9.6	10.7	6.9	6.3	6.6
6	9.2	6.8	7.6	12.9	11.2	11.9	13.9	9.3	11.2	7.8	6.4	7.2
7	10.4	8.9	9.9	13.3	11.2	12.1	14.2	9.6	11.5	8.9	7.4	8.1
8	10.0	7.7	9.0	13.4	11.2	12.1	16.0	9.9	12.5	9.4	7.2	8.1
9	8.7	7.0	7.7	11.9	10.5	11.1	15.2	10.1	12.2	8.4	6.4	7.2
10	---	---	---	11.6	9.9	10.6	9.8	8.2	8.9	7.8	5.8	6.8
11	---	---	---	12.2	10.0	10.8	9.2	7.4	8.3	8.7	6.5	7.4
12	---	---	---	12.9	9.6	10.9	9.5	9.2	9.4	8.2	6.9	7.4
13	---	---	---	13.0	9.0	10.5	10.5	9.6	10.1	8.0	6.9	7.5
14	---	---	---	13.2	8.6	10.3	10.2	9.7	9.9	8.0	7.3	7.6
15	11.3	10.9	11.2	13.2	8.1	10.1	11.5	9.3	10.2	7.9	7.2	7.6
16	11.0	10.5	10.7	9.9	7.8	8.6	11.7	9.3	10.3	7.4	6.1	6.9
17	11.1	10.5	10.8	10.5	7.3	8.5	11.7	8.8	10.0	7.4	7.0	7.2
18	11.7	11.2	11.5	11.1	8.2	9.4	12.8	9.0	10.6	7.9	6.9	7.4
19	12.1	11.7	11.9	11.5	9.0	10.1	13.1	9.1	10.9	7.8	6.0	6.7
20	13.0	12.1	12.7	12.6	9.6	11.0	9.8	8.5	9.1	6.8	6.0	6.4
21	13.4	12.9	13.1	14.0	10.3	11.9	8.6	7.5	8.0	6.9	5.9	6.4
22	13.3	10.9	12.6	13.7	10.2	11.6	8.1	7.8	7.9	7.1	6.0	6.6
23	11.2	10.7	10.9	12.4	9.4	10.6	8.6	7.9	8.2	9.4	6.9	8.2
24	11.7	10.9	11.3	14.0	9.3	11.3	9.9	7.8	8.6	8.9	7.3	8.2
25	12.8	11.8	12.4	15.8	10.2	12.5	10.2	7.2	8.4	8.5	7.2	7.8
26	13.2	12.8	12.9	16.0	10.6	12.9	10.5	6.5	8.2	7.6	6.7	7.1
27	12.8	12.4	12.7	16.9	10.6	13.2	10.1	6.2	7.8	7.0	6.4	6.7
28	12.5	12.2	12.4	17.1	10.8	13.3	9.7	5.8	7.4	7.5	6.5	7.0
29	---	---	---	15.1	10.1	12.1	7.7	5.8	6.7	7.2	6.8	7.1
30	---	---	---	15.2	9.1	11.5	9.3	5.6	7.2	7.3	6.5	7.1
31	---	---	---	11.3	8.5	9.8	---	---	---	8.1	7.1	7.6
MONTH	13.9	6.8	10.9	17.1	7.3	11.2	16.0	5.6	9.4	9.4	4.7	7.2
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE				JULY			AUGUST			SEPTEMBER		
1	8.2	6.7	7.5	10.5	5.8	7.7	7.9	6.3	7.0	9.2	5.8	7.3
2	7.8	6.6	7.2	11.2	6.1	8.3	9.2	6.5	7.6	9.6	5.8	7.4
3	7.5	6.2	6.8	11.4	6.2	8.6	9.1	6.4	7.7	9.7	5.9	7.5
4	6.8	6.0	6.4	12.1	6.2	8.8	8.5	6.4	7.5	9.5	5.6	7.3
5	8.0	6.2	7.1	11.3	5.9	8.4	6.9	4.3	5.3	8.6	5.8	7.0
6	7.9	6.8	7.3	10.2	5.8	8.0	7.1	4.8	6.0	8.2	5.7	6.7
7	7.0	6.4	6.7	10.7	6.2	8.3	8.0	6.7	7.4	6.0	5.5	5.8
8	6.6	5.1	6.3	10.8	6.2	8.6	7.4	6.7	7.0	---	---	---
9	6.6	5.0	5.8	9.2	5.7	7.2	8.7	6.5	7.5	---	---	---
10	6.4	5.6	6.0	8.6	4.7	6.6	9.1	6.4	7.7	---	---	---
11	6.9	4.8	6.4	7.2	4.7	5.7	9.0	5.8	7.1	6.9	5.0	6.0
12	7.0	4.5	6.1	6.5	4.2	5.8	8.9	5.7	7.1	6.4	5.1	5.8
13	7.4	6.1	6.7	4.4	1.2	2.3	7.8	4.5	6.6	7.3	4.2	6.0
14	7.3	6.0	6.6	1.4	.9	1.2	6.7	5.6	6.3	7.5	6.2	6.7
15	7.2	5.5	6.4	1.4	.5	.9	7.7	5.8	6.6	---	---	---
16	8.0	5.8	6.8	1.0	.6	.8	8.4	6.2	7.1	---	---	---
17	9.1	5.7	7.2	2.6	.6	1.1	9.1	6.3	7.6	---	---	---
18	10.5	5.7	7.8	8.4	1.1	3.8	8.1	6.1	7.0	6.1	5.1	6.0
19	9.2	5.7	7.4	9.5	6.2	7.7	6.8	4.9	6.0	7.4	4.5	6.0
20	8.6	6.3	7.5	8.7	6.5	7.4	5.6	4.6	5.0	8.0	6.4	7.1
21	9.1	6.3	7.5	8.1	6.1	7.0	6.3	4.5	5.1	8.2	7.4	7.9
22	7.9	6.0	6.9	7.1	5.0	5.8	5.8	5.2	5.6	8.5	7.4	7.8
23	6.8	4.9	6.0	6.3	2.5	4.2	6.1	5.8	6.0	10.6	8.1	9.1
24	6.2	5.1	5.7	2.6	1.7	2.1	6.5	6.1	6.3	9.1	7.3	8.2
25	7.2	6.1	6.6	2.2	1.3	1.6	6.8	6.2	6.4	8.1	7.4	7.9
26	6.8	5.8	6.2	5.0	1.9	3.9	7.2	6.2	6.6	8.0	7.0	7.4
27	7.0	5.4	6.2	5.8	3.7	4.6	8.0	6.0	6.9	7.7	7.1	7.3
28	7.0	5.4	6.1	6.8	4.4	5.4	9.0	5.9	7.2	7.7	6.9	7.3
29	8.0	5.2	6.4	7.3	4.8	5.8	7.5	5.9	6.6	7.4	6.8	7.1
30	8.9	5.7	7.1	9.1	4.7	6.7	8.8	6.1	7.2	7.9	6.7	7.2
31	---	---	---	7.2	6.1	6.6	8.7	6.0	7.2	---	---	---
MONTH	10.5	4.5	6.7	12.1	.5	5.5	9.2	4.3	6.7	10.6	4.2	7.1
YEAR	17.1	.5	8.9									



## MUSKINGUM RIVER BASIN

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 mi<sup>2</sup>.

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. 16-30, Feb. 25-27. Records good except for periods of estimated record, and discharges between 800 and 1,600 ft<sup>3</sup>/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.--52 years, 270 ft<sup>3</sup>/s, 14.49 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,000 ft<sup>3</sup>/s Jan. 22, 1959, gage height, 10.05 ft, from rating curve extended above 8,000 ft<sup>3</sup>/s on basis of contracted-opening and flow-over-road measurement of peak flow; minimum, 6.9 ft<sup>3</sup>/s Sept. 12, 13, 1971.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,800 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 4	2100	1,940	4.90	July 23	1830	2,280	5.41
Feb. 16	1130	3,220	6.66	Sept. 7	2100	1,840	4.72
July 13	0130	*3,880	*7.31				

Minimum discharge, 32 ft<sup>3</sup>/s Dec. 29, 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	84	83	1470	473	282	170	196	445	100	252	126
2	59	84	80	838	789	262	277	178	337	93	209	121
3	61	84	77	582	995	254	264	166	294	87	186	122
4	58	84	71	437	1400	225	234	176	274	83	174	112
5	55	81	71	518	1520	211	216	389	251	79	184	105
6	58	75	73	413	1120	203	196	395	209	77	196	108
7	57	83	92	314	921	184	182	275	502	74	181	1090
8	55	98	84	260	695	176	173	216	824	72	172	1020
9	52	117	73	226	579	193	161	188	1450	72	158	943
10	51	111	69	212	658	221	277	175	1070	86	150	935
11	57	98	65	222	678	208	1540	167	807	108	140	488
12	54	90	64	211	583	199	1390	157	515	1690	131	353
13	51	88	59	165	520	188	1010	314	353	2960	168	307
14	49	84	60	150	467	178	696	326	279	1300	322	267
15	48	86	52	156	1040	169	614	218	246	1340	202	485
16	54	728	50	186	2930	164	513	447	220	1150	162	386
17	76	452	47	210	2270	198	415	887	194	763	142	338
18	86	253	45	228	1410	237	391	751	172	516	130	262
19	102	181	43	224	965	196	322	527	158	346	278	319
20	155	149	41	236	704	214	288	391	148	308	464	451
21	138	122	40	600	549	200	998	362	151	789	755	314
22	112	108	39	615	474	185	1040	334	142	1070	772	394
23	104	99	38	558	462	177	879	258	132	1870	369	336
24	103	91	37	442	449	169	652	217	130	1530	283	259
25	97	88	36	376	400	161	471	193	128	1200	232	225
26	91	90	35	344	340	155	368	383	116	787	198	206
27	87	92	34	290	290	147	308	410	106	503	178	190
28	79	99	33	249	325	141	267	273	115	358	165	177
29	76	101	32	252	---	140	233	704	124	287	161	169
30	77	90	32	483	---	137	215	829	108	241	154	368
31	82	---	618	536	---	151	---	610	---	251	137	---
TOTAL	2337	4090	2273	12003	24006	5925	14760	11112	10000	20190	7405	10976
MEAN	75.4	136	73.3	387	857	191	492	358	333	651	239	366
MAX	155	728	618	1470	2930	282	1540	887	1450	2960	772	1090
MIN	48	75	32	150	290	137	161	157	106	72	130	105
CFSM	.30	.54	.29	1.53	3.39	.76	1.94	1.42	1.32	2.57	.94	1.45
IN.	.34	.60	.33	1.76	3.53	.87	2.17	1.63	1.47	2.97	1.09	1.61

CAL YR 1989 TOTAL 100995 MEAN 277 MAX 2860 MIN 32 CFSM 1.09 IN. 14.85  
WTR YR 1990 TOTAL 125077 MEAN 343 MAX 2960 MIN 32 CFSM 1.35 IN. 18.39

## 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 mi<sup>2</sup>.

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. 12-30. 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 1990, 12.7 ft<sup>3</sup>/s. At times low flow regulated by small pools above station. Water-quality data collected at this site 1965 to 1977.

AVERAGE DISCHARGE.--49 years, 36.2 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,470 ft<sup>3</sup>/s Jan. 22, 1959, gage height, 6.50 ft, from rating curve extended above 1,600 ft<sup>3</sup>/s on basis of contracted-opening measurement of peak flow; minimum daily, 0.2 ft<sup>3</sup>/s Nov. 9, 1944, Sept. 19, 1962.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft<sup>3</sup>/s and maximum (\*).

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 16	0800	421	4.91	Sept. 7	2400	*604	*5.58

Minimum daily discharge, 6.6 ft<sup>3</sup>/s July 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	8.8	14	219	38	52	22	22	49	12	41	24
2	22	8.5	14	106	176	50	27	20	39	11	32	23
3	22	9.0	13	62	232	49	30	20	37	9.6	25	22
4	18	8.7	13	56	219	45	28	23	35	9.0	23	20
5	14	8.1	13	89	222	41	25	34	30	8.7	136	19
6	12	8.2	13	68	134	41	24	33	28	8.0	123	22
7	10	8.6	15	50	111	39	22	27	75	7.7	72	371
8	8.8	10	15	40	97	37	20	22	185	7.4	51	420
9	8.2	12	14	35	80	38	18	20	244	6.9	46	202
10	10	12	13	35	104	43	34	18	142	6.6	72	166
11	13	12	12	40	100	42	109	17	87	11	45	113
12	11	11	11	38	75	41	85	17	61	134	34	82
13	9.7	9.5	11	34	61	39	61	26	51	146	44	66
14	9.2	8.9	10	29	59	37	51	27	47	79	78	69
15	8.9	13	10	26	144	35	53	23	44	64	56	191
16	8.5	93	10	36	361	33	48	33	39	49	41	144
17	12	90	10	47	191	34	43	66	35	36	33	101
18	9.2	54	9.8	51	119	32	39	68	31	27	30	75
19	13	35	9.8	48	91	29	34	48	25	22	73	73
20	20	27	9.8	46	74	28	35	37	26	21	59	92
21	23	23	9.8	93	63	26	100	29	28	27	121	74
22	20	20	9.6	85	61	24	106	25	23	35	116	102
23	18	18	9.6	67	64	23	69	22	21	234	76	97
24	15	17	9.6	63	63	22	53	21	20	199	59	69
25	13	16	9.4	57	58	21	45	20	20	104	50	57
26	12	16	9.3	52	52	20	38	34	17	62	44	50
27	11	16	9.3	43	49	20	34	32	16	45	38	46
28	9.7	17	9.2	37	53	19	30	27	16	36	33	42
29	9.0	16	9.1	36	---	19	25	73	16	30	32	40
30	8.6	15	9.0	38	---	18	24	109	14	30	29	45
31	8.7	---	99	36	---	20	---	69	---	50	26	---
TOTAL	398.5	621.3	433.3	1762	3151	1017	1332	1062	1501	1527.9	1738	2917
MEAN	12.9	20.7	14.0	56.8	113	32.8	44.4	34.3	50.0	49.3	56.1	97.2
MAX	23	93	99	219	361	52	109	109	244	234	136	420
MIN	8.2	8.1	9.0	26	38	18	18	17	14	6.6	23	19

CAL YR 1989 TOTAL 16941.5 MEAN 46.4 MAX 393 MIN 8.1  
WTR YR 1990 TOTAL 17461.0 MEAN 47.8 MAX 420 MIN 6.6

## MUSKINGUM RIVER BASIN

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 mi<sup>2</sup>.

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. 11-30, Apr. 8 to May 18. Records fair except for periods of estimated record, which are poor. Low flow slightly regulated by plants at Canton. Records include diversion from Sugar Creek well field. Mean pumpage for the 1990 water year, 17.5 ft<sup>3</sup>/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.--69 years, 189 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,600 ft<sup>3</sup>/s Jan. 21, 1959, gage height, 11.29 ft, from rating curve extended above 6,500 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 3.6 ft<sup>3</sup>/s Sept. 2, 1934.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft<sup>3</sup>/s, and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 16	0130	2,950	6.37	Aug. 19	0800	3,140	6.59
July 12	1000	2,750	6.13	Aug. 21	1300	2,140	5.34
July 23	1100	3,090	6.54	Sept. 7	1000	*4,050	*7.59

Minimum daily, 52 ft<sup>3</sup>/s Dec. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	111	102	90	891	288	219	190	130	212	118	184	145
2	201	95	87	326	1060	211	248	120	183	115	157	136
3	121	102	87	223	775	203	186	110	191	111	143	130
4	108	81	86	261	1330	183	171	140	180	107	134	129
5	98	78	92	339	770	180	160	300	160	110	637	130
6	96	81	100	235	466	178	145	250	193	109	330	189
7	92	103	107	182	455	169	141	180	390	106	222	3000
8	89	106	95	168	353	169	140	150	1060	105	180	1220
9	90	127	89	159	311	206	130	140	815	114	161	785
10	165	94	87	185	498	199	300	130	379	112	190	558
11	125	87	86	182	344	186	900	120	263	304	153	363
12	99	84	84	169	279	184	700	120	212	2080	132	292
13	94	84	80	148	247	177	450	280	189	759	355	256
14	89	84	78	132	324	171	400	200	176	424	261	395
15	86	261	76	146	1360	166	350	150	169	338	184	873
16	88	830	74	184	1820	163	310	350	154	246	155	465
17	166	292	72	192	678	190	280	700	139	192	139	338
18	98	170	70	203	421	167	250	450	139	165	155	266
19	187	129	68	180	347	167	210	237	132	150	1520	455
20	190	120	66	315	289	165	190	212	146	250	735	389
21	136	108	64	479	255	156	780	201	147	364	1360	292
22	119	101	62	319	277	156	820	171	129	488	601	526
23	108	95	60	268	287	153	620	157	126	2350	365	353
24	104	91	59	260	276	139	430	148	127	752	291	269
25	103	88	58	231	225	133	280	141	131	854	247	232
26	103	100	56	219	207	136	220	409	121	312	212	210
27	99	96	55	179	217	137	190	186	118	231	196	196
28	95	105	54	164	243	140	170	184	150	194	183	185
29	93	95	53	241	---	142	150	757	159	172	261	196
30	96	90	52	276	---	130	140	430	123	213	177	270
31	104	---	1100	230	---	160	---	270	---	325	159	---
TOTAL	3553	4079	3347	7686	14402	5235	9651	7523	6813	12270	10179	13243
MEAN	115	136	108	248	514	169	322	243	227	396	328	441
MAX	201	830	1100	891	1820	219	900	757	1060	2350	1520	3000
MIN	86	78	52	132	207	130	130	110	118	105	132	129

CAL YR 1989 TOTAL 87167 MEAN 239 MAX 2550 MIN 52  
WTR YR 1990 TOTAL 97981 MEAN 268 MAX 3000 MIN 52

## 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 mi<sup>2</sup>.

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.--52 years, 53.4 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 740 ft<sup>3</sup>/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, 263 ft<sup>3</sup>/s Feb. 20, gage height, 4.47 ft; minimum daily, 1.4 ft<sup>3</sup>/s Mar. 31, Apr. 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.3	7.2	62	4.1	34	6.4	1.4	58	162	13	60	14
2	7.7	7.0	72	4.1	34	1.7	1.5	50	73	11	49	14
3	7.7	6.9	72	50	35	1.6	1.6	42	72	9.2	37	16
4	7.6	6.7	78	165	24	1.6	1.5	44	70	7.9	28	14
5	7.1	6.4	94	178	17	1.6	1.5	62	63	7.2	36	12
6	6.7	5.8	100	146	17	1.6	1.7	66	57	6.7	37	17
7	6.4	5.5	115	146	130	1.6	1.9	64	62	5.8	28	152
8	6.1	5.5	112	148	191	1.7	2.2	59	90	5.2	22	193
9	5.7	5.6	95	57	190	1.9	2.2	54	125	4.9	17	188
10	5.3	5.6	95	4.1	190	1.9	2.0	49	125	4.7	16	187
11	5.3	5.7	81	36	189	1.9	1.9	43	175	7.3	17	186
12	5.4	5.7	43	96	188	1.9	1.8	40	201	53	16	182
13	5.5	5.6	58	96	187	1.9	1.8	48	192	95	17	162
14	5.5	5.6	71	95	163	1.9	1.8	48	166	90	20	97
15	5.4	23	27	95	139	1.9	2.5	43	85	95	17	72
16	5.3	36	2.7	95	10	1.9	5.1	52	78	133	15	65
17	5.3	53	2.6	95	10	1.9	5.6	78	69	103	12	57
18	5.3	59	2.0	94	10	1.9	5.6	91	59	59	12	47
19	6.1	57	1.6	71	136	1.9	5.6	90	48	50	25	49
20	7.8	77	1.6	27	239	1.8	32	87	37	41	50	55
21	8.6	93	1.6	26	254	1.8	100	87	32	40	69	52
22	9.4	117	1.6	55	251	1.8	118	81	25	40	79	53
23	9.5	129	1.6	153	249	1.7	146	74	21	97	75	50
24	9.5	125	1.6	189	247	1.7	165	67	18	156	68	43
25	9.5	118	1.5	188	245	1.6	162	59	17	198	60	37
26	9.3	116	1.5	123	248	1.7	153	71	15	197	51	32
27	8.9	103	2.3	16	189	1.7	131	74	14	196	41	27
28	8.5	86	3.7	11	59	1.7	82	72	13	194	32	24
29	8.0	73	3.8	27	---	1.7	75	91	14	175	25	24
30	7.6	59	3.8	34	---	1.7	67	159	15	98	19	52
31	7.3	---	4.0	34	---	1.4	---	184	---	71	16	---
TOTAL	219.6	1408.8	1212.5	2558.3	3875	59.0	1280.2	2187	2193	2263.9	1066	2173
MEAN	7.08	47.0	39.1	82.5	138	1.90	42.7	70.5	73.1	73.0	34.4	72.4
MAX	9.5	129	115	189	254	6.4	165	184	201	198	79	193
MIN	5.3	5.5	1.5	4.1	10	1.4	1.4	40	13	4.7	12	12

CAL YR 1989 TOTAL 20133.4 MEAN 55.2 MAX 248 MIN 1.5  
WTR YR 1990 TOTAL 20496.3 MEAN 56.2 MAX 254 MIN 1.4



## MUSKINGUM RIVER BASIN

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 mi<sup>2</sup>.

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. 14-30. 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 1990 water year, 17.5 ft<sup>3</sup>/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.--67 years, 1,433 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,400 ft<sup>3</sup>/s Jan. 26, 1937, gage height, 15.51 ft; minimum daily, 6.5 ft<sup>3</sup>/s Oct. 26, 1948.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,040 ft<sup>3</sup>/s Jan. 1, gage height, 7.48 ft; minimum daily, 240 ft<sup>3</sup>/s Dec. 29-30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	388	577	826	4030	2200	1940	861	1110	2500	691	1360	703
2	518	670	658	4980	3370	1740	1170	1030	1880	644	1100	657
3	764	698	632	5140	5340	1660	1410	941	1540	601	982	646
4	619	706	598	4990	5260	1550	1230	950	1440	565	828	611
5	493	667	594	3980	5370	1400	1140	1620	1290	527	1430	584
6	440	648	645	3110	5260	1320	1050	2000	1170	513	3000	581
7	400	652	723	1830	5040	1210	944	1630	1540	492	2190	2050
8	370	745	762	1420	5240	1120	884	1320	2350	473	1440	5060
9	356	951	685	1470	4720	1130	841	1110	3970	470	1070	4910
10	363	942	606	1280	4650	1320	989	1030	4730	489	919	5120
11	519	853	595	1280	4520	1350	3830	966	4320	600	844	4950
12	523	773	572	1310	3650	1260	5100	898	3920	2550	735	4230
13	450	736	555	1200	2960	1190	4300	1210	2820	4970	770	3400
14	409	732	520	1030	2380	1130	3350	1710	1890	4790	1560	1800
15	386	804	450	1000	3610	1050	2580	1430	1870	4240	1260	3300
16	373	2370	400	1220	5210	953	2220	1710	1830	4320	906	3780
17	470	3740	370	1440	5300	1000	1980	3700	1400	4570	737	2650
18	757	2980	350	1620	5220	1180	1740	4510	1140	3170	714	1970
19	787	1810	330	1760	5070	1100	1480	4320	1030	2360	1350	1660
20	1330	1440	320	1580	4590	1040	1360	2970	949	1800	4150	2340
21	1680	1210	310	2920	5180	1030	2950	2000	966	2490	4980	1880
22	1290	1030	290	3240	4660	991	5020	1790	921	3410	5350	1950
23	1040	962	280	2740	4580	946	4760	1500	865	4730	5060	2410
24	911	914	270	2580	4260	890	3690	1290	1150	5010	2700	1750
25	825	897	270	2050	3650	828	2690	1160	970	4040	1620	1380
26	741	891	260	1960	3050	793	2210	1550	862	5110	1320	1190
27	622	930	250	1630	2700	780	1890	1990	759	4660	1130	1030
28	568	990	250	1330	2020	753	1470	1590	713	3740	1010	956
29	532	1010	240	1290	---	732	1290	2220	775	2830	952	895
30	512	954	240	2090	---	736	1190	4210	762	1480	966	1190
31	527	---	2010	2400	---	798	---	3900	---	1550	792	---
TOTAL	19963	33282	15861	69900	119060	34920	65619	59365	52322	77885	53225	65633
MEAN	644	1109	512	2255	4252	1126	2187	1915	1744	2512	1717	2188
MAX	1680	3740	2010	5140	5370	1940	5100	4510	4730	5110	5350	5120
MIN	356	577	240	1000	2020	732	841	898	713	470	714	581

CAL YR 1989 TOTAL 568667 MEAN 1558 MAX 5380 MIN 240  
WTR YR 1990 TOTAL 667035 MEAN 1827 MAX 5370 MIN 240

## 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 mi<sup>2</sup>.

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. 12-30. 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.--52 years, 274 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,520 ft<sup>3</sup>/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, 1,810 ft<sup>3</sup>/s Jan. 1, gage height, 6.13 ft; minimum daily, 20 ft<sup>3</sup>/s Dec. 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	47	71	1400	345	323	124	150	696	98	234	76
2	56	52	69	964	811	288	168	135	444	82	165	68
3	86	50	65	926	1520	276	212	123	345	70	137	66
4	58	52	54	849	949	246	193	127	303	63	122	63
5	44	50	65	647	1350	214	161	353	246	57	150	57
6	38	46	65	466	1690	197	138	463	208	53	244	58
7	36	46	80	296	1710	175	121	347	391	51	155	119
8	34	55	70	227	1150	162	108	241	695	49	121	337
9	32	92	57	194	585	170	99	190	855	47	102	225
10	33	99	62	191	658	193	119	164	1440	51	93	534
11	76	77	58	207	717	186	834	146	1680	78	86	313
12	71	63	45	190	510	179	1070	132	1550	469	80	177
13	49	56	38	148	415	167	618	223	815	1240	81	149
14	40	51	35	109	380	157	428	400	376	1090	189	128
15	35	55	32	150	732	147	378	266	664	1370	141	327
16	32	546	30	147	367	138	318	329	742	1400	96	605
17	30	938	29	178	979	140	269	946	379	637	80	522
18	56	420	27	243	1590	146	241	1070	252	304	73	290
19	66	234	26	261	1720	130	202	614	198	214	115	217
20	165	171	25	245	1640	130	185	396	172	181	306	403
21	171	144	24	885	1640	122	571	340	170	577	356	305
22	119	117	24	925	1670	117	1170	286	152	817	583	296
23	89	103	23	540	931	109	758	228	137	1070	510	361
24	71	92	22	411	479	104	475	190	148	1360	264	239
25	63	85	22	354	345	100	354	165	129	1360	178	178
26	56	86	21	343	267	96	302	315	113	1150	141	146
27	51	93	21	281	319	92	253	509	98	463	117	128
28	49	91	21	230	334	89	215	354	89	291	101	114
29	46	93	20	217	---	87	186	681	94	228	89	106
30	43	79	35	396	---	89	166	1430	106	194	104	137
31	42	---	424	376	---	101	---	1320	---	281	96	---
TOTAL	1875	4183	1660	12996	25803	4870	10436	12633	13687	15395	5309	6744
MEAN	60.5	139	53.5	419	922	157	348	408	456	497	171	225
MAX	171	938	424	1400	1720	323	1170	1430	1680	1400	583	605
MIN	30	46	20	109	267	87	99	123	89	47	73	57

CAL YR 1989 TOTAL 97756 MEAN 268 MAX 1860 MIN 20  
WTR YR 1990 TOTAL 115591 MEAN 317 MAX 1720 MIN 20

## MUSKINGUM RIVER BASIN

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 mi<sup>2</sup>.

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. 12-30. 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 1990, 17.5 ft<sup>3</sup>/s. Water-quality data collected at this site 1965 to 1977.

AVERAGE DISCHARGE.--33 years (1931-32, 1935-38, 1961-90), 307 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,700 ft<sup>3</sup>/s Aug. 7, 1935, gage height, 14.70 ft (present datum), from rating curve extended above 8,400 ft<sup>3</sup>/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, 2,100 ft<sup>3</sup>/s June 10, gage height, 5.54 ft; minimum daily, 21 ft<sup>3</sup>/s Dec. 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	48	76	1340	381	369	133	143	835	93	260	65
2	52	55	75	1110	846	328	173	127	497	77	177	58
3	90	55	70	991	1670	312	233	115	366	65	144	54
4	65	55	58	996	1160	281	217	120	314	58	126	53
5	48	55	67	738	1490	244	182	347	252	52	141	46
6	42	50	69	555	1910	223	155	506	212	48	263	48
7	38	49	79	344	1940	199	135	373	395	45	167	99
8	38	56	75	259	1370	181	120	250	870	43	126	334
9	34	89	60	219	685	188	109	192	1030	42	106	218
10	36	109	67	209	725	214	129	164	1640	43	94	577
11	71	85	61	228	821	212	844	146	2010	68	88	321
12	80	70	50	211	594	203	1220	131	1850	567	82	170
13	55	62	42	166	483	190	727	213	1040	1540	83	138
14	44	56	37	116	434	179	499	441	424	1340	190	116
15	38	62	35	164	929	167	431	290	703	1670	151	307
16	34	538	33	157	437	156	369	374	904	1770	94	648
17	33	1090	31	189	1050	155	309	1160	427	839	76	560
18	52	503	30	256	1730	163	277	1290	266	342	69	290
19	68	269	28	292	1940	147	227	721	202	226	106	202
20	161	192	27	259	1850	144	205	440	171	185	303	393
21	190	160	26	941	1850	138	607	364	165	631	378	306
22	132	129	25	1050	1880	130	1300	301	151	1030	676	270
23	99	112	24	628	1090	121	861	235	132	1280	596	358
24	78	101	24	469	557	115	515	191	142	1540	288	227
25	68	91	23	404	400	111	363	164	126	1430	187	160
26	62	89	23	383	263	106	299	331	110	1230	142	125
27	56	96	22	321	366	102	250	563	93	514	114	107
28	54	97	22	258	373	97	210	377	83	319	97	91
29	51	99	21	239	---	95	178	790	84	248	83	83
30	47	86	36	428	---	96	157	1690	98	209	90	103
31	45	---	331	426	---	105	---	1580	---	292	84	---
TOTAL	2000	4608	1647	14346	29224	5472	11434	14129	15592	17836	5581	6527
MEAN	64.5	154	53.1	463	1044	177	381	456	520	575	180	218
MAX	190	1090	331	1340	1940	369	1300	1690	2010	1770	676	648
MIN	33	48	21	116	263	95	109	115	83	42	69	46

CAL YR 1989 TOTAL 106825 MEAN 293 MAX 2060 MIN 21  
WTR YR 1990 TOTAL 128396 MEAN 352 MAX 2010 MIN 21

## MUSKINGUM RIVER BASIN

03126000 STILLWATER CREEK AT PIEDMONT, OH

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 Boggs Fork, and 0.7 mi northwest of Piedmont.

DRAINAGE AREA.--122 mi<sup>2</sup>.

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

REVISED RECORDS.--WDR-OH-81-1: 1980 (M) (m).

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.

REMARKS.--Estimated daily discharges: Dec. 17-29. Records good except for estimated discharges, which are fair. Flow regulated by Piedmont Lake. Water-quality data collected at this site 1965 to 1977. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--52 years, 138 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,470 ft<sup>3</sup>/s Dec. 4, 1950; maximum gage height, 11.44 ft Mar. 5, 1963; minimum daily discharge, 0.2 ft<sup>3</sup>/s Sept. 3, 4, 10, 1953.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 694 ft<sup>3</sup>/s July 13, gage height, 7.06 ft; minimum daily, 14 ft<sup>3</sup>/s Dec. 21-25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	64	233	280	458	48	33	103	461	89	137	36
2	100	58	231	181	498	46	71	98	444	84	108	39
3	81	55	228	234	413	44	62	92	439	78	102	57
4	69	53	228	416	514	39	51	96	460	73	96	51
5	60	51	227	526	427	37	45	144	468	70	101	43
6	56	48	227	478	451	35	41	155	477	107	106	41
7	53	47	231	456	503	31	39	142	479	81	97	171
8	48	56	226	368	485	30	39	139	408	74	91	197
9	45	70	222	193	380	34	35	129	395	68	58	147
10	49	66	221	123	367	34	68	125	354	65	35	225
11	64	60	221	92	327	32	413	119	373	109	50	178
12	59	54	220	89	398	32	286	117	458	291	49	96
13	53	52	217	84	488	29	237	135	463	593	63	92
14	51	50	161	78	491	28	260	143	386	390	83	92
15	48	170	56	81	514	26	289	131	423	427	73	157
16	45	299	25	84	286	25	310	244	430	462	66	133
17	47	290	18	83	235	78	305	408	345	464	61	202
18	51	273	16	111	346	64	212	319	417	465	58	219
19	98	265	16	99	499	54	200	202	452	467	102	136
20	122	263	15	238	539	61	164	181	346	391	122	101
21	115	259	14	320	522	54	185	346	178	355	155	91
22	109	256	14	339	468	44	186	438	121	421	133	92
23	100	254	14	463	231	39	176	451	125	435	104	96
24	93	253	14	484	65	36	148	429	124	453	93	87
25	85	252	14	468	53	36	111	292	121	459	85	80
26	83	252	16	308	46	34	110	301	113	465	77	73
27	78	251	30	97	53	31	111	297	107	401	70	68
28	73	259	24	96	60	28	110	216	102	320	64	63
29	68	210	23	237	---	27	105	351	101	309	57	59
30	63	209	28	421	---	26	103	380	94	258	53	140
31	60	---	253	404	---	26	---	410	---	206	44	---
TOTAL	2187	4799	3683	7931	10117	1188	4505	7133	9664	8930	2593	3262
MEAN	70.5	160	119	256	361	38.3	150	230	322	288	83.6	109
MAX	122	299	253	526	539	78	413	451	479	593	155	225
MIN	45	47	14	78	46	25	33	92	94	65	35	36

CAL YR 1989 TOTAL 63541 MEAN 174 MAX 703 MIN 10  
WTR YR 1990 TOTAL 65992 MEAN 181 MAX 593 MIN 14



## MUSKINGUM RIVER BASIN

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 mi<sup>2</sup>.

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: Dec. 17-29 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.--52 years, 322 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,410 ft<sup>3</sup>/s Mar. 7, 1945, Mar. 5, 1963; maximum gage height, 17.29 ft Mar. 5, 1963; minimum daily discharge, 1.1 ft<sup>3</sup>/s Oct. 4, 1939.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,540 ft<sup>3</sup>/s June 10, gage height, 12.31 ft; minimum daily discharge, 30 ft<sup>3</sup>/s Dec. 25-26.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	68	99	414	1220	1100	151	112	186	1040	137	270	95
2	117	100	411	1170	1240	147	179	172	948	122	184	81
3	126	91	408	851	1150	155	222	162	903	109	162	105
4	99	90	400	873	1250	139	192	163	935	98	144	98
5	83	83	402	1100	1400	115	173	276	821	89	151	83
6	80	81	401	795	1180	99	160	345	614	112	181	72
7	73	75	417	691	1230	94	149	321	668	100	157	194
8	66	76	413	707	1170	97	132	270	727	88	137	419
9	59	121	396	537	869	101	118	234	1160	80	125	271
10	58	140	395	340	743	108	175	213	1440	76	75	340
11	85	120	391	262	802	99	1230	193	935	123	104	348
12	101	103	391	201	824	103	1310	180	891	407	111	178
13	83	93	384	182	1020	103	781	228	957	1280	116	159
14	75	89	366	164	1040	95	564	319	933	1240	236	150
15	69	160	202	174	1400	100	617	257	841	1050	171	317
16	64	506	66	184	1370	97	637	485	911	1040	142	294
17	69	655	44	182	1070	196	670	1150	844	1040	122	274
18	79	545	40	247	959	326	508	1320	635	1010	110	324
19	142	485	38	282	1150	232	430	817	573	795	150	264
20	308	497	36	462	1230	303	338	475	538	560	221	176
21	296	503	34	1180	1160	259	386	657	338	502	331	152
22	249	454	32	1130	896	188	405	1030	222	774	597	146
23	203	445	32	1140	543	173	361	993	208	955	575	160
24	173	441	31	1150	219	148	332	904	209	915	327	143
25	153	437	30	1080	155	141	267	712	202	720	206	118
26	139	436	30	806	150	130	250	658	185	649	186	101
27	124	439	36	356	140	114	234	980	167	599	169	90
28	114	444	70	300	164	106	221	860	156	467	155	81
29	107	447	62	415	---	101	207	987	162	424	139	75
30	100	371	58	1140	---	95	197	1240	153	392	126	267
31	94	---	325	1170	---	97	---	1120	---	353	111	---
TOTAL	3656	8626	6755	20491	25624	4412	11557	17907	19316	16306	5991	5575
MEAN	118	288	218	661	915	142	385	578	644	526	193	186
MAX	308	655	417	1220	1400	326	1310	1320	1440	1280	597	419
MIN	58	75	30	164	140	94	112	162	153	76	75	72

CAL YR 1989 TOTAL 142401 MEAN 390 MAX 1730 MIN 20  
WTR YR 1990 TOTAL 146216 MEAN 401 MAX 1440 MIN 30

## MUSKINGUM RIVER BASIN

03127500 STILLWATER CREEK AT UHRICHSVILLE, 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 mi<sup>2</sup>.

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: Oct. 1 to Sept. 21. Records poor, except Sept. 22-30, which are good. 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.--68 years, 430 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,650 ft<sup>3</sup>/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, 1,850 ft<sup>3</sup>/s June 10, maximum gage height, 4.22 ft Feb. 16 (backwater from Tuscarawas River); minimum daily discharge, 66 ft<sup>3</sup>/s Oct. 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	98	117	428	1170	1300	200	152	248	1150	190	432	137
2	104	123	453	1330	1450	180	188	235	1070	152	305	123
3	146	121	430	1000	1400	200	265	229	1040	138	225	124
4	139	114	420	960	1450	180	262	229	1040	128	196	145
5	118	110	420	1050	1600	150	243	414	1080	120	184	128
6	107	102	420	1200	1500	125	222	685	802	96	208	113
7	101	101	420	900	1400	115	207	572	771	117	206	142
8	90	98	420	740	1350	120	191	435	1000	115	181	432
9	87	105	420	740	950	120	173	325	1450	83	164	426
10	76	152	420	620	840	125	236	293	1850	82	177	373
11	71	153	420	450	840	130	1590	258	1750	97	138	406
12	112	137	410	270	880	120	1600	242	1070	261	173	335
13	115	121	410	210	960	110	1250	284	981	1460	159	228
14	108	110	400	200	1100	102	900	632	984	1600	273	198
15	95	117	300	200	1490	99	680	476	1030	1460	261	271
16	77	367	183	220	1600	102	700	744	986	1090	195	417
17	66	728	118	250	1300	123	720	1400	926	1120	167	362
18	88	655	100	280	1100	291	740	1600	755	1080	153	386
19	123	559	90	330	1050	400	697	1200	618	900	180	351
20	291	515	84	400	1130	301	503	959	626	700	293	270
21	380	537	80	823	1270	374	506	736	556	640	347	225
22	324	494	74	1180	929	292	581	1160	363	850	803	212
23	273	465	72	1150	600	254	490	1240	277	1150	902	222
24	236	460	70	1100	380	225	432	1200	257	1000	670	223
25	204	456	70	1080	220	190	366	1100	259	900	326	191
26	179	457	68	950	180	176	339	988	242	778	246	166
27	164	465	68	650	160	161	327	1240	223	715	212	148
28	149	478	68	300	180	147	305	1170	199	598	187	133
29	142	489	90	500	---	145	269	1400	199	486	171	124
30	133	452	82	1100	---	140	262	1690	188	460	164	306
31	124	---	254	1400	---	140	---	1600	---	440	146	---
TOTAL	4520	9358	7762	22753	28609	5537	15396	24984	23742	19006	8444	7317
MEAN	146	312	250	734	1022	179	513	806	791	613	272	244
MAX	380	728	453	1400	1600	400	1600	1690	1850	1600	902	432
MIN	66	98	68	200	160	99	152	229	188	82	138	113
(+)	1.81	1.68	1.54	1.59	1.63	1.65	1.66	1.87	1.76	1.78	1.76	1.72

CAL YR 1989 TOTAL 178135 MEAN 488 MAX 2100 MIN 30 (+) 1.66  
WTR YR 1990 TOTAL 177428 MEAN 486 MAX 1850 MIN 66 (+) 1.70

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

## MUSKINGUM RIVER BASIN

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 mi<sup>2</sup>.

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.--No estimated daily discharges. Records fair except Mar. 5 to May 6 which are 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.--52 years, 77.2 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,050 ft<sup>3</sup>/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, 518 ft<sup>3</sup>/s June 1, gage height 6.82 ft; minimum daily, 0.81 ft<sup>3</sup>/s Apr. 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.9	41	46	4.4	306	87	3.5	27	394	53	44	15
2	9.1	102	17	63	234	110	2.6	30	283	48	35	15
3	9.1	130	17	233	118	109	1.6	35	276	40	25	17
4	8.9	124	9.8	308	119	109	1.6	39	263	29	17	11
5	9.7	122	5.4	237	120	41	1.4	46	136	26	21	9.9
6	8.7	157	3.8	146	159	1.4	1.4	51	63	35	25	9.1
7	9.3	220	3.6	148	278	1.8	1.4	52	72	23	22	38
8	9.4	243	4.1	149	310	1.9	1.4	50	90	18	15	60
9	10	234	4.1	96	250	2.1	1.4	49	114	16	11	59
10	9.8	221	4.1	23	173	3.1	1.4	42	116	14	9.3	54
11	11	212	3.7	70	174	4.0	1.5	42	230	24	15	50
12	10	214	4.1	83	293	5.4	1.3	42	444	64	13	48
13	11	215	4.4	23	350	6.2	1.3	52	317	188	21	46
14	11	214	4.4	23	293	6.2	1.3	64	78	238	41	40
15	11	216	4.4	24	221	6.2	1.3	65	249	238	35	41
16	10	213	4.4	33	15	5.8	1.3	96	329	369	27	38
17	10	212	4.3	60	12	4.2	1.2	124	326	428	20	35
18	10	212	4.1	113	213	4.1	.95	126	243	332	20	27
19	11	211	4.5	131	308	3.6	.84	123	93	115	53	28
20	12	234	6.3	128	365	3.5	.84	122	68	57	65	31
21	12	242	6.5	126	419	3.2	.84	252	65	61	79	27
22	12	240	6.2	220	434	3.2	.81	331	62	67	174	32
23	12	238	6.2	262	317	3.2	1.5	396	58	76	205	28
24	14	217	6.1	297	160	3.5	2.7	427	54	78	106	23
25	14	206	5.9	339	92	3.8	4.1	267	52	74	60	19
26	14	205	5.9	219	3.5	3.8	6.0	97	47	69	56	15
27	14	207	5.9	118	5.4	3.7	8.9	105	42	63	51	13
28	14	206	6.4	120	34	3.5	13	106	40	58	46	12
29	12	202	5.7	139	---	3.5	18	115	55	52	39	12
30	12	138	4.7	235	---	3.5	21	169	59	49	29	43
31	11	---	4.7	306	---	3.5	---	345	---	50	21	---
TOTAL	340.9	5848	223.7	4476.4	5775.9	553.9	106.38	3887	4718	3052	1400.3	896.0
MEAN	11.0	195	7.22	144	206	17.9	3.55	125	157	98.5	45.2	29.9
MAX	14	243	46	339	434	110	21	427	444	428	205	60
MIN	8.7	41	3.6	4.4	3.5	1.4	.81	27	40	14	9.3	9.1
CAL YR 1989	TOTAL	39344.2	MEAN	108	MAX	658	MIN	2.8				
WTR YR 1990	TOTAL	31278.48	MEAN	85.7	MAX	444	MIN	.81				

## 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 mi<sup>2</sup>.

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. 17-30. 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.--69 years, 2,538 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 46,800 ft<sup>3</sup>/s Jan. 26, 1937, gage height, 20.65 ft, site and datum then in use; minimum daily, 170 ft<sup>3</sup>/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 ft<sup>3</sup>/s computed by U.S. Army Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,600 ft<sup>3</sup>/s Feb. 16, gage height, 8.71 ft; minimum daily, 380 ft<sup>3</sup>/s Dec. 29, 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	682	754	1570	5520	4560	3100	1280	1850	6680	1290	2790	1230
2	680	829	1380	5610	4910	2810	1490	1720	4770	1160	2200	1140
3	917	971	1270	5360	7520	2630	2010	1590	3940	1060	1840	1120
4	1060	994	1230	5420	9250	2490	2050	1550	3590	977	1610	1070
5	870	980	1180	6000	9190	2270	1860	2200	3330	908	1460	1020
6	753	948	1200	5810	9050	2020	1720	3340	2780	883	2990	966
7	693	964	1270	3870	8850	1850	1560	3150	2900	842	3360	1450
8	632	1070	1330	2840	8820	1710	1430	2530	4790	809	2380	4660
9	595	1240	1310	2560	7740	1670	1340	2100	7970	765	1820	5530
10	579	1420	1200	2300	7070	1750	1510	1860	8280	747	1520	5390
11	662	1390	1170	1910	7040	1920	6230	1700	8690	823	1490	5600
12	811	1270	1140	1950	6390	1840	8290	1590	7690	2520	1310	5280
13	796	1190	1100	1770	5530	1750	7890	1750	6840	7900	1270	4460
14	707	1150	1040	1510	5030	1670	5870	2620	4720	8240	1720	3320
15	645	1160	984	1390	6540	1590	4720	2760	4430	7590	2300	2900
16	610	2590	635	1430	11000	1500	4110	2580	4690	7370	1690	4990
17	598	4970	600	1770	9620	1540	3640	5480	4050	7410	1350	4320
18	734	5090	540	2050	8850	1770	3310	7280	3280	6210	1190	3410
19	1040	3470	500	2500	8940	1940	2790	7400	2600	4630	1560	2720
20	1340	2560	480	2700	8300	1830	2450	5820	2290	3710	3660	3040
21	2180	2270	460	4440	8630	1810	3570	4010	2110	3550	5950	3180
22	1990	2080	440	6110	8650	1720	5950	3780	1910	5130	6670	2650
23	1580	1880	420	5500	7890	1600	6810	3680	1680	7420	6760	3260
24	1320	1790	410	4860	6510	1500	5590	3380	1680	7970	5350	2880
25	1180	1720	410	4430	5320	1400	4360	3080	1760	7200	3050	2280
26	1080	1700	400	4000	4310	1320	3500	3280	1570	6980	2320	1930
27	972	1710	400	3370	3960	1270	3050	4110	1400	6720	1950	1700
28	865	1800	400	2450	3150	1220	2560	4040	1360	5570	1820	1520
29	809	1830	380	2290	---	1170	2180	5540	1420	4470	1600	1430
30	768	1800	380	3710	---	1150	1990	6970	1380	3400	1530	1740
31	746	---	2010	4690	---	1170	---	8110	---	2670	1410	---
TOTAL	28894	53590	27239	110120	202620	54980	105110	110850	114580	126924	77920	86186
MEAN	932	1786	879	3552	7236	1774	3504	3576	3819	4094	2514	2873
MAX	2180	5090	2010	6110	11000	3100	8290	8110	8690	8240	6760	5600
MIN	579	754	380	1390	3150	1150	1280	1550	1360	747	1190	966

CAL YR 1989 TOTAL 1006817 MEAN 2758 MAX 11000 MIN 380  
WTR YR 1990 TOTAL 1099013 MEAN 3011 MAX 11000 MIN 380



## MUSKINGUM RIVER BASIN

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 mi<sup>2</sup>.

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 good. 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.--52 years, 204 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,800 ft<sup>3</sup>/s Mar. 13, 1964 from rating curve extended above 1,900 ft<sup>3</sup>/s; maximum gage height, 8.45 ft Mar. 14, 1939; minimum daily discharge, 0.5 ft<sup>3</sup>/s Nov. 18, 1982.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1913 reached a discharge of 11,700 ft<sup>3</sup>/s, computed by U.S. Army Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,220 ft<sup>3</sup>/s July 17, 18, 20, gage height, 5.62 ft; minimum daily, 12 ft<sup>3</sup>/s Dec. 27, 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	111	132	28	172	340	100	235	294	103	57	178
2	23	122	128	101	215	322	127	205	257	87	63	163
3	23	117	125	142	309	305	172	85	226	76	63	145
4	20	115	120	151	512	287	218	38	200	67	64	129
5	17	114	115	160	833	266	252	89	176	61	161	116
6	18	112	111	171	985	245	306	139	161	56	337	105
7	17	127	107	210	1000	222	306	236	149	47	511	111
8	16	153	103	231	902	206	271	303	164	43	603	122
9	15	156	99	222	765	195	240	270	249	45	669	142
10	18	153	95	208	644	188	249	238	364	48	508	214
11	23	151	91	201	543	185	302	191	560	65	302	250
12	23	148	87	199	461	181	377	136	722	240	297	216
13	23	135	82	189	397	176	476	175	720	547	416	188
14	24	126	79	176	358	170	546	269	623	360	394	102
15	23	115	66	169	282	138	528	346	524	742	362	128
16	23	135	53	166	416	118	466	407	425	1190	332	257
17	30	151	52	163	950	118	404	403	344	1220	285	449
18	30	155	37	162	1060	115	338	783	287	1220	244	466
19	39	158	28	164	1080	114	291	836	240	1190	232	401
20	42	159	24	175	1060	114	259	771	114	1190	305	349
21	49	159	17	198	1030	98	305	683	39	1160	421	308
22	52	156	16	239	990	79	429	574	45	1090	924	300
23	52	154	14	292	865	82	639	478	79	896	1070	300
24	52	152	14	314	690	82	765	387	149	676	789	297
25	49	150	13	308	572	83	742	300	197	527	389	280
26	44	148	13	293	478	84	630	299	194	399	385	253
27	41	145	12	260	406	81	504	310	171	280	679	223
28	38	143	12	232	364	80	394	330	146	208	607	137
29	35	139	20	211	---	80	323	357	128	178	435	46
30	33	135	24	192	---	84	274	350	114	158	367	58
31	68	---	31	178	---	88	---	327	---	106	278	---
TOTAL	979	4194	1920	6105	18339	4926	11233	10550	8061	14275	12549	6433
MEAN	31.6	140	61.9	197	655	159	374	340	269	460	405	214
MAX	68	159	132	314	1080	340	765	836	722	1220	1070	466
MIN	15	111	12	28	172	79	100	38	39	43	57	46

CAL YR 1989 TOTAL 69569 MEAN 191 MAX 1250 MIN 12  
WTR YR 1990 TOTAL 99564 MEAN 273 MAX 1220 MIN 12

## 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 mi<sup>2</sup>.

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.--Estimated daily discharges: Dec. 22-30. Records good except estimated daily discharges which are fair. 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.--59 years, 358 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,460 ft<sup>3</sup>/s July 5, 1969, gage height, 14.11 ft, from rating curve extended above 4,000 ft<sup>3</sup>/s on basis of contracted-opening measurement of peak flow; minimum daily, 29 ft<sup>3</sup>/s Aug. 7, 8, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,900 ft<sup>3</sup>/s Feb. 16, gage height, 9.76 ft; minimum daily, 80 ft<sup>3</sup>/s Dec. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	93	181	213	444	303	552	276	372	511	197	163	267
2	98	200	208	220	1120	521	454	333	443	181	157	251
3	99	191	203	265	840	501	372	265	402	167	156	238
4	94	187	196	350	1510	448	401	182	364	157	154	219
5	89	185	192	490	1310	414	428	501	325	147	584	207
6	87	184	191	335	1330	389	469	343	297	142	475	197
7	87	196	194	324	1340	350	496	351	289	135	758	247
8	88	289	184	349	1220	329	427	464	672	128	746	244
9	86	271	174	337	1060	342	376	415	846	124	817	312
10	93	242	171	351	997	355	552	375	611	158	757	324
11	132	233	167	329	794	328	1220	345	712	200	400	358
12	101	226	164	318	685	321	702	263	901	1120	386	315
13	95	216	160	291	588	310	729	931	930	1100	587	281
14	95	198	156	269	544	300	803	645	960	1600	617	270
15	92	230	149	259	1370	275	815	564	810	1240	503	642
16	91	832	123	260	2210	252	718	805	628	1440	459	374
17	144	340	122	269	1440	258	656	1360	518	1420	396	570
18	124	274	120	360	1410	244	554	1160	427	1400	350	635
19	142	259	103	300	1400	236	471	1140	367	1380	492	623
20	193	255	103	387	1350	250	438	1050	296	1360	718	567
21	136	251	100	630	1300	247	1050	1230	161	1460	1600	445
22	140	245	98	453	1300	206	746	879	153	1520	1310	553
23	130	239	94	451	1260	211	849	735	254	1520	1340	440
24	125	235	90	486	1040	203	991	612	258	980	1180	411
25	124	230	88	475	835	202	990	511	297	763	583	381
26	122	236	86	478	712	201	871	1290	302	601	545	348
27	120	236	85	402	627	197	732	710	274	443	724	317
28	116	253	84	363	631	193	604	583	248	320	815	276
29	113	240	82	339	---	192	497	797	247	276	620	141
30	111	219	80	322	---	237	424	702	218	259	501	148
31	119	---	763	301	---	247	---	585	---	284	439	---
TOTAL	3479	7573	4943	11207	30526	9311	19111	20498	13721	22222	19332	10601
MEAN	112	252	159	362	1090	300	637	661	457	717	624	353
MAX	193	832	763	630	2210	552	1220	1360	960	1600	1600	642
MIN	86	181	80	220	303	192	276	182	153	124	154	141

CAL YR 1989 TOTAL 133464 MEAN 366 MAX 2370 MIN 80  
WTR YR 1990 TOTAL 172524 MEAN 473 MAX 2210 MIN 80

## MUSKINGUM RIVER BASIN

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 Perrysville, and 4.7 mi upstream from the confluence of Clear Fork and Black Fork.

DRAINAGE AREA.--198 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1938 to current year. Published as Clear Fork near Perrysville 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 1990 water year 15.3 ft<sup>3</sup>/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.--52 years, 198 ft<sup>3</sup>/s .

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,340 ft<sup>3</sup>/s Jan. 23, 1959, gage height, 4.89 ft; minimum daily, 0.6 ft<sup>3</sup>/s Nov. 2, 4, 1938.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 942 ft<sup>3</sup>/s Feb. 19, gage height 3.24 ft; minimum daily, 30 ft<sup>3</sup>/s Oct. 13, 14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	36	71	50	130	261	100	151	672	104	129	70
2	45	36	52	488	374	201	154	141	411	96	116	66
3	44	36	52	654	415	126	217	131	334	88	105	62
4	43	36	52	226	458	126	236	141	262	83	99	59
5	43	35	52	222	779	78	234	261	228	78	106	58
6	43	81	59	230	874	55	215	297	203	76	138	56
7	43	129	62	225	860	55	190	276	194	72	145	66
8	43	128	58	200	865	55	170	243	314	69	108	68
9	43	128	54	130	688	55	150	209	605	66	113	105
10	43	128	54	113	468	55	165	187	633	66	105	157
11	34	126	54	127	465	56	681	176	815	76	97	128
12	124	126	54	145	596	44	848	166	875	139	88	106
13	30	126	40	170	491	37	558	334	635	242	99	92
14	30	125	37	166	168	36	295	771	323	339	124	91
15	31	124	46	165	36	72	304	874	316	533	113	118
16	31	230	46	121	400	93	284	763	269	698	99	123
17	32	234	47	99	738	93	261	734	230	656	89	118
18	32	139	47	135	849	93	241	832	207	326	83	106
19	32	139	46	163	885	93	213	835	182	223	103	110
20	32	168	49	163	834	93	198	750	161	184	131	129
21	32	192	49	166	814	94	344	598	149	233	141	125
22	32	162	42	564	893	94	444	318	136	317	193	124
23	32	147	38	658	718	94	525	242	132	540	200	122
24	32	136	38	321	501	93	472	230	134	688	174	117
25	32	122	38	221	496	94	328	215	132	379	147	107
26	32	122	38	207	616	77	244	501	120	250	126	96
27	33	130	37	184	329	69	225	615	111	207	110	87
28	33	152	37	184	236	69	200	617	106	174	99	80
29	33	151	44	124	---	70	178	771	110	150	90	76
30	33	127	48	110	---	71	161	880	111	137	82	78
31	35	---	49	130	---	77	---	875	---	144	75	---
TOTAL	1200	3751	1490	6861	15976	2679	8835	14134	9110	7433	3627	2900
MEAN	38.7	125	48.1	221	571	86.4	294	456	304	240	117	96.7
MAX	124	234	71	658	893	261	848	880	875	698	200	157
MIN	30	35	37	50	36	36	100	131	106	66	75	56
CAL YR 1989	TOTAL 70276	MEAN 193	MAX 932	MIN 30								
WTR YR 1990	TOTAL 77996	MEAN 214	MAX 893	MIN 30								

## MUSKINGUM RIVER BASIN

87

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 mi<sup>2</sup>.

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: Dec. 12-30. 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.--52 years, 240 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,490 ft<sup>3</sup>/s July 5, 1969, gage height, 14.32 ft; minimum daily 1.0 ft<sup>3</sup>/s June 10, 1947, Jan. 25, 1959.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,230 ft<sup>3</sup>/s Feb. 4, gage height, 8.51 ft; minimum daily, 25 ft<sup>3</sup>/s Oct. 16, Dec. 28, 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	51	102	979	187	381	172	131	237	64	118	272
2	37	43	96	634	915	345	421	113	192	59	90	219
3	36	41	91	436	1040	336	296	105	172	53	76	175
4	31	38	84	466	1060	262	256	145	145	49	70	140
5	30	36	97	699	1060	233	229	490	136	45	714	125
6	27	38	92	393	1070	206	184	325	124	44	778	132
7	27	43	94	254	1080	174	154	222	140	42	814	445
8	26	78	81	209	1060	169	136	171	399	40	807	333
9	26	80	62	181	1030	183	123	143	799	40	719	338
10	31	62	55	203	931	220	236	138	845	47	415	410
11	57	53	51	231	710	203	1020	129	748	81	273	214
12	39	48	46	185	502	194	834	118	449	706	197	163
13	32	43	42	134	411	178	550	477	296	824	233	145
14	29	42	39	139	354	163	386	638	220	796	276	195
15	27	78	37	125	762	151	317	326	437	803	168	819
16	25	733	35	174	1060	145	258	515	198	814	133	634
17	81	626	34	228	1060	155	232	788	147	827	113	399
18	95	355	33	398	1060	142	206	818	118	826	100	265
19	76	216	32	286	1070	129	168	793	99	799	300	305
20	170	166	32	279	1070	130	163	753	95	731	798	344
21	104	141	31	749	1070	126	678	778	101	459	796	243
22	73	115	30	472	1040	122	774	627	87	448	806	548
23	56	98	29	329	906	117	796	383	478	637	827	383
24	49	82	28	283	778	108	771	280	256	400	831	265
25	44	76	27	247	480	102	593	222	165	283	824	209
26	40	78	26	325	405	98	368	532	120	221	803	174
27	38	83	26	210	369	93	273	388	94	173	819	154
28	37	92	25	174	454	91	216	255	82	139	822	142
29	35	112	25	161	---	91	174	434	86	118	798	136
30	33	112	27	160	---	110	155	565	73	118	581	146
31	36	---	549	161	---	118	---	330	---	168	367	---
TOTAL	1474	3859	2058	9904	22994	5275	11139	12132	7538	10854	15466	8472
MEAN	47.5	129	66.4	319	821	170	371	391	251	350	499	282
MAX	170	733	549	979	1080	381	1020	818	845	827	831	819
MIN	25	36	25	125	187	91	123	105	73	40	70	125
CAL YR 1989	TOTAL	85676	MEAN	235	MAX	1080	MIN	16				
WTR YR 1990	TOTAL	111165	MEAN	305	MAX	1080	MIN	25				



## MUSKINGUM RIVER BASIN

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 mi<sup>2</sup>.

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.--Estimated daily discharges: Dec. 16-30. Records good except for estimated daily discharges, which are fair. 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.--37 years, (1954-90), 216 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,000 ft<sup>3</sup>/s Jan. 21, 1959, gage height, 18.19 ft, from rating curve extended above 9,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum daily, 8.6 ft<sup>3</sup>/s Aug. 22, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,330, ft<sup>3</sup>/s Feb. 16 gage height 6.28 ft; minimum daily, 29 ft<sup>3</sup>/s Oct. 8, 18.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	42	49	1160	219	244	143	109	310	101	171	69
2	38	43	45	515	1740	231	338	101	241	89	153	65
3	40	43	44	309	1760	227	298	94	212	79	138	59
4	36	42	42	316	1760	197	219	140	181	72	128	61
5	34	41	41	562	1520	173	179	973	159	66	141	53
6	32	44	42	357	794	157	149	627	159	64	147	52
7	32	45	45	224	583	139	125	371	186	59	141	75
8	29	51	52	171	468	129	109	251	1490	56	128	84
9	30	56	49	140	399	144	101	192	2830	113	116	93
10	34	54	48	151	501	175	231	159	1770	350	107	212
11	43	50	44	162	424	176	1430	145	759	221	99	143
12	44	46	42	144	327	177	773	134	474	1320	93	102
13	42	45	39	114	275	166	415	779	337	1480	101	81
14	41	44	37	101	307	152	292	1290	269	2270	155	73
15	33	50	34	97	1780	137	255	586	520	2540	132	75
16	32	197	34	96	3660	127	216	1070	338	1100	108	92
17	31	215	32	111	1740	132	190	1440	232	555	96	102
18	29	129	32	196	990	124	166	1120	187	354	88	95
19	62	96	32	197	562	111	144	553	158	264	84	85
20	61	79	32	375	380	106	148	354	143	224	89	96
21	58	72	31	1130	290	103	1070	344	138	1180	98	99
22	54	62	31	652	275	102	851	283	127	1900	97	96
23	49	54	31	391	314	95	441	224	118	2080	90	100
24	47	49	30	301	310	93	292	186	115	1110	86	89
25	47	47	30	253	240	87	224	163	112	576	80	77
26	45	47	30	279	201	82	186	1130	103	380	84	71
27	42	48	30	210	202	77	161	1400	96	286	86	67
28	40	52	30	174	248	75	143	668	94	239	84	59
29	40	52	30	167	---	74	125	1170	98	208	81	59
30	37	51	40	153	---	79	116	827	108	191	80	64
31	36	---	598	136	---	108	---	466	---	192	74	---
TOTAL	1250	1946	1726	9344	22269	4199	9530	17349	12064	19719	3355	2548
MEAN	40.3	64.9	55.7	301	795	135	318	560	402	636	108	84.9
MAX	62	215	598	1160	3660	244	1430	1440	2830	2540	171	212
MIN	29	41	30	96	201	74	101	94	94	56	74	52

CAL YR 1989 TOTAL 86626 MEAN 237 MAX 2220 MIN 26  
WTR YR 1990 TOTAL 105299 MEAN 288 MAX 3660 MIN 29

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	296	337	622	4940	1150	2360	906	1210	3240	879	1220	1030
2	309	408	547	3150	3280	2250	1290	1080	2470	775	1000	838
3	323	419	524	2500	6060	1940	1790	987	2110	707	901	755
4	305	403	496	2260	6390	1880	1590	935	1840	653	840	674
5	287	392	496	3110	6670	1820	1530	3870	1570	612	1190	614
6	280	392	506	2390	6580	1500	1430	3290	1410	580	1890	588
7	275	442	524	1760	6410	1430	1360	2390	2270	556	2160	711
8	271	558	520	1500	5600	1220	1240	1980	3240	526	2080	1210
9	266	652	466	1260	4630	1200	1130	1710	656	588	2180	888
10	275	627	470	1140	4100	1290	1230	1490	3900	1210	1970	1430
11	320	585	410	1150	3960	1300	4780	1350	5970	1090	1420	1230
12	366	564	370	1160	3480	1270	5830	1210	6430	4010	1110	1010
13	397	541	340	1070	2910	1210	3980	2060	6630	6060	1030	875
14	289	524	310	927	2020	1140	2850	4630	6530	5580	1620	788
15	277	568	290	929	1800	1040	2680	3550	5760	5900	1310	1450
16	265	1850	280	904	5100	1070	2380	4040	6260	6360	1110	1670
17	274	2400	270	923	6380	1070	2110	6120	3120	6600	990	1480
18	375	1720	250	1150	6350	1040	1890	6310	1880	6570	893	1400
19	385	1280	240	1420	6530	837	1630	5620	1550	5120	945	1250
20	513	1110	240	1390	6640	1080	1500	4880	1360	4650	2120	1470
21	539	1070	230	3170	6600	951	3310	4200	1180	4970	2380	1260
22	447	980	230	4040	6490	906	4670	3500	1020	5500	3220	1290
23	415	728	220	3150	6320	867	3710	2630	1030	6200	2880	1540
24	377	676	220	2360	5440	839	3530	2160	1480	5600	2790	1200
25	364	630	220	1920	4310	802	3160	1840	1150	5210	2300	1040
26	350	624	210	1870	3340	776	2560	3920	1060	4090	1930	926
27	339	638	210	1680	3480	735	2140	5690	954	2140	1840	836
28	328	649	210	1420	2340	709	1820	4170	924	1710	2190	768
29	319	711	200	1350	---	694	1550	5430	1040	1440	1960	681
30	312	672	200	1270	---	708	1350	6140	981	1270	1710	586
31	308	---	1520	1190	---	829	---	4910	---	1400	1320	---
TOTAL	10446	23150	11841	58453	134360	36763	70926	103302	79015	98556	52499	31488
MEAN	337	772	382	1886	4799	1186	2364	3332	2634	3179	1694	1050
MAX	539	2400	1520	4940	6670	2360	5830	6310	6630	6600	3220	1670
MIN	265	337	200	904	1150	694	906	935	656	526	840	586
CAL YR 1989												
WTR YR 1990	TOTAL	596942	MEAN	1635	MAX	7070	MIN	200				
	TOTAL	710799	MEAN	1947	MAX	6670	MIN	200				

## MUSKINGUM RIVER BASIN

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 mi<sup>2</sup>.

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: Nov. 21 to Dec. 4, Dec. 16-30, Sept. 11-13, 17, 18. Records good except those for periods of estimated record and Aug. 19-29 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.--60 years, 421 ft<sup>3</sup>/s, 12.37 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 47,500 ft<sup>3</sup>/s July 5, 1969, gage height, 26.40 ft (from flood-marks), from rating curve extended above 11,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow at site then in use; minimum, 23 ft<sup>3</sup>/s Sept. 10-15, 28-30, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 5	1530	2,230	15.38	June 15	2400	2,390	15.54
Feb. 16	1330	*2,880	*15.98	July 13	0200	2,040	15.06
June 9	1130	2,470	15.62				

Minimum daily discharge 67 ft<sup>3</sup>/s Dec. 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	91	121	220	1530	433	599	256	327	980	231	383	300
2	117	128	190	1290	1310	586	339	292	682	206	329	379
3	129	122	170	1040	1570	569	389	269	573	189	292	380
4	110	114	150	894	1790	527	373	292	486	178	267	426
5	114	109	135	837	2200	496	357	681	415	163	350	411
6	115	108	137	698	2180	462	338	680	366	154	479	296
7	111	109	150	579	2060	422	304	551	584	144	510	299
8	106	137	147	494	1790	406	272	457	1230	133	476	365
9	101	176	141	432	1440	408	246	386	2420	141	409	538
10	105	171	135	405	1310	414	408	342	2030	168	348	741
11	134	148	120	382	1140	405	1230	309	1560	273	298	750
12	121	132	119	361	960	395	1060	279	1200	1170	260	640
13	107	121	144	310	782	374	888	514	879	1950	271	470
14	97	116	153	253	726	356	768	633	753	1680	378	276
15	89	147	119	259	1450	334	730	509	2040	1570	304	643
16	81	743	110	270	2770	314	629	881	2180	1350	263	558
17	96	638	98	308	2550	314	565	1470	1440	1060	233	640
18	173	569	90	390	2300	307	505	1460	874	732	215	620
19	177	467	84	413	2140	290	449	1250	522	519	384	510
20	250	383	82	540	1820	289	425	1100	437	449	892	583
21	274	340	78	1110	1410	276	1040	1040	424	1160	1210	515
22	220	290	76	920	1120	270	1070	806	365	1160	1470	562
23	179	260	74	736	960	257	990	614	355	1800	1520	545
24	157	240	72	651	858	242	932	511	365	1840	1510	503
25	145	230	71	583	728	229	799	440	333	1480	1350	461
26	138	225	70	567	640	216	650	989	292	1130	1000	420
27	130	230	69	492	620	220	543	1060	260	776	675	378
28	125	240	68	434	641	212	477	795	246	561	527	340
29	119	250	67	409	---	211	420	1420	278	469	429	313
30	107	245	120	459	---	213	371	1690	269	410	398	362
31	107	---	905	420	---	235	---	1330	---	459	360	---
TOTAL	4125	7309	4364	18466	39698	10848	17823	23377	24838	23705	17790	14224
MEAN	133	244	141	596	1418	350	594	754	828	765	574	474
MAX	274	743	905	1530	2770	599	1230	1690	2420	1950	1520	750
MIN	81	108	67	253	433	211	246	269	246	133	215	276
CFSM	.29	.53	.30	1.28	3.06	.75	1.28	1.63	1.78	1.65	1.24	1.02
IN.	.33	.59	.35	1.48	3.18	.87	1.43	1.87	1.99	1.90	1.43	1.14

CAL YR 1989 TOTAL 173703 MEAN 476 MAX 2600 MIN 59 CFSM 1.03 IN. 13.93  
WTR YR 1990 TOTAL 206567 MEAN 566 MAX 2770 MIN 67 CFSM 1.22 IN. 16.56

## MUSKINGUM RIVER BASIN

91

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 mi<sup>2</sup>.

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. 16-30, Jan. 3-5. Records good except for periods of estimated daily discharges which are fair. Water-quality data collected at this site 1965 to 1977.

AVERAGE DISCHARGE.--54 years, 28.7 ft<sup>3</sup>/s, 14.33 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,720 ft<sup>3</sup>/s July 5, 1969, gage height, 13.92 ft, from rating curve extended above 2,200 ft<sup>3</sup>/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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 15	2315	904	9.36	June 8	1045	*1,930	*11.42
May 29	0245	769	8.77	July 12	1630	1,040	9.81

Minimum daily discharge 1.9 ft<sup>3</sup>/s Sept. 5, 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	4.2	6.3	168	68	27	14	17	58	8.1	11	2.1
2	4.9	3.5	6.1	74	159	26	24	15	46	7.0	9.4	2.1
3	3.1	3.5	5.7	33	91	25	19	14	40	6.3	8.3	2.4
4	2.4	3.8	5.4	29	308	21	18	32	35	5.8	7.6	2.0
5	2.0	3.3	5.6	70	137	20	16	71	29	5.4	8.0	1.9
6	2.0	3.2	6.2	29	87	19	14	49	29	5.1	7.0	1.9
7	2.3	3.4	7.5	23	70	16	13	34	81	4.6	6.5	9.6
8	2.2	4.0	5.1	20	57	17	12	28	698	4.3	5.6	4.8
9	2.0	9.9	4.5	18	53	20	11	23	357	4.6	5.1	21
10	5.6	6.0	4.6	19	75	18	156	21	144	6.6	4.9	10
11	8.8	5.5	4.9	17	56	18	192	18	77	12	4.5	5.4
12	3.8	4.6	4.6	16	48	17	70	18	54	445	4.2	5.2
13	3.1	4.1	4.0	12	43	16	47	60	44	118	5.3	6.2
14	2.7	3.9	3.7	13	90	15	42	35	113	92	5.6	5.9
15	2.3	38	3.1	13	435	14	38	28	82	67	4.0	10
16	2.3	164	2.8	13	357	14	33	83	39	42	3.5	6.0
17	2.4	35	2.7	15	130	17	30	154	32	32	3.3	6.1
18	2.9	23	2.6	22	80	14	25	66	26	24	3.9	4.4
19	9.0	17	2.5	18	61	14	22	45	22	20	16	7.2
20	9.3	15	2.5	122	46	14	24	43	20	29	11	8.0
21	7.5	12	2.4	121	39	13	204	77	19	86	9.5	5.4
22	6.7	11	2.4	59	40	12	72	41	16	68	6.8	13
23	5.0	9.7	2.3	42	38	12	51	33	15	212	5.3	8.2
24	4.5	8.4	2.2	38	35	12	41	28	14	59	5.2	6.0
25	4.1	8.2	2.2	35	26	11	35	25	13	39	4.8	5.0
26	3.8	9.2	2.2	32	25	10	31	256	11	29	3.8	4.5
27	3.6	8.3	2.1	26	29	9.5	27	84	9.4	21	3.3	4.1
28	3.4	8.9	2.1	24	31	9.3	24	126	13	18	2.9	3.8
29	3.2	7.4	2.0	52	---	9.3	21	481	13	15	2.9	5.0
30	3.1	6.6	2.0	60	---	9.4	19	166	9.8	13	2.7	14
31	3.3	---	13	43	---	12	---	86	---	20	2.3	---
TOTAL	123.7	444.6	125.3	1276	2714	481.5	1345	2257	2159.2	1518.8	184.2	191.2
MEAN	3.99	14.8	4.04	41.2	96.9	15.5	44.8	72.8	72.0	49.0	5.94	6.37
MAX	9.3	164	13	168	435	27	204	481	698	445	16	21
MIN	2.0	3.2	2.0	12	25	9.3	11	14	9.4	4.3	2.3	1.9
CFSM	.15	.54	.15	1.51	3.56	.57	1.65	2.68	2.65	1.80	.22	.23
IN.	.17	.61	.17	1.75	3.71	.66	1.84	3.09	2.95	2.08	.25	.26

CAL YR 1989 TOTAL 11685.7 MEAN 32.0 MAX 503 MIN 1.1 CFSM 1.18 IN. 15.98  
WTR YR 1990 TOTAL 12820.5 MEAN 35.1 MAX 698 MIN 1.9 CFSM 1.29 IN. 17.53



## MUSKINGUM RIVER BASIN

03140500 MUSKINGUM RIVER NEAR COSHOCTON, OH

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.

DRAINAGE AREA.--4,859 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1936 to current year.

REVISED RECORDS.--WSP 1907: Drainage area.

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.

REMARKS.--Estimated daily discharges: Dec. 17-30. Records good except for period of estimated record which is fair. Flow regulated by 13 flood-control reservoirs at points 19 mi to 88 mi upstream. Water-quality data collected at this site 1965 to 1977. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--54 years, 4,980 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 78,700 ft<sup>3</sup>/s Jan. 26, 1937, gage height, 21.98 ft; minimum daily, 420 ft<sup>3</sup>/s Sept. 13, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1913 reached a stage of about 28.8 ft, discharge, 202,000 ft<sup>3</sup>/s, computed by U.S. Army Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 23,800 ft<sup>3</sup>/s Feb. 17, gage height, 15.78 ft; minimum daily, 760 ft<sup>3</sup>/s Dec. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1400	1440	2730	9420	6850	6670	2850	4110	13200	2990	5110	3110
2	1390	1530	2450	10400	9220	6420	3290	3780	9710	2690	4370	2690
3	1500	1690	2250	8850	15000	5910	4410	3490	7800	2450	3770	2530
4	1770	1740	2180	8700	19500	5670	4500	3380	6890	2290	3410	2340
5	1610	1720	2120	9900	20200	5410	4260	6430	6230	2160	3160	2220
6	1460	1690	2150	9610	19700	4830	4010	7970	5600	2040	4970	2110
7	1370	1680	2210	7100	19500	4440	3760	6980	6410	1960	6130	2330
8	1290	1860	2260	5600	17900	4110	3480	5850	10300	1890	5490	5130
9	1230	2180	2170	4890	16500	4000	3240	5050	15500	1820	4920	6850
10	1230	2350	2040	4560	13900	4080	3740	4480	15800	2380	4420	7160
11	1350	2340	2110	4120	13200	4240	12700	4090	18800	2410	3840	7330
12	1510	2220	2000	4020	12000	4190	15800	3750	17700	6960	3260	7060
13	1580	2100	1840	3790	10200	4010	14300	4390	16400	17300	3040	6190
14	1390	2020	1740	3320	8910	3840	10700	7710	13800	17000	3690	5170
15	1270	2060	1610	3110	11800	3580	9000	7460	13400	16700	4340	4760
16	1190	4930	969	3100	21300	3540	7860	7580	13400	16100	3670	6910
17	1150	7630	920	3340	23200	3570	6990	13000	10900	16000	3100	6780
18	1230	7690	880	3910	21100	3610	6420	16200	7920	14700	2760	5830
19	1770	5860	870	4690	20000	3630	5680	15600	6360	11200	3060	5030
20	2080	4580	860	5420	19200	3690	5130	13400	5150	9180	5450	5130
21	2920	4070	840	8970	18400	3660	7670	10700	4700	9810	7760	5410
22	3070	3780	830	11300	18100	3500	12000	9050	4250	11900	10500	4820
23	2560	3280	820	10500	16800	3290	12100	7820	3880	15400	10300	5430
24	2230	3050	810	8660	14300	3140	10900	6840	4070	16200	9720	5160
25	2040	2890	800	7570	11300	2990	9190	6150	4020	15000	7270	4350
26	1900	2820	790	6970	8980	2830	7570	9000	3640	13700	5820	3800
27	1780	2820	780	6350	8800	2720	6520	11700	3310	10700	5050	3410
28	1630	2920	780	5170	7250	2610	5750	10700	3090	8700	4830	3090
29	1540	3010	770	4820	---	2530	5000	16200	3390	7140	4450	2880
30	1470	2970	760	6100	---	2500	4490	17000	3250	6060	4050	3050
31	1430	---	2940	6910	---	2640	---	16700	---	5210	3620	---
TOTAL	51340	90920	47279	201170	423110	121850	213310	266560	258870	270040	155330	138060
MEAN	1656	3031	1525	6489	15110	3931	7110	8599	8629	8711	5011	4602
MAX	3070	7690	2940	11300	23200	6670	15800	17000	18800	17300	10500	7330
MIN	1150	1440	760	3100	6850	2500	2850	3380	3090	1820	2760	2110
CAL YR 1989	TOTAL 1954809	MEAN 5356	MAX 22200	MIN 760								
WTR YR 1990	TOTAL 2237839	MEAN 6131	MAX 23200	MIN 760								

## 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 mi<sup>2</sup>.

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.--Estimated daily discharges: Dec. 17-29. Records good except those for periods of estimated discharges which are fair. 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.--52 years, 132 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 985 ft<sup>3</sup>/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, 898 ft<sup>3</sup>/s Feb. 7, gage height, 9.06 ft; minimum daily, 2.3 ft<sup>3</sup>/s, Jan. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.3	4.0	269	5.5	502	3.3	4.0	125	703	3.9	4.4	4.2
2	4.1	4.0	275	155	727	3.0	4.1	124	706	4.0	4.2	4.4
3	4.2	4.0	273	570	394	2.7	4.0	124	706	4.2	4.3	4.4
4	4.0	4.0	271	793	242	2.4	3.9	84	706	4.1	4.3	230
5	4.2	3.9	315	873	370	3.2	3.9	7.4	709	4.3	4.1	384
6	4.3	3.8	335	869	877	3.3	4.0	98	708	4.2	4.0	119
7	4.5	3.8	333	844	893	2.9	3.9	485	710	4.3	4.0	4.2
8	4.4	3.9	330	338	878	3.0	3.6	699	515	4.3	4.0	4.1
9	4.3	3.9	327	7.5	874	3.5	3.5	700	75	4.3	4.0	4.2
10	4.3	3.9	325	7.5	53	3.8	3.7	700	5.1	4.2	3.9	81
11	4.3	3.9	322	7.6	492	3.6	3.8	417	426	4.2	4.0	115
12	4.6	3.9	290	7.5	872	3.5	3.8	5.1	704	4.2	3.8	280
13	6.7	3.8	222	7.5	873	3.3	3.8	5.1	593	74	3.8	304
14	6.1	3.8	201	7.5	874	3.1	3.9	241	155	119	3.8	38
15	4.5	274	97	7.5	394	3.4	4.0	355	205	119	3.8	5.1
16	73	481	5.9	110	92	3.4	4.0	175	306	359	3.8	5.1
17	106	595	6.2	263	263	4.5	4.0	72	272	505	3.7	256
18	106	662	6.4	312	687	4.7	4.0	340	188	178	3.8	381
19	107	652	6.4	109	867	4.8	3.8	689	77	4.1	3.9	129
20	108	477	6.0	4.3	867	4.5	3.8	705	78	4.1	4.0	4.3
21	108	365	5.8	4.3	865	4.1	4.0	315	32	4.2	230	4.4
22	108	362	5.4	293	532	4.0	3.8	4.7	4.3	4.1	235	4.3
23	225	360	5.2	461	108	4.0	3.9	4.2	4.1	4.0	4.0	4.2
24	278	358	5.2	457	3.7	3.9	4.0	4.3	4.0	4.0	4.0	4.3
25	213	355	5.0	453	3.2	3.2	4.0	4.1	4.1	4.0	4.0	166
26	34	353	5.0	291	3.1	3.3	4.1	5.5	3.7	4.1	3.9	120
27	4.5	314	4.8	104	4.6	3.3	4.1	421	3.5	4.1	4.0	4.8
28	4.2	174	4.8	104	4.2	3.6	3.5	716	3.8	4.1	4.5	4.3
29	3.9	105	4.3	306	---	3.4	3.4	116	4.0	4.0	4.6	3.6
30	3.9	205	4.3	2.3	---	3.5	85	5.8	4.0	4.3	4.5	3.5
31	4.0	---	4.6	41	---	3.7	---	249	---	4.3	4.3	---
TOTAL	1554.3	6146.6	4270.3	7815.0	13614.8	109.9	197.3	7996.2	8614.6	1457.6	582.4	2676.4
MEAN	50.1	205	138	252	486	3.55	6.58	258	287	47.0	18.8	89.2
MAX	278	662	335	873	893	4.8	85	716	710	505	235	384
MIN	3.3	3.8	4.3	2.3	3.1	2.4	3.4	4.1	3.5	3.9	3.7	3.5

CAL YR 1989 TOTAL 74902.8 MEAN 205 MAX 880 MIN 2.3  
WTR YR 1990 TOTAL 55035.4 MEAN 151 MAX 893 MIN 2.3

## MUSKINGUM RIVER BASIN

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 mi<sup>2</sup>.

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: Dec. 10-13, 18-30, July 12, 20, 21, Aug. 5, 13, 19, Sept. 2, 3, 8, 9, 14-16, 21, 22, 29, 30. 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.--55 years, 446 ft<sup>3</sup>/s (unadjusted).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 8,500 ft<sup>3</sup>/s June 6 or 7, 1963; maximum gage height, 24.51 ft Aug. 13, 1980 (backwater from tributaries); minimum daily discharge, 0.7 ft<sup>3</sup>/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, 3,100 ft<sup>3</sup>/s May 30, gage height, 13.69 ft; minimum daily 32 ft<sup>3</sup>/s Dec. 29, 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	85	293	2330	1730	321	192	183	2270	61	283	48
2	70	100	350	2680	1310	268	516	218	1310	66	123	45
3	102	88	360	2270	1440	252	610	213	1010	54	88	391
4	73	79	357	1500	1450	225	430	266	982	40	75	289
5	55	78	354	1330	1990	196	365	929	871	78	93	344
6	47	73	397	1290	1720	186	297	1170	831	197	92	398
7	46	70	437	1130	1440	173	257	842	823	132	74	227
8	57	94	437	1010	1370	156	225	862	939	62	67	173
9	59	151	408	472	1320	163	197	863	1540	45	56	148
10	64	193	380	253	1610	185	290	824	2180	43	51	435
11	159	138	380	254	1840	174	1660	798	2010	55	64	331
12	187	109	370	218	1520	173	2110	438	1180	291	47	238
13	110	94	350	175	1420	163	1030	246	904	1320	48	376
14	84	90	291	121	1360	150	500	426	703	1150	64	321
15	72	89	258	174	1640	140	548	517	504	953	68	708
16	65	742	219	176	1950	139	490	704	1060	704	47	660
17	131	1330	118	282	2000	306	369	1470	727	638	38	245
18	209	1010	60	508	1410	709	327	2050	444	608	36	370
19	463	863	48	563	1220	417	267	1600	304	271	82	484
20	852	796	44	629	1200	438	240	1090	199	101	286	262
21	519	617	42	1610	1130	384	270	1650	192	200	199	135
22	387	504	40	1400	1080	300	343	1460	146	294	353	126
23	303	481	38	994	777	266	266	541	136	293	267	207
24	378	466	37	901	411	226	220	287	177	228	79	198
25	404	455	36	830	313	223	194	221	124	187	59	122
26	306	454	35	784	208	221	176	1020	100	165	50	228
27	154	460	34	544	267	191	161	2140	82	106	44	177
28	98	422	33	391	327	174	148	1900	68	86	40	68
29	94	303	32	661	---	166	137	2300	58	78	39	41
30	93	226	32	2000	---	163	132	2990	54	115	35	222
31	87	---	853	2410	---	164	---	2940	---	398	55	---
TOTAL	5788	10660	7123	29890	35453	7412	12967	33158	21928	9019	3002	8017
MEAN	187	355	230	964	1266	239	432	1070	731	291	96.8	267
MAX	852	1330	853	2680	2000	709	2110	2990	2270	1320	353	708
MIN	46	70	32	121	208	139	132	183	54	40	35	41
(+)	5.25	5.02	5.25	5.27	4.91	5.09	5.27	5.48	5.64	5.36	5.42	5.09

CAL YR 1989 TOTAL 215141 MEAN 589 MAX 2610 MIN 24 (+) 5.33  
WTR YR 1990 TOTAL 184417 MEAN 505 MAX 2990 MIN 32 (+) 5.25

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

## MUSKINGUM RIVER BASIN

95

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 mi<sup>2</sup>.

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: Dec. 17-30. 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.--52 years, 930 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,930 ft<sup>3</sup>/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 ft<sup>3</sup>/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 ft<sup>3</sup>/s, computed by U.S. Army Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,980 ft<sup>3</sup>/s June 14, gage height, 15.38 ft; minimum daily, 80 ft<sup>3</sup>/s Dec. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	333	196	457	913	3230	762	437	440	5160	302	514	172
2	266	185	395	2070	3430	774	453	418	5630	272	623	166
3	206	180	412	2740	3210	736	593	429	5300	247	531	171
4	165	178	438	2950	3360	681	822	456	5300	229	422	244
5	152	176	447	3060	3900	636	809	555	3790	214	354	430
6	144	172	447	2680	3990	590	727	873	2110	196	323	443
7	132	166	457	2090	3920	546	649	1300	1690	224	338	499
8	119	165	484	1740	3460	511	586	1270	1710	295	337	552
9	108	178	507	1460	3000	484	533	1090	615	286	300	486
10	107	204	509	1170	2730	471	560	1050	827	243	268	435
11	118	248	499	854	2900	472	1880	1010	1870	253	251	443
12	125	280	489	645	3110	474	3240	965	2920	565	262	561
13	164	266	482	582	2950	467	3610	902	4430	1870	280	562
14	203	239	472	516	2680	455	3140	772	5500	684	309	519
15	196	220	442	458	3080	436	2140	746	3540	2200	301	726
16	171	306	365	421	3090	415	1580	842	4140	4230	285	928
17	155	565	270	417	1300	422	1340	1590	2250	2920	257	1060
18	144	1270	220	484	2290	503	1120	2920	1640	1610	232	799
19	174	1370	180	654	3060	793	960	3410	1150	1140	246	619
20	298	1160	150	958	4440	867	861	3310	910	898	311	651
21	638	1030	140	1900	5560	803	820	2790	758	756	406	629
22	801	893	130	2590	5600	780	867	2630	664	954	334	514
23	662	734	120	2780	4150	715	893	2640	610	1780	583	429
24	538	644	110	2210	2370	648	840	1930	554	2030	665	403
25	468	601	100	1740	1430	593	728	1150	530	1420	487	419
26	470	583	96	1490	979	558	641	1250	500	1080	359	403
27	469	571	92	1310	828	535	584	2390	452	833	289	363
28	406	574	88	1120	765	505	539	3280	404	665	246	379
29	320	580	84	964	---	472	504	3010	365	550	220	364
30	251	541	80	1570	---	447	470	2010	332	479	201	408
31	213	---	181	2600	---	439	---	3390	---	450	185	---
TOTAL	8716	14475	9343	47136	84812	17990	32926	50818	65651	29875	10719	14777
MEAN	281	482	301	1521	3029	580	1098	1639	2188	964	346	493
MAX	801	1370	509	3060	5600	867	3610	3410	5630	4230	665	1060
MIN	107	165	80	417	765	415	437	418	332	196	185	166

CAL YR 1989 TOTAL 419269 MEAN 1149 MAX 4950 MIN 56  
WTR YR 1990 TOTAL 387238 MEAN 1061 MAX 5630 MIN 80



## 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 mi<sup>2</sup>.

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: Dec. 12-Jan. 5. 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.--54 years, 154 ft<sup>3</sup>/s, 14.94 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,800 ft<sup>3</sup>/s Sept. 14, 1979, gage height, 14.07 ft, from rating curve extended above 7,700 ft<sup>3</sup>/s on basis of contracted-opening measurement of peak flow; minimum, 2.0 ft<sup>3</sup>/s Oct. 3, 1963, gage height, 0.94.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,600 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 4	2030	2,280	5.73	June 9	1000	2,930	6.50
Feb. 16	0930	5,010	8.59	June 14	2400	1,690	4.92
Apr. 11	0800	2,580	6.09	July 13	0600	*7,250	*10.15
May 29	1700	3,690	7.32				

Minimum discharge, 9.5 ft<sup>3</sup>/s Oct. 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	33	37	700	264	136	79	90	359	44	66	17
2	18	32	36	370	756	134	147	83	268	41	56	16
3	16	31	36	200	601	134	132	77	238	37	52	15
4	13	28	41	100	1410	116	116	118	187	34	49	14
5	11	26	34	300	1070	106	104	451	147	32	53	13
6	11	26	35	156	563	99	91	299	126	29	50	14
7	12	27	40	115	429	86	81	213	323	27	45	16
8	12	29	34	99	335	83	72	164	709	26	42	29
9	12	40	50	87	287	93	67	133	2420	72	39	34
10	19	40	37	90	373	95	455	118	1090	159	38	63
11	50	36	30	83	301	92	1840	102	476	202	36	33
12	30	32	28	76	256	91	644	86	302	2180	36	34
13	22	29	27	69	212	84	359	263	227	4390	39	82
14	18	27	26	67	269	80	286	266	339	1270	40	42
15	15	56	25	66	1350	77	286	179	1020	799	33	65
16	15	656	24	63	3580	75	223	440	352	401	29	46
17	19	222	24	65	1040	79	192	996	218	247	26	45
18	25	106	23	130	543	75	155	715	161	170	25	36
19	47	75	23	114	398	70	131	346	126	130	33	33
20	61	65	22	505	284	70	126	260	107	127	69	44
21	48	58	22	938	225	66	398	459	99	435	42	39
22	44	49	21	404	215	64	270	289	83	568	37	36
23	36	45	21	253	214	64	203	215	81	800	34	42
24	31	40	21	205	185	60	170	179	74	344	31	36
25	28	39	21	170	141	60	148	149	66	217	29	31
26	26	41	21	167	117	57	132	791	57	151	27	27
27	24	42	21	124	123	54	120	693	51	116	24	25
28	23	50	21	110	151	52	113	518	48	96	21	23
29	22	46	21	173	---	52	106	3010	53	83	21	23
30	22	40	25	345	---	53	98	1340	49	74	25	57
31	24	---	150	254	---	62	---	584	---	78	20	---
TOTAL	765	2066	997	6598	15692	2519	7344	13626	9856	13379	1167	1030
MEAN	24.7	68.9	32.2	213	560	81.3	245	440	329	432	37.6	34.3
MAX	61	656	150	938	3580	136	1840	3010	2420	4390	69	82
MIN	11	26	21	63	117	52	67	77	48	26	20	13
CFSM	.18	.49	.23	1.52	4.00	.58	1.75	3.14	2.35	3.08	.27	.25
IN.	.20	.55	.26	1.75	4.17	.67	1.95	3.62	2.62	3.55	.31	.27

CAL YR 1989 TOTAL 67596.8 MEAN 185 MAX 3510 MIN 8.3 CFSM 1.32 IN. 17.96  
WTR YR 1990 TOTAL 75039 MEAN 206 MAX 4390 MIN 11 CFSM 1.47 IN. 19.94

## MUSKINGUM RIVER BASIN

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 mi<sup>2</sup>.

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: Dec. 13-31, Jan. 1-Feb. 9, Feb. 19-28, Mar. 7-Apr. 1, Apr. 5-10, 19-21, 24-30, May 1-4, 18-25, June 4-9, 23-30, July 1-10, 25-31, Aug. 1-15. Records 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.--31 years, 157 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,120 ft<sup>3</sup>/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 ft<sup>3</sup>/s, by slope-area measurement.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,620 ft<sup>3</sup>/s June 9, gage height 11.66 ft; minimum daily, 14 ft<sup>3</sup>/s Sept. 2-6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	49	354	700	250	167	35	52	606	31	39	15
2	30	52	426	130	780	99	126	50	529	28	37	14
3	28	45	419	70	900	92	99	49	488	27	35	14
4	24	40	412	130	1700	83	72	150	100	25	32	14
5	20	37	408	480	1000	81	60	709	78	24	30	14
6	21	36	406	380	700	80	52	344	60	22	28	14
7	20	35	324	300	500	56	48	176	250	21	27	18
8	19	47	70	220	320	54	45	160	700	20	25	17
9	18	176	52	170	380	60	43	133	2560	40	24	15
10	28	119	44	140	580	64	250	122	2600	100	23	23
11	66	76	38	100	420	70	1290	111	2340	161	21	23
12	46	58	35	90	378	80	796	104	1150	1090	20	31
13	33	47	33	80	326	72	287	308	735	2090	19	63
14	29	42	31	70	364	66	181	329	489	2350	18	38
15	26	145	30	62	948	58	255	169	898	1950	17	81
16	25	1280	29	56	1560	52	157	422	837	1030	16	52
17	128	1050	28	50	1150	50	115	635	479	593	15	28
18	156	433	27	660	401	46	85	480	370	436	15	24
19	324	268	27	560	250	44	70	260	111	103	37	23
20	416	252	26	1000	270	43	60	160	92	112	33	22
21	194	283	26	1500	270	40	120	430	138	204	23	20
22	162	314	25	1000	310	40	120	280	80	336	24	20
23	107	362	24	680	310	38	81	240	68	488	23	21
24	82	352	24	500	270	37	58	210	60	183	21	22
25	67	346	24	330	180	36	56	200	54	96	20	20
26	57	346	24	250	120	36	150	450	48	72	19	17
27	51	345	23	170	160	36	80	430	44	66	18	15
28	44	346	23	130	220	35	66	370	40	60	17	15
29	39	345	23	300	---	35	58	1440	37	54	16	16
30	36	330	27	600	---	35	56	1190	34	49	16	26
31	39	---	100	350	---	35	---	585	---	44	16	---
TOTAL	2363	7656	3562	11258	15017	1820	4971	10748	16075	11905	724	735
MEAN	76.2	255	115	363	536	58.7	166	347	536	384	23.4	24.5
MAX	416	1280	426	1500	1700	167	1290	1440	2600	2350	39	81
MIN	18	35	23	50	120	35	35	49	34	20	15	14
CAL YR 1989	TOTAL 82199	MEAN 225	MAX 1280	MIN 12								
WTR YR 1990	TOTAL 86834	MEAN 238	MAX 2600	MIN 14								

## 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 mi<sup>2</sup>.

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.--Estimated daily discharges: Dec. 9-29. Records fair, except for estimated daily discharges which are poor. 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.--51 years, 614 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 45,000 ft<sup>3</sup>/s Jan. 21, 1959, gage height, 20.3 ft (from high-water mark), from rating curve extended above 24,000 ft<sup>3</sup>/s on basis of flood-routing studies from station at Toboso; minimum daily, 28 ft<sup>3</sup>/s Sept. 27, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 31	2230	6,720	9.16	May 17	1200	7,230	9.53
Jan. 20	2130	6,550	9.04	May 29	1130	9,810	11.17
Feb. 4	1600	8,800	10.57	Jun. 9	0830	19,200	14.86
Feb. 16	0600	13,200	12.76	Jun. 15	0130	10,000	11.24
Apr. 11	0230	8,780	10.56	July 12	2130	*19,800	*15.05

Minimum daily discharge, 92 ft<sup>3</sup>/s Dec. 25-28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	194	240	753	4610	1620	901	329	491	1720	383	494	180
2	201	238	883	2260	5040	744	461	459	1450	359	443	172
3	178	233	881	1440	3430	697	469	437	1330	347	405	165
4	167	218	852	1270	6070	605	379	829	918	335	382	160
5	155	204	839	2440	4430	532	334	3990	728	322	392	163
6	154	202	841	1450	2340	494	294	2250	706	308	373	156
7	151	210	875	996	2120	446	258	1300	1460	291	365	201
8	140	230	446	776	1920	419	232	1000	3320	283	357	171
9	133	534	270	642	1560	426	216	830	14300	531	322	253
10	205	559	230	708	2380	441	1750	735	7940	1020	310	350
11	254	385	200	786	1750	463	6090	659	4660	1400	297	227
12	220	312	180	787	1450	521	2860	605	2840	8400	287	350
13	178	264	160	649	1230	483	1630	1660	2080	10500	286	501
14	170	245	150	554	1370	440	1300	2010	2820	7860	287	346
15	151	439	140	550	5710	410	1560	1110	5830	6420	266	624
16	145	4770	130	576	11000	382	1240	2880	2370	3160	248	358
17	261	2900	120	701	4520	373	1060	5850	1640	2150	236	248
18	459	1580	115	1810	2580	354	894	2950	1350	1730	228	209
19	873	1020	110	1470	1780	323	772	1380	909	1060	268	206
20	1390	837	105	3600	1480	322	726	1070	730	1000	695	209
21	843	822	100	4850	1270	304	1740	1290	742	2030	328	197
22	744	786	98	2310	1270	292	1340	1080	619	4900	304	188
23	531	842	96	1560	1280	281	952	912	585	3760	268	201
24	421	805	94	1330	1110	268	798	815	557	1800	246	180
25	351	766	92	1200	904	250	704	752	529	1200	233	172
26	312	761	92	1280	749	244	1010	3530	476	911	217	163
27	277	765	92	1010	786	232	731	2280	439	757	213	153
28	248	823	92	878	998	222	621	1640	418	658	201	145
29	228	851	130	1220	---	220	569	8020	411	585	202	149
30	211	794	188	2010	---	218	526	4110	399	538	208	228
31	230	---	2910	1470	---	241	---	2100	---	563	185	---
TOTAL	10175	23635	12264	47193	72147	12548	31845	59024	64276	65561	9546	7025
MEAN	328	788	396	1522	2577	405	1061	1904	2143	2115	308	234
MAX	1390	4770	2910	4850	11000	901	6090	8020	14300	10500	695	624
MIN	133	202	92	550	749	218	216	437	399	283	185	145

CAL YR 1989 TOTAL 402893 MEAN 1104 MAX 14700 MIN 92  
WTR YR 1990 TOTAL 415239 MEAN 1138 MAX 14300 MIN 92

## 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 mi<sup>2</sup>.

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.--No estimated daily discharges. Records good. 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 ft<sup>3</sup>/s; 30 years (water years 1961-90), 886 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 47,000 ft<sup>3</sup>/s Jan. 22, 1959, gage height, 32.46 ft; minimum daily, 19 ft<sup>3</sup>/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, 5,130 ft<sup>3</sup>/s June 18, gage height, 9.59 ft; minimum daily, 71 ft<sup>3</sup>/s Apr. 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	243	713	494	2860	1700	967	247	480	4270	329	576	176
2	243	442	443	4170	2480	824	662	479	4250	328	439	148
3	203	156	442	4190	2910	631	832	449	4150	323	360	158
4	153	218	695	2380	3200	632	746	451	4250	318	293	174
5	139	217	877	1350	3890	872	549	1770	4150	317	292	172
6	125	215	779	1250	4190	845	335	2780	3870	314	364	172
7	101	203	709	1240	4190	592	71	2740	2880	292	397	172
8	101	424	430	1550	4220	543	73	1720	2250	259	320	173
9	101	379	189	959	3760	497	75	847	384	292	267	199
10	130	280	187	586	3060	415	111	725	2230	923	257	297
11	240	281	330	740	3030	414	2450	557	4430	1190	287	408
12	285	279	386	628	2960	759	4400	358	4420	2790	286	266
13	186	398	239	390	3180	776	3800	359	4360	4690	287	333
14	114	504	239	394	2030	543	2840	1940	3940	4210	286	473
15	118	330	169	393	2550	540	2760	2150	2440	4520	285	672
16	185	2280	115	752	3610	475	2430	1770	4730	4860	265	655
17	290	3450	115	1040	4290	364	1780	2510	4900	4960	229	257
18	313	2050	265	1460	4890	362	1010	4080	4910	4930	229	256
19	438	1980	348	1240	4880	492	740	4400	4900	4940	259	256
20	630	1190	173	639	4910	589	592	4110	4860	4510	435	217
21	545	769	158	2460	4880	522	428	2340	4830	4310	504	166
22	543	741	135	4260	4830	468	1090	1010	4840	4750	323	217
23	798	686	86	4200	3130	363	1580	826	4710	4790	385	273
24	668	684	84	4200	1530	244	1290	859	4420	4910	408	269
25	176	682	84	2720	1510	240	773	739	4460	4870	244	240
26	163	678	123	976	1980	170	722	2620	2630	4730	214	174
27	173	638	215	984	1500	402	662	4240	663	2810	195	144
28	160	703	240	980	913	592	457	3830	449	845	166	143
29	160	751	149	1320	---	402	456	170	386	588	204	146
30	191	656	96	2330	---	296	496	1250	335	502	203	196
31	341	---	433	2320	---	246	---	3170	---	579	203	---
TOTAL	8256	22977	9427	54961	90203	16077	34457	55729	104297	78979	9462	7602
MEAN	266	766	304	1773	3222	519	1149	1798	3477	2548	305	253
MAX	798	3450	877	4260	4910	967	4400	4400	4910	4960	576	672
MIN	101	156	84	390	913	170	71	170	335	259	166	143

CAL YR 1989 TOTAL 422539 MEAN 1158 MAX 4600 MIN 80  
WTR YR 1990 TOTAL 492427 MEAN 1349 MAX 4960 MIN 71



## 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 McConnelssville, and 3.5 mi downstream from Oilspring Run.

DRAINAGE AREA.--7,422 mi<sup>2</sup>.

## 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.--Estimated daily discharges: Jan. 4-9. 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.--69 years, 7,646 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 126,000 ft<sup>3</sup>/s Jan. 26, 1937, gage height, 21.14 ft; minimum daily, 325 ft<sup>3</sup>/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 ft<sup>3</sup>/s computed by U.S. Army Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 39,900 ft<sup>3</sup>/s June 9, gage height, 10.78 ft; minimum daily, 1.360 ft<sup>3</sup>/s Dec. 25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2420	2570	4390	14500	14200	10600	4360	6350	25300	4690	7310	4390
2	2370	2670	4070	18200	16100	10200	5430	5860	23500	4360	6870	3910
3	2240	2180	3770	17100	22100	9590	6350	5470	20600	4000	5970	3660
4	2180	2300	3640	16000	26900	8920	7320	5630	18500	3690	5190	3350
5	2220	2350	3890	14000	30200	8580	7190	8570	17300	3550	4890	3190
6	2120	2410	3930	12000	29200	8310	6630	13400	14400	3810	4910	3260
7	1950	2350	3730	11000	28600	7140	5820	13400	12800	3160	6780	3240
8	1820	2510	3790	10000	27800	6770	5370	11700	14900	2910	7390	4170
9	1720	3260	3310	9200	25900	6350	4940	9360	34400	2920	6450	7610
10	1700	3220	3210	8170	25300	6190	6320	8100	29300	3790	5930	8450
11	1950	3300	3110	7260	22600	6320	19300	7420	25300	5610	5400	9040
12	2120	3320	3350	6440	21400	6730	24600	6580	25600	10200	5040	8880
13	2200	3170	2910	5800	19700	6690	24700	6890	25200	26300	4440	8640
14	2090	3170	2860	5310	18500	6110	21300	9560	25400	27600	4430	7860
15	1950	3060	2640	5020	20100	5790	18200	12700	29300	24100	5170	8260
16	1820	7040	2120	4880	28500	5590	15600	11600	25500	24500	5310	8350
17	1890	12000	1770	5360	31700	5880	13500	21100	23000	24700	4530	9600
18	1980	11700	1680	6620	29400	5790	11500	24300	18300	22700	4030	8700
19	2870	11100	2140	7240	28500	5970	9980	24500	15400	20200	4150	7540
20	3690	8760	2050	6640	27800	6600	8830	23600	12900	17100	6180	6770
21	3890	6960	1920	6470	28400	6290	8480	21500	11700	17000	8330	7100
22	4800	6400	1760	15700	28600	6030	13200	16900	10900	17900	10900	6970
23	4800	5760	1540	19300	27400	5770	16200	14600	10500	21000	11700	6660
24	4530	5150	1440	17800	22500	5310	15800	12800	9810	23500	12400	7060
25	3490	4850	1360	15500	18600	5050	13700	10900	9560	22700	10700	6310
26	3010	4740	1400	12100	15700	4740	11700	13700	9140	20800	8200	5530
27	2880	4620	1480	11100	14000	4450	10100	20400	6150	18100	6880	4900
28	2720	4730	1630	10600	12500	4670	8670	22300	5050	13300	6020	4470
29	2510	4860	1660	12700	---	4430	7720	30800	4850	10800	5890	4210
30	2340	4790	4320	14300	---	4240	6940	28100	4850	9100	5180	5490
31	2290	---	11900	14000	---	4210	---	25800	---	7910	4900	---
TOTAL	80560	145300	92770	340310	662200	199310	339750	453890	519410	422000	201470	187570
MEAN	2599	4843	2993	10980	23650	6429	11320	14640	17310	13610	6499	6252
MAX	4800	12000	11900	19300	31700	10600	24700	30800	34400	27600	12400	9600
MIN	1700	2180	1360	4880	12500	4210	4360	5470	4850	2910	4030	3190
CAL YR 1989	TOTAL 3404040		MEAN 9326	MAX 31900	MIN 1340							
WTR YR 1990	TOTAL 3644540		MEAN 9985	MAX 34400	MIN 1360							

## MUSKINGUM RIVER BASIN

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.

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 CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 980 mg/L July 13; minimum daily mean, 9 mg/L Dec. 4, 6.

SEDIMENT LOADS: Maximum daily, 79,900 tons June 9; minimum daily, 77 tons Dec. 25.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED SATUR- ATION) (00301)	COLI- FORM, FECAL, UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
OCT 18...	1230	1960	820	8.2	10.0	14.0	14	8.2	82	K39	K780
JAN 29...	1015	8820	590	7.9	6.5	4.0	13	11.0	87	K550	K290
MAR 22...	1100	5960	670	8.3	18.0	12.0	5.8	11.7	112	K180	K27
MAY 16...	1140	11600	520	8.0	21.5	16.5	15	8.8	94	K200	K210
JUL 11...	1130	5990	660	8.6	21.0	24.5	16	8.9	111	M1	K160
SEP 07...	0945	3160	610	8.4	26.5	25.0	6.1	8.2	103	K42	K24

DATE	HARD- NESS TOTAL (MG/L AS CA CO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CA CO3 (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
OCT 18...	320	84	26	41	5.1	183	0	148	160	65	0.3
JAN 29...	230	61	18	21	3.4	120	0	99	120	34	0.1
MAR 22...	--	71	22	29	4.0	148	0	122	130	48	0.2
MAY 16...	210	56	17	20	3.8	127	0	105	87	32	0.2
JUL 11...	280	71	24	33	4.6	145	2	123	140	49	0.1
SEP 07...	290	79	23	33	5.3	164	0	134	120	51	0.2

## MUSKINGUM RIVER BASIN

03150000 MUSKINGUM RIVER AT MCCONNELSVILLE, OH--Continued

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)
OCT 18...	5.0	495	0.02	1.5	0.07	0.05	0.50	0.12	0.05	0.05	30
JAN 29...	7.4	338	0.02	2.3	0.10	0.09	0.60	0.08	0.02	0.02	20
MAR 22...	4.9	429	0.01	1.3	<0.01	0.02	0.40	0.04	<0.01	<0.01	--
MAY 16...	6.2	300	0.03	2.1	0.10	0.06	0.90	0.05	0.03	0.02	30
JUL 11...	2.2	439	0.02	0.8	0.02	0.01	1.1	0.11	0.03	<0.01	40
SEP 07...	7.2	428	0.01	1.2	0.05	0.04	0.60	0.05	0.03	0.01	--

DATE	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)
OCT 18...	<1	51	<0.5	1.0	<1	<3	4	10	<1	13
JAN 29...	<1	38	<0.5	<1.0	<1	<3	<10	13	<10	7
MAR 22...	--	--	--	--	--	--	--	--	--	--
MAY 16...	1	42	<0.5	<1.0	1	<3	20	27	1	8
JUL 11...	<1	51	<0.5	1.0	<1	<3	5	5	1	12
SEP 07...	--	--	--	--	--	--	--	--	--	--

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SEDI- MENT, SUS- PENDE (MG/L) (80154)
OCT 18...	93	<0.1	<10	5	<1	<1.0	310	<6	12	27
JAN 29...	120	<0.1	<10	<10	<1	<1.0	270	<6	5	41
MAR 22...	--	--	--	--	--	--	--	--	--	18
MAY 16...	11	0.1	<10	8	<1	<1.0	250	<6	42	67
JUL 11...	3	<0.1	<10	4	<1	<1.0	320	<6	21	62
SEP 07...	--	--	--	--	--	--	--	--	--	45

K Results based on colony count outside the acceptable range.  
M Presence of material verified but not quantified.

## MUSKINGUM RIVER BASIN

03150000 MUSKINGUM RIVER AT MCCONNELSVILLE, OH--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

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	2420	52	338	2570	29	204	4390	20	230
2	2370	38	241	2670	30	218	4070	25	272
3	2240	45	272	2180	23	135	3770	10	106
4	2180	35	206	2300	26	163	3640	9	84
5	2220	38	226	2350	23	144	3890	9	99
6	2120	27	157	2410	28	184	3930	13	134
7	1950	27	143	2350	52	327	3730	35	352
8	1820	40	198	2510	61	407	3790	30	307
9	1720	32	147	3260	38	332	3310	27	244
10	1700	36	168	3220	53	460	3210	34	295
11	1950	41	215	3300	41	369	3110	31	259
12	2120	31	179	3320	47	419	3350	28	256
13	2200	32	190	3170	31	264	2910	24	187
14	2090	37	209	3170	43	371	2860	15	114
15	1950	54	286	3060	25	210	2640	22	156
16	1820	30	145	7040	44	926	2120	21	118
17	1890	34	172	12000	99	3220	1770	25	121
18	1980	31	165	11700	123	3880	1680	19	87
19	2870	36	277	11100	111	3360	2140	26	153
20	3690	35	347	8760	88	2120	2050	23	125
21	3890	29	308	6960	53	999	1920	22	113
22	4800	25	323	6400	40	693	1760	22	103
23	4800	29	371	5760	27	416	1540	21	89
24	4530	27	329	5150	21	298	1440	21	83
25	3490	29	271	4850	19	249	1360	21	77
26	3010	31	248	4740	20	255	1400	21	79
27	2880	34	263	4620	17	212	1480	21	83
28	2720	28	203	4730	25	320	1630	21	90
29	2510	24	159	4860	23	299	1660	20	91
30	2340	24	154	4790	27	347	4320	20	235
31	2290	26	163	---	---	---	11900	25	788
TOTAL	80560	---	7073	145300	---	21801	92770	---	5530
JANUARY			FEBRUARY			MARCH			
1	14500	87	3420	14200	72	2760	10600	33	952
2	18200	192	9410	16100	94	4070	10200	25	700
3	17100	181	8360	22100	167	9980	9590	35	904
4	16000	172	7430	26900	381	27700	8920	24	586
5	14000	149	5630	30200	398	32500	8580	24	566
6	12000	143	4620	29200	243	19200	8310	24	536
7	11000	122	3610	28600	178	13800	7140	18	349
8	10000	82	2220	27800	129	9720	6770	16	298
9	9200	50	1230	25900	112	7830	6350	23	387
10	8170	35	770	25300	125	8570	6190	59	990
11	7260	28	546	22600	93	5690	6320	64	1090
12	6440	24	425	21400	68	3940	6730	72	1320
13	5800	22	346	19700	67	3570	6690	72	1310
14	5310	14	203	18500	76	3790	6110	65	1070
15	5020	18	244	20100	100	5400	5790	71	1100
16	4880	16	217	28500	271	20900	5590	68	1030
17	5360	22	321	31700	319	27300	5880	69	1090
18	6620	20	355	29400	208	16500	5790	70	1090
19	7240	28	542	28500	154	11800	5970	63	1020
20	6640	30	544	27800	122	9150	6600	66	1180
21	6470	174	3040	28400	113	8630	6290	65	1110
22	15700	266	11300	28600	98	7560	6030	62	1010
23	19300	220	11500	27400	87	6400	5770	64	1000
24	17800	154	7420	22500	63	3840	5310	57	814
25	15500	97	4080	18600	56	2790	5050	60	824
26	12100	70	2290	15700	43	1820	4740	53	676
27	11100	51	1520	14000	43	1640	4450	53	634
28	10600	41	1170	12500	33	1120	4670	45	573
29	12700	87	2990	---	---	---	4430	46	554
30	14300	259	10000	---	---	---	4240	43	495
31	14000	91	3450	---	---	---	4210	45	508
TOTAL	340310	---	109203	662200	---	277970	199310	---	25766



## MUSKINGUM RIVER BASIN

03150000 MUSKINGUM RIVER AT MCCONNELSVILLE, OH--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

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	4360	43	503	6350	46	788	25300	170	11600
2	5430	49	718	5860	47	739	23500	145	9230
3	6350	56	952	5470	45	661	20600	116	6440
4	7320	59	1160	5630	76	1180	18500	107	5350
5	7190	51	995	8570	131	3070	17300	107	4960
6	6630	51	908	13400	158	5750	14400	100	3940
7	5820	47	734	13400	178	6470	12800	52	1800
8	5370	51	736	11700	115	3680	14900	108	4470
9	4940	43	579	9360	78	1980	34400	797	79900
10	6320	122	2080	8100	67	1460	29300	601	48800
11	19300	630	32900	7420	59	1180	25300	275	18800
12	24600	594	39400	6580	66	1180	25600	213	14700
13	24700	276	18400	6890	63	1180	25200	161	11000
14	21300	184	10600	9560	92	2430	25400	163	11200
15	18200	114	5610	12700	119	4090	29300	530	42700
16	15600	84	3540	11600	97	3060	25500	305	21000
17	13500	70	2560	21100	366	22300	23000	237	14800
18	11500	52	1610	24300	346	22600	18300	173	8570
19	9980	30	819	24500	271	17900	15400	153	6400
20	8830	50	1240	23600	186	11900	12900	115	4010
21	8480	58	1340	21500	167	9690	11700	114	3600
22	13200	111	4080	16900	158	7200	10900	101	2980
23	16200	186	8140	14600	151	5940	10500	103	2930
24	15800	170	7270	12800	150	5180	9810	91	2420
25	13700	124	4610	10900	167	4960	9560	98	2520
26	11700	97	3050	13700	145	5770	9140	89	2180
27	10100	74	2030	20400	235	13000	6150	112	1860
28	8670	70	1650	22300	213	13000	5050	94	1280
29	7720	55	1150	30800	478	39700	4850	95	1240
30	6940	54	1020	28100	308	23600	4850	86	1120
31	---	---	---	25800	208	14500	---	---	---
TOTAL	339750	---	160384	453890	---	256138	519410	---	351800
JULY			AUGUST			SEPTEMBER			
1	4690	95	1200	7310	104	2060	4390	47	557
2	4360	85	994	6870	103	1920	3910	70	741
3	4000	79	854	5970	85	1380	3660	57	563
4	3690	59	586	5190	73	1020	3350	71	641
5	3550	56	535	4890	86	1130	3190	41	354
6	3810	63	641	4910	72	954	3260	48	427
7	3160	68	578	6780	79	1440	3240	36	318
8	2910	67	527	7390	74	1470	4170	74	829
9	2920	65	508	6450	76	1320	7610	65	1330
10	3790	58	601	5930	57	909	8450	81	1840
11	5610	79	1200	5400	72	1050	9040	65	1590
12	10200	457	20700	5040	53	722	8880	69	1640
13	26300	980	69300	4440	69	830	8640	56	1320
14	27600	715	54700	4430	56	672	7860	54	1140
15	24100	214	14000	5170	67	943	8260	99	2220
16	24500	169	11200	5310	74	1070	8350	66	1480
17	24700	156	10400	4530	73	896	9600	67	1740
18	22700	148	9090	4030	66	721	8700	65	1530
19	20200	133	7210	4150	60	675	7540	56	1140
20	17100	183	8440	6180	69	1150	6770	68	1240
21	17000	246	11300	8330	83	1830	7100	128	2470
22	17900	218	10500	10900	89	2680	6970	134	2510
23	21000	252	14300	11700	164	5160	6660	130	2330
24	23500	276	17500	12400	200	6720	7060	119	2270
25	22700	329	20200	10700	139	4070	6310	111	1890
26	20800	161	9040	8200	85	1880	5530	105	1560
27	18100	124	6060	6880	75	1410	4900	102	1340
28	13300	125	4520	6020	50	814	4470	100	1210
29	10800	96	2770	5890	67	1070	4210	102	1160
30	9100	111	2730	5180	51	712	5490	111	1650
31	7910	119	2550	4900	73	966	---	---	---
TOTAL	422000	---	314734	201470	---	49644	187570	---	41030
YEAR	3644540		1621071						

## 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 mi<sup>2</sup>.

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. 14-28. Records good except for periods of estimated record which are fair. Water-quality data collected at this site 1965 to 1977.

AVERAGE DISCHARGE.--51 years, 89.8 ft<sup>3</sup>/s, 13.70 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,000 ft<sup>3</sup>/s July 22, 1948, gage height, 17.68 ft (from high-water mark in well), from rating curve extended above 4,300 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 3.0 ft<sup>3</sup>/s Dec. 29, 1947, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,900 ft<sup>3</sup>/s and maximum (\*);

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 10	2315	2,130	7.96	May 29	0715	*5,600	*12.61
May 17	0900	3,520	10.39				

Minimum discharge, 23 ft<sup>3</sup>/s Sept. 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	58	48	501	200	91	105	64	244	43	43	25
2	52	52	47	227	334	89	143	61	196	40	40	25
3	43	52	46	168	234	86	108	59	178	38	39	24
4	38	49	43	191	633	78	101	208	152	36	38	23
5	37	47	45	184	346	74	92	432	127	95	75	31
6	39	47	46	138	211	71	83	243	113	104	47	54
7	41	46	46	116	254	67	79	157	112	48	41	29
8	38	50	42	105	203	66	74	123	678	41	36	28
9	36	64	41	97	212	73	69	105	546	38	111	29
10	54	56	43	95	465	69	401	96	231	43	62	28
11	109	50	42	87	241	360	914	83	152	72	44	26
12	68	48	40	82	191	194	287	77	118	199	41	29
13	55	45	36	71	160	141	192	181	103	164	61	45
14	50	45	34	67	139	127	164	161	98	302	62	33
15	46	51	33	69	273	113	147	112	268	153	44	86
16	45	428	32	68	718	103	126	246	111	88	40	38
17	131	168	31	68	255	105	115	1690	88	67	37	31
18	105	115	30	103	183	93	99	415	77	54	37	28
19	359	90	30	88	156	97	93	235	69	48	39	36
20	212	85	29	327	129	95	92	336	65	164	53	38
21	141	73	28	254	117	86	105	281	64	519	66	32
22	107	66	28	156	117	83	90	194	79	170	75	55
23	89	61	27	123	113	78	83	156	190	397	49	49
24	78	56	27	111	105	78	79	135	93	131	40	38
25	71	54	26	106	85	78	75	123	69	88	36	34
26	65	57	26	97	74	73	73	620	60	70	33	31
27	61	54	25	87	97	70	71	397	54	61	30	28
28	57	61	47	81	104	68	70	642	51	59	29	27
29	54	54	64	322	---	67	73	3250	48	53	29	27
30	52	50	169	340	---	69	65	793	46	49	29	72
31	55	---	1180	211	---	78	---	367	---	53	26	---
TOTAL	2436	2232	2431	4740	6349	3020	4268	12042	4480	3487	1432	1079
MEAN	78.6	74.4	78.4	153	227	97.4	142	388	149	112	46.2	36.0
MAX	359	428	1180	501	718	360	914	3250	678	519	111	86
MIN	36	45	25	67	74	66	65	59	46	36	26	23
CFSM	.88	.84	.88	1.72	2.55	1.09	1.60	4.36	1.68	1.26	.52	.40
IN.	1.02	.93	1.02	1.98	2.65	1.26	1.78	5.03	1.87	1.46	.60	.45

CAL YR 1989	TOTAL 52881	MEAN 145	MAX 1700	MIN 25	CFSM 1.63	IN. 22.10
WTR YR 1990	TOTAL 47996	MEAN 131	MAX 3250	MIN 23	CFSM 1.48	IN. 20.06

## 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 mi<sup>2</sup>.

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. 14-29. 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.--60 years, 463 ft<sup>3</sup>/s, 13.70 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,000 ft<sup>3</sup>/s Mar. 10, 1964, gage height, 21.31 ft, from rating curve extended above 17,000 ft<sup>3</sup>/s on basis of contracted-opening and slope-area measurement of peak flow; minimum daily, 23 ft<sup>3</sup>/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 ft<sup>3</sup>/s, from reports of U.S. Army Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 3,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jan 1	0730	5,950	12.42	May 29	1630	*11,300	*16.51
Feb. 4	2100	3,660	9.22	June 8	1900	4,070	9.94
Feb. 16	0830	3,590	9.11	June 10	1630	7,080	13.57
Apr. 11	1130	5,230	11.57	June 15	0600	3,720	9.34
May 17	1730	6,880	13.39				

Minimum daily discharge, 110 ft<sup>3</sup>/s Sept. 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	207	304	241	4970	1070	567	391	296	1510	252	225	125
2	259	262	229	1930	1350	531	842	282	1140	232	198	120
3	214	250	222	1220	1270	511	634	267	1000	214	185	114
4	182	235	197	1080	2320	462	561	591	828	206	176	112
5	167	224	220	1140	2470	431	507	1880	685	364	310	110
6	168	216	217	881	1460	411	450	1290	596	880	251	189
7	180	212	234	709	1320	381	410	859	589	362	201	128
8	170	260	213	622	1210	367	377	655	2200	269	181	137
9	160	542	171	549	1040	386	349	542	4460	234	245	133
10	193	444	202	526	2160	379	555	474	6800	311	222	133
11	394	356	200	476	1600	961	4330	417	4930	765	222	128
12	276	315	188	437	1190	840	2060	373	1580	1060	209	125
13	227	282	149	381	947	646	1290	665	1070	1920	201	154
14	205	269	140	334	807	570	985	951	926	1620	268	138
15	187	282	140	346	929	514	896	625	2730	1150	194	355
16	177	1970	130	341	3020	471	744	910	1140	722	168	219
17	437	1260	130	335	1750	506	662	4940	781	508	153	165
18	443	792	130	494	1180	511	578	3820	635	395	147	139
19	1190	589	120	504	965	480	507	1560	563	334	172	155
20	1190	503	120	1140	780	532	479	1360	483	315	344	185
21	761	432	120	1640	681	473	530	1580	447	1310	350	152
22	597	373	120	1050	650	444	510	1080	426	560	358	228
23	469	333	120	795	627	415	448	814	925	1180	259	229
24	404	294	120	708	585	397	416	658	608	637	213	179
25	361	275	120	644	506	408	388	555	454	447	190	153
26	322	279	120	634	431	381	365	1600	379	359	172	142
27	293	273	120	536	526	357	346	1880	335	308	158	134
28	272	304	120	480	660	338	331	1630	312	280	148	124
29	256	290	220	982	---	328	345	8950	288	253	147	123
30	244	256	497	2540	---	326	311	6660	266	232	150	407
31	243	---	3820	1440	---	364	---	2480	---	253	136	---
TOTAL	10848	12676	9090	29864	33504	14688	21597	50644	39086	17932	6553	4935
MEAN	350	423	293	963	1197	474	720	1634	1303	578	211	164
MAX	1190	1970	3820	4970	3020	961	4330	8950	6800	1920	358	407
MIN	160	212	120	334	431	326	311	267	266	206	136	110
CFSM	.76	.92	.64	2.10	2.61	1.03	1.57	3.56	2.84	1.26	.46	.36
IN.	.88	1.03	.74	2.42	2.72	1.19	1.75	4.10	3.17	1.45	.53	.40

CAL YR 1989 TOTAL 281577 MEAN 771 MAX 7080 MIN 120 CFSM 1.68 IN. 22.82  
WTR YR 1990 TOTAL 251417 MEAN 689 MAX 8950 MIN 110 CFSM 1.50 IN. 20.38

## HOCKING RIVER BASIN

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 mi<sup>2</sup>.

## 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. 17-30. Records good except for periods of estimated discharges, which are 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.--14 years, 1,123 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,700 ft<sup>3</sup>/s May 30, 1990, gage height, 26.45 ft; minimum daily, 52 ft<sup>3</sup>/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 ft<sup>3</sup>/s. Flood in March 1907 reached a stage of 27 ft, site and datum then in use, discharge 50,000 ft<sup>3</sup>/s, estimated by U.S. Army Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 19,700 ft<sup>3</sup>/s May 30, gage height, 26.45 ft; minimum daily, 216 ft<sup>3</sup>/s Sept. 6, 29.

REVISIONS.--The maximum discharges for some water years have been revised as shown in the following table. They supersede figures published in the reports for 1979, 1983, 1985 and 1986.

Water Year	Date	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
1979	Feb. 27, 1979	15,600	25.45
1983	May 4, 1983	12,800	24.25
1985	Feb. 25, 1985	11,900	23.67
1986	Nov. 18, 1985	12,800	24.25

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	435	583	663	9370	3430	1300	996	614	6580	545	415	271
2	505	648	629	9760	3060	1170	1170	598	3220	504	380	257
3	522	566	601	3890	3370	1120	1580	605	2720	465	348	282
4	425	538	576	2670	3760	1040	1350	1220	2380	435	327	245
5	370	504	546	2800	6190	945	1250	6670	1820	423	333	228
6	358	480	560	2280	4260	892	1060	5210	1430	794	487	216
7	395	462	565	1770	3200	829	919	2970	1440	879	424	258
8	398	458	563	1490	3360	796	832	2070	1400	559	352	236
9	378	694	535	1330	2710	796	772	1620	3620	473	323	233
10	403	1170	490	1230	4690	819	766	1380	6520	538	337	265
11	733	921	505	1160	5460	1660	3130	1200	7740	533	410	259
12	835	755	495	1060	3390	3330	5680	888	6930	1020	397	248
13	604	670	456	934	2790	2060	3050	910	2450	2370	370	226
14	497	681	408	791	2370	1730	2090	1770	1820	2170	347	248
15	435	719	372	745	1870	1430	1910	1500	2710	2040	385	296
16	399	3080	307	756	4880	1180	1670	1320	3240	1360	328	425
17	1130	4960	300	737	6010	1560	1440	6510	1660	1040	294	336
18	1490	2530	280	766	3320	1970	1310	9710	1280	845	276	274
19	2770	1740	270	1000	2520	1470	1180	9030	1070	659	352	249
20	4160	1410	270	2090	2100	1770	1130	3010	970	556	609	285
21	2550	1250	260	4400	1770	1600	1200	4380	891	828	611	301
22	1860	1060	260	3040	1610	1300	1240	3490	824	1230	971	291
23	1450	911	260	2220	1490	1130	1060	2430	996	1220	788	337
24	1140	820	260	1880	1350	1050	935	1890	1300	1360	531	351
25	920	753	260	1620	1240	1060	855	1370	946	856	428	297
26	787	724	250	1530	1050	1030	807	4110	786	663	382	263
27	703	720	250	1310	1020	941	744	9140	694	560	350	240
28	637	754	250	1140	1220	861	691	6450	641	492	323	232
29	584	778	250	2540	---	814	672	10400	611	451	302	216
30	547	722	450	7910	---	792	661	18200	569	427	306	674
31	530	---	4240	6160	---	945	---	13900	---	426	283	---
TOTAL	28950	32061	16381	80379	83490	39390	42150	134565	69258	26721	12769	8539
MEAN	934	1069	528	2593	2982	1271	1405	4341	2309	862	412	285
MAX	4160	4960	4240	9760	6190	3330	5680	18200	7740	2370	971	674
MIN	358	458	250	737	1020	792	661	598	569	423	276	216
CAL YR 1989	TOTAL 688753	MEAN 1887	MAX 11600	MIN 250								
WTR YR 1990	TOTAL 574653	MEAN 1574	MAX 18200	MIN 216								



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 1989 TO SEPTEMBER 1990

		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)
NOV 01...	1015	608	690	7.9	10.5	10.0	9.7	9.9	90	K590	K5100
MAR 21...	1545	1520	460	7.5	20.0	9.5	15	12.5	112	K290	K35
MAY 17...	0915	6310	340	7.4	18.5	16.5	140	8.9	95	K10000	K10000
JUL 18...	0900	856	480	7.7	24.0	22.0	35	8.5	100	K540	K560
DATE	HARD- NESS TOTAL (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)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
NOV 01...	250	63	23	29	2.9	142	0	116	140	42	0.2
MAR 21...	170	42	16	18	1.8	72	0	59	100	25	0.2
MAY 17...	140	35	12	13	1.9	88	0	72	85	13	0.2
JUL 18...	210	54	18	17	3.5	117	0	96	110	24	0.1
DATE	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- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)
NOV 01...	9.4	378	0.01	0.72	0.04	0.04	0.50	0.06	<0.01	0.01	20
MAR 21...	8.8	279	0.01	0.60	0.04	0.04	<0.20	0.03	<0.01	<0.01	20
MAY 17...	8.7	206	0.01	0.70	0.05	0.04	1.6	0.07	0.01	<0.01	40
JUL 18...	9.7	308	0.01	1.70	0.03	<0.01	0.70	0.09	0.01	<0.01	50
DATE	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 01...	<1	43	<0.5	1.0	<1	<3	1	21	<1	16	
MAR 21...	<1	33	<0.5	2.0	<5	<3	<10	<3	<10	12	
MAY 17...	<1	32	<0.5	<1.0	<1	<3	14	63	<1	8	
JUL 18...	<1	43	0.5	<1.0	<1	<3	2	4	<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)	
NOV 01...	240	<0.1	<10	6	<1	<1.0	320	<6	150	18	
MAR 21...	300	0.1	<10	<10	<1	<1.0	230	<6	28	36	
MAY 17...	110	<0.1	<10	6	<1	<1.0	170	<6	31	463	
JUL 18...	82	<0.1	<10	4	<1	<1.0	250	<6	10	84	

K Results based on colony count outside the acceptable range.

## 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 mi<sup>2</sup>, 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.--No estimated daily discharges. Records 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.--25 years, 168 ft<sup>3</sup>/s, 14.62 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,170 ft<sup>3</sup>/s May 25, 1968, gage height, 27.39 ft; minimum, 0.17 ft<sup>3</sup>/s Sept. 28, 29, 1987.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,400 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jan. 1	1530	2,970	18.10	May 30	0400	2,550	16.91
Jan. 29	2200	2,820	17.68	Aug. 23	0300	*3,300	*18.98

Minimum discharge, 6.9 ft<sup>3</sup>/s July 10, 11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	91	100	126	2770	294	133	195	111	204	10	80	36
2	207	111	115	802	251	118	182	109	151	9.9	40	27
3	129	99	108	317	408	116	174	107	175	9.3	26	42
4	90	93	94	366	641	101	155	275	165	9.0	19	35
5	70	91	82	419	785	85	147	2050	118	8.7	16	25
6	63	90	84	261	341	79	131	782	102	8.4	31	20
7	168	89	87	199	311	72	113	324	88	8.3	32	18
8	143	88	89	172	366	65	102	209	79	8.0	22	16
9	125	99	86	157	368	66	91	159	243	7.5	18	18
10	188	124	79	149	1950	70	87	139	165	7.2	17	56
11	554	104	69	137	862	399	188	121	88	7.5	90	47
12	235	94	75	127	441	546	181	102	63	9.2	53	129
13	157	88	56	111	307	235	135	180	51	155	27	100
14	127	85	57	78	243	174	113	209	48	245	22	49
15	109	86	52	101	209	145	189	132	182	101	22	34
16	105	1020	54	105	791	121	201	379	144	60	21	26
17	323	700	47	100	522	487	163	1900	69	32	20	21
18	707	263	39	103	272	493	153	927	50	23	20	18
19	1460	185	35	121	226	234	141	249	38	18	19	20
20	934	159	35	561	187	258	129	165	30	16	19	34
21	385	148	35	1040	160	210	1000	138	26	23	25	31
22	260	126	33	393	153	170	812	135	25	146	1760	29
23	193	119	31	242	151	145	304	125	44	615	2350	28
24	163	110	26	197	147	123	209	102	27	144	192	25
25	143	102	25	175	131	132	168	85	18	52	115	23
26	128	99	24	164	80	135	166	219	15	29	88	19
27	114	99	24	138	114	129	150	1670	12	19	69	17
28	104	233	25	126	145	115	128	692	11	14	55	15
29	95	189	27	1130	---	108	126	2090	11	12	45	14
30	86	142	104	2580	---	105	125	1790	11	27	55	19
31	81	---	1550	624	---	130	---	354	---	538	52	---
TOTAL	7737	5135	3373	13965	10856	5499	6158	16029	2453	2454.8	5420	991
MEAN	250	171	109	450	388	177	205	517	81.8	79.2	175	33.0
MAX	1460	1020	1550	2770	1950	546	1000	2090	243	615	2350	129
MIN	63	85	24	78	80	65	87	85	11	7.2	16	14
CFSM	1.60	1.10	.70	2.89	2.49	1.14	1.32	3.31	.52	.51	1.12	.21
IN.	1.84	1.22	.80	3.33	2.59	1.31	1.47	3.82	.58	.59	1.29	.24

CAL YR 1989 TOTAL 103471 MEAN 283 MAX 4640 MIN 12 CFSM 1.82 IN. 24.67  
WTR YR 1990 TOTAL 80070.8 MEAN 219 MAX 2770 MIN 7.2 CFSM 1.41 IN. 19.09

## 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 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1987 to current year, no winter records. Records for water years 1988 and 1989 published in Water Data Reports OH-88-1 and OH-89-1 are unreliable and should not be used.

GAGE.--Water-stage recorder. Elevation of gage is 650 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 27 to Nov. 1, Dec. 10 to Jan. 6, May 4-8, May 17-20 and May 28 to June 6. Records poor. Record not collected Jan. 11 to Mar. 28. Data collected for Surface-Water Effects of Longwall Mining project, additional data in Volume 2 of this report.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge during operating period, 150 ft<sup>3</sup>/s, Jan. 1; maximum recorded gage height 19.45 ft May 29 (backwater from Racoon Creek); minimum daily discharge, 0.00 ft<sup>3</sup>/s, many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.3	1.3	1.3	150	---	---	5.8	1.7	5.0	.00	.00	.06
2	3.6	1.0	1.2	50	---	---	4.0	1.5	3.5	.00	.00	.06
3	1.7	.96	1.2	15	---	---	3.1	1.4	2.5	.00	.00	.06
4	1.2	.92	1.1	9.4	---	---	2.9	40	2.0	.00	.00	.02
5	.97	.88	1.1	7.4	---	---	2.5	90	1.7	.11	.00	.00
6	1.7	.95	1.1	5.8	---	---	2.1	40	1.1	.18	.00	.00
7	3.0	1.0	1.2	4.3	---	---	1.9	17	1.0	.02	.00	.00
8	2.3	.97	1.1	3.6	---	---	1.6	6.6	.87	.01	.00	.00
9	1.9	2.0	1.0	3.0	---	---	1.4	2.7	.70	.00	.00	.05
10	8.8	2.5	.99	2.8	---	---	2.9	2.2	.58	.00	.01	.05
11	5.8	1.9	.98	---	---	---	4.0	1.6	.40	.02	.01	.00
12	3.1	1.5	.97	---	---	---	2.6	1.4	.39	.10	.00	.48
13	2.2	1.3	.96	---	---	---	2.2	3.1	.28	.06	.00	4.0
14	1.8	1.2	.95	---	---	---	3.0	2.0	.32	.07	.00	.79
15	1.4	1.2	.94	---	---	---	3.6	1.6	1.4	.04	.00	.41
16	1.4	53	.92	---	---	---	2.7	7.2	1.0	.03	.00	.21
17	16	23	.91	---	---	---	2.6	45	1.0	.03	.00	.10
18	3.5	10	.90	---	---	---	2.2	20	.84	.03	.00	.08
19	2.3	3.8	.89	---	---	---	2.0	12	.49	.03	.00	.34
20	1.8	2.9	.88	---	---	---	2.0	5.0	.45	.01	.00	.19
21	1.5	2.3	.87	---	---	---	53	2.5	.45	.00	.00	.13
22	1.3	1.9	.86	---	---	---	11	2.2	.45	.14	.23	.16
23	1.2	1.7	.85	---	---	---	5.6	1.5	.45	.79	2.7	.11
24	1.0	1.5	.84	---	---	---	3.7	1.1	.42	.45	.67	.07
25	.92	1.4	.83	---	---	---	2.9	.93	.40	.40	.44	.06
26	.90	1.4	.82	---	---	---	2.4	3.1	.40	.40	.21	.05
27	.90	1.3	.81	---	---	---	2.1	18	.40	.27	.14	.04
28	.88	1.9	.80	---	---	---	2.0	80	.40	.16	.09	.05
29	.87	1.5	.80	---	---	1.7	2.0	50	.24	.00	.13	.16
30	.86	1.4	3.7	---	---	4.9	1.6	25	.02	.00	.10	3.8
31	.89	---	100	---	---	14	---	10	---	.00	.06	---
TOTAL	81.99	128.58	131.77	---	---	---	141.4	496.33	29.15	3.35	27.56	11.53
MEAN	2.64	4.29	4.25	---	---	---	4.71	16.0	.97	.11	.89	.38
MAX	16	53	100	---	---	---	53	90	5.0	.79	.23	4.0
MIN	.86	.88	.80	---	---	---	1.4	.93	.02	.00	.00	.00
CFSM	.78	1.26	1.25	---	---	---	1.38	4.70	.28	.03	.26	.11
IN.	.89	1.40	1.44	---	---	---	1.54	5.41	.32	.04	.30	.13

## RACoon CREEK BASIN

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 mi<sup>2</sup>.

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: Dec. 6, Dec. 11, Dec. 15 to Jan. 11 and Feb. 24 to Mar. 7. Record poor. 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 ft<sup>3</sup>/s, gage height, 8.34 on April 28, 1989, minimum daily discharge, 0.00 ft<sup>3</sup>/s, many days 1987, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft<sup>3</sup>/s and maximum (\*).

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jan. 29	2330	*795	*8.46	May 29	0145	565	8.06
Feb. 10	0900	543	7.61				

Minimum daily discharge, 0.26 ft<sup>3</sup>/s July 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	134	20	20	42	30	12	14	9.9	199	.87	3.1	1.5
2	71	19	20	29	31	10	13	9.6	106	.49	2.1	1.3
3	14	18	18	21	40	9.0	11	8.6	27	.46	1.9	1.1
4	8.8	18	17	27	90	7.9	11	121	9.6	.33	1.4	.92
5	6.3	16	19	35	52	6.9	10	200	7.4	3.2	1.2	.91
6	5.8	15	22	24	31	6.2	9.5	55	5.6	8.6	1.5	.63
7	18	15	19	19	39	5.6	8.6	30	5.2	.45	.54	.62
8	11	17	16	16	29	4.9	7.3	19	5.0	.26	.30	.59
9	11	24	16	14	69	5.9	6.6	15	4.0	.31	17	.91
10	35	23	18	13	304	5.5	8.6	13	3.6	1.0	18	1.4
11	42	20	19	11	57	18	13	9.1	3.3	.45	6.5	1.1
12	20	21	16	10	39	14	10	7.4	3.4	2.1	3.7	.89
13	14	22	12	7.9	29	9.1	8.9	14	3.6	1.4	3.1	13
14	11	23	9.2	6.1	22	7.4	9.1	11	3.8	2.0	3.8	5.5
15	8.5	26	8.2	8.8	19	6.1	11	7.6	8.2	1.6	2.5	2.8
16	6.4	200	7.6	8.5	128	5.3	9.7	25	4.6	.68	1.8	1.9
17	59	53	7.2	9.0	40	42	9.8	137	3.2	.48	1.3	1.7
18	101	33	6.7	13	27	21	9.4	33	2.6	.44	1.2	1.2
19	252	24	6.4	12	22	17	8.3	18	2.2	.34	.93	1.6
20	56	23	6.1	196	16	17	8.2	13	2.1	.29	.96	2.3
21	31	20	6.0	92	14	14	141	11	2.1	.69	1.9	1.6
22	21	17	5.8	48	12	12	49	10	2.3	3.2	59	1.8
23	16	16	5.6	33	11	11	25	8.2	2.8	10	15	1.7
24	13	17	5.5	28	9.8	11	18	6.4	2.6	3.9	7.5	1.4
25	11	16	5.3	24	9.3	11	15	5.2	2.3	2.6	5.2	1.2
26	10	17	5.1	20	8.8	10	13	29	1.9	1.9	3.6	.96
27	9.3	18	5.0	16	9.9	9.2	11	33	1.7	2.0	2.5	.88
28	8.1	33	4.9	14	13	8.8	11	168	1.5	2.2	2.2	.77
29	9.2	24	8.0	332	---	8.5	13	318	1.5	2.1	2.0	.64
30	10	22	24	212	---	8.6	11	99	1.2	3.3	2.0	1.8
31	13	---	60	46	---	18	---	191	---	6.4	1.7	---
TOTAL	1036.4	830	418.6	1387.3	1201.8	352.9	504.0	1635.0	429.3	64.04	175.43	54.62
MEAN	33.4	27.7	13.5	44.8	42.9	11.4	16.8	52.7	14.3	2.07	5.66	1.82
MAX	252	200	60	332	304	42	141	318	199	10	59	13
MIN	5.8	15	4.9	6.1	8.8	4.9	6.6	5.2	1.2	.26	.30	.59
CFSM	2.12	1.75	.85	2.83	2.72	.72	1.06	3.34	.91	.13	.36	.12
IN.	2.44	1.95	.99	3.27	2.83	.83	1.19	3.85	1.01	.15	.41	.13

CAL YR 1989 TOTAL 12566.49 MEAN 34.4 MAX 745 MIN .10 CFSM 2.18 IN. 29.59  
WTR YR 1990 TOTAL 8089.39 MEAN 22.2 MAX 332 MIN .26 CFSM 1.40 IN. 19.05



## 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 mi<sup>2</sup>.

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: Dec. 15-30. Records fair except for estimated daily discharges, which are poor. 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.--58 years, 459 ft<sup>3</sup>/s, 10.99 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,100 ft<sup>3</sup>/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 ft<sup>3</sup>/s Sept. 13, 1953.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 25, 1913, reached a stage of 21.1 ft, discharge, 27,000 ft<sup>3</sup>/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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 5	0300	3,880	9.04	June 11	0700	3,850	9.00
Feb. 18	1100	*6,010	*11.68				

Minimum discharge 15 ft<sup>3</sup>/s Oct. 2, 3, and Oct. 9, 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	37	99	881	311	647	816	254	371	230	533	245
2	15	39	91	1090	1140	656	1330	226	321	227	415	175
3	15	36	82	822	2090	601	1460	205	302	170	294	134
4	16	33	84	526	3270	545	1260	238	343	133	223	109
5	16	30	71	724	3870	452	840	682	367	111	285	92
6	18	30	73	1030	3810	390	589	1100	302	90	684	82
7	19	31	79	822	3060	350	461	1060	253	78	1070	96
8	17	35	76	546	1890	319	385	701	430	71	720	124
9	15	43	87	446	1180	311	335	473	1870	65	400	126
10	16	57	60	430	925	333	405	382	3170	129	285	146
11	22	66	60	463	789	368	1510	326	3750	393	215	392
12	23	71	70	486	649	386	2700	299	2760	781	170	310
13	22	64	74	436	539	400	3340	1130	1280	1600	214	199
14	21	57	63	345	482	386	2130	1920	629	2530	789	148
15	19	69	57	303	1390	351	1120	2540	451	3190	1140	199
16	17	484	49	306	3320	332	751	2870	367	3160	778	300
17	17	877	45	293	5140	355	586	3140	331	2560	405	345
18	17	859	41	388	5960	442	480	3200	285	1510	289	246
19	29	523	39	557	5170	427	399	3000	237	748	240	221
20	76	327	36	673	3390	349	359	1860	207	445	423	240
21	81	246	34	1340	1750	302	711	908	193	1090	429	254
22	85	199	32	1670	1000	275	1240	585	174	1950	538	303
23	81	164	30	1690	849	259	1230	464	204	2310	1100	352
24	81	137	28	1180	870	242	805	391	239	3150	1670	363
25	78	119	26	764	883	224	560	334	220	3060	1250	273
26	67	109	25	650	695	204	447	643	178	1760	585	197
27	55	106	24	536	574	191	383	1250	150	737	360	153
28	46	104	23	436	594	183	342	1270	130	452	270	128
29	41	102	50	383	---	177	311	843	123	343	241	110
30	35	99	92	354	---	206	283	582	124	336	298	165
31	34	---	323	326	---	385	---	455	---	580	328	---
TOTAL	1111	5153	2023	20896	55590	11048	27568	33331	19761	33989	16641	6227
MEAN	35.8	172	65.3	674	1985	356	919	1075	659	1096	537	208
MAX	85	877	323	1690	5960	656	3340	3200	3750	3190	1670	392
MIN	15	30	23	293	311	177	283	205	123	65	170	82
CFSM	.06	.30	.12	1.19	3.50	.63	1.62	1.90	1.16	1.93	.95	.37
IN.	.07	.34	.13	1.37	3.65	.72	1.81	2.19	1.30	2.23	1.09	.41

CAL YR 1989 TOTAL 161182 MEAN 442 MAX 6130 MIN 15 CFSM .78 IN. 10.57  
WTR YR 1990 TOTAL 233338 MEAN 639 MAX 5960 MIN 15 CFSM 1.13 IN. 15.31

## SCIOTO RIVER BASIN

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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 mi<sup>2</sup>.

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.--8 years, 71.4 ft<sup>3</sup>/S, 11.66 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,420 ft<sup>3</sup>/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 ft<sup>3</sup>/s and maximum (\*).

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 2	1930	828	9.26	May 18	0530	1,310	10.10
Feb. 15	1515	988	9.56	June 9	2300	817	9.24
May 14	1630	1,160	9.85	July 14	1245	*1,670	*10.62
				July 22	2045	1,080	9.72

Minimum discharge 0.56 ft<sup>3</sup>/s Oct. 5-6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.93	2.0	12	196	50	95	325	29	31	7.9	41	4.1
2	.88	1.7	11	190	466	77	396	27	25	6.1	31	3.8
3	.91	1.7	10	87	507	67	332	24	23	5.8	19	3.0
4	.74	1.6	9.7	79	494	60	140	47	20	4.5	15	2.6
5	.59	1.6	9.6	140	494	47	92	353	28	3.6	16	2.1
6	.73	1.7	9.8	165	451	38	67	432	26	3.1	18	1.6
7	.84	1.8	9.8	120	236	36	52	176	21	2.8	11	1.8
8	.80	2.5	9.2	72	160	32	42	95	77	2.5	9.6	2.0
9	.80	3.3	8.8	46	118	31	36	63	663	2.5	8.0	5.5
10	1.0	3.8	8.6	47	112	31	60	47	684	3.6	6.9	7.3
11	1.3	3.4	8.4	55	99	42	368	37	219	6.7	6.2	6.8
12	1.2	6.5	7.6	54	74	48	520	35	85	777	5.6	6.8
13	.93	6.9	7.0	39	59	55	161	425	55	1190	5.1	5.8
14	.91	6.0	6.9	46	89	47	96	814	42	1420	6.1	11
15	.85	9.5	6.8	28	528	38	73	499	62	922	35	17
16	.78	200	6.6	23	558	35	65	346	127	344	25	10
17	.72	249	6.4	24	467	40	54	991	55	124	15	13
18	.68	122	6.2	41	494	54	43	1050	32	67	10	13
19	1.9	65	6.0	72	215	46	37	264	23	43	7.7	9.5
20	2.0	46	6.0	151	109	34	34	105	18	253	6.8	7.0
21	2.2	35	5.9	452	77	29	83	67	15	334	7.2	5.8
22	2.3	29	5.8	467	66	27	101	49	13	586	8.4	6.4
23	3.0	24	5.7	160	70	25	79	37	11	815	7.7	6.6
24	4.7	20	5.7	108	83	23	59	30	10	362	6.3	6.2
25	4.6	17	5.6	87	74	21	49	25	11	121	6.0	6.9
26	3.8	16	5.5	94	57	20	42	50	12	67	5.1	6.9
27	3.5	16	5.4	68	57	18	37	71	9.3	44	5.4	5.0
28	3.1	15	5.4	51	65	18	36	69	7.3	32	5.8	4.6
29	2.7	14	5.4	45	---	18	33	80	6.4	24	6.4	4.0
30	2.2	13	21	45	---	22	31	59	5.6	22	5.3	3.5
31	2.1	---	161	43	---	83	---	43	---	41	4.1	---
TOTAL	53.69	935.0	398.8	3295	6329	1257	3543	6439	2416.6	7637.1	365.7	189.6
MEAN	1.73	31.2	12.9	106	226	40.5	118	208	80.6	246	11.8	6.32
MAX	4.7	249	161	467	558	95	520	1050	684	1420	41	17
MIN	.59	1.6	5.4	23	50	18	31	24	5.6	2.5	4.1	1.6
CFSM	.02	.37	.15	1.28	2.72	.49	1.42	2.50	.97	2.96	.14	.08
IN.	.02	.42	.18	1.47	2.83	.56	1.58	2.88	1.08	3.41	.16	.08

CAL YR 1989 TOTAL 28432.59 MEAN 77.9 MAX 2090 MIN .59 CFSM .94 IN. 12.71  
WTR YR 1990 TOTAL 32859.49 MEAN 90.0 MAX 1420 MIN .59 CFSM 1.08 IN. 14.69

## 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 mi<sup>2</sup>.

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: Dec. 9-30. Records fair, except for estimated records which are poor. Water-quality data collected at this site 1965 to 1977. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--48 years, 156 ft<sup>3</sup>/s, 11.90 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,300 ft<sup>3</sup>/s Jan. 21, 1959, gage height, 13.85 ft, from rating curve extended above 14,000 ft<sup>3</sup>/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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 15	2100	3,810	7.66	May 17	0915	2,610	6.55
May 14	0500	2,710	6.66	June 9	0145	*9,300	*10.75
				July 13	0915	2,860	6.81

Minimum daily discharge, 3.6 ft<sup>3</sup>/s Oct. 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.2	6.2	22	756	177	226	703	46	96	31	29	12
2	9.6	12	21	319	1860	148	960	44	73	29	28	9.9
3	6.3	11	20	147	1680	129	471	41	65	21	23	7.0
4	5.5	11	16	180	2010	104	215	156	60	18	19	6.3
5	6.3	11	18	449	1610	78	145	1880	59	15	28	7.6
6	6.1	10	19	289	624	68	102	907	56	14	29	6.9
7	6.9	11	20	143	405	59	75	312	159	13	21	9.1
8	8.7	22	21	99	294	54	60	163	931	12	18	20
9	6.3	36	17	78	217	55	52	108	7090	9.3	16	239
10	7.0	23	15	97	270	58	236	83	2410	10	15	119
11	7.0	23	14	132	218	130	1360	67	403	19	14	35
12	9.7	19	13	101	146	173	723	68	185	1060	13	22
13	10	16	12	63	112	130	248	1790	116	2310	13	19
14	7.8	11	11	48	361	93	165	2320	391	1820	15	17
15	5.0	24	10	41	2460	73	135	535	1900	1340	16	19
16	4.2	747	9.2	39	3200	72	119	1620	897	366	21	24
17	3.6	511	9.0	44	1800	124	99	2320	177	151	17	16
18	3.7	153	8.6	96	415	127	79	1370	97	82	15	15
19	12	76	8.0	129	240	79	68	298	66	54	14	16
20	29	52	7.6	505	162	63	67	165	50	44	18	18
21	21	40	7.4	1410	115	53	304	118	44	211	21	16
22	16	35	7.0	603	114	49	354	93	37	607	20	19
23	14	29	6.9	251	139	47	162	76	36	1070	19	24
24	12	27	6.8	177	165	43	110	65	31	393	15	18
25	14	22	6.8	141	134	39	87	58	29	137	15	16
26	11	21	6.7	212	83	36	73	538	26	75	14	14
27	11	22	6.7	121	106	34	66	429	23	49	12	14
28	11	25	6.6	80	223	33	60	202	21	37	9.3	12
29	9.6	27	11	71	---	32	56	922	20	31	16	12
30	9.8	22	30	66	---	55	53	357	20	26	29	13
31	8.9	---	866	61	---	320	---	149	---	26	16	---
TOTAL	302.2	2055.2	1253.3	6948	19340	2784	7407	17300	15568	10080.3	568.3	795.8
MEAN	9.75	68.5	40.4	224	691	89.8	247	558	519	325	18.3	26.5
MAX	29	747	866	1410	3200	320	1360	2320	7090	2310	29	239
MIN	3.6	6.2	6.6	39	83	32	52	41	20	9.3	9.3	6.3
CFSM	.05	.38	.23	1.26	3.88	.50	1.39	3.14	2.92	1.83	.10	.15
IN.	.06	.43	.26	1.45	4.04	.58	1.55	3.62	3.25	2.11	.12	.17

CAL YR 1989 TOTAL 64570.1 MEAN 177 MAX 3170 MIN 3.6 CFSM .99 IN. 13.49  
WTR YR 1990 TOTAL 84402.1 MEAN 231 MAX 7090 MIN 3.6 CFSM 1.30 IN. 17.64

## SCIOTO RIVER BASIN

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 mi<sup>2</sup>.

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.--Estimated daily discharges: Feb. 14, 22-25, and Mar. 20-30. Records fair. 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.--69 years, 796 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 55,200 ft<sup>3</sup>/s Jan. 22, 1959, gage height, 22.04 ft, from flood-mark; minimum daily, 0.4 ft<sup>3</sup>/s Nov. 8, 1924.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 25, 1913 reached a stage of 24.6 ft, discharge, 74,500 ft<sup>3</sup>/s at Griggs Dam, 9 mi downstream from gage, computed by C.E. Sherman, Ohio State University.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 16,400 ft<sup>3</sup>/s June 9, gage height, 12.69 ft; minimum daily, 16 ft<sup>3</sup>/s Jan. 18, 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	62	54	1870	568	1130	1730	370	804	156	803	360
2	41	68	69	1660	2640	2290	3100	382	606	379	911	292
3	42	71	81	1210	5620	907	3170	387	328	389	781	256
4	37	66	82	1150	7740	632	2000	419	264	175	390	256
5	33	64	86	1470	7090	271	1870	2850	769	236	284	66
6	33	62	91	1690	5460	1090	1010	3350	582	229	165	60
7	34	58	98	1290	4360	770	557	2080	814	147	1520	110
8	34	59	93	1120	3090	673	517	1480	1260	108	1240	246
9	33	65	92	1130	2360	284	609	1310	13300	52	594	293
10	35	73	92	1160	2150	263	1030	443	7270	192	461	570
11	36	79	95	1110	1950	503	3230	491	5210	200	184	237
12	36	93	93	930	1900	875	4260	417	4300	1870	58	400
13	38	98	91	788	1530	834	4190	2860	2880	5850	549	308
14	39	101	89	698	4000	498	3370	6000	2070	7010	348	397
15	41	155	87	694	5380	791	1920	4430	2730	6590	1540	237
16	41	1350	85	614	9490	556	1210	5530	2450	4690	1150	370
17	48	1980	84	224	9020	135	1290	7410	1710	3660	773	270
18	53	1480	83	16	7460	562	517	6630	488	2970	357	290
19	52	929	80	16	6300	1110	600	4440	947	1930	389	423
20	56	584	77	812	4420	880	790	3380	493	1020	192	189
21	72	393	75	2900	2830	680	773	2160	56	986	829	275
22	77	588	73	3310	2400	540	2190	668	342	3180	464	210
23	83	532	70	2560	2000	450	1770	815	445	5270	595	642
24	89	354	67	1990	1700	380	1230	562	257	4360	1650	434
25	93	38	65	1460	1400	350	1220	796	150	3930	2210	196
26	86	66	65	1300	1230	320	885	1110	377	3260	1270	413
27	76	82	63	1240	1100	280	474	1400	406	2100	487	300
28	71	95	61	1210	1100	250	380	3140	203	928	333	194
29	69	346	60	1230	---	340	496	3180	204	471	397	115
30	67	274	66	882	---	300	466	1380	136	325	263	151
31	66	---	925	477	---	202	---	993	---	856	285	---
TOTAL	1651	10265	3292	38211	106288	19146	46854	70863	51851	63519	21472	8560
MEAN	53.3	342	106	1233	3796	618	1562	2286	1728	2049	693	285
MAX	93	1980	925	3310	9490	2290	4260	7410	13300	7010	2210	642
MIN	33	38	54	16	568	135	380	370	56	52	58	60

CAL YR 1989 TOTAL 308559 MEAN 845 MAX 10700 MIN 33  
WTR YR 1990 TOTAL 441972 MEAN 1211 MAX 13300 MIN 16



## 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 mi<sup>2</sup>.

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. 15-29. 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.--44 years, 155 ft<sup>3</sup>/s, 13.41 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,900 ft<sup>3</sup>/s Jan. 22, 1959, gage height, 16.77 ft, from rating curve extended above 4,700 ft<sup>3</sup>/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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 16	1230	*2,350	*10.11	June 9	1230	1,620	8.67
May 14	0300	1,540	8.42	July 15	0700	2,280	9.99

Minimum discharge, 2.1 ft<sup>3</sup>/s Oct. 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	5.3	22	912	62	214	168	61	187	23	65	28
2	2.8	5.6	17	541	848	183	395	56	159	19	52	26
3	3.4	5.9	15	232	1290	176	306	51	158	15	43	25
4	3.0	7.5	15	203	1240	134	192	72	163	12	39	23
5	3.2	7.6	14	503	1190	102	143	299	138	11	177	22
6	2.8	6.6	13	296	612	89	108	276	123	8.9	228	20
7	2.4	6.1	13	134	331	77	90	172	149	7.4	389	28
8	2.5	6.8	13	93	241	76	78	122	528	6.7	161	33
9	3.0	9.3	14	77	188	83	69	94	1490	6.8	95	37
10	3.2	16	13	99	222	109	185	82	1010	479	71	29
11	3.8	12	12	137	205	117	1260	71	235	404	56	26
12	6.6	10	11	109	139	113	1030	65	147	1010	46	23
13	7.5	9.1	11	66	110	106	360	820	118	1660	93	20
14	8.0	8.2	9.6	69	99	94	223	1350	89	2010	213	31
15	5.4	13	8.6	58	692	87	178	745	72	2080	104	194
16	5.4	260	8.4	47	2110	80	146	617	61	1480	68	170
17	3.2	304	8.2	53	2030	80	124	1090	54	305	53	134
18	4.1	110	8.0	151	797	78	99	769	47	155	46	107
19	18	47	7.8	200	323	67	85	356	40	118	67	96
20	15	33	7.8	248	219	60	86	253	36	103	108	124
21	24	25	7.6	708	164	58	882	248	37	427	155	105
22	21	20	7.6	422	150	56	1010	199	34	608	263	134
23	13	17	7.4	196	193	55	388	163	82	754	136	165
24	11	16	7.4	142	219	49	224	138	108	271	94	102
25	9.6	15	7.2	118	155	46	171	123	63	143	72	75
26	8.0	16	7.2	105	134	44	134	990	46	106	59	62
27	6.9	14	7.2	83	136	42	105	1210	36	87	49	52
28	6.3	18	7.0	68	197	40	91	556	29	75	41	43
29	5.8	26	13	61	---	40	78	332	29	66	42	38
30	5.4	32	25	55	---	50	69	294	26	60	37	53
31	5.2	---	371	50	---	94	---	230	---	66	32	---
TOTAL	222.5	1082.0	709.0	6236	14296	2699	8477	11904	5494	12576.8	3154	2025
MEAN	7.18	36.1	22.9	201	511	87.1	283	384	183	406	102	67.5
MAX	24	304	371	912	2110	214	1260	1350	1490	2080	389	194
MIN	2.4	5.3	7.0	47	62	40	69	51	26	6.7	32	20
CFSM	.05	.23	.15	1.28	3.25	.55	1.80	2.45	1.17	2.58	.65	.43
IN.	.05	.26	.17	1.48	3.39	.64	2.01	2.82	1.30	2.98	.75	.48

CAL YR 1989 TOTAL 46862.7 MEAN 128 MAX 2750 MIN 2.4 CFSM .82 IN. 11.10  
WTR YR 1990 TOTAL 68875.3 MEAN 189 MAX 2110 MIN 2.4 CFSM 1.20 IN. 16.32

## SCIOTO RIVER BASIN

117

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 mi<sup>2</sup>.

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 ft<sup>3</sup>/s; 40 years (water years 1951-90), 354 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,100 ft<sup>3</sup>/s Mar. 21, 1927, gage-height, 16.9 ft, site and datum then in use; minimum daily, 0.1 ft<sup>3</sup>/s Sept. 14-29, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,700 ft<sup>3</sup>/s July 17, gage height, 8.76 ft; minimum daily, 5.4 ft<sup>3</sup>/s Mar. 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	19	94	121	161	463	22	64	627	56	111	65
2	19	12	64	558	1040	409	30	64	793	54	111	48
3	19	11	64	834	1660	250	356	64	779	53	111	42
4	19	13	48	820	1760	250	573	100	373	43	112	27
5	20	12	40	599	1770	336	367	325	120	28	113	19
6	20	13	40	361	2080	374	274	910	120	28	207	19
7	20	13	40	361	2510	290	273	892	122	23	422	19
8	20	13	40	523	2730	154	271	379	197	16	497	19
9	20	13	40	594	1500	109	170	366	162	12	378	20
10	20	13	40	376	254	108	142	217	154	65	154	87
11	17	13	40	303	250	109	1320	143	217	117	109	118
12	15	13	27	268	499	204	2070	145	1750	58	109	117
13	18	80	20	225	620	339	1620	232	2950	56	64	66
14	23	121	20	145	958	381	1030	1270	2880	107	186	26
15	23	120	20	99	1010	378	1010	2490	2340	61	255	18
16	23	453	20	99	1740	227	534	1200	1280	1760	255	17
17	23	481	20	99	2940	109	293	58	281	4050	132	87
18	23	386	20	186	2920	109	292	24	160	4420	64	224
19	24	383	20	388	2830	198	119	278	110	4190	65	166
20	24	296	20	484	2470	245	9.7	1840	109	2550	66	118
21	24	249	15	494	1810	153	906	3000	65	1580	197	118
22	24	156	13	1020	868	78	1580	2550	42	1300	350	311
23	24	111	13	1240	370	12	1570	2660	42	532	389	464
24	24	87	13	931	252	163	866	1220	77	1450	380	466
25	24	63	13	385	250	135	286	120	99	2030	211	110
26	24	64	30	176	340	7.4	286	443	98	2180	96	41
27	24	63	81	229	384	6.8	280	1470	97	1840	67	42
28	24	64	109	221	384	5.4	276	1870	99	487	68	42
29	26	95	110	221	---	5.6	276	22	99	201	69	42
30	25	112	112	220	---	7.1	148	176	74	194	69	42
31	25	---	140	185	---	13	---	426	---	114	69	---
TOTAL	678	3542	1386	12765	36360	5628.3	17249.7	25018	16316	29655	5486	3000
MEAN	21.9	118	44.7	412	1299	182	575	807	544	957	177	100
MAX	26	481	140	1240	2940	463	2070	3000	2950	4420	497	466
MIN	15	11	13	99	161	5.4	9.7	22	42	12	64	17

CAL YR 1989 TOTAL 124602 MEAN 341 MAX 4420 MIN 11  
WTR YR 1990 TOTAL 157084.0 MEAN 430 MAX 4420 MIN 5.4

## SCIOTO RIVER BASIN

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 mi<sup>2</sup>.

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: Dec. 15-28 and Jan. 4-9, 13, 14. 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.--70 years, 1,405 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 68,200 ft<sup>3</sup>/s Jan. 22, 1959, gage height, 27.22 ft, from high-water mark in well, from rating curve extended above 46,000 ft<sup>3</sup>/s; minimum daily, 47 ft<sup>3</sup>/s Sept. 6, 1930.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 25, 1913 reached a stage of 25.9 ft, discharge, 138,000 ft<sup>3</sup>/s, estimated by Franklin County Conservancy District.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 25,500 ft<sup>3</sup>/s June 9, gage height, 21.67 ft; minimum daily, 120 ft<sup>3</sup>/s Oct. 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	145	243	349	2430	1360	1650	946	693	1790	354	1200	413
2	154	170	260	1910	3410	2150	3260	543	1780	345	1070	427
3	134	162	229	2130	7120	2090	3210	547	1740	448	807	345
4	127	158	216	1950	11300	1100	3060	1360	1360	426	956	311
5	122	144	221	2100	9760	1010	2160	3720	872	230	923	284
6	123	159	228	2400	7690	917	2080	4190	1240	325	508	176
7	123	170	277	2000	6730	1580	1160	3630	2040	246	870	313
8	123	298	243	1800	6130	1000	947	2280	4650	198	2060	295
9	123	294	229	1800	4570	1050	935	1790	17500	183	1430	1010
10	186	205	216	1810	3030	478	1730	1490	9540	214	891	682
11	199	179	218	1520	2360	983	3800	706	5360	1060	606	596
12	143	170	217	1390	2160	1030	5880	956	4120	6460	336	841
13	128	175	202	1200	2310	1330	5780	3530	4850	6880	334	761
14	126	187	189	1100	2460	1270	4750	6220	4950	10700	754	672
15	120	527	180	952	8500	1090	3710	7270	6440	8890	1080	729
16	124	2230	170	889	13300	1490	2350	9620	4630	5490	1390	290
17	269	2660	160	758	12200	985	1740	9840	2780	6790	1320	538
18	132	2080	160	462	10400	440	1500	7690	1210	7110	745	274
19	620	1600	150	428	9100	1110	821	4760	920	6330	656	863
20	358	1210	150	2110	7270	1250	1000	3880	1210	4830	821	551
21	219	881	140	3480	4790	937	1390	5330	473	3250	681	513
22	193	698	140	4090	3290	701	2710	3600	352	7660	1030	416
23	180	929	140	3750	2160	469	3710	3320	626	7000	867	876
24	173	693	130	3260	1890	575	2570	2870	576	5200	1620	1260
25	172	405	130	2430	1780	902	1760	1310	357	5610	2320	718
26	173	239	130	1700	1630	888	1550	2360	390	4860	1940	515
27	169	247	130	1540	1690	507	1010	2280	487	4660	874	499
28	171	286	130	1490	1690	319	876	4930	548	2120	398	268
29	163	288	239	1770	---	403	878	10100	395	1290	503	337
30	161	623	566	1630	---	631	958	3460	392	641	450	432
31	218	---	2080	1160	---	500	---	1630	---	767	329	---
TOTAL	5571	18310	8219	57439	150080	30835	68231	115905	83578	110567	29769	16205
MEAN	180	610	265	1853	5360	995	2274	3739	2786	3567	960	540
MAX	620	2660	2080	4090	13300	2150	5880	10100	17500	10700	2320	1260
MIN	120	144	130	428	1360	319	821	543	352	183	329	176

CAL YR 1989 TOTAL 554113 MEAN 1518 MAX 12600 MIN 120  
WTR YR 1990 TOTAL 694709 MEAN 1903 MAX 17500 MIN 120

SCIOTO RIVER BASIN

119

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 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 945 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 1-27, Dec. 16-29 Dec. 30-Feb. 6, Feb. 15-27 and Sept. 17-30. Records good except for estimated daily discharges which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,590 ft<sup>3</sup>/s June 9, 1990, gage height, 11.07 ft; minimum, 0.12 ft<sup>3</sup>/s Oct. 6, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,200 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 5	0430	3,590	10.31	July 12	1900	2,770	9.59
June 9	0800	*4,590	*11.07	July 14	1830	2,620	9.44

Minimum discharge, 0.46 ft<sup>3</sup>/s Oct. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.2	3.3	18	430	200	84	61	26	64	9.6	14	1.7
2	5.4	3.9	13	200	1100	78	182	23	45	12	11	1.7
3	3.8	4.4	12	90	1000	73	121	22	42	7.2	8.6	1.6
4	3.2	3.8	14	100	1180	57	82	213	36	5.4	7.9	1.4
5	3.6	3.5	12	260	940	49	63	1790	30	4.2	16	1.2
6	3.5	3.7	11	170	500	44	48	483	61	3.1	18	1.2
7	3.9	3.9	31	96	259	36	38	197	727	2.3	11	1.3
8	4.9	8.0	33	64	199	36	33	110	1320	2.1	7.8	.91
9	3.7	21	29	45	163	45	31	71	2960	1.7	7.1	1.4
10	3.9	16	22	56	341	56	350	56	614	55	6.6	12
11	4.0	10	17	74	178	67	1150	48	188	46	5.5	13
12	5.4	7.5	15	54	126	83	291	45	98	1550	4.8	7.8
13	5.6	6.2	16	40	96	67	149	1050	66	946	4.6	5.2
14	4.3	7.1	12	28	279	57	104	575	45	1500	4.4	4.9
15	3.2	9.5	8.9	25	1400	47	104	191	37	848	6.7	3.6
16	2.5	406	6.4	22	1800	42	78	1300	30	216	4.4	1.5
17	2.1	148	5.2	25	900	53	62	1340	24	100	2.5	1.5
18	2.2	61	4.6	45	300	48	52	403	20	59	3.4	1.5
19	6.0	37	4.2	70	170	40	44	149	16	39	4.7	1.6
20	16	28	3.9	250	120	40	48	88	14	32	11	1.8
21	13	24	3.7	800	78	37	695	67	14	548	8.9	1.6
22	11	18	3.6	500	80	34	273	54	14	1180	10	2.1
23	8.8	14	3.5	260	97	34	129	43	13	792	7.3	2.4
24	7.0	12	3.4	150	95	31	84	36	12	210	6.0	1.9
25	8.0	13	3.3	84	65	28	61	32	10	96	5.2	1.7
26	6.0	15	3.2	120	65	26	48	341	7.2	58	4.1	1.5
27	2.5	19	3.2	84	58	23	39	247	5.6	37	1.7	1.4
28	.75	23	3.1	56	96	20	34	125	7.0	25	1.3	1.3
29	.59	27	8.0	43	---	22	33	1060	6.6	19	1.4	1.2
30	.52	22	24	39	---	26	29	291	6.7	14	1.3	1.3
31	3.3	---	820	35	---	42	---	112	---	12	1.3	---
TOTAL	153.86	978.8	1167.2	4315	11885	1425	4516	10588	6533.1	8429.6	208.5	83.21
MEAN	4.96	32.6	37.7	139	424	46.0	151	342	218	272	6.73	2.77
MAX	16	406	820	800	1800	84	1150	1790	2960	1550	18	13
MIN	.52	3.3	3.1	22	58	20	29	22	5.6	1.7	1.3	.91
CFSM	.05	.32	.37	1.38	4.20	.46	1.49	3.38	2.16	2.69	.07	.03
IN.	.06	.36	.43	1.59	4.38	.52	1.66	3.90	2.41	3.10	.08	.03

CAL YR 1989 TOTAL 48627.76 MEAN 133 MAX 2310 MIN .52 CFSM 1.32 IN. 17.91  
WTR YR 1990 TOTAL 50283.27 MEAN 138 MAX 2960 MIN .52 CFSM 1.36 IN. 18.52



## SCIOTO RIVER BASIN

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 mi<sup>2</sup>.

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: Jan. 4-9, June 7-11, Aug. 29. 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.--52 years, 191 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,800 ft<sup>3</sup>/s Jan. 21, 1959, gage height, 19.75 ft, from rating curve extended above 7,200 ft<sup>3</sup>/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, 7,750 ft<sup>3</sup>/s Feb. 15, gage height, 13.13 ft; minimum daily, 83 ft<sup>3</sup>/s Nov. 24.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	112	107	98	108	115	103	117	142	149	136	153	128
2	126	105	92	117	102	129	122	125	134	145	167	136
3	128	101	119	116	102	112	120	303	125	157	154	113
4	113	113	105	200	129	125	115	2130	114	145	158	146
5	98	105	152	350	107	119	125	1470	127	162	123	138
6	103	102	177	280	129	130	120	172	134	163	149	131
7	99	99	124	220	185	113	129	168	2700	161	144	132
8	101	102	101	170	216	124	128	152	2200	180	171	118
9	101	119	98	140	345	110	135	138	1500	179	153	110
10	105	95	104	106	1150	124	136	130	1000	144	167	110
11	124	110	111	115	581	110	334	136	700	125	162	120
12	106	97	107	109	129	114	563	1270	477	199	117	112
13	111	120	102	117	125	140	296	1310	184	687	110	133
14	120	104	95	104	320	123	211	493	355	3060	127	98
15	122	99	104	97	2630	128	198	1860	384	1970	116	111
16	129	111	94	119	3970	113	167	2460	126	750	145	126
17	113	102	120	113	2440	126	160	2100	147	171	128	120
18	117	121	109	112	1520	126	167	729	154	164	132	117
19	95	118	116	102	126	118	216	140	144	192	145	104
20	127	127	112	113	130	126	546	128	139	174	108	122
21	102	97	107	130	118	174	538	141	147	204	139	99
22	93	89	118	95	125	216	246	129	139	1680	111	104
23	125	108	107	110	119	147	157	133	112	1670	120	118
24	115	83	108	113	126	94	156	137	143	603	111	119
25	102	95	93	97	123	141	153	128	133	231	111	104
26	118	103	115	98	136	118	139	127	137	184	147	128
27	106	113	112	114	125	112	129	134	147	157	164	116
28	110	95	118	101	140	125	119	2070	141	172	164	119
29	96	102	102	125	---	115	140	881	138	165	140	112
30	124	103	118	112	---	121	116	131	129	169	126	105
31	102	---	119	97	---	115	---	151	---	152	124	---
TOTAL	3443	3145	3457	4100	15563	3891	5998	19718	12359	14451	4286	3549
MEAN	111	105	112	132	556	126	200	636	412	466	138	118
MAX	129	127	177	350	3970	216	563	2460	2700	3060	171	146
MIN	93	83	92	95	102	94	115	125	112	125	108	98

CAL YR 1989 TOTAL 99564 MEAN 273 MAX 2680 MIN 83  
WTR YR 1990 TOTAL 93960 MEAN 257 MAX 3970 MIN 83

## SCIOTO RIVER BASIN

121

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 mi<sup>2</sup>.

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 ft<sup>3</sup>/s, 17 years (water years 1974-90), 108 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,160 ft<sup>3</sup>/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 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,760 ft<sup>3</sup>/s Feb. 5 gage height, 5.41 ft; minimum daily, 5.7 ft<sup>3</sup>/s Apr. 13, 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.7	59	36	13	93	33	6.3	6.7	518	16	8.1	9.0
2	7.8	59	36	113	141	40	7.7	6.4	375	11	8.1	9.0
3	9.2	59	36	168	195	42	8.1	5.9	372	7.2	9.0	9.3
4	9.3	59	21	164	208	43	7.0	14	370	7.2	11	9.0
5	9.4	59	14	164	918	70	6.3	110	127	7.3	13	9.0
6	9.5	59	13	164	1550	116	6.1	649	14	9.3	12	9.0
7	9.5	59	14	164	1520	133	6.4	875	167	8.3	11	11
8	9.5	91	14	164	1160	133	5.9	404	232	7.1	11	9.3
9	9.5	93	14	85	441	78	5.9	43	49	6.8	10	9.9
10	9.5	74	14	49	88	52	13	55	19	11	10	9.0
11	9.5	74	14	48	88	52	7.4	50	76	16	10	8.1
12	9.5	74	14	47	158	75	5.9	32	928	25	9.9	8.3
13	9.5	69	14	47	238	85	5.7	40	1500	12	7.9	7.7
14	9.5	67	13	47	263	85	5.9	558	1440	23	8.1	7.2
15	9.5	69	12	47	206	85	5.7	931	223	12	8.1	7.2
16	21	472	12	23	277	86	5.9	348	682	715	8.1	7.0
17	63	338	12	12	1410	86	6.3	18	1010	1530	8.4	6.8
18	165	76	12	12	1410	86	6.5	9.9	513	1460	8.1	6.8
19	216	74	12	13	1350	86	6.4	110	21	1160	9.0	6.8
20	92	72	12	15	895	73	6.1	871	18	484	10	6.8
21	91	72	12	15	220	51	6.8	1340	17	330	9.8	6.8
22	90	72	12	109	18	32	5.9	764	15	333	9.0	6.8
23	90	72	12	457	20	22	5.9	216	15	631	9.0	6.8
24	90	72	11	611	24	22	6.4	14	15	843	9.0	7.0
25	90	72	11	529	25	22	7.0	14	12	463	8.5	7.1
26	70	72	11	270	25	17	6.9	20	6.7	186	8.1	6.8
27	59	72	12	91	25	6.8	7.0	16	9.6	69	8.1	6.8
28	59	70	11	90	23	6.7	6.8	23	18	9.5	8.2	6.8
29	59	70	11	90	---	6.0	6.8	24	14	10	9.0	6.7
30	59	46	12	90	---	6.1	6.8	84	17	11	9.0	7.1
31	59	---	16	90	---	6.1	---	392	---	9.3	9.0	---
TOTAL	1511.4	2746	470	4001	12989	1736.7	200.8	8043.9	8793.3	8423.0	287.5	234.9
MEAN	48.8	91.5	15.2	129	464	56.0	6.69	259	293	272	9.27	7.83
MAX	216	472	36	611	1550	133	13	1340	1500	1530	13	11
MIN	7.7	46	11	12	18	6.0	5.7	5.9	6.7	6.8	7.9	6.7
CAL YR 1989	TOTAL 46976.0	MEAN 129	MAX 1530	MIN 7.3								
WTR YR 1990	TOTAL 49437.5	MEAN 135	MAX 1550	MIN 5.7								

## SCIOTO RIVER BASIN

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 mi<sup>2</sup>.

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. 9-30. Records fair, except for period of estimated records, which are poor. 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.--64 years, 175 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,400 ft<sup>3</sup>/s Jan. 22, 1959, gage height, 19.59 ft (from high-water mark in well), from rating curve extended above 17,000 ft<sup>3</sup>/s on basis of contracted-opening measurement of peak flow; no flow Sept. 21-29, 1959.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,460 ft<sup>3</sup>/s June 9, gage height, 10.70 ft; minimum daily, 14 ft<sup>3</sup>/s Dec. 21-28, Sept. 4-5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	87	56	256	408	66	80	35	717	56	33	18
2	51	67	49	94	793	73	93	31	515	42	28	16
3	50	69	48	230	489	71	69	29	524	29	25	15
4	38	67	47	325	1430	67	58	408	516	25	36	14
5	41	67	36	311	755	68	50	681	373	22	123	14
6	51	78	31	237	1700	116	44	634	98	21	46	15
7	56	98	62	217	1810	163	39	1170	472	19	32	76
8	58	184	37	208	1620	169	35	775	1630	17	28	58
9	59	172	27	179	850	176	32	100	4080	27	26	266
10	332	86	25	83	323	94	493	92	340	91	24	66
11	268	83	23	75	213	185	516	92	172	254	23	35
12	94	77	20	71	213	118	124	114	520	2440	22	291
13	92	76	19	68	311	132	78	769	1570	436	25	76
14	118	77	17	64	529	125	86	507	2230	1150	31	112
15	151	295	17	67	2110	123	81	1220	1120	356	26	91
16	274	704	16	65	1440	161	65	1680	556	275	21	45
17	238	752	16	47	1440	142	57	1030	1110	1530	19	33
18	352	118	15	84	1600	126	51	214	948	1510	19	27
19	940	100	15	54	1520	134	46	125	89	1470	110	64
20	288	95	15	557	1330	122	49	541	61	823	74	63
21	243	91	14	394	491	86	258	1710	61	785	71	40
22	215	90	14	167	93	78	86	1160	57	1730	54	42
23	205	88	14	378	85	62	69	498	62	855	28	65
24	203	86	14	716	87	50	58	76	49	1100	20	46
25	202	86	14	762	74	47	52	71	40	797	18	33
26	192	111	14	532	64	43	47	417	35	256	16	29
27	97	93	14	156	78	40	44	128	29	202	16	26
28	73	103	14	125	83	36	41	302	26	53	15	23
29	75	89	17	288	---	32	51	1570	28	37	46	40
30	71	85	100	260	---	43	45	223	29	36	39	66
31	139	---	686	204	---	80	---	366	---	57	23	---
TOTAL	5301	4274	1506	7274	21939	3028	2897	16768	18057	16501	1117	1805
MEAN	171	142	48.6	235	784	97.7	96.6	541	602	532	36.0	60.2
MAX	940	752	686	762	2110	185	516	1710	4080	2440	123	291
MIN	35	67	14	47	64	32	32	29	26	17	15	14

CAL YR 1989 TOTAL 90178 MEAN 247 MAX 1860 MIN 14  
WTR YR 1990 TOTAL 100467 MEAN 275 MAX 4080 MIN 14

## 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 mi<sup>2</sup>.

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.--Estimated daily discharges: Dec. 9-29. Record good, except for period of estimated record, which are fair. 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.--66 years, 529 ft<sup>3</sup>/s (adjusted for diversion).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 59,800 ft<sup>3</sup>/s Jan. 22, 1959, gage height, 22.03 ft (from high-water mark in well), from rating curve extended above 13,000 ft<sup>3</sup>/s on basis of contracted-opening measurement of peak flow; minimum, 5 ft<sup>3</sup>/s Sept. 4, 5, 10-12, 1925; minimum daily since 1956, 9.4 ft<sup>3</sup>/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, 12,900 ft<sup>3</sup>/s June 9, gage height, 15.08 ft; minimum daily, 56 ft<sup>3</sup>/s October 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	240	152	1740	685	302	245	129	899	132	170	66
2	70	154	131	438	1890	264	311	126	691	128	145	61
3	68	147	128	433	1150	262	227	126	692	108	141	57
4	79	139	124	563	3020	236	177	695	655	103	134	57
5	87	129	125	771	1580	218	168	2640	559	100	333	61
6	75	147	143	499	1900	254	150	2710	223	98	177	69
7	67	159	284	412	2120	306	134	1570	1010	90	130	153
8	61	296	181	371	2030	296	126	1070	3670	90	136	191
9	56	437	110	346	1390	354	125	386	9720	98	129	505
10	108	241	100	262	1640	232	971	263	6990	269	129	467
11	179	191	92	243	1430	510	2550	241	2990	636	120	139
12	92	164	90	219	640	368	991	229	1180	3700	113	539
13	67	149	86	198	586	307	601	1520	1830	4150	115	545
14	60	144	82	172	777	293	461	2420	1850	5370	118	257
15	62	443	78	180	3440	278	503	1760	4410	4390	90	562
16	61	2410	76	178	9530	309	359	3890	929	1810	78	180
17	672	1160	72	166	4540	304	277	5020	1390	1710	74	122
18	260	423	70	493	3810	280	238	2740	1320	1700	73	103
19	966	284	68	297	1990	282	181	1710	397	1660	92	132
20	539	261	66	1560	1650	276	255	609	255	1140	354	175
21	291	259	64	1470	836	223	664	1800	263	1410	201	107
22	241	215	62	625	387	273	912	1440	232	3300	235	110
23	200	196	62	561	355	275	439	757	247	3240	126	206
24	185	183	60	890	325	188	282	288	211	2070	92	126
25	177	177	60	902	299	152	200	217	184	1310	86	87
26	181	197	58	808	247	149	193	970	179	559	76	79
27	150	208	58	427	296	139	171	586	152	448	70	76
28	133	218	58	301	377	131	144	444	147	230	66	76
29	127	200	140	608	---	123	200	4280	151	183	106	74
30	130	186	358	935	---	150	138	2360	137	184	119	276
31	174	---	2430	604	---	249	---	610	---	281	82	---
TOTAL	5678	9757	5668	17672	48920	7983	12393	43606	43563	40697	4110	5658
MEAN	183	325	183	570	1747	258	413	1407	1452	1313	133	189
MAX	966	2410	2430	1740	9530	510	2550	5020	9720	5370	354	562
MIN	56	129	58	166	247	123	125	126	137	90	66	57
(+)	126	115	117	117	116	116	119	121	127	137	136	130

CAL YR 1989 TOTAL 235042 MEAN 644 MAX 6990 MIN 56 (+) 120

WTR YR 1990 TOTAL 245705 MEAN 673 MAX 9720 MIN 56 (+) 123

(+) Average diversions to City of Columbus Municipal Water Supply.



## SCIOTO RIVER BASIN

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 mi<sup>2</sup>.

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. 14-29. Records good except for estimated daily discharges 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.--66 years, 458 ft<sup>3</sup>/s, 11.65 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 49,000 ft<sup>3</sup>/s Jan. 22, 1959, gage height, 17.94 ft from rating curve extended above 22,000 ft<sup>3</sup>/s on basis of contracted-opening measurement of peak flow; minimum observed, 1.4 ft<sup>3</sup>/s Sept. 17, 1932.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 4,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 5	1300	5,080	9.42	June 10	2400	*7,880	*11.45
Feb. 16	2000	7,840	11.43	June 15	1000	6,760	10.79
May 17	2200	5,480	9.83	July 13	1130	6,250	10.46
May 29	2300	5,380	9.73	July 23	0700	5,920	10.21

Minimum discharge, 38 ft<sup>3</sup>/s Oct. 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	64	101	2050	513	790	520	231	1030	170	243	79
2	48	61	98	2960	1390	669	807	214	755	159	215	78
3	45	60	92	1990	3420	614	1020	215	637	146	202	76
4	41	59	85	1100	3900	555	644	384	532	139	187	71
5	41	57	80	794	4980	465	503	1850	439	133	199	69
6	42	59	86	966	3490	409	412	3370	387	124	198	68
7	42	64	87	643	2220	368	344	1720	598	114	195	65
8	40	86	84	509	1770	336	299	1020	2750	110	172	63
9	39	120	78	433	1380	339	270	722	4440	108	158	69
10	43	119	75	396	1320	340	484	578	6710	111	161	130
11	44	153	77	388	1160	689	1780	474	5300	131	143	130
12	44	138	75	423	955	834	1980	391	1400	1580	133	164
13	43	115	65	365	808	726	1010	1110	934	5840	128	177
14	44	99	62	306	749	565	724	3620	789	5450	125	136
15	42	151	58	285	2500	489	607	3090	4440	5120	120	156
16	41	587	54	270	7240	457	510	3570	1800	2550	116	155
17	47	976	52	258	6570	456	442	5110	823	1230	110	138
18	46	657	50	327	2670	480	376	4740	570	811	109	120
19	94	381	49	340	1690	403	325	2150	460	611	105	110
20	120	277	47	866	1240	341	305	1180	392	546	100	106
21	90	227	46	2080	966	306	360	872	357	935	143	117
22	80	195	45	2250	849	294	574	674	329	2740	149	102
23	91	169	44	1250	802	284	491	547	315	4890	123	92
24	92	147	44	903	747	265	391	459	293	1910	118	91
25	84	134	43	750	626	249	341	405	267	974	111	89
26	79	127	43	655	500	237	308	461	242	673	107	89
27	72	118	42	616	535	226	286	1060	219	519	99	83
28	67	115	42	503	617	213	274	856	204	423	94	77
29	62	108	54	534	---	208	274	4110	190	359	93	76
30	60	105	82	608	---	225	251	3950	179	314	86	106
31	60	---	702	520	---	281	---	1700	---	279	83	---
TOTAL	1831	5728	2642	26338	55607	13113	16912	50833	37781	39199	4325	3082
MEAN	59.1	191	85.2	850	1986	423	564	1640	1259	1264	140	103
MAX	120	976	702	2960	7240	834	1980	5110	6710	5840	243	177
MIN	39	57	42	258	500	208	251	214	179	108	83	63
CFSM	.11	.36	.16	1.59	3.72	.79	1.06	3.07	2.36	2.37	.26	.19
IN.	.13	.40	.18	1.83	3.87	.91	1.18	3.54	2.63	2.73	.30	.21

CAL YR 1989 TOTAL 219009 MEAN 600 MAX 6080 MIN 39 CFSM 1.12 IN. 15.26  
WTR YR 1990 TOTAL 257391 MEAN 705 MAX 7240 MIN 39 CFSM 1.32 IN. 17.93

## SCIOTO RIVER BASIN

125

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 mi<sup>2</sup>.

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.--24 years 261 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,500 ft<sup>3</sup>/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, 2,650 ft<sup>3</sup>/s Feb. 18, gage height, 6.88 ft; minimum daily, 11 ft<sup>3</sup>/s Mar. 27 and Apr. 6-9.

 DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	125	117	43	379	263	12	85	1810	102	75	50
2	69	125	107	467	786	246	12	82	1780	80	75	50
3	111	125	106	958	1010	245	12	83	1450	64	82	35
4	116	125	106	1050	1020	246	12	142	1790	52	78	12
5	119	125	88	855	1170	201	12	640	1450	52	51	12
6	118	148	80	608	1290	179	11	1120	723	52	76	12
7	117	160	80	423	1270	179	11	1480	309	52	87	12
8	117	160	80	223	1250	149	11	768	385	52	86	12
9	116	187	80	222	867	132	11	300	185	39	86	12
10	117	227	80	252	632	133	12	264	15	13	72	12
11	136	226	55	267	632	137	12	198	15	193	66	12
12	144	226	42	225	898	852	13	168	362	394	59	12
13	158	224	42	206	813	999	13	168	1420	649	53	28
14	166	223	42	206	416	420	14	790	1800	375	53	48
15	166	249	42	204	580	333	14	1340	943	13	54	63
16	242	542	42	109	18	293	14	878	915	214	54	61
17	277	678	42	63	419	293	15	199	1780	1340	54	60
18	273	666	42	63	1750	294	15	23	1410	1820	54	60
19	272	649	42	139	2540	189	15	24	470	1790	54	60
20	245	634	42	195	2410	135	16	854	199	1470	54	59
21	232	622	42	462	2270	157	16	1750	167	1140	54	58
22	231	415	42	943	2110	191	16	1710	168	1190	53	58
23	230	314	41	1060	1320	154	130	1670	167	1450	51	57
24	229	313	41	1040	356	135	207	1620	148	1840	51	57
25	196	309	41	736	358	135	237	1060	80	1800	51	55
26	181	307	41	375	204	86	199	752	98	1820	51	55
27	181	192	41	306	201	11	153	793	106	1800	51	55
28	179	137	40	303	296	12	116	707	107	1510	51	55
29	179	137	41	185	---	12	84	31	108	468	51	55
30	166	137	41	335	---	12	84	16	108	165	51	54
31	137	---	42	432	---	12	---	817	---	105	51	---
TOTAL	5237	8707	1810	12955	27265	6835	1499	20532	20468	22104	1889	1241
MEAN	169	290	58.4	418	974	220	50.0	662	682	713	60.9	41.4
MAX	277	678	117	1060	2540	999	237	1750	1810	1840	87	63
MIN	17	125	40	43	18	11	11	16	15	13	51	12

CAL YR 1989 TOTAL 126596 MEAN 347 MAX 1870 MIN 14  
 WTR YR 1990 TOTAL 130542 MEAN 358 MAX 2540 MIN 11

## SCIOTO RIVER BASIN

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 mi<sup>2</sup>.

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.--Estimated daily discharges: Dec. 13-29 and Jan. 5-9. Records good, except for periods of estimated daily discharges, which are fair. 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.--55 years (1926-35, 1938-56, 1962-90), 303 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 39,600 ft<sup>3</sup>/s Jan. 22, 1959, gage height, 17.6 ft (from flood-marks), from rating curve extended above 25,000 ft<sup>3</sup>/s on basis of contracted-opening measurement of peak flow; minimum daily, 1.8 ft<sup>3</sup>/s July 25, 1934, Oct. 1-4, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,700 ft<sup>3</sup>/s May 29, gage height, 10.62 ft; minimum daily, 13 ft<sup>3</sup>/s Sept. 7, 8, 11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	169	155	628	580	296	42	100	1980	131	94	49
2	58	164	135	832	1020	276	51	95	1980	99	90	49
3	132	163	132	1100	1360	270	42	95	1570	83	93	46
4	133	158	129	1180	1870	264	40	251	1960	65	100	19
5	133	159	121	900	1610	234	37	997	1650	65	70	15
6	134	178	100	740	1700	204	33	1300	943	64	74	14
7	133	202	97	580	1720	202	31	1710	333	62	93	13
8	131	210	93	440	1650	182	29	1060	596	62	93	13
9	131	256	100	340	1260	164	28	367	367	62	91	14
10	136	301	95	361	965	163	205	298	97	42	83	14
11	151	288	86	382	882	485	381	244	71	302	71	13
12	170	283	53	343	1090	895	157	197	238	696	67	19
13	181	278	52	300	1120	1210	105	249	1340	814	57	22
14	199	277	51	296	612	508	86	684	2020	1250	54	42
15	200	426	51	296	1090	392	79	1500	1530	273	53	63
16	265	1040	51	215	937	336	66	1340	752	226	53	57
17	359	836	51	118	606	333	58	1340	1950	1260	53	55
18	346	763	50	190	1820	320	47	234	1670	1990	52	88
19	487	723	50	228	3110	242	43	136	596	1950	53	94
20	424	708	50	539	2950	164	44	625	253	1760	53	75
21	351	677	50	697	2800	174	48	1930	203	1330	56	72
22	323	511	50	1160	2370	212	44	1870	202	1370	57	74
23	308	365	50	1350	1650	186	107	1810	223	1570	55	73
24	299	355	50	1300	415	156	210	1750	201	2040	53	71
25	270	351	50	1010	388	156	243	1280	112	1980	51	71
26	238	349	50	563	272	138	220	1270	114	1960	51	70
27	235	266	50	422	221	36	178	1100	131	1950	51	70
28	230	182	50	411	322	32	150	941	129	1780	51	71
29	229	172	100	410	---	32	106	2420	130	610	51	71
30	219	170	193	526	---	34	102	289	130	205	49	81
31	193	---	816	631	---	42	---	624	---	155	49	---
TOTAL	6823	10980	3211	18488	36390	8338	3012	28106	23471	26206	2021	1498
MEAN	220	366	104	596	1300	269	100	907	782	845	65.2	49.9
MAX	487	1040	816	1350	3110	1210	381	2420	2020	2040	100	94
MIN	25	158	50	118	221	32	28	95	71	42	49	13

CAL YR 1989 TOTAL 171630 MEAN 470 MAX 3240 MIN 25  
WTR YR 1990 TOTAL 168544 MEAN 462 MAX 3110 MIN 13

## 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 mi<sup>2</sup>.

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.--70 years, 3,491 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 144,000 ft<sup>3</sup>/s Jan. 23, 1959, gage height, 32.5 ft, (from high-water mark in well); minimum daily, 166 ft<sup>3</sup>/s Sept. 27, 1944.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 26, 1913 reached a stage of 39.8 ft, discharge, 260,000 ft<sup>3</sup>/s (estimated by Franklin County Conservancy District).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 35,300 ft<sup>3</sup>/s Jun. 11, gage height, 14.52 ft; minimum daily, 980 ft<sup>3</sup>/s Oct. 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1020	1370	1880	11200	4650	4790	2250	2460	9110	1890	2680	1360
2	982	1550	1630	8220	6940	4630	3650	2110	8000	1770	2800	1330
3	1040	1370	1460	6160	12300	5170	5810	1940	7000	1730	2600	1340
4	1060	1310	1390	6120	16200	4530	5550	3420	6800	1730	2310	1260
5	1020	1250	1370	6910	20300	3530	4750	10100	6140	1690	2600	1180
6	1040	1230	1370	6660	22700	3200	4030	13800	5040	1680	2600	1140
7	1050	1270	1350	5650	18800	3160	3500	13500	4430	1680	2030	1060
8	1020	1340	1570	4510	15900	3610	2640	9310	7290	1490	2350	1100
9	986	1670	1430	3980	13900	3060	2360	6000	16900	1380	3330	1350
10	980	1980	1310	4060	12300	3060	2530	4600	22200	1450	2780	2270
11	1160	1730	1290	3930	10200	5170	11300	3760	33000	1800	2180	2110
12	1420	1620	1270	3550	8080	5650	13800	2910	27200	3890	1870	1680
13	1230	1540	1230	3260	7020	5720	11200	3630	12400	14500	1610	2420
14	1150	1480	1170	2900	6330	4770	9260	11100	12500	23800	1560	2370
15	1070	1510	1150	2650	7870	4080	7590	15100	15200	24900	1880	2070
16	1080	7820	1500	2530	19100	3710	6250	15800	17500	25900	2160	2540
17	1410	10800	1630	2300	28000	4050	4700	24000	11400	17800	2450	1640
18	2130	7740	1540	2350	32300	3420	3920	25200	8420	14100	2330	1560
19	2460	5490	1470	3270	26300	2930	3320	22500	5850	13600	1860	1400
20	4800	4430	1400	3710	20400	3330	2670	13200	3890	12200	1710	1800
21	3090	3780	1350	10500	15600	3270	3120	11700	3560	10700	2380	1720
22	2200	3240	1400	10700	11400	2870	4310	12000	2840	9810	3290	1530
23	1900	2680	1440	9370	8680	2600	6040	9250	2970	16900	2570	1470
24	1770	2690	1440	8110	6060	2360	5750	8300	2880	19700	2180	1860
25	1680	2360	1550	7360	5250	2340	4630	6750	2590	14100	2780	2190
26	1550	2080	1550	6150	4750	2550	3620	8840	2180	11700	3460	1740
27	1510	1890	1610	4780	4210	2390	3320	10500	2120	10100	3010	1400
28	1450	1760	1670	4130	4550	1930	2710	8260	2140	8920	1970	1390
29	1380	1730	1670	4330	---	1720	2560	25400	2110	5530	1550	1240
30	1330	1660	1860	7130	---	1790	2510	27400	1940	3500	1540	1300
31	1320	---	6270	6130	---	2110	---	21100	---	2690	1570	---
TOTAL	47288	82370	50220	172610	370090	107500	149650	353940	265600	282630	71990	48820
MEAN	1525	2746	1620	5568	13220	3468	4988	11420	8853	9117	2322	1627
MAX	4800	10800	6270	11200	32300	5720	13800	27400	33000	25900	3460	2540
MIN	980	1230	1150	2300	4210	1720	2250	1940	1940	1380	1540	1060
CAL YR 1989	TOTAL 1852278			MEAN 5075	MAX 26900	MIN 980						
WTR YR 1990	TOTAL 2002708			MEAN 5487	MAX 33000	MIN 980						



## 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, 1,020 microsiemens Dec. 25; minimum, 264 micromhos May 29.

pH: Maximum recorded, 8.8 units March 27, 28; minimum recorded, 7.5 units on several days.

WATER TEMPERATURES: Maximum, 29°C July 9; minimum, 0.0°C on several days during winter.

DISSOLVED OXYGEN: Maximum, 18.7 mg/L March 28; minimum, 6.1 mg/L Aug. 9.

## SCIOTO RIVER BASIN

03231500 SCIOTO RIVER AT CHILLICOTHE, OH--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	804	794	798	776	762	768	798	788	793	---	---	---
2	820	804	810	818	778	786	808	796	803	---	---	---
3	830	822	824	786	782	784	802	780	789	---	---	---
4	832	808	815	782	756	767	788	778	780	682	674	677
5	806	792	797	758	754	756	812	788	800	678	662	673
6	800	784	795	770	758	765	816	812	813	666	654	660
7	798	794	796	774	770	773	826	814	821	664	648	655
8	804	796	799	772	756	767	832	822	827	680	646	662
9	810	802	806	788	770	778	836	826	833	694	682	690
10	814	796	808	792	776	787	826	810	820	700	682	692
11	822	806	811	774	716	744	812	804	807	682	670	676
12	848	824	841	718	708	711	822	804	812	682	666	673
13	838	832	834	730	718	723	840	824	832	708	684	695
14	832	792	812	746	732	740	840	832	837	722	708	715
15	790	784	788	752	702	741	838	826	830	738	720	729
16	784	698	772	732	434	581	872	838	860	742	736	739
17	762	714	744	470	420	438	894	870	881	756	738	745
18	800	730	761	586	478	548	906	894	899	768	758	762
19	792	618	728	628	588	611	924	902	906	770	680	740
20	612	540	583	662	628	648	916	906	909	676	646	668
21	612	556	573	680	664	673	920	916	917	---	---	---
22	618	560	586	686	680	684	938	922	929	---	---	---
23	666	620	644	716	686	703	960	938	946	---	---	---
24	696	668	684	740	716	728	984	962	972	676	660	670
25	722	696	707	742	728	734	1020	970	975	660	636	645
26	740	722	730	740	732	735	974	956	962	644	638	640
27	762	740	748	746	740	743	982	948	954	660	644	649
28	758	752	755	770	744	758	950	934	941	686	662	675
29	756	750	754	786	772	778	972	924	936	688	614	669
30	758	750	753	786	780	783	928	868	895	650	598	623
31	764	752	757	---	---	---	864	706	782	672	628	643
MONTH	848	540	755	818	420	718	1020	706	866	770	598	683
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	702	676	690	750	724	740	834	794	813	738	726	732
2	704	662	691	744	720	735	796	758	778	728	718	722
3	656	572	612	720	706	716	806	744	762	738	726	732
4	582	524	563	702	694	697	752	744	746	748	504	677
5	520	452	479	730	698	714	766	736	758	616	496	550
6	476	452	467	746	730	741	732	698	714	516	500	505
7	484	476	480	760	742	748	698	686	692	556	506	523
8	498	484	491	782	734	763	710	690	701	584	560	577
9	508	498	500	752	734	743	732	708	720	610	584	593
10	512	504	507	760	736	755	732	696	720	652	610	632
11	544	514	527	742	482	618	686	426	514	658	652	655
12	582	546	565	644	520	610	526	406	445	684	658	670
13	614	584	599	674	624	651	592	530	558	704	682	695
14	638	616	628	718	674	702	610	594	604	700	510	602
15	644	590	631	732	718	727	592	564	579	542	496	513
16	580	372	443	734	728	731	562	546	553	542	492	521
17	394	374	383	748	730	739	600	562	579	484	352	399
18	410	392	398	736	728	732	632	600	613	418	400	411
19	412	404	410	730	724	727	632	620	627	464	418	440
20	406	400	402	780	730	753	670	632	648	480	436	467
21	426	406	412	774	750	758	690	672	681	532	466	505
22	468	428	447	764	756	760	682	646	672	534	510	521
23	520	468	487	768	758	761	644	574	611	544	524	536
24	596	522	570	766	754	761	612	568	587	552	546	550
25	630	598	613	770	762	767	626	614	622	566	550	556
26	680	632	657	788	770	775	654	626	640	578	332	472
27	742	680	703	792	754	773	696	548	672	552	404	496
28	746	718	731	790	766	776	704	694	698	574	476	558
29	---	---	---	784	768	775	726	706	713	456	264	326
30	---	---	---	792	768	782	732	722	725	382	344	376
31	---	---	---	834	782	802	---	---	---	492	382	422
MONTH	746	372	539	834	482	737	834	406	658	748	264	546

## SCIOTO RIVER BASIN

03231500 SCIOTO RIVER AT CHILLICOTHE, OH--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	558	502	539	740	724	734	710	674	691	784	761	775
2	574	560	568	746	716	734	710	690	699	769	753	764
3	610	566	586	738	680	715	690	682	685	780	761	767
4	592	584	587	738	702	720	706	644	688	800	784	791
5	586	582	584	750	706	736	686	659	680	784	769	777
6	606	588	598	726	698	713	710	667	689	776	761	769
7	670	608	647	734	710	724	718	686	704	780	765	773
8	666	518	631	720	706	714	718	690	700	800	780	788
9	472	346	372	738	678	719	737	643	689	812	792	802
10	360	334	347	718	702	709	671	655	664	847	776	817
11	330	300	311	742	708	728	682	667	674	776	639	688
12	416	322	364	750	610	682	702	674	689	639	616	631
13	464	418	449	594	324	410	714	686	705	679	639	655
14	486	460	478	386	316	342	726	702	718	651	573	612
15	480	356	441	386	348	365	753	722	737	596	556	574
16	446	338	379	412	346	371	---	---	---	620	533	586
17	500	456	483	442	414	435	---	---	---	552	510	528
18	522	500	509	---	---	---	---	---	---	534	514	524
19	560	522	543	---	---	---	---	---	---	576	514	543
20	624	562	592	---	---	---	---	---	---	626	580	595
21	664	628	653	---	---	---	---	---	---	696	573	641
22	666	656	660	---	---	---	---	---	---	714	594	622
23	668	636	652	---	---	---	---	---	---	610	586	597
24	718	670	697	---	---	---	---	---	---	650	610	630
25	720	706	712	490	478	483	---	---	---	628	586	612
26	---	---	---	478	463	468	---	---	---	618	590	606
27	744	734	736	482	463	473	683	670	677	658	600	625
28	752	744	748	498	478	484	694	674	682	680	620	638
29	754	736	746	561	502	533	722	694	707	734	628	671
30	742	736	738	620	561	596	741	722	731	680	628	649
31	---	---	---	670	623	644	784	745	763	---	---	---
MONTH	754	300	564	750	316	593	784	643	699	847	510	668
YEAR	1020	264	671									

PH (STANDARD UNITS), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	8.4	8.3	8.3	8.3	8.2	8.3	8.2	8.1	8.2	---	---	---
2	8.5	8.3	8.4	8.3	8.1	8.2	8.2	8.1	8.2	---	---	---
3	8.5	8.3	8.4	8.1	8.0	8.1	8.3	8.2	8.2	---	---	---
4	8.5	8.4	8.5	8.2	8.0	8.1	8.3	8.2	8.3	8.1	8.0	8.0
5	8.7	8.5	8.5	8.2	8.1	8.1	8.2	8.1	8.2	8.1	8.0	8.1
6	8.6	8.4	8.5	8.1	8.0	8.1	8.1	8.1	8.1	8.1	8.0	8.0
7	8.6	8.4	8.5	8.1	8.0	8.1	8.2	8.1	8.1	8.1	8.0	8.1
8	8.6	8.4	8.5	8.0	8.0	8.0	8.2	8.2	8.2	8.1	8.0	8.0
9	8.6	8.4	8.5	8.1	7.9	8.0	8.3	8.2	8.2	8.0	8.0	8.0
10	8.5	8.3	8.4	8.0	8.0	8.0	8.2	8.2	8.2	8.0	8.0	8.0
11	8.4	8.3	8.4	8.1	8.0	8.0	8.2	8.1	8.2	8.1	8.0	8.1
12	8.4	8.3	8.3	8.1	8.0	8.0	8.3	8.1	8.2	8.1	8.1	8.1
13	8.4	8.2	8.3	8.1	8.0	8.0	8.3	8.2	8.2	8.1	8.1	8.1
14	8.4	8.3	8.3	8.1	8.0	8.0	8.3	8.2	8.2	8.1	8.1	8.1
15	8.5	8.3	8.4	8.1	8.0	8.0	8.4	8.2	8.3	8.1	8.0	8.1
16	8.4	8.3	8.4	8.0	7.7	7.8	8.3	8.2	8.3	8.0	8.0	8.0
17	8.3	8.2	8.3	7.9	7.7	7.8	9.3	8.2	8.2	8.0	7.9	8.0
18	8.2	8.2	8.2	8.1	7.9	8.0	8.3	8.2	8.2	8.0	7.9	8.0
19	8.2	8.2	8.2	8.1	8.1	8.1	8.4	8.2	8.2	8.1	8.0	8.1
20	8.2	8.1	8.1	8.1	8.1	8.1	8.2	8.1	8.2	8.1	8.0	8.1
21	8.2	8.1	8.2	8.2	8.1	8.1	8.2	8.1	8.1	---	---	---
22	8.3	8.2	8.2	8.2	8.2	8.2	8.2	8.1	8.1	---	---	---
23	8.3	8.2	8.2	8.2	8.2	8.2	8.2	8.1	8.1	---	---	---
24	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.0	8.1	8.2	8.0	8.1
25	8.2	8.2	8.2	8.2	8.1	8.2	8.3	8.0	8.1	8.1	8.0	8.1
26	8.3	8.2	8.2	8.1	8.1	8.1	8.1	8.0	8.0	8.1	8.1	8.1
27	8.3	8.2	8.2	8.1	8.0	8.1	8.3	8.0	8.0	8.1	8.0	8.1
28	8.3	8.2	8.3	8.1	8.0	8.1	8.0	8.0	8.0	8.1	8.0	8.1
29	8.3	8.2	8.3	8.2	8.1	8.2	8.0	8.0	8.0	8.1	8.1	8.1
30	8.3	8.2	8.3	8.2	8.1	8.2	8.0	8.0	8.0	8.1	8.0	8.1
31	8.3	8.2	8.3	---	---	---	8.2	7.9	8.0	8.0	8.0	8.0
MONTH	8.7	8.1	8.3	8.3	7.7	8.1	8.4	7.9	8.1	8.2	7.9	8.1





## SCIOTO RIVER BASIN

03231500 SCIOTO RIVER AT CHILLICOTHE, OH--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	18.5	18.5	18.5	13.0	12.0	12.5	6.0	5.0	5.5	---	---	---
2	20.0	18.0	19.0	13.0	11.5	12.5	5.5	4.0	5.0	---	---	---
3	19.5	18.0	19.0	12.0	10.5	11.5	4.0	2.5	3.0	---	---	---
4	18.5	16.5	17.5	10.5	9.5	10.0	2.5	2.0	2.5	3.5	2.5	3.0
5	17.0	15.5	16.0	11.5	9.0	10.0	4.0	2.5	3.0	3.5	3.0	3.5
6	16.5	16.0	16.5	12.5	11.5	12.0	5.0	3.5	4.5	3.0	2.5	2.5
7	16.0	15.0	15.5	12.0	11.0	11.5	4.5	3.5	4.0	2.5	2.0	2.5
8	15.0	14.0	14.5	12.5	11.5	12.0	4.0	3.0	3.5	2.5	2.0	2.5
9	14.5	12.5	13.5	12.5	12.0	12.0	3.0	2.0	2.5	3.5	2.5	3.0
10	13.5	12.5	13.0	12.0	10.5	11.0	2.5	2.0	2.5	3.5	3.0	3.5
11	14.5	12.5	13.5	11.0	9.0	10.0	3.0	2.5	2.5	3.5	3.0	3.0
12	16.0	13.5	14.5	11.5	10.0	10.5	3.0	2.0	2.5	3.0	2.5	3.0
13	17.5	15.0	16.0	11.5	9.5	11.0	2.0	1.0	1.5	2.5	2.0	2.0
14	19.0	17.0	18.0	12.5	11.0	12.0	1.5	1.0	1.5	2.0	1.5	2.0
15	19.5	17.5	18.5	14.0	12.5	13.5	1.0	.0	.5	4.0	2.0	3.0
16	19.0	18.0	19.0	13.5	11.0	12.5	.5	.0	.5	5.5	4.0	4.5
17	19.0	17.5	19.0	10.5	8.0	9.5	.5	.5	.5	7.0	5.5	6.0
18	17.5	14.5	16.0	7.5	6.5	7.5	.5	.0	.5	8.0	7.0	7.5
19	14.5	11.5	13.0	6.5	6.0	6.0	.5	.0	.0	7.0	6.5	7.0
20	11.5	10.0	10.5	8.0	6.5	7.0	.0	.0	.0	7.0	6.5	6.5
21	10.5	9.0	10.0	7.5	6.5	7.0	.5	.0	.5	---	---	---
22	11.0	9.0	10.0	6.5	5.5	6.0	.5	.5	.5	---	---	---
23	12.0	10.0	11.0	5.0	4.5	5.0	.5	.5	.5	---	---	---
24	13.5	11.5	12.0	5.0	4.0	4.5	.5	.5	.5	5.0	4.0	4.5
25	14.5	12.5	13.5	5.5	4.0	5.0	.5	.0	.5	5.5	5.0	5.5
26	15.0	13.0	14.0	7.0	5.5	6.5	.0	.0	.0	5.5	4.5	5.0
27	15.0	13.5	14.5	8.5	6.5	7.5	.5	.0	.0	5.5	4.0	4.5
28	15.0	13.5	14.5	9.0	8.0	8.5	.0	.0	.0	5.5	4.5	5.0
29	15.0	13.0	14.0	8.0	6.5	7.5	.0	.0	.0	4.5	4.0	4.5
30	15.0	13.0	14.0	6.5	5.5	6.0	.0	.0	.0	4.0	3.0	3.5
31	14.5	13.0	14.0	---	---	---	.5	.0	.0	4.5	3.0	3.5
MONTH	20.0	9.0	15.0	14.0	4.0	9.5	6.0	.0	1.5	8.0	1.5	4.0
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	5.0	4.0	4.5	5.5	4.0	5.0	15.0	14.0	14.5	21.0	19.0	20.0
2	6.5	5.0	6.0	6.0	5.0	5.5	14.5	12.5	13.5	18.5	17.5	18.0
3	6.0	5.0	5.5	6.5	5.0	6.0	12.5	9.5	11.0	17.5	16.5	17.0
4	5.0	4.0	5.0	6.5	5.0	5.5	10.5	9.0	9.5	16.5	15.5	16.0
5	4.0	3.5	4.0	7.0	5.5	6.5	11.5	9.5	10.5	15.5	14.5	15.0
6	4.0	3.0	3.5	7.5	7.0	7.5	11.0	10.0	10.5	14.5	13.5	14.0
7	4.5	4.0	4.5	8.0	6.0	7.0	10.5	9.0	10.0	15.5	14.0	14.5
8	5.5	4.5	5.0	7.5	7.0	7.0	11.5	8.5	10.0	17.0	15.5	16.0
9	6.5	5.5	6.0	9.5	7.5	8.5	13.0	10.0	11.5	18.5	17.0	17.5
10	7.0	6.5	6.5	11.0	9.0	10.0	13.0	12.5	12.5	18.5	17.5	18.0
11	6.5	6.0	6.0	13.5	11.0	12.0	12.5	11.0	12.0	18.0	16.0	17.0
12	6.0	5.0	5.5	14.5	13.5	14.0	11.0	9.5	10.5	17.0	16.0	16.0
13	7.5	5.5	6.5	16.0	14.5	15.0	10.5	9.0	9.5	16.0	15.5	16.0
14	7.5	7.0	7.5	17.0	15.5	16.0	10.5	10.0	10.0	16.5	15.5	16.0
15	7.5	6.5	7.0	17.0	16.0	16.5	11.5	9.5	10.5	16.5	15.5	16.0
16	8.5	7.5	8.0	16.5	16.0	16.0	13.0	10.5	11.5	17.0	16.5	16.5
17	8.5	6.5	7.5	15.5	14.5	15.0	13.0	12.0	12.5	18.0	17.0	17.5
18	6.0	5.0	5.5	14.5	13.0	13.5	13.0	11.0	12.0	18.0	17.0	17.5
19	5.5	5.0	5.5	13.0	10.5	12.0	13.5	11.0	12.5	18.0	17.5	18.0
20	5.5	4.5	5.0	10.0	9.0	9.5	14.0	13.0	13.5	19.0	18.0	18.5
21	5.0	4.0	4.5	10.5	8.5	9.5	15.0	14.0	14.5	19.0	18.0	18.5
22	7.0	5.0	6.0	11.0	9.5	10.5	16.5	14.0	15.0	18.0	16.5	17.0
23	7.0	6.5	7.0	11.5	10.5	11.0	17.0	14.5	16.0	17.5	16.0	17.0
24	6.5	5.0	6.0	10.5	9.0	9.5	18.0	15.5	16.5	18.5	16.5	17.5
25	4.5	3.5	4.0	10.5	8.0	9.5	19.5	17.0	18.0	18.5	17.5	18.0
26	3.5	2.0	3.0	10.5	8.5	9.5	21.0	18.5	19.5	17.5	17.5	17.5
27	4.0	3.5	3.5	11.0	9.0	10.0	22.0	17.0	20.5	19.0	17.5	18.0
28	5.5	4.0	4.5	11.0	9.0	10.5	21.5	20.5	21.0	18.5	17.5	18.0
29	---	---	---	11.0	10.0	10.5	21.0	19.5	20.0	17.5	16.0	16.5
30	---	---	---	13.0	10.5	12.0	22.0	19.0	20.5	18.0	16.5	17.0
31	---	---	---	14.0	12.5	13.5	---	---	---	18.0	17.0	17.5
MONTH	8.5	2.0	5.5	17.0	4.0	10.5	22.0	8.5	13.5	21.0	13.5	17.0

## SCIOTO RIVER BASIN

03231500 SCIOTO RIVER AT CHILLICOTHE, OH--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	19.0	17.5	18.5	27.5	25.0	26.0	26.0	24.0	25.0	27.5	25.0	26.5
2	19.5	18.5	19.0	27.0	24.5	26.0	26.0	23.5	25.0	27.0	25.5	26.5
3	21.5	19.0	20.0	27.5	24.5	26.0	26.5	24.0	25.5	27.0	25.5	26.5
4	20.5	18.5	19.5	28.0	25.0	27.0	26.5	25.0	25.5	27.0	24.5	26.0
5	19.5	17.5	18.5	28.0	26.5	27.0	26.0	25.0	25.5	27.0	25.0	26.0
6	20.5	18.5	19.5	27.5	25.5	26.5	25.5	24.0	25.0	28.0	26.0	27.0
7	20.5	19.5	20.0	27.0	24.5	25.5	25.0	23.0	24.0	27.5	26.5	27.0
8	22.0	20.0	21.0	27.5	24.0	26.0	24.5	22.5	23.5	26.5	25.5	26.0
9	22.5	21.0	21.5	29.0	26.0	27.0	25.5	24.0	24.5	25.5	25.0	25.5
10	22.5	22.0	22.0	28.5	26.0	27.5	25.0	24.5	25.0	26.0	24.5	25.0
11	22.5	21.5	22.0	28.0	26.5	27.5	25.5	24.0	25.0	25.5	24.5	25.0
12	22.0	21.5	22.0	26.5	24.5	26.0	26.5	24.5	25.5	25.0	24.0	24.5
13	22.5	21.0	22.0	24.5	21.5	22.5	26.0	24.5	25.0	25.5	24.0	25.0
14	22.5	21.5	22.0	21.5	21.0	21.5	26.0	23.5	24.5	25.5	24.0	25.0
15	23.5	22.5	23.0	22.0	21.5	21.5	26.0	24.0	25.0	24.0	23.0	23.5
16	24.0	23.0	23.5	22.5	21.5	22.0	---	---	---	23.5	22.0	23.0
17	25.0	23.5	24.0	23.5	22.5	23.0	---	---	---	21.5	20.0	21.0
18	25.5	24.0	25.0	---	---	---	---	---	---	20.5	19.0	20.0
19	25.0	24.0	24.5	---	---	---	---	---	---	19.5	19.0	19.5
20	24.0	22.5	23.0	---	---	---	---	---	---	20.0	18.5	19.5
21	24.5	22.0	23.0	---	---	---	---	---	---	20.0	18.5	19.5
22	24.0	22.5	23.0	---	---	---	---	---	---	21.0	19.0	20.0
23	22.5	21.0	22.0	---	---	---	---	---	---	20.0	18.0	19.0
24	22.0	20.0	21.0	---	---	---	---	---	---	18.5	16.5	17.5
25	23.0	20.0	21.5	25.0	24.5	24.5	---	---	---	18.5	16.5	17.5
26	---	---	---	25.0	24.0	24.5	---	---	---	20.0	17.5	18.5
27	25.0	23.0	24.0	25.0	23.5	24.5	27.5	26.5	27.0	20.5	18.0	19.5
28	26.0	23.5	24.5	25.5	24.0	25.0	28.5	26.0	27.0	21.0	19.5	20.5
29	26.0	24.5	25.5	26.5	24.5	25.5	27.5	25.5	26.5	21.0	20.0	20.5
30	27.0	24.5	25.5	26.5	25.5	26.0	27.0	25.0	26.0	21.0	20.0	20.5
31	---	---	---	26.5	25.0	26.0	27.0	25.0	26.0	---	---	---
MONTH	27.0	17.5	22.0	29.0	21.0	25.0	28.5	22.5	25.5	28.0	16.5	22.5
YEAR	29.0	.0	14.0									

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	9.4	8.3	8.8	10.9	9.2	9.9	12.2	11.6	11.9	---	---	---
2	10.3	7.8	9.0	10.8	9.5	10.2	12.4	11.8	12.1	---	---	---
3	10.4	8.1	9.1	10.9	9.7	10.4	13.2	12.2	12.6	---	---	---
4	10.4	8.3	9.3	12.4	10.1	11.2	13.4	12.6	12.9	13.3	13.1	13.2
5	11.8	8.8	10.2	12.6	10.8	11.6	13.3	12.4	12.7	13.1	13.0	13.1
6	10.6	9.0	9.7	12.2	10.3	11.2	13.0	12.1	12.4	13.1	13.0	13.1
7	11.0	8.4	9.5	11.1	10.1	10.5	13.5	11.9	12.5	13.3	13.1	13.2
8	11.2	9.0	9.9	10.3	9.6	9.9	13.3	12.2	12.7	13.2	12.9	13.1
9	11.3	9.1	10.0	10.6	9.2	9.8	13.9	12.4	13.0	13.0	12.7	12.9
10	10.3	9.0	9.6	10.0	9.2	9.6	14.0	12.8	13.3	12.7	12.6	12.7
11	10.3	8.9	9.5	11.1	9.6	10.3	14.1	12.7	13.2	12.8	12.7	12.7
12	10.8	8.5	9.6	10.9	9.9	10.3	14.7	12.6	13.4	12.9	12.6	12.8
13	10.7	8.9	9.7	11.0	10.0	10.4	14.9	13.0	13.8	13.2	12.9	13.0
14	10.6	8.5	9.5	10.5	9.6	10.0	15.0	13.2	13.9	13.3	13.1	13.2
15	10.6	8.6	9.5	10.0	9.2	9.5	15.6	13.4	14.0	13.0	12.6	12.9
16	9.6	8.3	9.0	9.3	7.8	8.5	14.8	13.8	14.2	12.9	12.4	12.6
17	8.5	7.7	8.0	10.2	8.2	9.1	14.8	14.0	14.4	12.4	11.8	12.2
18	8.3	7.6	7.8	11.6	10.3	11.0	14.9	13.9	14.3	11.8	11.5	11.6
19	9.1	8.4	8.8	12.1	11.6	11.9	14.6	13.7	14.0	11.9	10.9	11.4
20	9.2	9.0	9.1	12.0	11.6	11.8	14.7	13.6	13.9	11.2	10.9	11.1
21	10.0	9.0	9.6	11.9	11.5	11.7	14.4	13.5	13.8	---	---	---
22	10.1	9.8	10.0	12.0	11.7	11.9	14.6	13.5	13.9	---	---	---
23	10.0	9.6	9.8	12.4	11.9	12.1	14.7	13.3	13.7	---	---	---
24	9.5	9.2	9.4	12.6	12.2	12.4	14.9	13.0	13.6	12.7	11.9	12.2
25	9.5	8.9	9.1	12.7	12.2	12.4	14.3	13.0	13.4	12.1	11.9	12.0
26	9.5	8.8	9.1	12.2	11.8	12.1	13.4	12.6	13.0	11.9	11.8	11.8
27	10.2	8.7	9.4	11.8	11.1	11.6	12.6	11.7	12.3	11.8	11.6	11.7
28	10.3	9.4	9.8	11.1	10.8	10.9	11.8	11.5	11.6	11.8	11.7	11.7
29	10.7	9.4	9.9	11.4	10.7	11.0	12.1	11.6	11.8	11.9	11.7	11.8
30	10.9	9.5	10.1	12.0	11.1	11.5	12.5	11.8	12.1	12.2	11.9	12.1
31	10.2	9.3	9.7	---	---	---	12.3	11.5	11.8	12.1	11.9	12.0
MONTH	11.8	7.6	9.4	12.7	7.8	10.8	15.6	11.5	13.1	13.3	10.9	12.4

## SCIOTO RIVER BASIN

03231500 SCIOTO RIVER AT CHILLICOTHE, OH--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	12.0	11.7	11.8	11.9	11.6	11.8	12.7	9.1	10.6	10.3	7.6	8.6
2	11.6	11.1	11.4	11.7	11.2	11.5	10.6	8.5	9.4	10.0	7.7	8.8
3	11.8	11.2	11.5	11.2	11.0	11.1	9.3	8.4	8.9	10.5	8.1	9.3
4	12.2	11.8	12.1	11.4	11.1	11.3	10.0	9.0	9.4	9.3	7.8	8.3
5	12.4	12.2	12.2	11.2	10.8	11.0	10.3	9.1	9.6	7.8	7.0	7.5
6	12.6	12.4	12.5	10.9	10.6	10.8	9.5	8.8	9.1	8.1	7.0	7.7
7	12.5	12.4	12.4	11.2	10.7	10.9	10.0	8.8	9.3	8.4	8.1	8.3
8	12.3	12.1	12.2	11.2	10.8	11.0	10.3	8.9	9.5	8.8	8.1	8.4
9	12.1	11.6	11.9	11.1	10.6	10.9	10.2	8.9	9.5	8.2	7.9	8.0
10	11.6	11.3	11.4	10.6	10.2	10.4	9.1	8.3	8.7	8.1	7.6	7.8
11	11.4	11.3	11.3	10.1	9.0	9.6	8.3	7.2	7.7	8.2	7.8	8.0
12	11.8	11.3	11.5	9.0	8.8	8.9	8.6	7.5	8.1	8.2	7.9	8.0
13	11.2	10.8	11.0	9.2	8.8	9.0	9.3	8.7	9.0	8.2	8.0	8.1
14	10.8	10.5	10.7	9.2	8.7	8.9	9.4	8.9	9.1	8.0	7.4	7.8
15	11.0	10.7	10.8	9.5	8.6	9.0	8.9	8.5	8.8	8.2	8.0	8.1
16	11.0	10.2	10.6	9.3	8.6	8.9	8.9	8.1	8.6	8.1	7.6	7.9
17	11.1	10.3	10.7	9.6	8.5	9.0	8.3	8.1	8.2	7.6	7.0	7.3
18	11.9	11.1	11.6	10.3	8.9	9.6	8.7	8.1	8.4	7.0	6.9	7.0
19	12.2	11.9	12.0	10.7	9.4	9.9	8.6	8.1	8.3	7.1	6.9	7.0
20	12.4	12.0	12.3	11.6	10.0	10.7	8.1	7.9	8.0	7.1	6.7	6.9
21	12.7	12.2	12.5	13.1	10.6	11.7	8.0	7.6	7.8	7.2	6.7	7.1
22	12.2	11.4	11.9	13.2	11.2	12.1	7.9	7.4	7.7	7.7	7.2	7.5
23	11.4	11.0	11.2	13.7	10.7	12.0	7.8	7.4	7.6	8.6	7.6	8.0
24	11.3	10.7	10.9	14.7	11.0	12.7	7.9	7.3	7.7	8.5	8.4	8.5
25	12.4	11.3	11.9	15.1	11.4	13.3	7.8	7.2	7.5	8.3	8.2	8.3
26	12.8	9.1	12.1	15.5	11.8	13.6	8.3	6.9	7.4	8.4	8.0	8.1
27	12.7	12.1	12.5	17.7	11.8	14.6	11.5	6.7	8.5	8.0	7.7	7.9
28	12.2	11.8	12.0	18.7	12.8	15.7	10.6	8.2	9.2	8.6	7.8	8.1
29	---	---	---	16.4	12.3	14.4	12.0	8.0	9.7	8.7	8.3	8.6
30	---	---	---	17.4	11.5	14.4	12.7	8.3	10.3	8.3	7.9	8.1
31	---	---	---	12.8	10.4	11.6	---	---	---	8.0	7.9	8.0
MONTH	12.8	9.1	11.7	18.7	8.5	11.3	12.7	6.7	8.7	10.5	6.7	8.0
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE				JULY			AUGUST			SEPTEMBER		
1	8.3	7.9	8.1	15.9	8.3	11.7	10.7	7.5	8.9	13.1	8.6	10.6
2	8.4	8.1	8.2	17.6	8.7	12.5	9.5	7.4	8.3	12.3	8.7	10.5
3	8.3	8.1	8.2	18.5	9.1	13.4	10.1	7.1	8.3	12.4	8.5	10.3
4	8.5	8.1	8.3	16.4	8.6	12.1	10.7	6.7	8.3	12.8	8.2	10.3
5	8.8	8.5	8.7	10.6	6.3	8.2	11.4	7.1	8.5	13.9	8.7	10.9
6	8.7	8.5	8.6	11.6	6.7	8.8	8.9	7.1	7.7	15.0	9.0	11.8
7	8.5	8.3	8.4	11.7	7.3	9.1	11.0	6.4	8.2	14.1	9.2	11.5
8	8.4	7.8	8.1	11.4	6.4	8.5	10.7	7.7	9.1	11.3	8.8	9.8
9	7.6	7.1	7.3	11.1	6.8	8.6	7.9	6.1	7.1	9.5	7.2	8.3
10	7.3	7.1	7.2	11.3	6.5	8.8	7.8	6.3	7.0	8.3	7.0	7.7
11	7.8	7.3	7.5	---	---	---	9.7	6.7	7.9	7.9	6.4	7.1
12	8.1	7.8	8.0	---	---	---	10.4	7.1	8.4	7.7	6.9	7.3
13	8.6	8.0	8.3	---	---	---	7.9	6.6	7.1	8.1	6.9	7.5
14	8.9	8.6	8.7	---	---	---	9.3	6.3	7.6	7.8	7.2	7.5
15	8.7	7.5	8.2	---	---	---	9.3	6.8	8.0	8.2	7.3	7.7
16	7.6	7.4	7.5	---	---	---	---	---	---	8.1	7.5	7.8
17	8.2	7.6	8.0	---	---	---	---	---	---	8.9	7.9	8.4
18	8.2	8.0	8.1	---	---	---	---	---	---	9.1	8.2	8.7
19	8.1	7.2	7.6	---	---	---	---	---	---	8.8	8.5	8.6
20	7.4	7.2	7.3	---	---	---	---	---	---	9.3	8.5	8.9
21	7.3	7.0	7.1	---	---	---	---	---	---	9.3	8.6	9.0
22	7.3	6.9	7.1	---	---	---	---	---	---	9.8	8.5	9.1
23	7.4	7.1	7.2	---	---	---	---	---	---	9.8	8.8	9.3
24	7.4	7.0	7.2	---	---	---	---	---	---	10.3	9.1	9.6
25	7.0	6.4	6.7	8.3	8.0	8.2	---	---	---	10.3	9.2	9.7
26	---	---	---	8.3	8.0	8.2	---	---	---	10.0	9.1	9.5
27	9.5	8.3	8.8	8.2	8.1	8.2	10.0	8.0	8.8	10.2	8.9	9.5
28	10.5	7.8	8.9	8.2	7.8	8.1	10.9	8.2	9.3	10.1	8.8	9.4
29	11.6	7.7	9.4	7.9	7.5	7.7	10.6	7.9	9.1	9.8	8.5	9.2
30	14.5	8.0	10.9	7.6	7.1	7.4	11.7	8.2	9.7	9.7	8.4	9.1
31	---	---	---	8.7	6.9	7.7	11.8	8.3	10.0	---	---	---
MONTH	14.5	6.4	8.1	18.5	6.3	9.2	11.8	6.1	8.4	15.0	6.4	9.2
YEAR	18.7	6.1	10.1									

## 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 mi<sup>2</sup>.

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.--23 years, 571 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 45,000 ft<sup>3</sup>/s Mar. 10, 1964, gage height, 27.3 ft, site and datum then in use; minimum daily, 4.7 ft<sup>3</sup>/s Sept. 1, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,370 ft<sup>3</sup>/s June 5, gage height, 7.80 ft; minimum daily, 11 ft<sup>3</sup>/s May 18, 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	74	163	256	514	1480	478	20	423	3740	128	170	172
2	107	163	175	1890	1320	478	20	299	4900	88	117	172
3	78	163	165	2350	1330	479	20	268	3690	88	92	113
4	78	446	204	2040	1650	479	20	184	5120	89	85	86
5	78	429	212	1600	2250	477	147	25	5210	90	84	69
6	78	92	167	1420	2890	314	340	946	5150	90	84	64
7	78	141	145	1000	3380	248	388	2900	5090	91	84	64
8	112	130	145	838	2870	248	386	3850	4500	90	84	64
9	111	99	145	617	1450	336	385	3830	2360	90	84	65
10	111	99	145	361	1450	372	455	3810	51	1190	85	37
11	111	100	112	448	2110	894	1790	2230	52	1980	86	29
12	111	100	95	495	1460	1940	2540	907	52	2000	86	25
13	112	228	96	404	1000	2360	2500	677	693	2040	86	33
14	185	268	95	359	881	2330	1850	813	1080	922	86	33
15	266	311	96	356	769	1710	956	1670	525	40	86	33
16	102	806	96	356	417	872	798	1300	816	41	86	33
17	316	1380	96	247	30	735	798	22	1550	2150	86	55
18	530	1380	95	202	1220	735	596	11	1560	4910	86	64
19	558	1360	95	425	3520	735	514	11	1280	4860	86	89
20	621	1190	95	1050	4800	554	438	1540	737	3020	86	103
21	643	727	95	1810	4880	479	340	4260	508	1120	88	169
22	512	333	95	2100	4670	479	684	5110	331	1100	97	197
23	413	310	94	1790	2540	479	909	5140	273	973	1680	144
24	422	310	93	1300	898	480	749	5180	652	827	2650	54
25	256	310	93	646	892	479	671	5210	428	574	1960	14
26	163	310	93	673	816	215	441	4130	231	234	597	14
27	163	308	93	849	735	25	345	4170	190	163	144	14
28	163	309	93	582	551	20	401	3900	190	163	131	15
29	163	307	93	594	---	19	584	49	190	164	132	453
30	163	305	93	1110	---	19	456	34	190	165	132	438
31	163	---	87	1510	---	20	---	1000	---	167	164	---
TOTAL	7041	12577	3752	29936	52259	19488	20541	63899	51339	29647	9604	2915
MEAN	227	419	121	966	1866	629	685	2061	1711	956	310	97.2
MAX	643	1380	256	2350	4880	2360	2540	5210	5210	4910	2650	453
MIN	74	92	87	202	30	19	20	11	51	40	84	14

CAL YR 1989 TOTAL 292778 MEAN 802 MAX 5060 MIN 41  
WTR YR 1990 TOTAL 302998 MEAN 830 MAX 5210 MIN 11



## SCIOTO RIVER BASIN

03232500 ROCKY FORK NEAR BARRETTS MILLS, OH

LOCATION.--Lat 39°13'06", long 83°23'08", Highland County, Hydrologic Unit 05060003, on left bank at downstream side of highway bridge, 1.1 mi north of Barretts Mills, 2 mi east of Rainsboro, 2.8 mi upstream from mouth, and 6 mi downstream from Rocky Fork Lake.

DRAINAGE AREA.--140 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1939 to current year.

REVISED RECORDS.--WSP 1908: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 770.8 ft above National Geodetic Vertical Datum of 1929, (levels by U.S. Army Corps of Engineers). Prior to Feb. 15, 1940, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Dec. 13-30 and May 17-18. Records good except for periods of estimated record which are poor. Some diurnal fluctuation caused by mill 6 mi upstream from station. Flow regulated by Rocky Fork Lake 6 mi upstream, since 1952, capacity, 34,100 acre-ft. Water-quality data collected at this site 1965 to 1977. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--51 years, 152 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,400 ft<sup>3</sup>/s Mar. 10, 1964 from rating curve extended above 8,800 ft<sup>3</sup>/s on basis of velocity-area studies; maximum gage height, 15.56 ft Mar. 6, 1945; minimum daily discharge, 0.90 ft<sup>3</sup>/s Sept. 10, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,640 ft<sup>3</sup>/s Aug. 22, gage height, 10.34 ft; minimum daily, 14 ft<sup>3</sup>/s Oct. 5, 6, and Dec. 18.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	69	99	48	367	166	227	58	419	47	30	63
2	18	64	100	16	473	163	231	64	364	40	29	58
3	17	65	98	15	466	154	212	68	329	37	29	51
4	15	60	75	73	868	139	198	785	274	35	39	45
5	14	57	35	54	820	128	174	2410	236	38	65	42
6	14	54	36	33	500	118	154	1050	223	35	46	40
7	18	51	35	29	340	108	138	361	140	32	38	37
8	16	65	35	26	328	103	122	222	55	31	33	35
9	16	130	35	28	449	113	113	199	64	32	31	39
10	17	150	38	63	1160	108	396	184	69	55	30	37
11	18	128	75	21	785	311	1130	157	69	63	29	35
12	17	115	73	20	425	351	586	138	66	143	29	59
13	17	194	26	17	135	289	337	228	66	159	36	113
14	18	361	20	17	148	279	320	248	73	148	37	95
15	20	498	16	18	445	343	309	219	142	149	32	78
16	181	713	15	17	2110	284	152	884	120	115	30	64
17	654	561	15	18	932	116	72	4000	104	90	30	52
18	455	545	14	27	317	128	84	1850	93	76	29	43
19	497	511	15	22	182	140	90	939	80	64	29	74
20	408	387	28	220	174	152	100	337	72	56	32	91
21	306	358	36	87	165	145	243	402	70	50	206	79
22	233	183	45	50	248	142	282	385	68	56	4400	85
23	151	42	18	39	199	132	239	340	76	57	1390	78
24	80	40	16	36	130	137	206	288	69	50	321	66
25	77	41	18	64	115	147	179	253	59	44	71	57
26	74	42	17	88	105	162	81	361	53	38	68	50
27	70	97	16	87	128	151	84	258	53	34	63	45
28	66	303	20	89	170	141	241	554	49	32	58	42
29	64	242	20	430	---	133	224	2840	48	31	135	43
30	61	99	80	585	---	141	54	744	48	31	83	251
31	64	---	185	430	---	202	---	478	---	31	71	---
TOTAL	3692	6225	1354	2767	12684	5326	6978	21304	3651	1899	7549	1947
MEAN	119	207	43.7	89.3	453	172	233	687	122	61.3	244	64.9
MAX	654	713	185	585	2110	351	1130	4000	419	159	4400	251
MIN	14	40	14	15	105	103	54	58	48	31	29	35

CAL YR 1989 TOTAL 80127 MEAN 220 MAX 3300 MIN 14  
WTR YR 1990 TOTAL 75376 MEAN 207 MAX 4400 MIN 14

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.

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.

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.

AVERAGE DISCHARGE.--67 years (1921-36, 1939-90), 810 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 56,900 ft<sup>3</sup>/s Mar. 10, 1964, gage height, 20.50 ft, from rating curve extended above 30,000 ft<sup>3</sup>/s on basis of contracted-opening measurement at gage height 20.08 ft; minimum daily, 5 ft<sup>3</sup>/s Oct. 29, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,700 ft<sup>3</sup>/s Aug. 22, gage height, 15.23 ft; minimum daily, 73 ft<sup>3</sup>/s Sept. 28.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	80	307	549	1910	2540	778	404	648	3000	170	216	270
2	88	299	492	2930	2430	761	428	581	5000	160	208	257
3	136	296	385	3620	2470	746	388	487	3800	150	166	239
4	120	482	429	3130	3280	716	344	1020	4300	150	153	173
5	115	592	408	2220	3940	693	332	3960	4700	140	224	156
6	113	387	381	2010	3970	625	438	3000	4700	140	184	134
7	112	207	319	1590	4510	453	541	3000	4600	140	158	126
8	111	301	303	1190	4410	434	554	4530	3050	140	149	125
9	131	337	298	1110	3080	463	543	4740	2250	500	148	124
10	139	356	295	686	3290	540	661	4750	1500	1300	144	128
11	143	344	270	663	3910	1370	2880	4030	600	1800	144	94
12	144	318	250	732	3230	2470	3970	1540	500	2300	142	109
13	142	355	230	688	1730	3290	3640	1510	440	3000	143	132
14	147	744	210	590	1510	3250	3280	1210	1000	3500	154	141
15	225	904	190	588	1440	3060	2090	1980	1700	1800	141	129
16	278	2180	170	583	3740	1790	1340	2830	700	1000	136	116
17	1860	2540	160	544	2240	1130	1070	6460	1700	500	134	103
18	1390	2500	160	433	1490	1040	963	3800	1800	4630	133	110
19	1700	2450	160	478	3370	1040	712	2170	2000	4780	131	127
20	1590	2250	160	1600	5330	1000	685	1360	900	4150	131	186
21	1320	1670	160	2450	5510	759	653	3910	800	1400	259	186
22	1090	881	160	2740	5520	725	924	5630	720	1320	6890	250
23	795	595	160	2500	4600	703	1370	5970	600	1220	3440	249
24	655	514	160	1990	1390	699	1360	5990	500	1010	3300	182
25	576	502	160	1330	1310	703	1190	4400	430	784	2800	115
26	351	503	160	874	1210	705	984	5400	350	487	1900	88
27	329	496	160	1240	1040	362	649	4800	290	266	800	79
28	316	731	160	1100	1010	270	581	5400	250	240	450	73
29	307	803	237	1300	---	246	755	10100	210	226	350	262
30	300	625	362	2440	---	237	812	4500	180	222	390	796
31	299	---	2190	2480	---	312	---	1700	---	219	267	---
TOTAL	15102	25469	9888	47739	83500	31370	34541	111406	52570	37844	23985	5259
MEAN	487	849	319	1540	2982	1012	1151	3594	1752	1221	774	175
MAX	1860	2540	2190	3620	5520	3290	3970	10100	5000	4780	6890	796
MIN	80	207	160	433	1010	237	332	487	180	140	131	73
CAL YR 1989	TOTAL 496500		MEAN 1360		MAX 6710		MIN					

## SCIOTO RIVER BASIN

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 mi<sup>2</sup>.

## 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: Dec. 13-29, May 29-30. Records good except for periods of estimated daily discharges which are fair. 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.

AVERAGE DISCHARGE.--5 years, 1,096 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,100 ft<sup>3</sup>/s May 29, 1990, gage height 24.67; minimum daily, 43 ft<sup>3</sup>/s Oct. 22-25, 1987.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 30,100 ft<sup>3</sup>/s May 29, gage height, 24.67 ft; minimum daily, 104 ft<sup>3</sup>/s Oct. 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	141	362	622	2930	2590	1080	937	793	3960	648	582	624
2	119	358	547	2780	2710	1040	989	795	6150	566	570	611
3	108	353	445	3290	2780	1020	827	650	4790	516	514	591
4	104	335	456	2950	4930	972	742	2940	5920	501	488	519
5	113	649	449	2300	4780	926	683	8010	5900	490	596	477
6	113	639	418	2050	3980	888	762	4470	5880	492	571	444
7	125	244	344	1710	4530	694	836	3500	5820	475	498	423
8	113	302	312	1390	4410	661	811	4840	5630	466	474	407
9	141	505	290	1340	3290	673	785	4830	4620	463	458	405
10	159	482	285	893	4250	743	1710	4720	1480	840	497	410
11	156	457	288	815	4000	3680	4940	4390	934	2550	454	381
12	142	396	284	854	3320	3600	4610	1750	830	2990	440	378
13	127	356	280	808	1990	3800	3830	1800	701	4090	446	425
14	125	667	270	667	1750	3520	3370	1870	1590	4420	475	449
15	197	907	270	659	1820	3330	2240	2040	2360	1940	451	433
16	296	3080	270	651	7790	2070	1620	4050	1090	1120	433	430
17	2670	2700	270	632	3700	1510	1410	15800	2140	843	423	394
18	1550	2450	260	550	2140	1380	1280	7020	2240	5010	416	380
19	1960	2310	260	648	3460	1350	1020	3310	2330	5420	415	386
20	1910	2150	260	2250	5210	1340	999	2780	1590	5160	411	458
21	1530	1730	260	2980	5550	1080	1190	4400	1260	2090	686	472
22	1350	1180	260	2790	5510	1030	1440	5420	1090	1950	8060	534
23	998	824	260	2490	5000	987	1700	6210	1120	1910	3980	553
24	818	651	260	2050	1760	973	1470	6080	1090	1660	4170	492
25	727	618	260	1580	1550	985	1270	6030	1180	1410	3560	403
26	516	606	260	1120	1420	1000	1100	8400	879	1060	1990	337
27	443	591	260	1380	1310	656	783	7180	739	735	1010	318
28	414	743	260	1300	1310	551	798	7840	698	661	711	304
29	393	868	500	1910	---	509	1090	25300	671	628	659	301
30	374	716	911	3050	---	504	1060	4340	655	612	762	1150
31	360	---	4880	2620	---	832	---	2510	---	596	640	---
TOTAL	18292	28229	15251	53437	96840	43384	46302	164068	75337	52312	35840	13889
MEAN	590	941	492	1724	3459	1399	1543	5293	2511	1687	1156	463
MAX	2670	3080	4880	3290	7790	3800	4940	25300	6150	5420	8060	1150
MIN	104	244	260	550	1310	504	683	650	655	463	411	301
CAL YR 1989	TOTAL 592427	MEAN 1623	MAX 9360	MIN 85								
WTR YR 1990	TOTAL 643181	MEAN 1762	MAX 25300	MIN 104								

SCIOTO RIVER BASIN

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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, 980 microsiemens Dec. 9, 11, 1989; minimum, 110 microsiemens Oct. 17, 1989.

pH: Maximum, 9.0 units May 24, 1986; minimum, 7.2 units Oct. 17, 1989.

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, 980 microsiemens Dec. 9, 11; minimum, 110 microsiemens Oct. 17.

pH: Maximum, 8.8 units Oct. 13; minimum 7.2 units Oct. 17.

WATER TEMPERATURE: Maximum, 28.5°C July 9; minimum, 0.0°C on several days during winter.

DISSOLVED OXYGEN: Maximum, 15.5 mg/L Oct. 13; minimum, 4.2 mg/L Nov. 16.



## SCIOTO RIVER BASIN

03234300 PAINT CREEK AT CHILLICOTHE, OH--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	588	580	583	667	620	642	868	824	846	504	414	452
2	604	565	586	659	612	640	880	852	866	628	508	590
3	588	549	567	800	635	689	928	882	911	628	602	616
4	596	549	571	831	776	804	958	928	943	614	580	597
5	612	573	588	808	706	750	948	890	914	630	596	615
6	594	580	585	714	651	687	920	864	890	646	610	631
7	604	573	593	769	706	750	942	884	920	662	638	650
8	612	580	598	792	745	772	958	944	952	680	650	666
9	635	557	602	745	674	703	980	944	962	684	654	670
10	604	549	579	753	682	715	966	954	959	700	664	681
11	580	541	562	784	714	751	980	902	939	760	686	703
12	604	518	562	737	690	718	930	628	797	738	696	717
13	573	502	541	753	682	719	770	734	753	754	726	744
14	549	486	518	714	651	683	758	730	745	764	730	749
15	533	478	509	690	580	629	772	742	754	730	694	711
16	525	384	494	612	471	570	814	776	795	718	692	706
17	345	110	275	690	580	651	880	818	841	718	680	700
18	463	322	391	643	580	606	882	832	855	716	678	689
19	486	439	466	769	651	730	884	824	847	748	714	735
20	502	455	475	714	698	707	840	800	825	752	538	617
21	518	478	501	760	700	731	880	844	857	650	532	583
22	541	486	511	822	760	790	894	776	842	678	626	648
23	549	502	521	852	808	824	918	866	887	662	640	651
24	533	478	510	890	834	859	928	874	903	642	620	634
25	549	502	521	882	836	862	878	838	863	662	636	643
26	565	533	552	844	822	833	838	810	828	670	528	608
27	604	573	590	858	828	849	858	816	840	662	568	626
28	635	588	610	888	826	848	888	782	811	686	584	660
29	651	596	622	894	818	849	862	780	804	724	472	590
30	659	596	626	854	822	839	780	726	765	572	486	510
31	643	620	626	---	---	---	714	376	489	614	576	593
MONTH	659	110	543	894	471	740	980	376	845	764	414	645
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	632	602	615	656	596	629	534	512	522	588	525	560
2	606	560	580	640	620	631	564	522	540	604	573	590
3	604	578	595	678	646	660	596	568	584	612	588	599
4	604	492	552	666	642	657	602	566	587	620	275	482
5	590	490	537	676	622	652	594	556	577	408	290	348
6	596	526	558	682	642	662	580	538	561	447	416	435
7	522	512	518	688	658	673	632	572	609	510	463	503
8	550	514	530	678	594	643	662	592	630	---	---	---
9	546	518	539	644	618	634	646	588	614	471	447	465
10	504	436	468	644	608	627	600	406	569	518	463	487
11	586	504	566	612	382	467	552	360	415	541	502	524
12	590	546	570	510	434	483	630	560	603	565	541	551
13	574	538	559	512	492	500	660	564	617	557	525	535
14	610	548	580	526	488	506	592	572	579	588	486	531
15	624	454	605	504	482	493	578	530	553	510	510	510
16	462	304	372	532	502	519	564	522	545	510	439	489
17	528	470	491	564	538	550	584	536	557	431	220	270
18	604	512	537	604	570	589	598	560	579	416	329	384
19	530	500	517	634	554	598	600	546	573	463	424	444
20	534	462	502	652	606	627	556	538	548	502	282	417
21	502	420	458	666	610	641	546	502	531	478	314	442
22	430	402	419	654	614	630	522	476	500	478	447	460
23	582	418	472	642	616	629	534	454	488	471	416	447
24	590	524	555	666	642	655	490	472	487	431	361	401
25	630	594	608	678	634	658	---	---	---	392	369	375
26	696	630	661	662	608	639	541	502	525	416	322	375
27	672	624	647	668	618	643	565	510	536	416	337	372
28	664	618	639	668	612	641	565	533	545	439	298	407
29	---	---	---	614	584	600	565	494	528	319	227	269
30	---	---	---	592	556	576	557	494	529	431	324	377
31	---	---	---	564	508	545	---	---	---	494	439	472
MONTH	696	304	545	688	382	602	662	360	553	620	220	451

## SCIOTO RIVER BASIN

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03234300 PAINT CREEK AT CHILLICOTHE, OH--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	463	314	373	580	549	566	572	526	552	---	---	---
2	329	314	322	596	549	576	580	532	558	---	---	---
3	369	314	337	612	549	582	578	510	549	518	494	506
4	376	329	353	604	533	571	572	486	543	533	494	514
5	384	345	369	573	533	555	528	464	509	549	510	531
6	---	---	---	573	541	560	530	514	521	549	510	533
7	---	---	---	604	557	578	560	510	538	557	525	542
8	400	384	385	604	541	573	546	484	519	573	549	560
9	447	400	427	573	518	548	536	480	510	580	549	563
10	533	431	489	573	455	513	532	332	494	580	541	562
11	588	533	570	502	447	486	524	356	485	580	549	564
12	620	588	606	502	420	460	534	500	519	588	557	568
13	627	573	606	440	358	388	538	512	525	612	549	572
14	565	471	498	386	258	339	538	492	518	565	541	550
15	510	408	440	438	374	401	540	478	511	573	533	557
16	486	431	463	462	406	440	512	468	492	596	557	576
17	510	431	470	500	466	488	508	464	488	612	565	587
18	491	471	483	456	316	339	492	460	478	612	573	593
19	502	486	495	350	328	339	490	456	474	588	558	573
20	533	502	522	364	342	350	566	470	519	564	520	549
21	541	510	529	412	370	392	564	356	476	546	524	534
22	541	518	533	416	376	397	464	194	276	526	492	514
23	588	478	517	418	382	400	360	290	337	546	506	526
24	557	510	532	446	414	430	438	348	395	574	538	555
25	588	518	535	454	428	442	360	324	349	588	550	569
26	573	533	553	492	452	473	392	340	371	588	554	571
27	573	549	560	522	480	507	450	380	422	616	574	595
28	588	549	571	546	514	530	500	454	484	616	580	600
29	588	565	573	550	514	533	572	488	517	---	---	---
30	588	549	569	550	520	534	533	478	511	---	---	---
31	---	---	---	552	526	538	525	502	521	---	---	---
MONTH	627	314	489	612	258	478	580	194	483	616	492	556
YEAR	980	110	579									

PH (STANDARD UNITS), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	8.4	8.3	8.3	8.5	8.2	8.3	8.3	8.1	8.2	8.1	7.9	8.0
2	8.5	8.2	8.3	8.5	8.3	8.4	8.2	8.2	8.2	8.2	8.0	8.2
3	8.5	8.2	8.4	8.5	8.3	8.4	8.2	8.2	8.2	8.2	8.1	8.1
4	8.6	8.3	8.4	8.6	8.2	8.4	8.3	8.2	8.3	8.1	8.1	8.1
5	8.6	8.3	8.5	8.5	8.2	8.3	8.3	8.2	8.2	8.1	7.9	8.0
6	8.5	8.4	8.4	8.5	8.1	8.3	8.2	8.1	8.1	7.9	7.8	7.9
7	8.6	8.4	8.5	8.3	8.1	8.2	8.3	8.2	8.2	7.9	7.8	7.8
8	8.6	8.3	8.5	8.3	8.1	8.2	8.3	8.3	8.3	7.8	7.8	7.8
9	8.7	8.4	8.5	8.3	8.0	8.2	8.4	8.3	8.3	7.8	7.8	7.8
10	8.6	8.3	8.5	8.4	8.1	8.2	8.4	8.3	8.3	7.8	7.8	7.8
11	8.7	8.3	8.5	8.5	8.2	8.3	8.5	8.3	8.4	8.2	7.8	8.0
12	8.7	8.3	8.5	8.5	8.2	8.4	8.5	8.3	8.4	8.3	8.2	8.2
13	8.8	8.2	8.5	8.6	8.2	8.4	8.5	8.4	8.4	8.3	8.2	8.2
14	8.7	8.2	8.5	8.4	8.2	8.3	8.4	8.3	8.4	8.2	8.2	8.2
15	8.7	8.2	8.4	8.3	8.1	8.2	8.4	8.3	8.3	8.3	8.2	8.2
16	8.4	8.2	8.3	8.0	7.7	7.8	8.4	8.3	8.3	8.2	8.2	8.2
17	7.9	7.2	7.7	8.1	7.8	7.9	8.4	8.2	8.3	8.2	8.2	8.2
18	8.0	7.8	7.9	8.3	7.9	8.0	8.3	8.2	8.2	8.2	8.1	8.2
19	8.1	7.9	8.0	8.1	7.9	8.0	8.3	8.2	8.2	8.4	8.1	8.3
20	8.0	7.9	8.0	8.1	7.9	8.0	8.3	8.2	8.2	8.3	8.1	8.1
21	8.1	7.8	7.9	8.1	8.0	8.0	8.2	8.2	8.2	8.2	8.1	8.1
22	8.3	7.9	8.2	8.1	8.0	8.0	8.2	8.1	8.2	8.3	8.2	8.2
23	8.2	8.1	8.2	8.1	8.0	8.0	8.2	8.1	8.2	8.2	7.9	8.0
24	8.2	8.1	8.2	8.3	8.0	8.2	8.2	8.1	8.1	8.2	7.9	8.0
25	8.2	8.1	8.1	8.3	8.2	8.3	8.2	8.1	8.1	8.1	8.1	8.1
26	8.2	8.1	8.2	8.3	8.2	8.3	8.2	8.1	8.1	8.2	8.1	8.1
27	8.3	8.1	8.2	8.3	8.2	8.3	8.1	8.1	8.1	8.2	8.1	8.2
28	8.3	8.2	8.2	8.2	8.1	8.2	8.2	8.0	8.1	8.1	8.0	8.0
29	8.4	8.2	8.3	8.3	8.1	8.2	8.2	8.1	8.2	8.1	7.9	8.0
30	8.4	8.2	8.3	8.2	8.1	8.2	8.3	8.1	8.2	8.2	8.0	8.1
31	8.3	8.2	8.2	---	---	---	8.2	7.9	8.0	8.2	8.0	8.1
MONTH	8.8	7.2	8.3	8.6	7.7	8.2	8.5	7.9	8.2	8.4	7.8	8.1

PH (STANDARD UNITS), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	8.1	8.0	8.1	7.8	7.7	7.8	8.4	8.1	8.2	8.6	8.3	8.4
2	8.1	8.0	8.1	8.2	7.8	8.0	8.3	8.1	8.2	8.7	8.3	8.5
3	8.1	8.1	8.1	8.2	8.2	8.2	8.3	8.2	8.3	8.7	8.4	8.5
4	8.1	8.0	8.0	8.2	8.2	8.2	8.5	8.2	8.4	8.4	7.9	8.2
5	8.1	8.0	8.1	8.2	8.2	8.2	8.5	8.3	8.4	8.1	7.8	7.9
6	8.1	8.0	8.1	8.2	8.2	8.2	8.6	8.2	8.4	8.2	8.1	8.2
7	8.0	8.0	8.0	8.2	8.2	8.2	8.6	8.4	8.5	8.2	8.2	8.2
8	8.1	8.0	8.0	8.2	8.2	8.2	8.6	8.4	8.5	---	---	---
9	8.1	8.0	8.0	8.2	8.2	8.2	8.6	8.4	8.5	8.1	8.0	8.1
10	8.1	7.9	8.0	8.3	8.2	8.2	8.4	8.0	8.3	8.1	8.0	8.1
11	8.1	8.1	8.1	8.2	7.6	7.9	8.3	8.0	8.1	8.2	8.1	8.1
12	8.1	7.8	8.1	8.0	7.8	7.9	8.4	8.3	8.4	8.2	8.1	8.1
13	7.9	7.7	7.8	8.0	7.9	8.0	8.4	8.3	8.3	8.2	8.1	8.1
14	7.8	7.7	7.8	8.0	7.8	7.9	8.3	8.2	8.3	8.2	8.0	8.1
15	8.0	7.7	7.8	7.8	7.7	7.8	8.2	8.2	8.2	8.1	8.0	8.1
16	8.0	7.7	7.9	7.8	7.6	7.7	8.2	8.1	8.2	8.2	8.1	8.1
17	7.9	7.7	7.8	7.9	7.6	7.8	8.2	8.1	8.1	8.0	7.8	7.9
18	7.8	7.7	7.7	8.0	7.7	7.8	8.2	8.1	8.2	8.0	7.9	8.0
19	8.0	7.7	7.8	8.2	7.8	8.1	8.2	8.1	8.2	8.1	8.0	8.1
20	7.9	7.8	7.9	8.3	8.2	8.3	8.2	8.1	8.1	8.0	7.9	8.0
21	7.9	7.8	7.9	8.2	8.2	8.2	8.2	8.0	8.1	8.1	7.9	8.0
22	7.9	7.9	7.9	8.3	8.2	8.2	8.3	8.1	8.2	8.0	8.0	8.0
23	8.0	7.9	8.0	8.3	8.2	8.3	8.3	8.2	8.2	8.0	7.9	8.0
24	7.9	7.8	7.8	8.4	8.2	8.3	8.2	8.0	8.2	8.0	7.8	7.9
25	7.9	7.8	7.9	8.4	8.3	8.3	---	---	---	7.9	7.8	7.8
26	8.1	7.8	7.9	8.4	8.3	8.3	8.5	8.2	8.3	7.9	7.8	7.8
27	8.0	7.8	7.9	8.3	8.2	8.3	8.6	8.1	8.4	7.9	7.8	7.8
28	7.8	7.7	7.8	8.3	8.2	8.3	8.6	8.3	8.4	7.9	7.7	7.9
29	---	---	---	8.4	8.1	8.3	8.6	8.3	8.4	8.0	7.8	7.9
30	---	---	---	8.4	8.1	8.3	8.7	8.4	8.5	7.9	7.8	7.8
31	---	---	---	8.3	8.1	8.2	---	---	---	8.0	7.9	7.9
MONTH	8.1	7.7	7.9	8.4	7.6	8.1	8.7	8.0	8.3	8.7	7.7	8.0
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	8.0	7.9	7.9	8.3	8.1	8.2	8.4	8.2	8.3	---	---	---
2	7.9	7.8	7.9	8.4	8.2	8.3	8.4	8.2	8.3	---	---	---
3	7.9	7.8	7.9	8.3	8.2	8.2	8.4	8.2	8.3	8.2	8.0	8.1
4	7.9	7.9	7.9	8.3	8.1	8.2	8.4	8.1	8.3	8.2	8.0	8.1
5	7.9	7.8	7.9	8.2	8.0	8.1	8.3	8.0	8.2	8.2	8.0	8.1
6	7.8	7.8	7.8	8.2	8.0	8.1	8.3	8.1	8.2	8.2	7.9	8.1
7	---	---	---	8.2	8.1	8.1	8.5	8.1	8.3	8.2	7.9	8.1
8	7.9	7.9	7.9	8.2	8.0	8.1	8.5	8.1	8.3	8.1	8.0	8.0
9	7.9	7.9	7.9	8.0	7.9	8.0	8.5	8.1	8.3	8.1	8.0	8.0
10	7.9	7.8	7.9	8.0	7.9	8.0	8.3	7.9	8.2	8.2	8.0	8.1
11	8.0	7.9	7.9	7.9	7.8	7.9	8.4	7.9	8.2	8.2	8.0	8.1
12	8.1	8.0	8.0	8.0	7.9	8.0	8.4	8.1	8.2	8.1	8.0	8.0
13	8.2	8.0	8.1	8.0	7.9	7.9	8.3	8.1	8.2	8.1	8.0	8.1
14	8.2	8.0	8.1	8.0	7.8	7.9	8.4	8.1	8.2	8.2	8.0	8.1
15	8.1	7.9	8.0	8.0	7.9	8.0	8.4	8.1	8.2	8.2	8.0	8.1
16	8.0	7.9	7.9	8.1	8.0	8.0	8.3	8.1	8.2	8.2	8.0	8.2
17	8.0	8.0	8.0	8.1	8.1	8.1	8.3	8.1	8.2	8.2	8.1	8.2
18	8.1	8.0	8.1	8.1	7.9	7.9	8.3	8.0	8.2	8.3	8.1	8.2
19	8.2	8.1	8.1	7.9	7.9	7.9	8.2	8.0	8.1	8.2	8.0	8.1
20	8.1	8.0	8.1	8.0	7.9	8.0	8.2	8.0	8.1	8.2	8.0	8.1
21	8.1	8.1	8.1	8.1	8.0	8.0	8.0	7.7	7.9	8.2	8.0	8.1
22	8.1	8.1	8.1	8.1	8.0	8.0	8.0	7.4	7.7	8.2	8.0	8.1
23	8.2	8.0	8.1	8.1	8.0	8.1	7.8	7.6	7.7	8.2	8.0	8.1
24	8.2	8.1	8.1	8.1	8.1	8.1	7.8	7.7	7.7	8.3	8.1	8.2
25	8.2	8.2	8.2	8.1	8.1	8.1	7.7	7.7	7.7	8.2	8.1	8.2
26	8.2	8.1	8.2	8.2	8.1	8.1	7.7	7.7	7.7	8.2	8.0	8.1
27	8.2	8.1	8.2	8.1	8.1	8.1	7.8	7.7	7.8	8.2	8.0	8.1
28	8.3	8.1	8.2	8.2	8.1	8.1	7.9	7.8	7.8	8.2	8.0	8.1
29	8.3	8.2	8.2	8.2	8.1	8.2	8.0	8.0	8.0	---	---	---
30	8.3	8.2	8.2	8.2	8.1	8.2	8.1	8.0	8.0	---	---	---
31	---	---	---	8.3	8.1	8.2	8.0	8.0	8.0	---	---	---
MONTH	8.3	7.8	8.0	8.4	7.8	8.1	8.5	7.4	8.1	8.3	7.9	8.1
YEAR	8.8	7.2	8.1									

## 03234300 PAINT CREEK AT CHILLICOTHE, OH--Continued

## WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	18.0	17.0	17.5	11.5	10.0	11.0	7.5	6.5	7.0	2.0	.5	1.0
2	20.0	17.0	18.0	11.5	9.5	10.5	7.5	6.5	7.0	2.0	1.0	1.5
3	19.5	17.0	18.0	10.0	9.0	10.0	6.5	6.0	6.5	2.0	1.5	2.0
4	17.0	14.5	16.0	9.0	7.0	8.0	6.5	5.5	6.0	3.0	2.0	2.5
5	15.5	12.5	14.5	10.5	8.0	9.0	7.0	6.0	6.5	3.5	3.0	3.5
6	15.0	14.5	14.5	12.5	10.0	11.5	8.0	7.0	7.5	4.0	3.0	3.5
7	15.0	14.0	14.5	12.0	10.0	11.0	7.0	6.0	6.5	3.5	3.0	3.5
8	13.5	12.0	13.0	12.0	11.0	11.5	6.0	5.0	5.5	4.0	3.5	3.5
9	13.5	10.5	12.0	12.0	10.5	11.5	5.0	4.0	4.5	4.5	3.5	4.0
10	12.5	11.0	11.5	10.5	9.0	10.0	5.0	4.0	4.5	5.0	4.5	5.0
11	14.0	11.0	12.5	10.0	7.5	8.5	5.0	2.0	3.5	5.0	3.5	4.0
12	15.5	12.0	13.5	10.5	9.0	9.5	2.5	1.0	2.0	3.5	2.0	3.0
13	17.0	14.0	15.5	11.0	8.5	10.0	1.0	.0	.5	2.5	2.0	2.0
14	19.0	15.5	17.0	12.0	10.0	11.0	1.0	.0	.5	2.5	1.5	2.0
15	19.0	16.5	18.0	13.5	12.0	12.5	.5	.0	.0	4.5	2.5	3.5
16	19.0	17.0	18.0	13.0	11.0	12.0	.0	.0	.0	5.5	4.5	5.0
17	17.5	17.0	17.5	11.0	9.5	10.5	.0	.0	.0	6.5	5.5	6.0
18	17.0	15.0	16.0	10.5	8.5	10.0	.0	.0	.0	8.0	6.5	7.5
19	15.0	11.0	13.0	10.0	8.5	9.5	.0	.0	.0	7.0	5.5	6.0
20	12.0	11.5	11.5	10.5	9.0	9.5	.0	.0	.0	5.5	4.5	5.0
21	13.5	11.5	12.0	9.0	8.5	9.0	.0	.0	.0	6.0	4.5	5.5
22	13.0	11.0	12.0	8.5	8.0	8.5	.0	.0	.0	5.0	4.5	5.0
23	12.5	11.0	12.0	8.0	7.5	8.0	.0	.0	.0	5.5	5.0	5.5
24	14.0	12.0	13.0	8.0	5.5	7.0	.0	.0	.0	6.0	5.5	6.0
25	14.5	12.5	13.5	7.5	5.5	6.5	.0	.0	.0	6.0	5.5	6.0
26	14.5	12.5	13.5	8.5	7.5	8.0	.0	.0	.0	5.5	4.5	5.5
27	14.5	12.0	13.0	10.0	8.0	8.5	.0	.0	.0	5.5	4.0	4.5
28	14.0	12.0	13.0	10.0	8.5	9.5	.0	.0	.0	5.5	5.0	5.5
29	13.5	11.0	12.5	8.5	7.0	7.5	.0	.0	.0	5.5	3.5	4.5
30	13.5	11.0	12.0	7.5	6.5	7.0	.0	.0	.0	4.0	3.0	3.5
31	12.5	11.5	12.0	---	---	---	.5	.0	.0	4.5	3.5	4.0
MONTH	20.0	10.5	14.0	13.5	5.5	9.5	8.0	.0	2.0	8.0	.5	4.0
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	4.5	4.0	4.0	8.0	6.0	6.5	14.0	12.5	13.0	17.5	15.0	16.0
2	6.0	4.5	5.0	7.0	5.5	6.5	13.0	11.5	12.5	15.0	13.5	14.0
3	6.0	5.5	5.5	6.5	4.5	6.0	11.0	8.0	9.5	13.5	13.0	13.5
4	5.5	4.5	5.0	6.5	4.5	5.5	11.0	7.5	9.0	14.5	13.0	13.5
5	5.0	4.0	4.5	7.0	4.5	6.0	12.0	9.5	10.5	14.5	13.5	14.0
6	5.5	4.5	5.0	7.0	6.0	6.5	11.5	10.5	11.0	14.5	12.5	13.5
7	5.5	5.0	5.5	7.0	4.5	6.0	10.5	8.5	9.5	14.0	13.5	13.5
8	6.0	4.5	5.5	7.0	6.0	6.5	11.5	8.0	10.0	---	---	---
9	7.5	6.0	6.5	9.0	7.0	8.0	12.0	9.5	11.0	16.0	15.5	15.5
10	7.5	6.0	7.0	10.5	8.5	9.5	12.5	11.5	12.0	15.5	14.5	15.0
11	6.5	5.5	6.0	12.0	10.0	11.0	11.5	10.0	10.5	16.5	14.0	15.0
12	6.5	6.0	6.5	12.5	11.5	12.0	10.5	9.5	10.0	15.0	14.0	14.5
13	8.0	6.5	7.0	13.5	12.0	12.5	11.5	9.0	10.5	15.5	14.0	15.0
14	8.0	7.5	8.0	14.0	12.5	13.5	11.5	11.0	11.0	17.5	14.5	16.0
15	8.5	7.0	7.5	15.0	13.5	14.0	12.5	10.0	11.5	16.5	16.5	16.5
16	11.0	8.5	9.5	15.0	14.0	14.5	13.5	11.0	12.5	17.0	16.5	16.5
17	8.5	7.0	7.5	14.5	13.5	14.0	13.0	11.5	12.5	17.5	16.5	17.0
18	7.5	7.0	7.5	15.0	12.5	14.0	12.5	9.5	11.0	18.0	16.0	17.0
19	9.5	7.0	7.5	14.0	10.0	12.0	13.5	10.0	12.0	18.0	16.0	17.0
20	7.5	7.0	7.0	9.5	8.0	9.0	14.5	13.0	14.0	19.0	17.0	18.0
21	7.5	6.5	7.0	10.0	7.0	8.5	15.0	14.5	14.5	18.0	17.0	17.5
22	8.5	7.0	7.5	11.0	8.5	10.0	15.5	12.5	14.5	17.0	16.5	16.5
23	8.0	6.5	7.5	11.0	10.0	10.5	15.5	13.0	14.5	17.5	16.0	16.5
24	7.0	6.0	7.0	10.0	8.0	8.5	15.0	14.0	14.0	18.5	16.0	17.0
25	6.0	5.0	5.5	9.5	7.0	8.5	---	---	---	17.5	16.5	17.0
26	5.5	4.0	5.0	10.0	7.5	9.0	19.0	15.5	17.0	17.5	16.5	17.0
27	6.5	5.5	6.0	11.0	7.5	9.5	19.5	16.5	18.0	19.0	16.5	17.5
28	7.0	5.5	6.5	10.5	8.0	9.5	19.0	16.5	17.5	18.0	16.0	17.0
29	---	---	---	10.5	9.5	10.0	17.0	15.0	16.0	16.0	15.5	15.5
30	---	---	---	12.5	10.0	11.0	18.0	13.5	16.0	17.5	16.0	16.5
31	---	---	---	13.0	12.5	12.5	---	---	---	18.5	15.5	17.0
MONTH	11.0	4.0	6.5	15.0	4.5	9.5	19.5	7.5	12.5	19.0	12.5	16.0



## SCIOTO RIVER BASIN

03234300 PAINT CREEK AT CHILLICOTHE, OH--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	18.5	16.5	17.5	26.5	23.5	24.5	25.0	21.5	23.5	---	---	---
2	17.5	16.5	17.0	25.5	22.5	24.0	25.5	21.0	23.0	---	---	---
3	19.5	17.0	18.0	26.0	21.5	24.0	26.0	21.5	23.5	24.5	22.5	23.5
4	18.5	16.5	17.0	27.0	22.5	24.5	25.0	22.0	23.5	25.5	22.0	23.5
5	18.0	16.5	17.0	26.5	24.0	25.5	24.5	22.5	23.5	25.5	22.0	23.5
6	---	---	---	26.0	23.5	25.0	23.0	21.5	22.5	26.5	23.0	25.0
7	---	---	---	25.5	21.5	23.5	22.5	19.5	21.0	25.5	23.5	25.0
8	---	---	---	26.5	21.5	24.0	23.0	19.0	21.0	24.5	23.0	23.5
9	21.0	19.5	20.0	28.5	24.0	26.0	24.0	20.5	22.0	23.5	22.0	22.5
10	21.0	19.0	20.0	27.5	24.5	26.0	23.5	21.5	22.5	23.5	20.5	22.0
11	21.0	18.0	19.5	26.5	24.0	24.5	23.5	21.0	22.0	23.0	21.0	22.0
12	21.0	18.0	19.5	24.5	23.0	24.0	25.0	21.5	23.0	22.5	21.5	22.0
13	22.5	18.5	20.5	23.0	22.0	22.5	24.0	22.0	23.0	23.0	21.0	22.0
14	22.0	20.5	21.5	22.5	20.5	21.5	24.0	20.5	22.5	23.5	21.5	22.5
15	23.0	21.0	22.0	22.0	20.5	21.5	24.5	21.0	22.5	22.5	20.5	21.5
16	24.5	21.0	22.5	24.0	20.5	22.0	25.5	21.5	23.5	21.0	19.0	20.0
17	23.5	21.5	23.0	25.0	21.5	23.5	25.5	22.0	24.0	20.0	16.5	18.5
18	23.5	23.0	23.0	24.5	20.5	22.0	26.0	23.0	24.5	18.0	15.5	17.0
19	23.5	23.0	23.0	23.0	21.0	22.0	27.0	23.5	25.5	17.5	16.5	17.0
20	23.0	21.0	21.5	23.5	21.5	22.5	27.0	24.0	25.5	19.0	16.5	17.5
21	23.5	20.5	22.0	23.5	22.5	23.0	26.5	22.5	24.5	18.5	16.5	17.5
22	23.0	21.0	22.0	23.0	22.0	22.5	24.0	21.5	22.5	20.5	17.5	19.0
23	21.0	20.0	20.5	23.0	22.0	22.5	24.0	23.0	23.5	18.5	16.5	17.5
24	21.0	18.5	20.0	23.5	21.5	22.5	24.0	23.0	23.5	17.5	14.5	16.0
25	23.0	19.5	21.5	24.0	21.5	23.0	24.5	23.0	23.5	18.0	14.0	16.0
26	23.5	20.0	22.0	23.5	22.0	23.0	25.0	23.5	24.0	19.0	15.5	17.5
27	24.5	21.5	23.0	24.0	22.0	23.0	26.0	23.0	24.5	19.5	16.0	18.0
28	25.5	22.0	23.5	25.5	21.5	23.5	26.5	24.0	25.0	20.5	18.0	19.0
29	24.5	23.0	23.5	26.5	23.0	24.5	24.5	23.0	24.5	---	---	---
30	26.0	22.5	24.0	26.0	23.5	24.5	25.0	22.0	23.0	---	---	---
31	---	---	---	25.5	23.5	24.5	23.0	22.0	22.0	---	---	---
MONTH	26.0	16.5	21.0	28.5	20.5	23.5	27.0	19.0	23.5	26.5	14.0	20.5
YEAR	28.5	.0	13.5									

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	10.7	8.6	9.6	12.5	9.9	11.0	9.0	8.3	8.5	12.8	12.2	12.4
2	11.9	8.6	9.9	13.0	10.4	11.4	8.5	8.1	8.3	13.3	10.7	12.5
3	12.0	8.6	9.9	12.4	10.3	11.0	8.6	8.1	8.3	13.3	12.6	12.9
4	12.5	8.9	10.3	13.0	9.8	11.1	8.8	8.5	8.7	13.8	12.2	13.1
5	12.9	9.5	10.9	11.1	9.4	10.1	9.0	8.6	8.8	13.6	9.2	10.9
6	10.3	9.4	9.8	10.7	7.9	9.2	8.6	7.3	8.3	10.9	9.8	10.4
7	12.7	10.4	11.2	10.1	8.4	9.1	9.3	8.3	8.8	11.1	10.3	10.7
8	13.2	9.4	11.0	9.8	8.3	8.9	10.5	9.3	9.9	11.5	10.7	11.1
9	14.2	9.9	11.7	10.2	8.2	9.0	12.2	10.5	11.3	12.7	11.3	11.8
10	12.9	10.0	11.0	10.7	8.6	9.5	13.2	12.2	12.7	12.7	12.3	12.5
11	14.7	9.7	11.6	12.2	9.4	10.4	14.0	12.9	13.4	12.7	11.7	12.2
12	15.4	9.4	11.7	12.2	9.1	10.3	14.0	12.6	13.2	12.3	11.6	11.9
13	15.5	9.2	11.5	12.9	9.2	10.5	14.3	12.8	13.5	12.8	11.8	12.2
14	15.1	8.5	11.0	9.9	8.3	9.2	14.4	12.1	13.6	12.9	11.8	12.3
15	13.5	8.3	10.2	9.2	7.4	8.3	14.1	12.7	13.3	13.3	11.9	12.6
16	10.7	8.3	9.2	7.3	4.2	6.0	14.2	13.3	13.7	12.4	11.3	12.0
17	10.1	6.1	8.5	8.1	5.5	6.5	14.3	13.5	14.0	12.0	11.0	11.5
18	9.2	5.9	7.5	8.6	4.8	6.8	14.3	13.5	14.0	11.3	10.2	10.8
19	11.7	6.2	8.6	7.9	4.5	5.4	14.1	13.2	13.8	12.4	10.1	11.2
20	10.1	7.6	8.9	8.3	5.2	6.7	14.4	13.0	13.8	11.7	11.2	11.4
21	9.0	6.5	7.4	8.4	7.5	8.1	14.0	13.1	13.6	11.6	11.1	11.3
22	10.8	6.5	9.6	9.2	8.3	8.7	15.2	13.3	14.3	11.8	11.5	11.7
23	10.6	9.3	9.8	9.8	9.1	9.6	14.6	13.3	14.2	11.9	10.6	11.4
24	10.7	8.9	9.9	10.2	9.5	9.7	14.7	13.2	14.0	11.8	10.1	10.7
25	10.8	8.9	9.8	10.2	9.3	9.6	14.3	13.0	13.7	11.0	10.2	10.5
26	11.6	9.2	10.5	10.4	9.0	9.6	14.2	12.5	13.3	11.1	10.1	10.6
27	11.1	10.0	10.6	10.0	8.8	9.4	13.1	12.2	12.6	11.7	10.4	11.1
28	11.0	9.7	10.2	8.8	8.2	8.4	13.9	12.2	12.9	10.5	9.1	10.2
29	11.4	10.0	10.5	9.8	8.0	9.1	14.0	12.4	13.1	11.8	9.4	10.3
30	11.6	9.9	10.5	9.2	8.4	8.9	14.4	12.8	13.5	12.0	11.4	11.8
31	10.3	9.6	9.9	---	---	---	14.0	12.3	13.3	12.1	9.8	10.9
MONTH	15.5	5.9	10.1	13.0	4.2	9.0	15.2	7.3	12.2	13.8	9.1	11.5

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	10.9	10.2	10.4	10.7	9.0	9.8	12.1	10.3	11.0	12.2	8.9	10.3
2	11.6	10.6	11.0	13.3	10.2	11.7	11.7	10.2	10.9	13.6	9.8	11.5
3	11.5	10.9	11.2	12.3	11.7	12.1	12.0	10.8	11.3	14.0	10.1	11.8
4	11.2	10.7	11.0	12.5	11.7	12.1	14.0	11.6	12.5	10.7	8.8	9.8
5	11.9	11.2	11.7	12.9	11.8	12.3	13.8	11.0	12.1	9.1	8.5	8.8
6	12.1	11.3	11.6	12.3	11.7	12.0	14.0	10.6	12.1	9.4	8.9	9.2
7	11.9	11.4	11.7	12.7	11.9	12.3	14.1	11.0	12.4	9.1	8.9	9.1
8	12.4	11.7	11.9	12.7	11.8	12.2	14.8	11.2	12.7	---	---	---
9	11.8	10.7	11.3	12.4	11.6	11.9	14.4	10.8	12.3	9.9	9.6	9.8
10	11.6	10.2	10.9	12.3	11.0	11.6	11.3	9.8	10.5	9.8	9.4	9.6
11	11.6	11.5	11.6	10.9	8.1	9.4	10.5	9.8	10.3	9.8	8.9	9.6
12	11.6	9.0	10.9	9.3	8.4	8.9	10.3	9.8	10.2	9.2	8.9	9.1
13	13.0	10.0	10.7	9.6	8.1	8.8	9.7	8.5	9.3	9.1	8.9	9.0
14	11.7	9.3	10.2	8.7	6.4	7.3	8.5	7.2	8.3	9.1	8.2	8.8
15	10.8	8.8	9.2	7.5	5.6	6.6	8.7	7.3	7.8	8.5	8.2	8.5
16	11.1	9.6	10.4	7.8	5.7	6.5	7.5	6.6	7.3	8.9	8.6	8.7
17	---	---	---	8.3	6.0	7.2	6.8	6.4	6.7	8.7	7.8	8.2
18	---	---	---	9.3	7.3	8.2	7.6	6.2	7.1	8.7	7.8	8.5
19	12.2	11.4	11.5	11.2	8.3	10.6	7.5	6.1	7.1	8.7	8.0	8.5
20	12.6	10.2	11.5	11.8	11.1	11.5	6.6	5.5	6.3	8.5	7.4	7.9
21	12.6	10.7	11.2	11.9	11.2	11.5	7.1	5.5	6.2	8.6	8.0	8.4
22	11.1	10.7	10.8	11.9	11.1	11.5	10.1	7.0	8.5	8.7	8.2	8.4
23	11.0	9.3	10.6	12.2	10.9	11.5	9.9	8.2	9.2	9.4	8.2	8.8
24	10.0	8.0	9.0	12.8	11.3	12.0	8.8	8.6	8.7	9.0	8.3	8.8
25	9.6	8.5	9.2	13.1	11.9	12.5	---	---	---	8.9	8.6	8.7
26	10.6	8.4	9.7	13.2	11.8	12.4	12.5	9.4	10.7	8.8	7.8	8.5
27	9.6	7.0	8.4	13.4	11.7	12.4	13.7	8.9	10.9	8.5	7.4	8.1
28	9.6	8.3	9.0	13.6	11.6	12.5	13.0	8.7	10.5	8.8	7.8	8.4
29	---	---	---	13.5	11.3	12.3	12.0	9.2	10.5	9.0	8.2	8.5
30	---	---	---	13.9	11.0	12.2	14.1	9.9	11.5	8.2	7.4	7.9
31	---	---	---	11.7	10.3	10.9	---	---	---	8.6	7.6	7.9
MONTH	13.0	7.0	10.6	13.9	5.6	10.8	14.8	5.5	9.8	14.0	7.4	9.0
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE				JULY			AUGUST			SEPTEMBER		
1	8.7	7.7	8.5	10.0	7.5	8.6	9.4	7.0	7.9	---	---	---
2	9.2	8.2	8.7	10.9	7.4	9.0	8.6	6.7	7.5	---	---	---
3	9.0	7.6	8.3	11.6	7.3	9.1	9.4	6.2	7.6	9.1	7.8	8.2

## SCIOTO RIVER BASIN

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 mi<sup>2</sup>.

## 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.--Estimated daily discharges: Dec. 15-30, Feb. 15-20. Records good, except for estimated discharges which are fair. 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.--60 years, 4,621 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 177,000 ft<sup>3</sup>/s Jan. 23, 1937, from rating curve extended above 112,000 ft<sup>3</sup>/s; maximum gage height, 26.4 ft Jan. 23, 1937, from floodmarks, and Jan. 23, 1959; minimum daily discharge, 244 ft<sup>3</sup>/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, 46,000 ft<sup>3</sup>/s May 30, gage height, 19.12 ft; minimum daily, 982 ft<sup>3</sup>/s Oct. 2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1010	1500	2160	14400	7310	5530	2960	2930	13000	2190	2780	1600
2	982	1690	2050	11100	8460	5380	3810	2670	13500	1990	2920	1500
3	1030	1560	1760	9350	13800	5610	5990	2340	11500	1870	2640	1500
4	1060	1460	1680	8840	19200	5440	5900	6080	11900	1840	2410	1400
5	1030	1630	1630	8790	24100	4260	5280	17400	11400	1790	2830	1300
6	1020	1610	1610	8610	25200	3900	4410	17000	10300	1990	2770	1230
7	1060	1360	1550	7220	23700	3460	4210	16200	9590	1750	2200	1150
8	1040	1470	1650	5600	20200	4040	3260	14000	11200	1610	2140	1080
9	1010	2030	1620	4890	17500	3460	2880	10400	18600	1450	3290	1370
10	1030	2260	1490	4640	17200	3550	3260	8780	25000	1780	2900	1860
11	1090	2030	1440	4420	14700	8650	13500	8000	35000	3460	2430	2200
12	1380	1820	1420	4100	11700	9240	17200	4600	28000	5500	2040	1680
13	1290	1730	1380	3760	9130	8910	14300	4570	13400	14500	1760	2060
14	1180	1830	1300	3270	8090	8000	12000	10100	13100	24500	1680	2460
15	1160	2110	1350	2980	9800	7150	9430	15100	15400	27000	1950	1910
16	1250	8420	1950	2860	27800	5570	7640	17900	17600	28000	1970	2470
17	4750	11800	2200	2660	31400	5250	5880	33300	13100	18700	2460	1680
18	3360	8910	2200	2530	34500	4670	4990	34000	10400	16500	2330	1450
19	4540	6630	2150	3490	29400	4010	4190	25800	8130	17200	1950	1430
20	6170	5880	2150	5570	25000	4370	3360	16800	5400	16000	1620	1640
21	4630	5270	2000	12200	20700	4190	3820	15600	4620	11900	2610	1850
22	3270	4190	2000	12900	16400	3700	5080	17500	3680	10400	11000	1570
23	2650	3230	2050	11500	13600	3400	6800	14800	3650	15800	6640	1620
24	2320	3030	2040	9850	8160	3150	6980	13300	3540	19400	5790	1810
25	2140	2680	2150	8770	6630	3090	5600	12000	3410	14600	5550	2010
26	1890	2510	2150	7010	5980	3360	4540	14800	2770	11600	4950	1740
27	1710	2250	2200	5890	5330	2950	3850	18300	2560	9940	3640	1260
28	1680	2210	2300	5120	5460	2410	3220	15500	2520	9000	2340	1250
29	1590	2280	2320	6440	---	2130	3360	37300	2420	5970	1840	1180
30	1530	2160	2800	10400	---	2080	3250	38600	2270	3940	1800	1960
31	1490	---	8910	9050	---	2670	---	25500	---	2900	1780	---
TOTAL	61342	97540	65660	218210	460450	143580	180950	491170	326960	305070	95010	49220
MEAN	1979	3251	2118	7039	16440	4632	6032	15840	10900	9841	3065	1641
MAX	6170	11800	8910	14400	34500	9240	17200	38600	35000	28000	11000	2470
MIN	982	1360	1300	2530	5330	2080	2880	2340	2270	1450	1620	1080

CAL YR 1989 TOTAL 2371232 MEAN 6497 MAX 31700 MIN 982  
WTR YR 1990 TOTAL 2495162 MEAN 6836 MAX 38600 MIN 982

## 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, &gt;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, 972 microsiemens Dec. 28; minimum, 194 microsiemens May 29.

pH: Maximum, 8.9 units July 3; minimum, 7.5 units Apr. 11, 12, May 17, Aug. 22, 23.

WATER TEMPERATURES: Maximum, 27.5°C Sept. 6; minimum, 0.5°C on several days during winter.

DISSOLVED OXYGEN: Maximum recorded, 19.7 mg/L July 3; minimum recorded, 5.9 mg/L June 21.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED ITY (MG/L) (00300)	OXYGEN, DIS- SOLVED CENT SATUR- (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 01...	1330	1500	820	8.2	14.5	12.0	9.3	9.6	91	K130	K200
MAR 21...	1230	4030	785	8.3	12.5	9.5	12	10.8	97	K400	K16
MAY 17...	1210	36500	335	7.8	21.0	18.0	330	8.1	89	K10000	K10000
JUL 23...	1130	16100	420	8.2	24.0	22.5	88	8.4	100	K6200	K5900
DATE	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD (MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD (MG/L AS CO3 (00452)	ALKA- LINITY WAT WH TOT FET FIELD (MG/L AS CACO3 (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
NOV 01...	310	77	28	43	4.5	284	0	233	95	52	0.4
MAR 21...	330	83	30	29	3.0	270	3	227	90	46	0.3
MAY 17...	150	38	13	7.5	3.4	115	0	93	33	12	0.3
JUL 23...	190	50	15	10	3.5	166	0	136	37	20	<0.1



## SCIOTO RIVER BASIN

03234500 SCIOTO RIVER AT HIGBY, OH--Continued

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L AS N) (70300)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)
NOV 01...	5.5	464	0.01	2.40	0.03	0.03	0.7	0.32	0.26	0.23	30
MAR 21...	5.3	470	0.02	3.90	0.24	0.23	0.6	0.16	0.11	0.13	<10
MAY 17...	6.4	201	0.06	4.40	0.09	0.12	4.0	0.11	0.06	0.04	130
JUL 23...	7.4	251	0.03	4.60	0.04	0.05	1.0	0.30	0.08	0.07	30

DATE	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)
NOV 01...	1	76	<0.5	<1.0	<1	<3	3	45	<1	11
MAR 21...	1	65	<0.5	2.0	<5	<3	<10	7	<10	9
MAY 17...	1	40	<0.5	<1.0	<1	<3	21	140	1	4
JUL 23...	2	46	<0.5	<1.0	<1	<3	5	30	<1	9

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SEDI- MENT, SUS- PENDE (MG/L) (80154)
NOV 01...	46	<0.1	10	3	<1	<1.0	1400	<6	19	23
MAR 21...	6	0.2	<10	<10	<1	<1.0	1400	<6	12	23
MAY 17...	10	<0.1	<10	5	<1	<1.0	410	<6	19	1340
JUL 23...	2	0.1	<10	3	<1	<1.0	740	<6	5	294

K Results based on colony count outside the acceptable range.

SCIOTO RIVER BASIN

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03234500 SCIOTO RIVER AT HIGBY, OH--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	808	794	785	760	748	754	738	708	720	636	448	535
2	824	808	818	770	760	763	750	740	746	592	464	522
3	832	808	823	776	772	774	764	750	759	572	464	539
4	814	794	805	776	760	774	762	756	760	---	---	---
5	800	792	796	774	702	737	764	754	758	---	---	---
6	798	784	794	770	698	729	780	764	774	618	578	610
7	800	794	797	774	734	761	796	774	781	612	422	545
8	808	796	803	778	730	769	796	788	792	642	622	627
9	814	802	808	704	594	642	816	796	807	664	642	655
10	824	796	810	728	678	710	816	804	810	666	662	663
11	826	812	817	726	706	719	810	802	807	664	662	662
12	838	808	817	704	690	695	800	792	796	664	648	659
13	838	832	835	706	688	697	818	798	806	688	658	677
14	840	834	837	714	680	699	844	818	831	708	680	697
15	832	780	818	680	496	663	844	826	835	718	700	709
16	828	718	782	502	350	434	888	828	854	728	696	721
17	614	310	400	438	412	425	896	852	873	726	718	722
18	594	492	532	546	442	501	896	862	884	722	716	720
19	604	396	481	572	546	558	902	878	897	742	720	734
20	528	484	499	592	572	580	900	886	892	716	390	537
21	546	528	538	612	594	605	912	892	901	560	494	539
22	556	528	538	646	614	630	924	906	914	570	520	546
23	610	560	584	668	642	651	944	914	930	586	560	581
24	646	612	628	698	670	683	940	924	933	660	632	648
25	670	648	659	720	700	712	946	926	935	632	604	623
26	712	672	691	714	710	712	946	932	937	618	604	614
27	736	714	723	716	710	713	958	942	951	624	610	617
28	742	736	739	718	704	714	972	958	966	634	522	599
29	754	740	747	718	700	711	962	952	958	---	---	---
30	754	750	753	712	698	704	962	812	926	---	---	---
31	754	744	750	---	---	---	794	264	432	---	---	---
MONTH	840	310	716	778	350	674	972	264	838	742	390	627
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	604	580	596	690	502	641	698	682	690	698	675	689
2	614	594	600	698	647	691	690	667	678	690	682	689
3	616	556	587	686	643	674	737	694	711	706	690	698
4	550	474	512	682	639	665	698	698	698	706	259	560
5	474	450	462	680	643	666	714	698	710	482	267	380
6	462	448	455	694	647	688	710	678	691	474	455	462
7	464	446	460	---	---	---	675	659	668	518	478	494
8	482	462	469	733	678	717	675	659	669	541	518	530
9	488	452	478	733	687	716	694	675	683	533	525	530
10	446	388	419	737	725	731	698	478	666	557	529	541
11	498	448	477	737	710	715	494	404	440	564	548	559
12	532	500	514	---	---	---	486	431	447	616	566	600
13	570	534	550	580	573	574	561	490	535	616	586	604
14	594	570	581	604	580	592	580	561	574	656	508	604
15	608	494	593	612	596	603	580	557	566	516	492	502
16	484	330	397	651	616	633	557	541	547	532	462	515
17	384	348	366	667	626	655	573	549	559	458	224	299
18	400	368	388	678	659	666	596	573	585	408	306	372
19	410	400	407	667	639	658	612	596	606	456	408	431
20	408	396	401	690	639	656	620	608	613	484	412	452
21	400	390	395	721	682	698	627	592	613	496	426	479
22	432	400	414	733	690	702	620	600	608	496	482	489
23	472	432	451	745	698	711	620	573	593	494	490	492
24	564	470	528	729	698	705	580	557	567	490	478	486
25	594	566	579	698	690	697	604	580	598	478	470	473
26	632	594	613	713	682	691	623	604	613	476	310	386
27	660	600	635	733	698	717	733	627	653	474	334	412
28	684	602	671	741	706	723	788	663	692	496	280	430
29	---	---	---	741	706	723	765	643	667	270	194	228
30	---	---	---	737	722	730	671	643	660	366	244	309
31	---	---	---	729	690	707	---	---	---	448	368	396
MONTH	684	330	500	745	502	681	788	404	620	706	194	487

## SCIOTO RIVER BASIN

03234500 SCIOTO RIVER AT HIGBY, OH--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	490	454	477	748	736	744	690	651	670	816	792	807
2	468	462	467	752	736	743	702	690	697	812	792	799
3	520	462	483	750	730	740	690	682	687	800	792	796
4	486	470	478	734	714	723	706	643	692	824	792	802
5	482	470	476	752	726	737	686	529	613	831	824	829
6	478	468	474	760	556	663	651	612	639	831	824	829
7	522	458	485	734	696	722	694	655	680	847	831	838
8	554	526	538	748	720	738	690	682	686	871	839	858
9	554	372	422	746	728	737	714	663	696	871	851	860
10	376	346	360	748	694	718	655	486	630	894	855	870
11	344	306	321	698	598	654	643	494	583	892	766	839
12	400	312	349	643	555	610	678	647	664	760	670	718
13	470	404	443	580	341	466	698	675	689	718	654	701
14	488	464	482	357	310	329	694	667	677	716	698	713
15	486	410	463	384	361	372	722	698	707	694	660	670
16	422	346	372	392	353	362	745	722	737	744	666	700
17	498	428	472	447	396	428	737	722	728	752	702	723
18	524	500	510	467	424	433	733	706	713	724	710	714
19	558	518	535	431	424	430	722	718	721	746	722	733
20	604	558	578	447	431	439	745	722	734	786	746	770
21	612	558	590	467	431	453	741	651	688	786	760	769
22	---	---	---	494	447	475	659	219	320	816	756	795
23	664	632	651	474	353	412	478	329	428	784	750	762
24	682	640	666	431	353	386	486	447	471	834	786	812
25	688	678	683	478	435	461	518	468	493	832	808	818
26	712	684	694	478	463	468	588	518	563	800	722	744
27	726	712	719	478	463	470	620	573	602	722	714	717
28	742	726	733	500	478	483	655	620	637	740	720	733
29	750	740	743	556	502	525	675	659	667	798	742	772
30	756	740	748	616	558	585	682	675	680	788	528	611
31	---	---	---	651	620	634	792	686	744	---	---	---
MONTH	756	306	531	760	310	553	792	219	643	894	528	770
YEAR	972	194	638									

PH (STANDARD UNITS), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	8.2	8.1	8.1	8.2	8.1	8.2	8.4	8.3	8.3	8.0	8.0	8.0
2	8.3	8.1	8.2	8.3	8.2	8.2	8.4	8.3	8.3	8.2	8.0	8.1
3	8.3	8.2	8.2	8.2	8.2	8.2	8.4	8.3	8.4	8.3	8.2	8.3
4	8.4	8.3	8.3	8.3	8.2	8.3	8.4	8.4	8.4	8.2	8.2	8.2
5	8.5	8.2	8.3	8.3	8.3	8.3	8.4	8.3	8.4	---	---	---
6	8.4	8.2	8.3	8.3	8.2	8.2	8.3	8.3	8.3	8.3	8.3	8.3
7	8.5	8.3	8.4	8.3	8.2	8.2	8.3	8.3	8.3	8.3	8.3	8.3
8	8.5	8.3	8.4	8.2	8.1	8.2	8.4	8.3	8.3	8.3	8.3	8.3
9	8.5	8.3	8.4	8.3	8.1	8.1	8.4	8.3	8.4	8.3	8.3	8.3
10	8.4	8.2	8.2	8.3	8.2	8.2	8.4	8.3	8.3	8.3	8.3	8.3
11	8.2	8.1	8.2	8.3	8.2	8.2	8.3	8.3	8.3	8.4	8.3	8.3
12	8.4	8.1	8.3	8.3	8.2	8.2	8.4	8.3	8.3	8.4	8.3	8.3
13	8.3	8.2	8.3	8.3	8.2	8.2	8.4	8.4	8.4	8.4	8.4	8.4
14	8.3	8.2	8.2	8.3	8.2	8.2	8.4	8.3	8.4	8.4	8.3	8.4
15	8.2	8.2	8.2	8.2	8.1	8.2	8.4	8.4	8.4	8.3	8.3	8.3
16	8.3	8.2	8.2	8.0	7.8	7.9	8.4	8.3	8.3	8.3	8.2	8.3
17	8.1	7.6	7.8	8.1	7.7	7.9	8.3	8.3	8.3	8.3	8.2	8.2
18	8.1	8.0	8.0	8.3	8.1	8.2	8.3	8.3	8.3	8.3	8.2	8.2
19	8.1	8.0	8.1	8.4	8.3	8.3	8.3	8.2	8.3	8.3	8.2	8.3
20	8.1	8.1	8.1	8.4	8.3	8.3	8.3	8.2	8.2	8.3	8.1	8.2
21	8.1	8.1	8.1	8.3	8.3	8.3	8.3	8.2	8.2	8.2	8.1	8.2
22	8.1	8.1	8.1	8.3	8.3	8.3	8.2	8.2	8.2	8.3	8.1	8.2
23	8.1	8.1	8.1	8.3	8.3	8.3	8.2	8.2	8.2	8.4	8.3	8.3
24	8.1	8.1	8.1	8.3	8.3	8.3	8.2	8.1	8.2	8.3	8.1	8.3
25	8.1	8.1	8.1	8.3	8.3	8.3	8.2	8.1	8.1	8.3	8.1	8.3
26	8.1	8.1	8.1	8.3	8.3	8.3	8.2	8.1	8.2	8.3	8.3	8.3
27	8.1	8.1	8.1	8.3	8.1	8.3	8.2	8.1	8.2	8.3	8.3	8.3
28	8.2	8.1	8.1	8.3	8.2	8.2	8.2	8.1	8.1	8.3	8.3	8.3
29	8.2	8.1	8.2	8.3	8.3	8.3	8.1	8.1	8.1	---	---	---
30	8.2	8.2	8.2	8.3	8.3	8.3	8.2	8.1	8.1	---	---	---
31	8.2	8.1	8.2	---	---	---	8.2	8.0	8.1	8.3	8.3	8.3
MONTH	8.5	7.6	8.2	8.4	7.7	8.2	8.4	8.0	8.3	8.4	8.0	8.3

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PH (STANDARD UNITS), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

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



## SCIOTO RIVER BASIN

03234500 SCIOTO RIVER AT HIGBY, OH--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

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

## SCIOTO RIVER BASIN

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03234500 SCIOTO RIVER AT HIGBY, OH--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	18.0	16.5	17.0	25.5	23.5	24.5	24.0	22.0	23.0	26.0	24.0	25.0
2	18.0	17.0	17.5	25.0	22.5	24.0	23.5	22.0	23.0	26.0	25.0	25.5
3	19.5	17.5	18.5	25.5	22.5	24.0	24.0	22.0	23.0	26.5	24.5	25.5
4	18.5	17.0	17.5	26.0	23.5	24.5	24.0	22.5	23.5	26.0	24.0	25.0
5	18.0	16.5	17.0	25.5	24.0	25.0	23.5	23.0	23.0	26.5	24.5	25.5
6	18.5	17.0	18.0	25.5	23.0	24.0	23.0	22.0	22.5	27.5	25.5	26.5
7	18.5	18.0	18.0	25.0	22.5	23.5	22.5	20.5	21.5	27.0	26.0	26.5
8	20.0	18.0	19.0	25.5	22.5	24.0	23.0	21.0	22.0	26.0	24.5	25.0
9	20.5	19.5	20.0	27.0	24.0	25.0	23.5	21.5	22.5	25.0	24.0	24.5
10	21.0	20.0	20.5	27.0	24.5	25.5	23.0	21.5	22.5	25.0	23.0	24.0
11	21.0	20.0	20.5	26.5	24.5	26.0	23.0	21.0	22.0	24.5	23.5	24.0
12	21.0	20.0	20.5	24.5	23.0	24.0	24.0	22.0	23.0	24.0	23.0	23.5
13	21.0	19.5	20.5	23.0	20.5	22.0	23.5	22.0	23.0	24.5	23.0	23.5
14	21.0	20.0	20.5	20.5	20.0	20.0	23.5	21.0	22.5	24.5	23.5	24.0
15	22.0	20.5	21.0	20.5	20.0	20.5	23.5	22.0	22.5	23.5	22.0	23.0
16	22.5	21.5	22.0	21.0	20.0	20.5	24.5	22.0	23.0	22.5	21.5	22.0
17	23.0	22.0	22.5	22.0	21.0	21.5	24.5	23.0	23.5	21.5	19.5	20.5
18	23.5	22.5	23.0	22.0	21.0	22.0	25.0	23.5	24.0	20.0	18.5	19.5
19	23.5	22.0	22.5	22.5	21.5	22.0	25.5	24.0	24.5	19.5	18.5	19.0
20	22.5	21.0	21.5	23.0	22.0	22.5	26.5	24.5	25.5	20.0	18.5	19.0
21	21.0	20.5	20.5	23.0	22.0	22.5	26.0	24.5	25.0	19.5	18.0	19.0
22	21.5	21.0	21.5	22.5	21.5	22.0	24.5	21.5	22.5	21.0	19.0	20.0
23	21.0	20.0	20.5	22.0	22.0	22.0	23.0	22.5	22.5	20.5	18.0	19.0
24	21.0	19.0	20.0	22.5	21.5	22.0	23.0	22.5	22.5	18.5	16.5	17.5
25	22.0	19.0	20.0	23.5	22.0	22.5	23.5	23.0	23.0	18.5	16.0	17.5
26	22.5	19.5	21.0	23.0	22.0	22.5	24.5	23.0	23.5	19.5	17.0	18.0
27	23.5	20.5	22.0	23.0	22.0	22.5	25.5	23.5	24.5	20.5	18.0	19.0
28	24.0	21.5	23.0	23.5	22.0	22.5	26.0	24.0	25.0	21.0	19.0	20.0
29	24.0	22.5	23.5	24.5	22.5	23.5	25.0	23.5	24.0	20.5	19.5	20.0
30	25.0	22.5	23.5	24.0	23.0	23.5	25.0	23.0	23.5	20.0	19.0	19.5
31	---	---	---	24.5	23.0	23.5	26.0	22.5	24.5	---	---	---
MONTH	25.0	16.5	20.5	27.0	20.0	23.0	26.5	20.5	23.0	27.5	16.0	22.0
YEAR	27.5	.5	14.0									

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	9.4	7.8	9.0	9.1	8.7	8.9	12.0	11.4	11.8	12.4	12.2	12.2
2	10.3	8.1	9.1	9.3	8.8	9.0	12.0	11.6	11.8	---	---	---
3	10.4	8.3	9.3	10.1	8.8	9.4	12.4	11.7	12.0	---	---	---
4	10.4	8.8	9.6	10.8	9.9	10.2	12.5	12.2	12.3	---	---	---
5	11.8	9.0	10.3	10.8	10.3	10.6	12.6	12.3	12.4	---	---	---
6	10.6	8.4	9.3	10.9	10.1	10.4	12.5	12.1	12.2	---	---	---
7	11.0	9.0	9.9	10.7	10.0	10.2	12.5	12.0	12.2	---	---	---
8	11.2	9.1	9.9	10.1	9.6	9.8	12.9	12.3	12.6	---	---	---
9	11.3	9.3	10.0	10.7	9.6	10.1	13.2	12.6	12.9	---	---	---
10	10.3	9.0	9.6	10.6	10.0	10.3	13.3	12.9	13.1	---	---	---
11	11.2	9.3	9.9	11.0	10.0	10.5	13.2	12.9	13.0	---	---	---
12	11.8	9.9	10.5	10.8	10.2	10.6	13.5	13.0	13.2	---	---	---
13	11.3	9.2	10.0	11.0	10.2	10.6	13.6	13.0	13.4	---	---	---
14	10.0	8.5	9.0	10.9	10.1	10.4	13.7	13.2	13.4	---	---	---
15	8.8	7.6	8.0	10.3	9.7	9.9	13.6	12.9	13.2	---	---	---
16	7.9	7.0	7.5	10.6	9.0	9.6	14.5	12.7	13.1	---	---	---
17	7.5	7.2	7.4	11.3	9.2	10.0	13.4	12.9	13.1	---	---	---
18	---	---	---	12.4	11.3	11.9	13.3	13.1	13.3	---	---	---
19	---	---	---	12.7	12.1	12.4	13.5	13.1	13.3	---	---	---
20	---	---	---	12.6	10.3	11.6	13.7	13.1	13.3	---	---	---
21	---	---	---	10.5	10.3	10.4	13.2	12.9	13.1	---	---	---
22	---	---	---	10.6	10.4	10.5	13.2	12.8	13.0	---	---	---
23	---	---	---	11.1	10.6	10.9	13.2	12.7	13.0	---	---	---
24	---	---	---	11.6	11.0	11.3	12.9	12.4	12.7	---	---	---
25	---	---	---	11.5	11.2	11.3	12.4	12.2	12.3	---	---	---
26	---	---	---	11.3	10.9	11.1	12.7	12.2	12.4	---	---	---
27	9.7	9.4	9.5	11.0	10.5	10.7	12.2	11.5	11.8	---	---	---
28	9.8	9.4	9.6	10.6	10.3	10.4	11.8	11.5	11.6	---	---	---
29	9.7	9.2	9.4	11.1	10.4	10.8	12.0	11.4	11.7	---	---	---
30	9.5	9.1	9.3	11.6	10.9	11.3	12.7	11.9	12.1	---	---	---
31	9.4	8.9	9.1	---	---	---	13.1	12.4	12.8	12.6	12.1	12.4
MONTH	11.8	7.0	9.3	12.7	8.7	10.5	14.5	11.4	12.6	12.6	12.1	12.3

03234500 SCIOTO RIVER AT HIGBY, OH--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	12.3	12.1	12.2	17.7	15.5	16.5	14.1	10.9	13.7	10.5	8.5	9.2
2	12.2	11.6	11.9	16.5	14.6	15.5	10.0	6.4	7.4	10.0	8.5	9.3
3	14.2	11.5	12.6	15.4	15.0	15.1	9.3	6.2	7.4	10.3	8.9	9.6
4	15.7	13.8	14.9	15.7	14.5	15.4	11.6	8.0	9.6	9.8	8.9	9.1
5	16.9	15.5	16.0	16.0	14.7	15.4	14.6	9.6	11.8	9.0	8.4	8.7
6	17.2	16.2	16.5	15.1	14.7	15.0	14.8	14.2	14.6	8.8	8.3	8.5
7	16.5	16.3	16.4	15.5	13.1	14.8	15.1	14.2	14.7	8.9	8.3	8.8
8	16.7	16.3	16.5	15.9	13.4	15.2	14.7	14.4	14.6	8.9	8.3	8.7
9	16.4	15.7	16.0	16.9	13.7	15.2	14.5	13.0	13.9	8.5	8.0	8.3
10	16.0	15.5	15.8	14.8	14.0	14.4	13.0	12.5	12.7	8.6	8.2	8.5
11	17.3	15.7	16.2	14.3	14.1	14.2	13.5	11.8	13.0	8.8	8.5	8.6
12	17.4	16.3	16.7	---	---	---	13.7	12.9	13.4	8.6	8.2	8.4
13	17.7	16.6	17.1	---	---	---	14.1	12.5	13.7	15.5	8.5	9.7
14	17.2	16.7	17.0	13.8	13.0	13.5	13.9	12.8	13.3	9.6	8.4	8.7
15	17.4	16.8	17.2	13.2	12.8	13.0	13.3	11.9	12.6	9.0	8.8	8.9
16	16.7	13.9	15.6	12.9	12.4	12.8	12.5	10.9	12.0	8.9	8.5	8.8
17	16.6	14.8	15.7	12.2	10.0	11.1	11.9	10.6	11.5	8.7	8.1	8.4
18	18.3	15.4	17.4	11.5	9.2	10.7	13.0	11.9	12.3	8.4	7.9	8.2
19	18.8	17.1	18.2	11.7	10.6	11.0	12.9	12.5	12.7	8.0	7.9	7.9
20	19.4	17.2	17.5	13.6	10.8	12.3	12.5	12.2	12.4	8.0	7.8	7.9
21	19.5	17.1	18.0	14.7	12.7	13.8	12.0	9.9	10.3	8.5	7.8	8.2
22	19.1	17.0	18.4	14.9	14.1	14.6	10.2	9.9	10.0	8.9	8.5	8.7
23	18.4	16.2	17.3	14.7	14.4	14.6	10.1	9.8	9.9	9.0	8.9	8.9
24	18.4	16.3	16.7	15.5	12.7	14.7	10.1	9.7	9.9	8.9	8.8	8.9
25	17.4	16.9	17.2	15.8	11.0	14.9	10.1	9.6	9.8	8.8	8.7	8.7
26	19.2	17.4	17.7	15.7	13.7	15.3	10.5	9.5	9.9	8.9	8.6	8.7
27	19.0	14.8	17.4	15.3	13.2	14.7	9.8	8.6	9.4	8.6	8.4	8.5
28	18.9	16.4	17.2	16.0	13.9	15.3	9.8	8.2	8.9	13.2	8.5	9.0
29	---	---	---	15.8	15.1	15.4	10.8	8.2	9.3	9.1	8.7	8.9
30	---	---	---	15.4	14.8	15.2	12.3	8.6	10.3	8.7	8.1	8.5
31	---	---	---	14.9	11.5	14.3	---	---	---	10.1	8.0	8.3
MONTH	19.5	11.5	16.3	17.7	9.2	14.3	15.1	6.2	11.5	15.5	7.8	8.7
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE				JULY			AUGUST			SEPTEMBER		
1	12.0	10.9	11.7	15.7	8.4	11.4	10.2	7.9	8.8	10.3	7.9	9.0
2	11.8	11.5	11.7	18.0	9.1	12.6	10.0	8.3	9.1	10.3	7.8	9.1

## 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, 18,680 acre-ft Feb. 5, elevation, 849.60 ft; minimum, 9,080 acre-ft Jan. 16, elevation, 836.68 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, 5,920 acre-ft June 9, elevation, 759.68 ft; minimum, 4,330 acre-ft Aug. 13, elevation, 755.26 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, 81,800 acre-ft June 9, elevation, 896.85 ft; minimum, 36,260 acre-ft Dec. 30, elevation, 880.05 ft.

## MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

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.....	847.02	16,160	--	755.35	4,360	--	887.20	52,710	--
Oct. 31.....	847.52	16,620	+460	755.38	4,370	+10	884.25	45,280	-7,430
Nov. 30.....	847.05	16,190	-430	755.63	4,460	+90	882.94	44,230	-1,050
Dec. 31.....	847.49	16,600	+410	756.40	4,720	+260	882.24	40,700	-3,530
CAL YR 1989	-	-	-710	-	-	+130	-	-	-17,060
Jan. 31.....	843.60	13,460	-3,140	755.70	4,480	-240	887.70	54,010	+13,310
Feb. 28.....	844.51	14,130	+670	756.01	4,590	+110	893.81	71,270	+17,260
Mar. 31.....	843.23	13,190	-940	755.56	4,430	-160	892.79	68,030	-3,240
Apr. 30.....	844.11	13,840	+650	755.69	4,480	+50	893.80	71,240	+3,210
May. 31.....	841.76	12,150	-1,690	756.09	4,610	+130	894.07	72,120	+880
June 30.....	841.35	11,870	-280	755.49	4,410	-200	892.66	67,640	-4,480
July 31.....	842.29	12,520	+650	756.18	4,640	+230	893.57	70,500	+2,860
Aug. 31.....	840.59	11,370	-1,150	755.71	4,480	-160	890.80	62,310	-8,190
Sept. 30.....	841.23	11,790	+420	755.46	4,400	-80	888.42	55,900	-6,410
WTR YR 1990..	--	--	-4,370			+40			+3,190



UPPER TWIN CREEK BASIN  
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 mi<sup>2</sup>.

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. 15-30 and June 10-Aug. 29. Records poor.

AVERAGE DISCHARGE.--27 years, 13.6 ft<sup>3</sup>/s., 15.14 in./yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,500 ft<sup>3</sup>/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 ft<sup>3</sup>/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 ft<sup>3</sup>/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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 31	0830	495	6.70	May 4	1345	996	7.99
Apr. 21	0630	*1,430	*9.77				

Minimum daily discharge, 0.10 ft<sup>3</sup>/s Aug. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	6.3	11	77	31	8.5	36	21	17	.39	.34	.13
2	24	5.9	10	36	27	9.9	32	17	12	.33	.30	.13
3	13	5.8	8.7	31	35	9.8	27	14	12	.30	.26	.13
4	7.9	4.4	7.4	31	52	7.9	25	233	7.5	.33	.50	.11
5	6.2	4.4	7.4	29	43	6.9	20	130	6.5	.42	1.2	.11
6	4.4	4.4	6.9	26	34	6.6	16	72	6.5	1.6	3.3	.13
7	4.4	5.0	6.5	22	31	5.2	13	75	6.5	1.2	1.5	.17
8	3.8	9.1	5.8	19	27	4.9	9.9	48	6.4	.80	.80	.17
9	3.1	24	5.8	15	63	4.9	8.7	33	6.2	.62	.50	.94
10	3.1	20	5.7	12	159	5.3	12	24	4.5	.47	.36	.81
11	6.6	14	5.1	10	59	5.1	21	16	3.5	1.0	.29	.84
12	6.0	13	4.6	9.1	34	5.1	19	12	2.8	2.5	.26	.56
13	4.9	11	4.0	6.7	29	4.9	11	24	2.3	5.5	.22	.49
14	3.8	9.7	3.8	5.1	25	4.4	11	19	3.6	60	.19	.42
15	3.4	48	3.1	5.0	23	4.4	14	15	5.4	7.7	.54	.45
16	3.8	107	2.8	4.6	128	4.4	9.7	81	4.5	4.5	.82	.54
17	76	38	2.5	4.4	50	8.9	5.8	172	3.5	2.5	.62	.46
18	70	24	2.3	4.4	34	9.0	6.6	55	2.8	1.6	.45	.39
19	104	16	2.0	4.1	27	7.7	11	29	2.3	1.0	.30	.47
20	47	15	1.8	148	18	8.7	15	18	1.9	.72	.20	.44
21	28	13	1.7	93	14	8.7	376	13	1.7	.60	.28	.44
22	17	10	1.5	43	13	8.7	50	30	2.1	.52	.35	.47
23	12	8.6	1.4	30	12	8.6	40	25	3.1	2.5	.50	.50
24	8.7	7.2	1.3	24	10	8.1	33	19	2.5	3.5	.64	.50
25	7.3	6.9	1.3	22	6.7	8.1	26	13	1.6	1.9	.90	.52
26	6.7	7.4	1.3	17	5.1	10	20	12	1.2	1.0	.54	.55
27	6.0	8.0	1.5	13	6.3	10	16	11	.90	.70	.45	.50
28	5.4	14	1.7	12	9.1	10	24	83	.72	.52	.35	.51
29	4.4	13	2.0	125	---	10	43	112	.60	.40	.28	.54
30	4.0	12	15	85	---	13	28	52	.46	.33	.10	.50
31	4.6	---	209	41	---	31	---	29	---	.36	.13	---
TOTAL	519.5	485.1	344.9	1004.4	1005.2	258.7	979.7	1507	132.58	105.81	17.47	12.92
MEAN	16.8	16.2	11.1	32.4	35.9	8.35	32.7	48.6	4.42	3.41	.56	.43
MAX	104	107	209	148	159	31	376	233	17	60	3.3	.94
MIN	3.1	4.4	1.3	4.1	5.1	4.4	5.8	11	.46	.30	.10	.11
CFSM	1.37	1.33	.91	2.66	2.94	.68	2.68	3.98	.36	.28	.05	.04
IN.	1.58	1.48	1.05	3.06	3.07	.79	2.99	4.60	.40	.32	.05	.04

CAL YR 1989	TOTAL 7322.44	MEAN 20.1	MAX 466	MIN .11	CFSM 1.64	IN. 22.33
WTR YR 1990	TOTAL 6373.28	MEAN 17.5	MAX 376	MIN .10	CFSM 1.43	IN. 19.43

## 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, July 27, 1990; 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, 233 microsiemens Aug. 19; minimum recorded, 60 microsiemens July 14.

pH: Maximum recorded, 8.5 units July 27; minimum recorded, 6.2 units Jan. 2.

WATER TEMPERATURE: Maximum recorded, 30.5°C Aug. 20; minimum recorded 0°C Dec. 23, 24.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

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- TOCOCCEI FECAL, KF AGAR (COLS. PER 100 ML)
		HARD- NESS TOTAL (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 10...	1200	2.7	110	7.4	12.0	10.0	6.0	9.1	84	K90	K110
NOV 20...	1105	16	90	6.9	12.0	10.5	0.80	10.2	95	K27	K30
DEC 18...	1155	2.3	90	6.8	-18.0	1.0	0.40	13.8	--	K4	K90
JAN 16...	1200	5.4	90	7.2	12.0	5.5	0.60	11.8	107	K10	K22
FEB 20...	1030	19	90	7.6	9.0	5.0	10	12.6	100	K5	K8
MAR 27...	1045	11	100	7.2	11.5	7.0	1.0	13.3	111	K6	K31
APR 23...	1130	39	85	7.1	24.0	12.0	--	9.0	86	K18	K80
MAY 21...	1230	13	90	7.4	19.5	16.0	120	8.8	92	K80	K98
JUN 27...	1100	0.90	116	7.5	25.5	20.0	14	8.1	91	K29	K160
JUL 03...	1100	0.29	130	7.0	25.0	21.5	1.0	8.8	102	K13	K80
AUG 29...	1050	0.28	130	7.4	20.5	21.0	5.0	8.1	94	K400	K420
SEP 05...	1200	0.23	135	7.5	30.5	24.5	0.50	7.9	97	M0	K90
</											

K Results based on colony count outside the acceptable range.

M Presence of material verified but not quantified.

DATE	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- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- NUM, DIS- SOLVED (UG/L AS AL)
OCT 10...	9.7	50	<0.010	0.230	0.010	0.010	<0.20	<0.010	<0.010	<0.010	<10
NOV 20...	11	51	<0.010	0.230	<0.010	<0.010	<0.20	<0.010	<0.010	<0.010	10
DEC 18...	9.7	66	<0.010	0.240	0.030	0.030	<0.20	<0.010	0.020	<0.010	--
JAN 16...	9.6	57	<0.010	0.260	0.010	0.010	<0.20	0.020	<0.010	0.020	--
FEB 20...	10	42	<0.010	0.300	0.010	0.010	<0.20	0.020	0.020	0.020	--
MAR 27...	10	68	<0.010	0.200	<0.010	<0.010	<0.20	<0.010	<0.010	<0.010	--
APR 23...	--	--	<0.010	0.500	<0.010	<0.010	<0.20	<0.010	<0.010	<0.010	--
MAY 21...	11	57	<0.010	0.200	<0.010	0.010	<0.20	0.020	<0.010	<0.010	<10
JUN 27...	11	63	<0.010	0.200	0.010	0.020	<0.20	<0.010	0.020	<0.010	--
JUL 03...	12	78	0.010	0.200	0.020	0.010	0.30	0.030	<0.010	<0.010	<10
AUG 29...	11	82	<0.010	0.300	<0.010	0.020	<0.20	<0.010	0.010	<0.010	--
SEP 05...	11	83	<0.010	0.100	0.050	0.020	0.30	<0.010	<0.010	<0.010	--

[illegible][illegible]

## UPPER TWIN CREEK BASIN

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03237280 UPPER TWIN CREEK AT MCGAW, OH--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	136	106	122	145	143	144	110	108	108	99	95	97
2	113	108	111	147	144	145	110	107	108	102	99	100
3	116	114	115	148	145	146	108	107	108	102	90	97
4	118	115	116	148	145	147	110	108	109	107	82	101
5	119	116	118	147	146	147	110	108	109	105	78	88
6	124	118	121	149	147	148	111	109	110	---	---	---
7	124	118	121	149	120	139	112	108	110	---	---	---
8	119	118	118	129	124	126	112	110	111	---	---	---
9	122	118	120	126	114	118	113	110	112	---	---	---
10	124	122	123	113	107	109	114	111	112	---	---	---
11	122	118	120	108	105	107	114	111	112	---	---	---
12	121	118	119	109	107	108	114	112	113	---	---	---
13	123	120	121	119	108	113	115	112	114	---	---	---
14	124	121	123	128	119	124	115	113	114	---	---	---
15	125	123	124	128	78	114	115	112	114	---	---	---
16	128	123	125	82	76	79	119	115	117	104	95	97
17	129	94	107	86	82	84	125	118	122	109	94	99
18	104	94	100	90	85	88	124	95	105	110	94	98
19	104	94	100	92	88	90	---	---	---	103	93	97
20	106	102	105	104	92	97	---	---	---	99	71	81
21	110	105	108	108	103	105	---	---	---	82	75	78
22	119	110	114	105	102	104	---	---	---	---	---	---
23	125	119	122	106	103	104	---	---	---	---	---	---
24	129	125	127	107	104	106	---	---	---	---	---	---
25	131	129	130	108	106	107	---	---	---	---	---	---
26	132	130	131	108	107	107	---	---	---	---	---	---
27	135	131	133	108	107	108	---	---	---	---	---	---
28	137	133	135	111	107	110	---	---	---	---	---	---
29	138	134	136	111	109	110	---	---	---	---	---	---
30	141	137	139	110	108	109	---	---	---	---	---	---
31	144	139	142	---	---	---	95	85	88	---	---	---
MONTH	144	94	121	149	76	115	125	85	110	110	71	94
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	---	---	---	---	---	---	80	77	78	---	---	---
2	---	---	---	---	---	---	79	77	78	---	---	---
3	---	---	---	---	---	---	79	78	78	---	---	---
4	---	---	---	---	---	---	79	78	78	---	---	---
5	---	---	---	---	---	---	81	78	78	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	112	110	110
10	---	---	---	---	---	---	---	---	---	118	111	112
11	---	---	---	---	---	---	---	---	---	116	113	114
12	---	---	---	---	---	---	---	---	---	118	115	117
13	---	---	---	---	---	---	---	---	---	120	108	114
14	---	---	---	---	---	---	---	---	---	117	111	114
15	---	---	---	---	---	---	---	---	---	118	114	116
16	---	---	---	---	---	---	---	---	---	118	85	110
17	---	---	---	---	---	---	---	---	---	105	84	96
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	75	73	74	---	---	---	---	---	---	---	---	---
21	76	74	75	---	---	---	---	---	---	88	81	87
22	77	75	76	---	---	---	---	---	---	84	81	82
23	77	75	76	---	---	---	93	79	81	85	82	83
24	---	---	---	---	---	---	85	82	84	87	83	85
25	---	---	---	---	---	---	89	85	87	89	87	88
26	---	---	---	---	---	---	89	87	88	90	87	89
27	---	---	---	82	81	82	---	---	---	91	88	90
28	---	---	---	83	80	81	---	---	---	96	64	82
29	---	---	---	83	81	82	---	---	---	78	67	74
30	---	---	---	83	80	82	---	---	---	81	78	80
31	---	---	---	82	78	80	---	---	---	89	81	84
MONTH	77	73	75	83	78	81	93	77	81	120	64	96



## UPPER TWIN CREEK BASIN

03237280 UPPER TWIN CREEK AT MCGAW, OH--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	89	84	86	131	125	128	130	124	127	136	131	132
2	88	86	87	132	126	128	129	121	124	135	132	133
3	90	85	88	132	127	130	131	123	125	139	133	135
4	92	90	91	134	131	132	129	126	128	140	133	135
5	96	92	93	136	125	132	134	127	130	140	134	137
6	99	95	97	136	129	132	133	129	131	142	137	139
7	99	93	96	134	131	132	132	129	131	142	138	140
8	102	97	99	163	131	134	132	129	131	144	129	139
9	103	100	101	136	133	134	135	129	132	156	121	136
10	105	102	103	140	134	136	139	132	134	132	129	130
11	107	104	105	140	115	134	140	132	134	132	132	132
12	109	106	107	138	119	129	139	134	136	132	130	132
13	112	108	110	122	117	120	139	125	135	139	129	131
14	112	93	109	122	60	90	140	134	137	131	119	129
15	102	97	99	110	100	106	140	136	139	129	124	127
16	105	100	103	113	110	112	176	137	148	127	123	125
17	109	105	107	115	112	113	177	134	150	127	116	125
18	111	108	109	119	113	116	197	148	162	127	124	126
19	112	110	111	120	115	118	233	151	178	127	118	124
20	113	110	111	121	119	120	201	144	163	129	124	126
21	113	111	112	121	119	120	173	125	143	127	122	124
22	115	102	109	122	112	119	142	129	134	127	124	126
23	110	106	107	119	112	114	132	130	132	127	121	125
24	113	110	111	117	112	114	133	130	132	132	122	124
25	115	112	113	119	114	117	133	131	132	132	123	125
26	119	113	116	120	117	119	136	131	132	132	125	127
27	127	116	121	124	119	121	138	132	133	133	126	128
28	127	121	124	130	120	123	140	134	135	134	127	129
29	137	121	125	132	122	126	140	129	134	132	129	131
30	128	124	126	132	124	127	156	134	136	134	131	132
31	---	---	---	132	125	128	142	132	133	---	---	---
MONTH	137	84	106	163	60	123	233	121	137	156	116	130
YEAR	233	60	115									

PH (STANDARD UNITS), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	7.3	7.0	7.1	7.5	7.5	7.5	7.1	6.8	6.9	7.0	6.3	6.7
2	7.3	7.2	7.2	7.5	7.4	7.5	7.0	6.8	6.9	6.9	6.2	6.5
3	7.2	7.1	7.1	7.5	7.4	7.4	6.9	6.7	6.8	6.9	6.3	6.6
4	7.2	7.1	7.2	7.4	7.4	7.4	6.9	6.7	6.8	7.0	6.4	6.7
5	7.2	7.1	7.1	7.4	7.3	7.4	7.0	6.8	6.9	6.8	6.4	6.5
6	7.1	7.1	7.1	7.4	7.4	7.4	7.1	6.8	7.0	---	---	---
7	7.1	7.1	7.1	7.4	7.3	7.4	7.0	6.8	6.9	---	---	---
8	7.1	7.0	7.1	7.4	7.4	7.4	7.0	6.8	6.8	---	---	---
9	7.2	7.0	7.1	7.5	7.1	7.3	7.0	6.7	6.8	---	---	---
10	7.1	7.0	7.1	7.1	7.0	7.1	7.0	6.8	6.9	---	---	---
11	7.1	7.0	7.0	7.1	7.0	7.0	7.0	6.7	6.8	---	---	---
12	7.1	7.0	7.0	7.1	7.0	7.0	7.0	6.7	6.9	---	---	---
13	7.0	6.9	7.0	7.1	7.0	7.1	7.0	6.6	6.8	---	---	---
14	7.1	7.0	7.0	7.2	7.1	7.1	6.9	6.6	6.7	---	---	---
15	7.1	7.0	7.0	7.3	7.0	7.2	6.8	6.6	6.7	---	---	---
16	7.0	6.9	7.0	7.1	6.8	6.9	6.6	6.5	6.5	7.3	7.2	7.2
17	7.2	7.0	7.2	6.9	6.8	6.8	6.6	6.4	6.5	7.4	7.2	7.3
18	7.2	7.2	7.2	6.9	6.8	6.8	6.6	6.5	6.5	7.4	7.2	7.3
19	7.3	7.1	7.2	6.9	6.8	6.8	---	---	---	7.4	7.2	7.3
20	7.2	7.1	7.2	7.1	6.9	7.0	---	---	---	7.3	7.0	7.1
21	7.4	7.3	7.3	7.1	6.9	7.0	---	---	---	7.1	7.0	7.1
22	7.4	7.3	7.4	7.0	6.9	6.9	---	---	---	---	---	---
23	7.4	7.4	7.4	7.0	6.8	6.9	---	---	---	---	---	---
24	7.4	7.4	7.4	7.0	6.8	6.9	---	---	---	---	---	---
25	7.4	7.4	7.4	7.0	6.7	6.9	---	---	---	---	---	---
26	7.4	7.4	7.4	7.2	6.9	7.1	---	---	---	---	---	---
27	7.5	7.4	7.5	7.3	7.0	7.1	---	---	---	---	---	---
28	7.5	7.4	7.5	7.3	7.1	7.2	---	---	---	---	---	---
29	7.5	7.4	7.5	7.1	6.9	7.0	---	---	---	---	---	---
30	7.5	7.5	7.5	7.0	6.8	6.9	---	---	---	---	---	---
31	7.5	7.5	7.5	---	---	---	6.9	6.5	6.8	---	---	---
MONTH	7.5	6.9	7.2	7.5	6.7	7.1	7.1	6.4	6.8	7.4	6.2	6.9



## 03237280 UPPER TWIN CREEK AT MCGAW, OH--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	17.0	16.0	16.0	13.0	11.5	12.5	7.5	5.0	6.0	6.0	5.0	6.0
2	17.5	16.0	16.5	12.5	11.0	12.0	7.5	5.0	6.0	5.5	3.5	4.5
3	17.5	16.0	16.5	12.0	10.5	11.5	5.5	4.0	5.0	6.5	5.0	5.5
4	15.5	14.0	15.0	11.0	9.0	10.0	5.5	3.5	4.5	8.5	6.0	7.5
5	15.0	12.5	13.5	11.5	9.0	10.5	8.0	5.0	6.5	7.5	7.0	7.0
6	14.5	13.5	14.0	13.5	11.5	12.5	9.5	7.0	8.0	---	---	---
7	15.0	13.5	14.0	12.5	11.5	12.0	8.0	5.5	6.5	---	---	---
8	14.0	12.5	13.0	13.5	12.5	13.0	5.5	4.5	5.0	---	---	---
9	13.5	10.5	12.0	13.5	12.0	13.0	5.0	4.0	4.5	---	---	---
10	12.5	11.5	12.0	12.0	11.0	11.5	5.5	4.5	5.0	---	---	---
11	13.5	11.0	12.0	11.5	10.0	10.5	6.0	4.0	5.0	---	---	---
12	15.0	11.5	13.0	12.0	11.0	11.5	5.5	3.5	5.0	---	---	---
13	16.0	13.0	14.5	12.5	11.0	11.5	4.5	3.0	3.5	---	---	---
14	17.0	14.0	15.5	12.5	11.5	12.0	4.0	3.0	3.0	---	---	---
15	17.5	14.5	16.0	14.5	13.0	13.5	3.0	2.0	2.5	---	---	---
16	16.5	15.0	16.0	14.0	11.0	12.5	2.5	2.0	2.5	7.0	6.0	6.5
17	16.5	15.5	16.0	11.0	9.5	10.0	2.5	2.0	2.0	8.5	5.5	7.0
18	15.5	12.5	14.0	9.5	9.0	9.5	2.0	1.5	2.0	9.5	7.0	8.0
19	12.5	11.5	12.0	9.5	8.0	8.5	2.0	1.5	2.0	7.0	5.5	6.0
20	12.0	11.0	11.5	12.0	9.5	10.5	2.0	1.5	1.5	8.5	5.5	7.0
21	12.0	10.5	11.5	10.5	8.0	9.5	1.5	1.5	1.5	8.0	7.0	7.5
22	12.0	11.0	11.5	7.5	6.5	7.0	1.5	1.0	1.0	---	---	---
23	13.0	11.0	12.0	7.0	5.5	6.0	.5	.0	.5	---	---	---
24	13.5	12.0	13.0	7.5	4.5	6.0	.5	.0	.0	---	---	---
25	14.0	12.5	13.5	8.5	5.0	6.5	1.5	.5	1.0	---	---	---
26	14.0	12.5	13.5	10.5	8.5	9.0	1.5	1.0	1.5	---	---	---
27	14.0	12.5	13.5	11.0	8.5	9.5	1.5	1.0	1.0	---	---	---
28	14.0	12.0	13.0	11.5	9.5	10.5	1.5	1.5	1.5	---	---	---
29	13.5	12.0	12.5	9.5	7.0	8.5	1.5	1.5	1.5	---	---	---
30	13.5	12.0	12.5	7.5	5.5	6.5	1.5	1.5	1.5	---	---	---
31	13.0	12.5	13.0	---	---	---	7.0	1.5	4.5	---	---	---
MONTH	17.5	10.5	13.5	14.5	4.5	10.0	9.5	.0	3.5	9.5	3.5	6.5
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	---	---	---	---	---	---	10.0	7.5	8.5	---	---	---
2	---	---	---	---	---	---	9.5	6.5	7.5	---	---	---
3	---	---	---	---	---	---	6.5	5.0	5.5	---	---	---
4	---	---	---	---	---	---	8.5	5.0	6.5	---	---	---
5	---	---	---	---	---	---	10.0	5.5	7.5	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	15.5	14.0	15.0
10	---	---	---	---	---	---	---	---	---	15.0	12.5	14.0
11	---	---	---	---	---	---	---	---	---	16.5	11.0	13.0
12	---	---	---	---	---	---	---	---	---	13.0	11.5	12.5
13	---	---	---	---	---	---	---	---	---	15.0	12.0	13.5
14	---	---	---	---	---	---	---	---	---	17.5	13.0	14.5
15	---	---	---	---	---	---	---	---	---	16.0	13.5	15.0
16	---	---	---	---	---	---	---	---	---	17.0	14.0	15.0
17	---	---	---	---	---	---	---	---	---	14.5	13.5	14.0
18	---	---	---	---	---	---	---	---	---	15.0	13.0	14.0
19	---	---	---	---	---	---	---	---	---	15.5	13.0	14.0
20	6.5	4.0	5.5	---	---	---	---	---	---	16.0	14.0	15.0
21	7.0	3.5	5.0	---	---	---	---	---	---	16.5	14.5	15.5
22	8.5	5.5	7.0	---	---	---	---	---	---	14.5	13.0	13.5
23	7.5	7.0	7.0	---	---	---	12.5	10.0	11.0	15.0	12.0	13.5
24	---	---	---	---	---	---	13.5	8.5	10.5	17.0	12.5	14.5
25	---	---	---	---	---	---	14.5	9.5	11.5	15.0	13.5	14.0
26	---	---	---	---	---	---	12.5	10.0	12.0	16.0	14.0	15.0
27	---	---	---	8.0	4.0	6.5	---	---	---	18.5	14.5	16.0
28	---	---	---	7.0	3.0	5.0	---	---	---	16.0	14.0	15.0
29	---	---	---	7.5	5.0	6.5	---	---	---	14.5	13.5	14.0
30	---	---	---	9.0	6.5	7.5	---	---	---	15.0	12.5	13.5
31	---	---	---	8.0	7.5	7.5	---	---	---	17.0	12.0	14.5
MONTH	8.5	3.5	6.0	9.0	3.0	6.5	14.5	5.0	9.0	18.5	11.0	14.5





## 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 mi<sup>2</sup>.

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: Dec. 13-30 and Aug. 2-7. 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.--59 years, 450 ft<sup>3</sup>/s, 15.79 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 59,200 ft<sup>3</sup>/s Mar. 10, 1964; gage height, 27.91 ft, from rating curve extended above 22,000 ft<sup>3</sup>/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 ft<sup>3</sup>/s, and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 31	1445	14,000	15.50	Apr. 21	1330	11,900	14.16
Jan. 20	1415	13,100	14.92	May 5	0315	16,700	16.69
Jan. 29	2030	11,200	13.72	May 17	0715	16,600	16.65
Feb. 16	0615	*20,900	*18.33				

Minimum daily discharge, 7.8 ft<sup>3</sup>/s Aug. 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	86	88	2300	599	263	570	168	392	26	14	84
2	47	88	82	825	2280	219	383	185	297	22	12	55
3	39	82	78	482	2100	209	293	162	2010	20	10	39
4	32	76	72	440	3310	178	233	3290	635	19	25	30
5	27	72	68	550	1650	152	205	9340	333	22	60	24
6	25	67	72	348	819	141	175	1950	249	73	150	20
7	30	67	72	264	1070	129	150	1110	740	36	66	17
8	33	98	70	223	861	119	130	602	480	24	36	17
9	37	1600	65	199	2740	124	117	409	260	17	23	16
10	45	503	61	183	5070	133	378	314	187	16	17	15
11	53	256	65	165	1460	503	2630	244	147	55	13	14
12	58	179	62	150	1060	495	725	196	120	362	9.7	15
13	51	140	53	128	667	267	397	435	104	572	8.6	18
14	43	119	42	108	495	207	302	510	227	304	9.0	37
15	37	242	36	110	1420	180	367	260	1270	247	30	161
16	54	4450	33	117	10500	159	284	3310	325	155	37	87
17	2670	949	30	119	1510	227	248	11800	169	86	22	42
18	1150	432	26	324	763	240	261	1810	118	57	14	27
19	1440	272	24	399	567	190	199	761	94	41	10	33
20	1150	216	22	6020	425	335	176	456	79	31	7.8	215
21	498	187	20	1980	333	242	6230	345	73	24	301	136
22	284	151	17	836	304	191	1870	449	87	23	3530	77
23	195	131	15	509	294	167	764	370	141	116	1500	60
24	153	114	15	382	260	151	478	251	98	157	739	75
25	127	103	14	341	223	188	341	203	77	68	206	48
26	111	101	14	481	163	264	263	1090	59	41	109	34
27	99	100	16	302	183	228	215	1150	47	27	76	27
28	90	115	18	240	283	176	189	2890	39	20	57	21
29	83	120	23	4840	---	155	238	5370	32	15	54	19
30	75	101	250	2700	---	156	214	1490	29	13	251	1210
31	75	---	8530	995	---	588	---	675	---	16	167	---
TOTAL	8854	11217	10053	27060	41409	6976	19025	51595	8918	2705	7564.1	2673
MEAN	286	374	324	873	1479	225	634	1664	297	87.3	244	89.1
MAX	2670	4450	8530	6020	10500	588	6230	11800	2010	572	3530	1210
MIN	25	67	14	108	163	119	117	162	29	13	7.8	14
CFSM	.74	.97	.84	2.26	3.82	.58	1.64	4.30	.77	.23	.63	.23
IN.	.85	1.08	.97	2.60	3.98	.67	1.83	4.96	.86	.26	.73	.26

CAL YR 1989 TOTAL 220296 MEAN 604 MAX 11700 MIN 11 CFSM 1.56 IN. 21.18  
WTR YR 1990 TOTAL 198049.1 MEAN 543 MAX 11800 MIN 7.8 CFSM 1.40 IN. 19.04

## WHITEOAK CREEK BASIN

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 mi<sup>2</sup>.

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: Dec. 5-30. Records good except those below 30 ft<sup>3</sup>/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 1990 averaged 0.44 ft<sup>3</sup>/s. Satellite telemeter at this station.

AVERAGE DISCHARGE.--63 years, 257 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,400 ft<sup>3</sup>/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 ft<sup>3</sup>/s, and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 31	1930	5,940	6.26	Apr. 11	0700	6,810	6.56
Jan. 20	1700	6,840	6.57	Apr. 21	0630	5,780	6.20
Jan. 30	0030	5,700	6.17	May 5	1400	6,900	6.59
Feb. 9	2400	5,940	6.26	May 17	1930	*11,800	*7.96
Feb. 16	1130	8,650	7.13				

Minimum daily discharge, 0.17 ft<sup>3</sup>/s, Oct. 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	3.6	23	1460	314	126	510	64	125	11	5.5	32
2	3.6	4.0	21	229	1580	99	325	64	114	11	4.0	20
3	2.4	4.4	20	108	999	87	203	64	1180	11	2.2	14
4	2.2	4.4	19	125	2470	73	131	327	363	11	3.6	12
5	1.4	6.4	18	257	1020	57	104	5540	141	8.7	48	11
6	.77	6.9	18	106	298	49	87	1000	96	339	219	8.9
7	1.7	7.8	17	61	651	39	72	437	296	100	36	6.9
8	.60	91	17	47	495	35	61	208	307	33	16	7.8
9	.22	212	15	67	1770	35	58	132	131	17	11	7.8
10	.17	125	14	60	3570	38	1010	94	80	12	9.0	7.8
11	.60	48	12	52	578	1040	4080	77	63	133	8.0	7.8
12	1.1	23	11	43	402	473	431	63	46	294	7.8	7.8
13	1.2	13	10	32	236	184	211	751	34	466	8.8	58
14	1.2	8.8	9.4	28	163	121	151	509	149	1410	276	93
15	1.2	228	8.4	29	953	91	148	215	1930	847	68	68
16	1.5	1810	7.8	29	6700	117	146	3070	234	127	26	23
17	112	378	7.2	30	642	311	115	10200	93	58	15	13
18	157	138	6.6	265	242	214	109	2420	56	32	10	10
19	122	85	6.0	275	170	127	96	269	34	25	9.0	31
20	250	65	5.6	4480	127	227	78	165	29	17	7.1	175
21	105	53	5.4	1350	95	139	3550	263	28	15	49	69
22	37	39	5.2	333	91	96	1050	189	30	22	1490	35
23	20	32	5.0	180	84	78	287	245	127	38	434	28
24	12	29	4.8	126	75	71	167	130	96	58	88	26
25	6.9	28	4.8	108	64	96	115	95	38	27	41	17
26	4.2	28	4.8	139	42	214	89	136	28	15	28	13
27	2.7	28	4.8	110	37	155	75	389	19	12	19	11
28	2.2	28	4.8	75	91	101	65	518	13	9.9	15	11
29	2.2	28	4.8	1940	---	82	64	3420	11	8.9	120	11
30	1.9	24	80	2170	---	78	64	598	11	7.9	301	384
31	2.8	---	4130	358	---	511	---	203	---	7.4	78	---
TOTAL	861.36	3579.3	4520.4	14672	23959	5164	13652	31855	5902	4183.8	3453.0	1219.8
MEAN	27.8	119	146	473	856	167	455	1028	197	135	111	40.7
MAX	250	1810	4130	4480	6700	1040	4080	10200	1930	1410	1490	384
MIN	.17	3.6	4.8	28	37	35	58	63	11	7.4	2.2	6.9

CAL YR 1989 TOTAL 121919.61 MEAN 334 MAX 7270 MIN .07  
WTR YR 1990 TOTAL 113021.66 MEAN 310 MAX 10200 MIN .17

## 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 mi<sup>2</sup>.

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. 9-30 and May 29 to June 7. 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.--38 years, 119 ft<sup>3</sup>/s, 12.53 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,800 ft<sup>3</sup>/s Jan. 21, 1959, gage height, 12.20 ft, from rating curve extended above 4,400 ft<sup>3</sup>/s on basis of slope area measurements of peak flow; minimum, 2.8 ft<sup>3</sup>/s Sept. 2, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 800 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 31	2145	1400	5.65	May 17	0545	1,590	6.04
Feb. 4	2215	1250	5.34	May 29	unknown	2,100	unknown
Feb. 16	0845	2700	7.94	June 14	2115	1,080	4.96
May 5	0300	851	4.40	July 9	2230	1,800	6.46
May 13	1715	870	4.45	July 13	0845	*4,960	*10.05

Minimum discharge, 25 ft<sup>3</sup>/s Dec. 21, 22, result of freeze-up.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	36	48	910	145	155	189	87	340	66	94	41
2	42	35	47	524	483	148	213	84	220	62	89	41
3	39	35	46	238	440	140	175	83	190	60	86	40
4	37	33	43	159	928	125	156	231	160	57	86	38
5	36	33	44	217	817	118	140	712	140	54	101	37
6	37	38	47	157	463	111	123	430	160	52	88	37
7	37	41	48	123	399	102	112	280	180	49	80	36
8	36	73	43	108	343	100	103	206	367	48	77	37
9	34	101	40	98	307	106	97	168	492	291	73	194
10	36	74	37	93	361	103	222	150	304	408	71	116
11	37	60	35	93	287	406	641	132	205	245	68	68
12	35	53	33	87	241	323	352	128	164	2700	66	61
13	34	47	32	73	208	228	244	613	143	3540	65	63
14	34	45	30	68	214	189	202	594	296	898	65	59
15	32	66	29	66	1000	165	177	590	461	792	61	80
16	32	293	28	64	2180	179	155	1130	238	392	60	70
17	34	177	27	65	726	172	141	1340	169	269	57	56
18	34	119	27	79	426	147	123	715	141	210	58	50
19	40	93	26	87	334	133	114	375	122	178	56	55
20	46	84	26	253	262	123	115	290	118	189	55	54
21	45	76	25	440	223	115	176	241	113	316	59	49
22	42	66	25	281	214	111	173	205	106	312	57	50
23	40	62	28	202	203	106	142	183	108	292	55	48
24	38	58	31	169	184	101	126	162	99	218	52	47
25	36	56	34	154	149	99	115	152	87	170	51	44
26	35	58	36	165	151	94	107	257	81	146	50	42
27	36	57	35	133	150	90	102	256	77	132	47	41
28	36	57	35	117	170	87	100	276	74	121	45	40
29	34	53	43	115	---	90	100	1650	71	113	51	40
30	35	49	60	111	---	125	93	1000	69	106	49	54
31	36	---	945	103	---	176	---	600	---	101	44	---
TOTAL	1146	2128	2033	5552	12008	4467	5028	13320	5495	12587	2016	1688
MEAN	37.0	70.9	65.6	179	429	144	168	430	183	406	65.0	56.3
MAX	46	293	945	910	2180	406	641	1650	492	3540	101	194
MIN	32	33	25	64	145	87	93	83	69	48	44	36
CFSM	.29	.55	.51	1.39	3.32	1.12	1.30	3.33	1.42	3.15	.50	.44
IN.	.33	.61	.59	1.60	3.46	1.29	1.45	3.84	1.58	3.63	.58	.49

CAL YR 1989 TOTAL 70183 MEAN 192 MAX 2270 MIN 25 CFMS 1.49 IN. 20.24  
WTR YR 1990 TOTAL 67468 MEAN 185 MAX 3540 MIN 25 CFMS 1.43 IN. 19.46

## 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 mi<sup>2</sup>.

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: Dec. 9 to Apr. 10. 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.--38 years, 63.8 ft<sup>3</sup>/s, 13.71 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,300 ft<sup>3</sup>/s Jan. 21, 1959, Mar. 4, 1963, gage height, 11.25 ft, from rating curve extended above 3,100 ft<sup>3</sup>/s; minimum, 0.3 ft<sup>3</sup>/s Sept. 3-7, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 31	unknown	980	unknown	May 17	0400	1,150	6.90
Feb. 4	unknown	900	unknown	May 29	1730	1,050	6.67
Feb. 16	unknown	1,100	unknown	July 9	2200	1,250	7.15
May 4	2400	839	6.11	July 12	1230	*2,110	*8.80

Minimum daily 6.2 ft<sup>3</sup>/s Sept. 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.5	11	18	460	70	78	94	45	136	29	27	7.8
2	5.4	10	18	230	240	72	105	42	111	26	25	7.4
3	5.5	9.4	16	135	230	66	96	40	99	25	24	7.2
4	5.5	8.6	15	82	470	62	84	130	84	23	26	7.2
5	5.6	8.7	16	110	370	58	76	379	71	21	29	6.9
6	6.0	13	17	84	250	54	66	226	84	20	24	6.9
7	6.2	14	18	66	220	50	60	144	147	19	22	6.5
8	6.2	24	15	54	180	47	54	109	241	18	20	6.9
9	6.0	31	13	43	160	50	47	92	217	191	19	18
10	8.1	26	12	40	180	50	100	83	131	506	18	20
11	9.1	20	11	38	150	200	323	69	96	221	17	14
12	8.3	17	10	36	125	170	195	64	79	1010	16	14
13	8.0	16	9.8	31	100	135	122	316	68	1410	16	13
14	7.7	15	9.0	27	99	105	101	410	125	589	16	10
15	7.5	25	8.6	25	350	82	88	423	193	499	15	13
16	7.4	123	8.2	24	1100	88	73	899	109	197	13	9.9
17	7.9	100	7.8	23	600	86	65	896	79	126	12	8.3
18	8.4	74	7.4	26	250	74	56	441	65	99	13	7.4
19	12	54	7.2	40	160	66	54	194	56	80	11	9.7
20	13	49	7.2	120	135	62	54	143	53	99	11	9.5
21	13	40	6.8	220	115	58	110	116	50	225	14	8.3
22	12	31	6.6	150	100	54	119	98	47	165	13	9.6
23	11	27	7.4	115	94	51	91	85	46	129	12	8.9
24	11	24	8.2	94	84	48	77	72	42	97	12	8.4
25	9.9	23	9.0	78	74	47	66	66	38	74	11	7.5
26	9.5	23	9.2	82	72	45	60	204	37	60	10	7.1
27	9.4	23	9.0	72	72	44	57	310	35	53	9.3	6.8
28	8.7	24	9.0	58	84	43	54	234	33	46	8.6	6.9
29	8.4	21	13	54	---	42	52	941	31	40	12	17
30	8.7	18	30	52	---	54	47	552	30	34	9.7	40
31	11	---	480	50	---	84	---	198	---	30	8.1	---
TOTAL	261.9	902.7	832.4	2719	6134	2225	2646	8021	2633	6161	493.7	324.1
MEAN	8.45	30.1	26.9	87.7	219	71.8	88.2	259	87.8	199	15.9	10.8
MAX	13	123	480	460	1100	200	323	941	241	1410	29	40
MIN	5.4	8.6	6.6	23	70	42	47	40	30	18	8.1	6.5
CFSM	.13	.48	.42	1.39	3.47	1.14	1.40	4.09	1.39	3.14	.25	.17
IN.	.15	.53	.49	1.60	3.61	1.31	1.56	4.72	1.55	3.63	.29	.19

CAL YR 1989 TOTAL 35117.1 MEAN 96.2 MAX 2480 MIN 5.3 CFSM 1.52 IN. 20.67  
WTR YR 1990 TOTAL 33353.8 MEAN 91.4 MAX 1410 MIN 5.4 CFSM 1.45 IN. 19.63



## 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 down-stream 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 mi<sup>2</sup>.

## 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: Dec. 10-29. 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. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--65 years, (1915-17, 1925-36, 1938-90), 1,254 ft<sup>3</sup>/s, 14.16 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 84,100 ft<sup>3</sup>/s Jan. 22, 1959, gage height, 27.30 ft present datum, from rating curve extended above 60,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum observed, 27 ft<sup>3</sup>/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 ft<sup>3</sup>/s and maximum (\*).

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 15	2400	31,600	17.54	May 15	2300	28,700	16.82
Apr. 11	0100	15,500	12.72	May 17	0700	*34,800	*18.28
May 5	0500	20,900	14.55	May 29	0900	19,000	13.93

Minimum daily discharge, 170 ft<sup>3</sup>/s Dec. 21, 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	273	260	345	3580	1050	1140	1620	792	5170	507	412	395
2	274	278	321	1580	2150	1070	1760	820	3770	487	391	340
3	273	295	312	1090	3060	937	1290	784	3240	458	374	300
4	264	282	293	1170	8680	832	1070	4790	2270	437	413	277
5	232	275	284	1400	6840	802	966	13700	2870	420	556	266
6	232	296	283	1200	4530	793	882	6710	1870	475	492	254
7	251	426	306	1030	4240	758	774	4020	3790	431	534	240
8	233	617	336	934	3640	726	697	3640	2750	394	455	264
9	228	1050	310	869	2770	632	648	3020	1990	377	340	313
10	231	643	280	665	3920	772	3450	1630	1730	3340	309	1040
11	243	524	260	565	2830	8130	9610	1350	1360	2940	297	602
12	230	413	240	538	2410	5220	4860	1000	1340	6840	281	1040
13	230	359	220	431	1700	4650	2600	7270	1090	6980	436	846
14	228	332	210	389	1660	3780	1790	4990	1210	9370	352	636
15	215	1550	200	377	9840	1940	1670	10700	3570	8110	327	1100
16	253	6110	190	373	17800	2320	1290	16900	3490	3780	293	957
17	374	2050	185	375	7390	2440	1120	23800	1870	1730	283	821
18	276	1280	180	1200	5760	1540	1000	8220	1260	2840	272	478
19	350	993	175	920	4920	1390	876	6210	946	4010	260	1030
20	440	866	175	4360	4450	1310	824	5620	884	2560	343	762
21	431	627	170	3410	4140	1000	1360	5200	931	1230	4130	567
22	346	596	170	2040	3820	909	2910	4430	892	1630	5130	547
23	300	561	180	1820	2190	852	1740	4140	1340	1520	1640	487
24	278	538	190	1470	1600	855	1330	3530	1320	1300	986	411
25	261	525	210	1380	1260	951	1160	1530	966	1110	513	346
26	251	524	230	1140	1010	948	1050	3020	719	1680	403	323
27	242	529	230	909	973	848	801	5420	628	2720	336	300
28	237	500	230	701	1200	787	815	3500	601	989	309	288
29	257	455	290	1600	---	690	847	14800	543	637	1270	322
30	250	401	535	2000	---	881	748	8700	501	477	1330	558
31	247	---	6570	1170	---	1440	---	6410	---	442	589	---
TOTAL	8430	24155	14110	40686	115833	51343	51558	186646	54911	70221	24056	16110
MEAN	272	805	455	1312	4137	1656	1719	6021	1830	2265	776	537
MAX	440	6110	6570	4360	17800	8130	9610	23800	5170	9370	5130	1100
MIN	215	260	170	373	973	632	648	784	501	377	260	240
CFSM	.23	.67	.38	1.09	3.44	1.38	1.43	5.00	1.52	1.88	.65	.45
IN.	.26	.75	.44	1.26	3.58	1.59	1.59	5.77	1.70	2.17	.74	.50
CAL YR 1989	TOTAL 650201	MEAN 1781	MAX 17400	MIN 170	CFSM 1.48	IN. 20.11						
WTR YR 1990	TOTAL 658059	MEAN 1803	MAX 23800	MIN 170	CFSM 1.50	IN. 20.35						

## LITTLE MIAMI RIVER BASIN

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, 0.78 ton Oct. 17, 1988.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,310 mg/L May 17; minimum daily mean, 4 mg/L Dec. 4-7, Jan. 11-15.

SEDIMENT LOADS: Maximum daily, 87,700 tons May 17; minimum daily, 3.1 tons Dec. 16.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

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- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)
OCT 17...	1000	347	590	8.4	21.0	19.0	40	7.3	82	K5500	K9100
JAN 24...	0945	1420	580	8.2	11.0	5.0	6.0	13.0	105	K500	K1800
MAR 27...	1445	834	670	8.7	5.0	2.0	2.8	13.6	100	K7	K18
MAY 22...	0845	4500	560	8.0	13.0	12.5	23	10.3	100	K1900	K1800
JUL 17...	0930	1790	500	8.2	15.5	15.0	39	9.8	99	K1000	K650
SEP 06...	1030	334	720	8.5	36.0	26.0	19	8.0	102	K290	K100

DATE	HARD- NESS TOTAL (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)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT 17...	210	55	18	32	4.4	198	5	170	42	47	0.3
JAN 24...	260	66	24	15	3.2	237	0	192	42	36	0.2
MAR 27...	300	77	27	31	2.8	253	14	230	50	56	<0.1
MAY 22...	240	60	21	11	2.6	232	0	190	35	26	0.3
JUL 17...	250	64	21	12	4.1	221	0	181	26	22	0.1
SEP 06...	320	80	29	40	4.1	310	0	254	49	66	0.3

K Results based on colony count outside the acceptable range.

## LITTLE MIAMI RIVER BASIN

03245500 LITTLE MIAMI RIVER AT MILFORD, OH--Continued

DATE	SILICA, DIS- SOLVED (MG/L AS STO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)
OCT 17...	1.9	326	0.03	2.10	0.05	0.02	1.1	0.72	0.54	0.48	30
JAN 24...	5.5	368	0.02	4.50	0.07	0.07	0.6	0.16	0.11	0.12	<10
MAR 27...	2.4	405	0.02	2.70	0.01	<0.01	0.4	0.19	0.17	0.17	--
MAY 22...	4.8	299	0.03	4.50	0.05	0.04	0.9	0.17	0.08	0.07	<10
JUL 17...	9.4	318	0.02	4.70	0.06	0.03	1.3	0.31	0.21	0.21	70
SEP 06...	6.3	448	0.02	2.90	0.05	0.03	0.6	0.44	0.40	0.40	--

[illegible][illegible]

## LITTLE MIAMI RIVER BASIN

03245500 LITTLE MIAMI RIVER AT MILFORD, OH--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

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	273	31	23	260	11	7.8	345	5	4.3
2	274	24	17	278	17	13	321	6	4.9
3	273	13	9.5	295	12	9.7	312	5	4.0
4	264	22	16	282	7	5.1	293	4	3.2
5	232	25	16	275	6	4.5	284	4	3.2
6	232	25	16	296	10	8.2	283	4	3.3
7	251	26	18	426	27	35	306	4	3.7
8	233	23	14	617	42	74	336	5	4.2
9	228	18	11	1050	79	229	310	5	4.0
10	231	16	10	643	35	62	280	5	3.8
11	243	16	11	524	25	36	260	5	3.6
12	230	16	9.9	413	22	25	240	5	3.5
13	230	16	9.9	359	18	17	220	6	3.3
14	228	16	9.9	332	17	15	210	6	3.2
15	215	17	10	1550	58	876	200	6	3.2
16	253	29	24	6110	679	13200	190	6	3.1
17	374	56	61	2050	134	799	185	6	3.2
18	276	17	13	1280	28	99	180	7	3.2
19	350	36	36	993	23	62	175	7	3.2
20	440	24	28	866	20	48	175	7	3.3
21	431	18	21	627	17	29	170	7	3.4
22	346	16	15	596	8	13	170	8	3.5
23	300	19	15	561	6	9.2	180	8	3.8
24	278	18	14	538	6	9.4	190	8	4.2
25	261	18	13	525	9	12	210	8	4.8
26	251	18	12	524	12	16	230	9	5.4
27	242	19	12	529	16	23	230	9	5.6
28	237	18	12	500	20	27	230	9	5.8
29	257	16	11	455	17	20	290	10	7.6
30	250	14	9.5	401	8	8.5	535	22	36
31	247	13	8.3	---	---	---	6570	505	11000
TOTAL	8430	---	506.0	24155	---	15792.4	14110	---	11151.5
JANUARY			FEBRUARY			MARCH			
1	3580	282	2880	1050	29	84	1140	25	77
2	1580	162	734	2150	60	370	1070	19	55
3	1090	44	131	3060	107	883	937	26	65
4	1170	38	117	8680	589	17500	832	16	37
5	1400	23	86	6840	446	8690	802	8	16
6	1200	11	36	4530	169	2120	793	12	25
7	1030	9	25	4240	116	1330	758	34	69
8	934	6	16	3640	77	765	726	50	98
9	869	7	16	2770	81	618	632	40	68
10	665	5	9.9	3920	148	1590	772	35	73
11	565	4	6.2	2830	67	521	8130	699	17800
12	538	4	5.8	2410	39	258	5220	511	7590
13	431	4	4.7	1700	26	119	4650	195	2480
14	389	4	4.2	1660	24	107	3780	93	960
15	377	4	4.1	9840	780	42300	1940	74	388
16	373	5	5.2	17800	1030	56300	2320	79	484
17	375	10	9.9	7390	373	7580	2440	54	360
18	1200	169	591	5760	218	3500	1540	38	161
19	920	91	233	4920	99	1310	1390	14	51
20	4360	478	7240	4450	88	1050	1310	13	47
21	3410	282	2730	4140	90	1010	1000	18	49
22	2040	187	1060	3820	77	796	909	19	46
23	1820	61	301	2190	64	382	852	16	36
24	1470	21	85	1600	55	239	855	15	34
25	1380	20	73	1260	45	154	951	18	46
26	1140	19	60	1010	37	99.9	948	19	49
27	909	17	41	973	30	77	848	14	31
28	701	16	31	1200	26	85	787	14	30
29	1600	95	752	---	---	---	690	14	26
30	2000	101	618	---	---	---	881	14	35
31	1170	46	147	---	---	---	1440	28	112
TOTAL	40686	---	18053.0	115833	---	149837.9	51343	---	31398



## LITTLE MIAMI RIVER BASIN

03245500 LITTLE MIAMI RIVER AT MILFORD, OH--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

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	1620	38	165	792	27	57	5170	125	1750
2	1760	31	149	820	26	57	3770	112	1140
3	1290	22	79	784	30	63	3240	179	1630
4	1070	10	30	4790	204	5460	2270	145	902
5	966	10	26	13700	823	34800	2870	138	1080
6	882	9	21	6710	232	4210	1870	88	454
7	774	6	13	4020	243	2670	3790	511	5520
8	697	6	12	3640	134	1320	2750	217	1650
9	648	7	12	3020	90	745	1990	149	802
10	3450	153	4680	1630	62	273	1730	172	802
11	9610	603	17200	1350	50	184	1360	172	636
12	4860	226	3100	1000	22	61	1340	112	407
13	2600	104	743	7270	779	18700	1090	70	208
14	1790	62	300	4990	357	5050	1210	70	251
15	1670	36	164	10700	480	24600	3570	510	5220
16	1290	22	78	16900	701	34500	3490	243	2330
17	1120	17	50	23800	1310	87700	1870	177	901
18	1000	16	43	8220	617	14500	1260	132	455
19	876	13	32	6210	212	3610	946	93	240
20	824	17	37	5620	123	1860	884	72	173
21	1360	30	118	5200	102	1440	931	62	155
22	2910	67	555	4430	92	1100	892	76	187
23	1740	31	148	4140	68	765	1340	180	664
24	1330	29	106	3530	29	290	1320	173	616
25	1160	28	86	1530	10	40	966	145	385
26	1050	24	68	3020	383	5800	719	86	170
27	801	20	43	5420	602	9410	628	54	92
28	815	25	55	3500	170	1680	601	49	79
29	847	25	56	14800	480	20000	543	52	76
30	748	23	46	8700	290	6920	501	102	137
31	---	---	---	6410	170	2980	---	---	---
TOTAL	51558	---	28215	186646	---	290845	54911	---	29112
JULY			AUGUST			SEPTEMBER			
1	507	143	196	412	124	138	395	122	132
2	487	120	158	391	107	113	340	56	52
3	458	104	128	374	91	91	300	69	56
4	437	117	138	413	164	239	277	117	88
5	420	127	146	556	183	299	266	76	54
6	475	176	236	492	86	115	254	126	87
7	431	58	68	534	52	74	240	91	59
8	394	43	45	455	16	19	264	100	81
9	377	52	53	340	30	27	313	85	77
10	3340	1040	13800	309	22	18	1040	239	856
11	2940	987	7970	297	26	21	602	107	185
12	6840	1120	20600	281	36	27	1040	246	916
13	6980	786	14900	436	256	417	846	142	335
14	9370	586	15100	352	81	81	636	84	144
15	8110	430	10000	327	33	29	1100	222	772
16	3780	166	1820	293	61	48	957	161	422
17	1730	98	469	283	47	36	821	58	129
18	2840	104	818	272	45	33	478	46	60
19	4010	223	2460	260	34	24	1030	372	1350
20	2560	112	832	343	41	55	762	145	310
21	1230	66	217	4130	857	11000	567	73	112
22	1630	56	251	5130	890	13400	547	81	120
23	1520	96	393	1640	441	2120	487	83	111
24	1300	97	340	986	151	412	411	44	48
25	1110	93	282	513	61	86	346	42	39
26	1680	68	330	403	51	56	323	46	40
27	2720	107	803	336	59	53	300	53	43
28	989	55	150	309	60	50	288	61	47
29	637	62	101	1270	407	1820	322	101	112
30	477	129	166	1330	247	933	558	188	291
31	442	103	123	589	140	223	---	---	---
TOTAL	70221	---	93093	24056	---	32057	16110	---	7128
YEAR	658059		707267.5						

## LITTLE MIAMI RIVER BASIN

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 mi<sup>2</sup>, 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.--Estimated daily discharges: Dec. 12-31. Records good except those for period of estimated record 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 ft<sup>3</sup>/s, 14 years (water years 1977-90) 413 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,700 ft<sup>3</sup>/s Apr. 2, 1970, gage height, 20.31 ft; minimum daily, 0.14 ft<sup>3</sup>/s Sept. 23, 27, 1967. Maximum discharge since start of construction of East Fork Dam 31,000 ft<sup>3</sup>/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 ft<sup>3</sup>/s, from flood study.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,510 ft<sup>3</sup>/s May 23, gage height, 12.45 ft; minimum daily, 17 ft<sup>3</sup>/s Dec. 28-29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	133	134	301	1150	135	102	123	2130	69	46	192
2	61	108	134	721	1170	221	98	123	1080	59	41	155
3	62	66	122	1060	1160	221	93	123	640	41	32	116
4	63	65	84	1050	1320	173	91	316	662	33	35	117
5	54	72	42	1050	1560	118	88	526	579	34	39	118
6	40	92	42	1040	1880	118	88	1090	353	37	36	99
7	40	120	41	1040	1890	131	81	2480	352	34	34	102
8	39	176	41	1030	1870	149	69	3550	563	35	34	73
9	39	271	46	1030	1960	121	69	3490	268	36	34	77
10	40	320	61	849	1930	80	130	3120	361	34	34	75
11	41	320	56	474	1870	308	1390	1830	297	39	34	75
12	41	231	35	165	1850	650	2750	505	152	115	34	84
13	41	95	31	81	1830	1090	1750	377	71	239	52	230
14	41	95	29	81	1810	908	824	733	81	447	37	422
15	43	140	27	81	1310	544	439	1120	379	534	35	427
16	45	241	26	81	422	443	104	1020	572	834	34	358
17	61	809	25	87	1800	440	104	871	275	1110	34	205
18	101	1230	23	162	2840	435	103	2580	108	925	34	118
19	154	976	23	322	2780	434	101	4120	108	588	34	215
20	219	718	22	588	2750	434	116	4060	111	313	34	350
21	271	624	21	476	2230	431	364	3870	111	92	53	420
22	162	287	20	865	1140	278	453	3210	110	93	54	347
23	119	126	20	1580	351	105	765	4270	95	93	253	225
24	186	66	19	2010	347	153	1070	4430	95	92	537	164
25	186	65	19	1550	347	221	734	3680	111	92	540	164
26	183	70	19	965	343	221	376	1700	128	92	429	164
27	183	81	18	702	296	219	276	732	128	92	188	144
28	166	85	17	490	153	217	183	701	128	92	71	92
29	128	85	17	352	---	217	123	1170	104	92	108	63
30	128	104	27	729	---	172	123	2120	69	83	126	190
31	131	---	150	1140	---	104	---	2490	---	62	155	---
TOTAL	3113	7871	1391	22152	40359	9491	13057	60530	10221	6531	3241	5581
MEAN	100	262	44.9	715	1441	306	435	1953	341	211	105	186
MAX	271	1230	150	2010	2840	1090	2750	4430	2130	1110	540	427
MIN	39	65	17	81	153	80	69	123	69	33	32	63

CAL YR 1989 TOTAL 189509 MEAN 519 MAX 3600 MIN 17  
WTR YR 1990 TOTAL 183538 MEAN 503 MAX 4430 MIN 17

## 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 mi<sup>2</sup>.

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: Dec. 12-29, March 12-16, and June 1-6. Records 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.--67 years (1915-17, 1925-90), 552 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 42,400 ft<sup>3</sup>/s Mar. 10, 1964, gage height, 23.84 ft; minimum daily, 0.4 ft<sup>3</sup>/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 ft<sup>3</sup>/s Aug. 30, 1974, gage height, 19.52 ft, result of failure of cofferdam.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 19,300 ft<sup>3</sup>/s May 17, gage height, 17.87 ft; minimum daily, 37 ft<sup>3</sup>/s Aug. 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	166	168	877	1750	225	480	264	2000	81	54	204
2	70	160	165	953	2200	351	430	245	1250	78	50	184
3	71	89	156	1470	2000	337	247	230	900	58	41	121
4	70	82	121	1540	3450	292	201	1840	920	47	40	119
5	71	81	69	1550	2290	195	179	3100	620	46	50	117
6	53	106	65	1460	2380	190	164	1950	520	66	45	106
7	59	137	64	1420	2580	184	150	2620	1090	52	40	105
8	52	219	62	1400	2410	220	126	3540	871	47	41	70
9	49	408	60	1380	2970	214	117	3510	538	46	40	76
10	51	456	77	1210	3130	198	1130	3300	540	46	40	73
11	53	431	80	731	2460	846	2230	2400	462	84	39	69
12	50	357	54	269	2360	900	3090	982	272	428	39	307
13	50	129	44	117	2300	1500	2360	1690	112	360	92	236
14	50	126	40	114	2260	1300	1360	1290	118	1150	97	435
15	50	641	37	114	3800	1150	1040	2620	677	828	50	436
16	51	1490	35	112	3430	1100	318	4230	865	905	42	381
17	62	1090	33	115	2230	923	296	7850	449	1280	39	248
18	109	1700	32	323	3120	731	281	2800	158	1130	38	126
19	186	1430	31	467	3050	766	255	4130	149	716	37	533
20	274	984	30	2650	2990	723	255	4110	148	477	38	444
21	339	924	29	1200	2660	669	1410	4100	147	123	406	439
22	259	437	28	1190	1750	509	1070	3610	160	121	1950	391
23	109	193	27	1910	552	185	1160	4300	148	246	272	274
24	214	93	27	2370	532	227	1620	4350	129	134	580	184
25	215	88	26	2070	506	437	1280	3930	127	113	560	177
26	215	89	26	1440	492	452	699	2390	155	104	487	174
27	212	105	25	977	494	365	513	1320	153	101	259	168
28	208	167	25	766	393	327	385	1270	153	99	78	124
29	154	144	25	1380	---	323	265	3170	145	98	271	59
30	156	127	303	1380	---	350	251	2600	82	95	228	291
31	164	---	2430	1700	---	580	---	2800	---	73	167	---
TOTAL	3772	12649	4394	34655	60539	16769	23362	86541	14058	9232	6210	6671
MEAN	122	422	142	1118	2162	541	779	2792	469	298	200	222
MAX	339	1700	2430	2650	3800	1500	3090	7850	2000	1280	1950	533
MIN	46	81	25	112	393	184	117	230	82	46	37	59

CAL YR 1989 TOTAL 272316 MEAN 746 MAX 5780 MIN 25  
WTR YR 1990 TOTAL 278852 MEAN 764 MAX 7850 MIN 25

## MILL CREEK BASIN

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 mi<sup>2</sup>.

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.--Estimated daily discharges: Oct. 11-20 and Dec. 11-29. Records good except those for estimated periods which are fair. 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 ft<sup>3</sup>/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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Nov. 15	2100	2,430	11.48	May 29	0330	1,980	10.33
Feb. 15	1630	3,570	14.27	Aug. 21	0130	2,120	10.71
Apr. 10	1930	2,340	11.25	Aug. 29	1100	2,310	11.18
May 4	2330	2,720	12.21	Sept. 12	0800	1,940	10.24
May 17	0130	*3,640	*14.46				

Minimum daily 9.0 ft<sup>3</sup>/s Dec. 28

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	23	21	121	135	53	134	132	77	45	12	34
2	20	16	19	64	186	50	93	43	75	16	12	23
3	19	16	17	55	163	42	56	66	189	14	12	22
4	18	14	18	97	767	34	50	788	73	13	11	21
5	17	13	20	71	191	35	45	921	50	13	56	21
6	31	70	25	47	120	33	39	224	203	18	15	20
7	22	109	27	36	173	29	33	121	384	14	13	19
8	12	207	21	35	104	31	29	86	113	12	12	225
9	14	67	20	35	136	41	29	65	71	12	11	129
10	27	37	18	38	165	48	792	81	49	13	12	45
11	19	25	18	30	95	570	384	48	42	9.5	11	30
12	15	21	17	27	75	128	137	111	38	282	9.9	315
13	17	21	15	20	63	95	92	721	35	75	11	49
14	14	27	14	19	55	75	80	216	49	164	33	33
15	20	726	13	21	1700	56	59	1330	43	67	14	23
16	120	447	12	30	1150	296	56	1330	27	31	13	18
17	100	110	11	92	271	117	52	1640	22	22	13	16
18	80	69	12	172	141	77	40	297	24	19	12	15
19	190	42	13	77	109	92	36	155	21	19	11	456
20	70	41	13	563	85	55	53	144	95	19	338	83
21	51	35	12	168	67	47	150	100	33	16	917	49
22	28	31	11	100	70	43	55	139	176	14	234	97
23	18	24	10	82	64	38	45	74	102	69	64	42
24	17	22	10	66	67	77	40	61	66	19	38	31
25	16	22	9.6	60	43	70	38	78	25	17	26	26
26	16	27	9.4	43	36	52	34	139	20	16	20	24
27	16	25	9.2	33	104	39	32	83	19	15	21	21
28	16	38	9.0	29	76	38	39	250	18	16	22	20
29	13	24	15	216	---	46	37	933	17	12	879	61
30	14	21	161	123	---	77	28	180	37	13	115	97
31	46	---	544	106	---	99	---	104	---	13	53	---
TOTAL	1091	2370	1144.2	2676	6411	2583	2787	10660	2193	1097.5	3020.9	2065
MEAN	35.2	79.0	36.9	86.3	229	83.3	92.9	344	73.1	35.4	97.4	68.8
MAX	190	726	544	563	1700	570	792	1640	384	282	917	456
MIN	12	13	9.0	19	36	29	28	43	17	9.5	9.9	15

CAL YR 1989 TOTAL 41229.2 MEAN 113 MAX 1870 MIN 9.0  
WTR YR 1990 TOTAL 38098.6 MEAN 104 MAX 1700 MIN 9.0





## GREAT MIAMI RIVER BASIN

03260700 BOKENGHALAS 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 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1957 to current year. Prior to October 1962, published as Buckongahelas 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. 13-30, and Apr. 30 to June 14. 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.--33 years, 33.6 ft<sup>3</sup>/s, 12.57 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,780 ft<sup>3</sup>/s Jan. 21, 1959, gage height, 6.83 ft; minimum daily, 2.2 ft<sup>3</sup>/s Sept. 29, 30, Oct. 7, 1963.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 31	1045	496	4.70	Apr. 11	0030	366	3.91
Feb. 15	2145	*591	*5.34				

Minimum daily discharge, 3.5 ft<sup>3</sup>/s Dec. 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	13	20	43	19	58	89	38	54	21	23	12
2	14	12	20	19	132	56	120	37	50	20	22	11
3	14	12	19	15	72	54	75	35	80	20	21	11
4	13	12	19	29	169	48	62	90	62	18	22	12
5	13	11	20	30	83	47	55	220	56	17	22	12
6	14	11	20	18	55	45	49	150	50	17	19	11
7	13	14	20	14	44	41	45	130	47	17	19	20
8	11	23	19	13	35	41	42	90	80	16	18	13
9	11	22	20	12	32	46	40	70	150	17	17	23
10	14	18	17	14	30	43	129	58	180	19	17	13
11	13	16	17	13	24	59	218	50	100	49	16	12
12	12	14	17	11	20	52	97	60	70	121	15	13
13	11	13	19	10	19	47	71	200	50	71	39	12
14	11	16	12	9.6	29	44	66	170	60	83	25	18
15	9.8	64	9.0	9.7	343	42	60	150	49	61	19	16
16	11	149	6.2	9.7	410	60	56	250	41	45	18	12
17	12	49	5.4	11	182	57	52	300	37	36	17	12
18	12	34	5.0	14	120	48	48	200	34	31	28	11
19	20	28	4.5	11	95	45	46	150	32	27	24	14
20	20	27	4.2	43	77	43	47	130	32	44	23	12
21	20	25	4.0	52	66	41	80	120	31	61	18	11
22	19	23	3.9	26	69	39	57	100	33	133	17	16
23	17	22	3.8	19	66	39	51	88	43	103	16	11
24	15	22	3.7	17	58	35	48	80	33	61	16	12
25	14	21	3.7	16	55	33	45	72	28	46	15	11
26	13	22	3.6	14	53	33	43	66	26	39	14	10
27	13	22	3.6	12	57	32	42	100	27	34	14	9.7
28	12	22	3.5	11	67	31	41	85	26	30	15	9.5
29	12	21	5.0	11	---	34	40	74	26	26	24	9.2
30	12	21	15	11	---	46	39	64	23	26	14	8.3
31	14	---	291	11	---	83	---	58	---	26	13	---
TOTAL	424.8	779	634.1	549.0	2481	1422	1953	3485	1610	1335	600	377.7
MEAN	13.7	26.0	20.5	17.7	88.6	45.9	65.1	112	53.7	43.1	19.4	12.6
MAX	20	149	291	52	410	83	218	300	180	133	39	23
MIN	9.8	11	3.5	9.6	19	31	39	35	23	16	13	8.3
CFSM	.38	.72	.56	.49	2.44	1.26	1.79	3.10	1.48	1.19	.53	.35
IN.	.44	.80	.65	.56	2.54	1.46	2.00	3.57	1.65	1.37	.61	.39

CAL YR 1989 TOTAL 15935.3 MEAN 43.7 MAX 599 MIN 3.5 CFSM 1.20 IN. 16.33  
WTR YR 1990 TOTAL 15650.6 MEAN 42.9 MAX 410 MIN 3.5 CFSM 1.18 IN. 16.04

## GREAT MIAMI RIVER BASIN

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 mi<sup>2</sup>.

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: Dec. 10-31 and Sept. 11, 12. 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 4.80 ft<sup>3</sup>/s in 1990 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.--65 years, (1925-90) 481 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,700 ft<sup>3</sup>/s Mar. 20, 1927, gage height 14.4 ft, from rating curve extended above 8,700 ft<sup>3</sup>/s on basis of velocity-area studies; maximum gage height, 15.91 ft Jan. 21, 1959; minimum discharge, 1.5 ft<sup>3</sup>/s Aug. 13, 1963, result of temporary storage behind dam upstream; minimum daily discharge, 8.0 ft<sup>3</sup>/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 ft<sup>3</sup>/s, computed by Miami Conservancy District.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft<sup>3</sup>/s and maximum (\*).

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 15	2200	*7,900	*10.54	June 9	1530	4,870	8.08
May 16	1400	4,970	8.16	July 14	1800	4,760	7.98

Minimum daily discharge 62 ft<sup>3</sup>/s Dec. 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	86	91	340	1230	284	792	1160	272	315	225	251	160
2	87	91	335	626	1960	686	1570	265	313	253	191	143
3	84	86	327	371	2430	643	1290	230	430	173	165	140
4	98	89	304	488	3210	599	983	449	440	144	162	137
5	90	85	237	1000	2960	464	726	1900	366	134	229	104
6	77	81	147	732	2200	445	589	1620	283	129	480	92
7	76	84	139	539	1720	447	480	1030	274	143	311	105
8	75	132	123	462	1340	350	408	638	1400	114	205	154
9	72	230	109	429	959	342	340	475	4020	106	151	210
10	72	200	105	490	908	388	800	405	3840	119	135	533
11	78	161	105	535	759	652	2880	382	2230	237	125	300
12	77	130	100	470	625	757	2670	385	1450	2410	122	200
13	71	114	101	390	492	588	2100	2280	865	3310	391	160
14	69	110	100	351	530	515	1560	2890	644	3910	1130	168
15	66	306	96	343	4720	455	1150	2200	994	3800	765	227
16	67	1670	94	334	6750	663	802	4090	586	2650	406	230
17	68	1300	90	305	5260	1030	633	4700	438	1860	279	193
18	83	676	88	346	4160	766	600	3510	353	1290	524	147
19	143	455	84	369	3160	563	413	2290	326	767	543	118
20	156	343	80	615	2270	525	376	1590	283	445	376	140
21	136	517	76	1610	1680	410	744	1070	238	642	280	155
22	150	492	74	1120	1300	341	1040	725	240	1340	425	147
23	141	424	70	658	1080	331	754	555	269	1870	388	213
24	120	389	68	505	1060	367	578	421	265	1470	280	199
25	109	371	66	430	929	299	478	397	231	885	224	144
26	98	373	65	381	706	261	423	662	186	525	196	119
27	91	367	64	313	641	257	375	812	176	386	179	109
28	87	372	63	270	829	229	344	630	169	312	148	100
29	86	378	62	263	---	236	312	605	233	275	229	92
30	84	350	100	284	---	313	283	530	257	239	395	134
31	86	---	600	234	---	849	---	389	---	253	220	---
TOTAL	2883	10467	4412	16493	54922	15563	26861	38397	22114	30416	9905	5073
MEAN	93.0	349	142	532	1961	502	895	1239	737	981	320	169
MAX	156	1670	600	1610	6750	1030	2880	4700	4020	3910	1130	533
MIN	66	81	62	234	284	229	283	230	169	106	122	92

CAL YR 1989 TOTAL 203575 MEAN 558 MAX 5620 MIN 62  
WTR YR 1990 TOTAL 237506 MEAN 651 MAX 6750 MIN 62

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 mi<sup>2</sup>.

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.--Estimated daily discharges: Dec. 11 to Feb. 8. Records fair, except for period of estimated record which are poor. 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.--26 years, 131 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,600 ft<sup>3</sup>/s June 14, 1981, maximum gage height, 14.08 ft Feb. 24, 1975; minimum daily, 0.10 ft<sup>3</sup>/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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 16	1330	*2,930	*12.30	May 17	0200	2,240	11.59
Apr. 11	0900	1,840	10.99	July 13	1600	2,330	11.69

Minimum daily discharge 3.1 ft<sup>3</sup>/s July 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	12	11	340	70	167	506	35	23	9.4	13	31
2	3.9	11	11	160	1200	147	504	29	29	8.3	9.8	21
3	4.6	10	8.7	100	800	139	359	28	84	5.8	7.8	17
4	4.3	8.1	9.3	140	1000	100	248	194	79	4.8	7.2	12
5	4.0	6.7	9.9	290	600	82	186	704	50	4.2	30	8.4
6	3.7	8.6	11	180	450	78	138	452	35	3.9	28	7.4
7	3.7	14	9.8	100	400	56	97	242	33	3.6	16	11
8	3.7	99	8.8	80	360	50	78	147	676	3.1	11	19
9	3.7	252	8.1	66	330	61	65	100	1220	3.2	8.3	354
10	3.4	242	8.5	82	304	72	439	69	856	4.1	6.9	394
11	4.7	230	7.9	96	259	601	1720	67	336	33	5.2	252
12	4.9	160	7.2	74	64	429	1190	105	160	970	4.1	167
13	5.1	11	6.8	56	49	255	568	1120	92	2150	208	20
14	4.5	6.1	6.6	45	68	182	328	1130	94	1750	374	15
15	4.4	102	6.2	37	1080	131	220	573	192	1100	189	34
16	4.4	705	5.8	33	2770	437	158	1480	97	439	89	15
17	6.2	373	5.6	38	1890	480	123	2020	58	209	47	8.5
18	11	228	5.4	62	975	274	85	1120	40	121	474	5.5
19	12	146	5.2	100	510	183	68	455	29	77	537	6.7
20	17	107	5.0	200	314	120	64	226	23	56	225	8.1
21	22	154	4.9	540	214	90	184	148	21	60	214	6.0
22	30	260	4.8	300	237	77	204	93	18	125	186	15
23	25	35	4.7	170	355	74	149	59	26	334	96	13
24	20	18	4.6	120	325	59	108	46	25	198	60	13
25	17	19	4.5	90	223	48	84	45	17	105	40	11
26	14	19	4.5	70	201	42	69	95	12	61	29	9.8
27	12	15	4.4	60	160	41	60	93	13	39	21	8.4
28	11	19	4.4	50	191	37	54	71	13	28	16	7.0
29	11	13	4.4	52	---	41	50	60	11	22	100	27
30	9.2	9.6	9.0	56	---	76	41	42	10	18	93	94
31	10	---	450	46	---	470	---	29	---	18	52	---
TOTAL	294.1	3293.1	658.0	3833	15399	5099	8147	11077	4372	7963.4	3197.3	1610.8
MEAN	9.49	110	21.2	124	550	164	272	357	146	257	103	53.7
MAX	30	705	450	540	2770	601	1720	2020	1220	2150	537	394
MIN	3.4	6.1	4.4	33	49	37	41	28	10	3.1	4.1	5.5

CAL YR 1989 TOTAL 53314.4 MEAN 146 MAX 2490 MIN 3.4  
WTR YR 1990 TOTAL 64943.7 MEAN 178 MAX 2770 MIN 3.1



## GREAT MIAMI RIVER BASIN

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 mi<sup>2</sup>.

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. 12-30. 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.--75 years, 210 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,400 ft<sup>3</sup>/s May 7, 1916, gage height, 86.4 ft, present datum, from rating curve extended above 5,400 ft<sup>3</sup>/s; minimum daily, 1.4 ft<sup>3</sup>/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 ft<sup>3</sup>/s, at site upstream from Turtle Creek, drainage area, 211 mi<sup>2</sup>, computed by Miami Conservancy District.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,940 ft<sup>3</sup>/s Feb. 16, gage height, 83.74 ft; minimum daily, 8.4 ft<sup>3</sup>/s Dec. 22-28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	24	26	572	116	272	858	77	87	38	39	69
2	21	25	30	266	1610	251	923	70	87	43	37	46
3	21	21	32	172	1480	240	513	62	131	41	29	41
4	19	17	25	365	1810	195	348	375	149	37	27	39
5	20	18	27	490	1270	166	251	1210	122	35	34	33
6	18	21	28	267	706	153	198	693	96	31	54	22
7	14	19	31	179	498	134	158	365	89	24	48	33
8	12	36	25	142	438	118	125	230	1400	31	37	37
9	18	266	17	119	373	128	102	168	2370	26	26	523
10	21	267	17	158	377	136	628	147	1450	26	25	560
11	17	247	20	156	327	991	2250	125	582	40	24	354
12	16	242	25	131	180	717	1600	145	304	1100	15	230
13	11	79	22	93	116	400	800	1790	201	1900	284	109
14	9.9	29	16	88	168	282	463	1550	222	2170	480	54
15	10	157	12	77	2670	213	325	1210	421	1510	250	227
16	20	1210	11	63	4500	662	248	2710	216	625	134	84
17	19	516	10	72	3280	676	202	2980	147	286	86	49
18	20	288	9.4	160	1410	364	160	1810	111	179	960	39
19	18	185	9.0	157	749	294	132	752	91	129	877	37
20	22	149	8.8	398	464	252	126	398	84	98	427	35
21	34	137	8.6	895	336	204	316	274	79	101	286	29
22	53	268	8.4	512	342	179	315	204	72	123	558	82
23	52	105	8.4	319	488	167	240	155	93	435	218	65
24	41	43	8.4	233	485	147	188	127	83	297	137	63
25	34	41	8.4	190	312	132	149	117	63	168	97	53
26	29	49	8.4	144	288	118	126	208	53	109	69	36
27	28	46	8.4	128	258	107	113	216	41	86	52	30
28	23	45	8.4	99	313	100	98	165	116	62	49	33
29	16	43	10	101	---	109	103	154	62	50	108	21
30	20	37	15	106	---	163	85	124	41	49	176	91
31	26	---	724	91	---	923	---	100	---	43	106	---
TOTAL	703.9	4630	1217.6	6943	25364	8993	12143	18711	9063	9892	5749	3124
MEAN	22.7	154	39.3	224	906	290	405	604	302	319	185	104
MAX	53	1210	724	895	4500	991	2250	2980	2370	2170	960	560
MIN	9.9	17	8.4	63	116	100	85	62	41	24	15	21

CAL YR 1989 TOTAL 95294.5 MEAN 261 MAX 3360 MIN 8.4  
WTR YR 1990 TOTAL 106533.5 MEAN 292 MAX 4500 MIN 8.4

## GREAT MIAMI RIVER BASIN

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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 mi<sup>2</sup>.

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: Dec. 10-30. Records 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 5.6 ft<sup>3</sup>/s in 1990 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.--28 years, 810 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,300 ft<sup>3</sup>/s Mar. 6, 1963, gage height, 14.66 ft; minimum, 0.50 ft<sup>3</sup>/s July 12, 13, 1963, result of temporary storage during repair of dam upstream; minimum daily discharge, 4.3 ft<sup>3</sup>/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 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,500 ft<sup>3</sup>/s Feb. 16, gage height, 12.88 ft; minimum daily, 86 ft<sup>3</sup>/s Dec. 27-29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	150	167	399	1850	372	1100	2020	397	481	306	353	292
2	151	149	391	1070	2990	980	2510	401	453	322	299	227
3	154	148	386	691	4400	925	1950	368	526	303	258	201
4	145	136	348	673	5700	861	1460	696	614	242	244	199
5	159	145	361	1450	5060	738	1120	3410	559	211	252	190
6	152	148	248	1100	3230	633	928	2570	445	198	460	146
7	138	158	213	799	2360	632	777	1570	386	190	467	153
8	133	195	202	648	1920	553	673	1030	2570	195	332	177
9	131	435	162	572	1450	519	560	768	7320	180	241	478
10	140	532	150	579	1320	539	834	651	6500	182	216	1040
11	145	467	140	692	1210	1710	5260	555	3260	266	199	780
12	145	431	130	631	961	1760	4650	584	1920	3080	179	481
13	143	310	125	517	749	1170	3060	3850	1240	5390	286	350
14	139	216	120	446	717	942	2070	5010	996	6160	1380	258
15	133	392	110	427	6990	792	1500	3410	1530	6130	1160	418
16	132	2910	110	414	13400	1220	1150	7400	1010	3640	661	361
17	142	2150	105	400	10200	1930	939	9240	720	2280	440	259
18	140	1180	105	439	6490	1330	864	6490	582	1520	1100	252
19	177	786	100	545	4150	987	674	3380	467	1060	1500	212
20	232	603	100	703	2830	831	599	2110	466	730	946	182
21	244	588	98	2300	2040	706	919	1440	400	786	621	205
22	244	794	96	1780	1620	582	1360	1080	362	1220	939	248
23	258	624	94	1110	1530	540	1100	859	397	2260	697	280
24	239	494	92	835	1470	538	891	650	401	1930	505	290
25	211	441	90	691	1230	510	725	600	365	1230	393	262
26	193	453	88	579	1040	443	639	774	300	794	315	210
27	178	446	86	508	961	416	563	1040	346	594	275	177
28	168	451	86	416	1050	399	525	873	478	489	256	167
29	161	446	86	402	---	379	504	771	341	404	257	160
30	156	434	130	407	---	480	440	741	392	377	553	161
31	161	---	915	393	---	1370	---	560	---	337	413	---
TOTAL	5194	16829	5866	24067	87440	26515	41264	63278	35827	43006	16197	8816
MEAN	168	561	189	776	3123	855	1375	2041	1194	1387	522	294
MAX	258	2910	915	2300	13400	1930	5260	9240	7320	6160	1500	1040
MIN	131	136	86	393	372	379	440	368	300	180	179	146

CAL YR 1989 TOTAL 314715 MEAN 862 MAX 10200 MIN 86  
WTR YR 1990 TOTAL 374299 MEAN 1025 MAX 13400 MIN 86

## GREAT MIAMI RIVER BASIN

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 mi<sup>2</sup>.

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: Dec. 11-30, Sept. 24, 25. 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.--72 years, 1,005 ft<sup>3</sup>/s, 11.88 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,400 ft<sup>3</sup>/s Jan. 22, 1959, gage height, 75.44 ft at site and datum then in use; minimum daily, 25 ft<sup>3</sup>/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 ft<sup>3</sup>/s computed by Miami Conservancy District.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 16,000 ft<sup>3</sup>/s Feb. 16, gage height, 19.21 ft; minimum daily, 170 ft<sup>3</sup>/s Dec. 26-29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	234	249	514	4380	573	1520	2510	546	779	459	527	389
2	235	236	499	2680	2990	1370	3150	530	702	421	493	303
3	228	224	488	1360	5480	1280	2570	501	773	433	433	263
4	218	218	458	819	6970	1180	1960	910	862	357	438	251
5	223	215	468	1750	7550	1060	1540	4720	795	320	512	250
6	226	231	398	1480	4560	906	1250	3640	674	296	541	211
7	210	256	319	1060	3310	877	1080	2270	619	278	651	188
8	196	344	301	857	2680	811	929	1530	2630	286	507	223
9	192	553	266	784	2160	775	801	1140	6490	276	397	331
10	197	729	255	775	1970	748	955	975	8130	298	343	1120
11	206	642	250	921	1770	2450	5360	818	4260	397	320	966
12	202	569	230	867	1490	2770	5590	851	2480	4540	303	597
13	199	482	220	714	1220	1780	3870	4160	1700	6860	321	449
14	193	337	210	615	1150	1400	2630	6500	1520	6920	1290	342
15	184	507	205	582	5370	1180	1970	4420	2940	7440	1400	513
16	178	3270	200	559	14600	1510	1530	7330	1610	4620	871	462
17	193	2900	195	548	14000	2550	1230	11900	1120	2880	577	355
18	195	1710	190	586	9430	1890	1090	9870	901	2020	797	307
19	221	1120	190	717	5570	1410	927	4790	741	1460	1790	291
20	310	875	185	1040	3800	1160	817	2940	695	1110	1190	255
21	328	763	180	2750	2770	1030	1140	2060	631	1800	832	249
22	323	976	180	2460	2260	883	1680	1560	564	1770	972	300
23	336	864	180	1610	2120	803	1430	1240	587	3240	873	327
24	326	663	175	1210	2010	765	1150	1010	591	2620	643	350
25	295	596	175	1010	1710	747	962	911	537	1790	505	330
26	275	600	170	860	1460	653	842	1070	476	1210	410	275
27	261	588	170	746	1370	597	765	1400	413	913	356	226
28	246	598	170	634	1420	588	699	1230	818	762	330	204
29	239	569	170	596	---	580	678	1160	542	645	344	209
30	229	551	280	599	---	722	602	1100	513	590	542	199
31	235	---	1810	584	---	1510	---	859	---	535	563	---
TOTAL	7333	22435	9701	36153	111763	37505	51707	83941	46093	57546	20071	10735
MEAN	237	748	313	1166	3992	1210	1724	2708	1536	1856	647	358
MAX	336	3270	1810	4380	14600	2770	5590	11900	8130	7440	1790	1120
MIN	178	215	170	548	573	580	602	501	413	276	303	188
CFSM	.21	.65	.27	1.01	3.47	1.05	1.50	2.36	1.34	1.62	.56	.31
IN.	.24	.73	.31	1.17	3.62	1.21	1.67	2.72	1.49	1.86	.65	.35

CAL YR 1989 TOTAL 457666 MEAN 1254 MAX 15500 MIN 170 CFSM 1.09 IN. 14.82  
WTR YR 1990 TOTAL 494983 MEAN 1356 MAX 14600 MIN 170 CFSM 1.18 IN. 16.03

## 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 mi<sup>2</sup>.

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: Dec. 16-31. Records good except for estimated daily discharges which are fair. 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 8 discharge measurements furnished by Miami Conservancy District.

AVERAGE DISCHARGE.--60 years, 175 ft<sup>3</sup>/s, 12.31 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,320 ft<sup>3</sup>/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 ft<sup>3</sup>/s Sept. 17, 1963.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1913 reached a stage of 12.1 ft, discharge, 18,200 ft<sup>3</sup>/s, at site with drainage area of 213 mi<sup>2</sup>, computed by Miami Conservancy District.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 5	0130	1,510	4.91	May 17	1200	2,500	6.36
Feb. 16	1900	*3,150	*7.18	Aug. 23	0830	1,920	5.55
May 14	0030	1,560	4.99				

Minimum daily discharge 30 ft<sup>3</sup>/s Dec. 25-29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	78	76	104	642	122	283	541	122	144	61	81	230
2	76	75	102	338	629	262	598	116	157	60	73	170
3	75	76	99	236	744	251	412	109	240	58	72	141
4	72	76	92	268	1200	214	311	322	195	55	69	122
5	70	75	99	434	1180	191	264	1170	160	53	204	108
6	68	75	98	244	655	178	225	709	144	52	156	100
7	66	81	96	179	493	163	197	407	139	49	102	93
8	63	105	88	156	392	156	181	282	240	47	85	92
9	62	125	81	141	339	160	170	223	463	49	75	116
10	63	118	88	140	322	167	238	198	618	52	69	195
11	60	106	84	148	286	896	806	176	296	71	67	132
12	62	98	86	141	251	1140	528	203	212	442	61	119
13	59	88	97	111	231	562	349	1200	172	510	95	105
14	60	87	81	106	248	386	289	1260	170	522	125	110
15	61	210	65	105	1870	304	255	843	156	733	87	383
16	60	939	52	100	3030	455	224	1720	125	318	73	239
17	66	580	45	100	2160	566	201	2310	114	191	66	154
18	66	343	38	110	870	364	176	1330	102	138	67	116
19	68	247	34	117	586	278	163	611	94	112	71	113
20	83	214	33	188	426	233	164	421	95	107	95	119
21	84	190	32	397	336	214	211	318	102	421	144	104
22	84	169	31	315	334	200	205	257	89	803	916	192
23	84	153	31	232	433	183	189	220	93	914	1480	231
24	85	138	31	198	372	165	173	196	89	482	489	196
25	87	131	30	171	275	162	162	181	81	283	311	149
26	73	130	30	155	272	153	152	200	74	196	221	124
27	65	126	30	134	248	144	145	229	73	149	164	105
28	72	125	30	123	299	138	142	212	72	125	132	96
29	73	117	30	117	---	142	148	195	66	109	574	90
30	73	106	40	117	---	175	134	171	65	96	856	84
31	75	---	250	113	---	436	---	154	---	91	365	---
TOTAL	2193	5179	2127	6076	18603	9321	7953	16065	4840	7349	7445	4328
MEAN	70.7	173	68.6	196	664	301	265	518	161	237	240	144
MAX	87	939	250	642	3030	1140	806	2310	618	914	1480	383
MIN	59	75	30	100	122	138	134	109	65	47	61	84
CFSM	.37	.89	.36	1.02	3.44	1.56	1.37	2.69	.84	1.23	1.24	.75
IN.	.42	1.00	.41	1.17	3.59	1.80	1.53	3.10	.93	1.42	1.43	.83

CAL YR 1989 TOTAL 99241 MEAN 272 MAX 3580 MIN 30 CFSM 1.41 IN. 19.13  
WTR YR 1990 TOTAL 91479 MEAN 251 MAX 3030 MIN 30 CFSM 1.30 IN. 17.63



## GREAT MIAMI RIVER BASIN

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 mi<sup>2</sup>.

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.--Estimated daily discharges: Dec. 10 to Jan 5. Records good except for estimated daily discharges, which are 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.--68 years, 447 ft<sup>3</sup>/s, 12.07 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,400 ft<sup>3</sup>/s Jan. 14, 1937, from rating curve extended above 14,500 ft<sup>3</sup>/s on basis of velocity-area study; maximum gage height, 18.46 ft June 29, 1980; minimum discharge observed, 4 ft<sup>3</sup>/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 ft<sup>3</sup>/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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 16	0300	*11,000	*13.55	May 17	0730	7,540	10.95
May 13	1730	5,350	8.90				

Minimum daily discharge 45 ft<sup>3</sup>/s Dec. 19-28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	124	108	134	1100	219	581	1380	209	248	117	148	335
2	122	105	134	380	2490	531	1670	193	270	107	132	241
3	119	105	126	290	2400	506	930	188	404	99	124	194
4	115	102	121	390	3830	412	664	660	344	90	122	164
5	111	99	127	950	2990	352	530	3560	280	86	259	145
6	109	99	130	550	1600	324	426	1840	250	79	261	135
7	106	108	124	365	1140	289	358	936	240	74	160	129
8	104	140	111	295	884	275	315	607	1220	73	131	136
9	101	190	102	259	744	288	288	453	2190	79	116	311
10	102	185	94	297	743	292	513	394	1740	91	106	530
11	101	153	84	350	612	2760	3140	344	712	130	100	256
12	102	134	74	292	523	2760	1360	354	461	2810	92	179
13	99	120	70	210	460	1240	775	3840	358	2640	237	166
14	99	123	50	192	493	798	585	3500	443	2140	393	155
15	95	330	49	187	6190	610	488	1980	449	2720	178	693
16	93	2760	48	172	10000	1260	417	6020	284	976	126	457
17	100	1340	47	176	5280	1550	368	6630	236	530	108	259
18	103	645	46	264	2090	816	314	3030	207	345	312	182
19	113	415	45	286	1330	571	282	1330	186	259	824	165
20	130	344	45	498	930	449	286	876	186	312	910	179
21	138	302	45	1300	716	393	394	650	196	900	596	161
22	143	254	45	817	708	367	406	505	172	1770	1720	341
23	143	226	45	530	1060	335	342	418	177	2620	2090	440
24	131	194	45	428	901	290	309	365	171	1300	754	353
25	130	178	45	360	572	276	286	339	147	673	460	269
26	113	176	45	313	540	260	263	398	133	422	319	208
27	102	168	45	255	512	242	251	442	144	307	237	170
28	107	167	45	227	648	229	248	392	230	249	190	145
29	102	160	50	220	---	238	261	356	152	209	683	134
30	101	140	70	222	---	304	232	310	129	182	1370	128
31	107	---	400	198	---	1190	---	270	---	165	569	---
TOTAL	3465	9570	2641	12373	50605	20788	18081	41389	12359	22554	13827	7360
MEAN	112	319	85.2	399	1807	671	603	1335	412	728	446	245
MAX	143	2760	400	1300	10000	2760	3140	6630	2190	2810	2090	693
MIN	93	99	45	172	219	229	232	188	129	73	92	128
CFSM	.22	.63	.17	.79	3.59	1.33	1.20	2.65	.82	1.45	.89	.49
IN.	.26	.71	.20	.92	3.74	1.54	1.34	3.06	.91	1.67	1.02	.54

CAL YR 1989 TOTAL 231741 MEAN 635 MAX 9320 MIN 45 CFSM 1.26 IN. 17.14  
WTR YR 1990 TOTAL 215012 MEAN 589 MAX 10000 MIN 45 CFSM 1.17 IN. 15.90

## GREAT MIAMI RIVER BASIN

185

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 mi<sup>2</sup>.

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 699.82 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 10-31. Records fair. Flood flow regulated by Englewood retarding basin.

COOPERATION.--Gage-height tapes and 8 discharge measurements furnished by Miami Conservancy District.

AVERAGE DISCHARGE.--65 years, 583 ft<sup>3</sup>/s, 12.18 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,980 ft<sup>3</sup>/s June 15, 1958, gage height, 80.88 ft; minimum, 3.7 ft<sup>3</sup>/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 ft<sup>3</sup>/s at site 1 mi downstream, computed by Miami Conservancy District.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,920 ft<sup>3</sup>/s Feb. 17, gage height, 78.77 ft; minimum daily, 54 ft<sup>3</sup>/s Dec. 24-27.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	170	119	204	1110	292	725	1770	311	381	196	253	431
2	165	118	200	665	1670	763	2090	290	379	181	234	313
3	156	117	193	425	3330	685	1350	278	490	169	219	257
4	151	110	182	373	3400	656	881	451	500	158	227	227
5	147	110	186	838	4480	563	708	3590	408	149	281	204
6	145	109	198	726	3180	478	590	3390	367	140	389	182
7	139	110	196	457	1700	435	495	1460	357	131	283	171
8	134	144	179	382	1230	394	437	863	759	127	230	167
9	130	199	158	346	1000	376	400	644	2600	140	207	190
10	131	247	140	330	985	390	460	549	2880	171	191	503
11	126	224	120	385	832	452	2260	475	1020	205	180	367
12	123	187	100	367	696	3020	2520	450	623	3110	170	249
13	120	162	80	300	617	3480	1070	2580	484	4540	177	217
14	116	146	70	258	697	1530	781	4510	460	3490	404	199
15	113	192	64	261	3500	954	663	3450	794	3810	309	388
16	108	1490	62	245	6440	769	561	4220	464	2110	217	634
17	110	2820	60	240	6820	1780	501	5820	361	852	183	342
18	120	1060	58	265	5980	1580	438	6000	320	562	171	252
19	142	599	58	331	5600	888	389	5030	292	425	790	217
20	150	446	56	532	5420	670	383	2460	290	360	808	213
21	149	393	56	1610	3780	557	476	931	296	1030	589	210
22	154	338	56	1190	1090	503	556	720	279	1770	1330	209
23	158	299	56	737	859	474	485	603	268	3250	2410	447
24	147	273	54	583	1080	421	437	521	266	2250	1160	379
25	140	253	54	489	1120	383	404	497	246	1010	557	324
26	127	249	54	432	819	366	375	568	225	617	400	260
27	114	240	54	364	634	345	357	625	215	456	313	222
28	114	240	56	326	641	327	348	590	261	376	264	193
29	110	228	66	312	---	329	362	568	249	329	268	175
30	114	213	100	312	---	400	344	488	214	297	1520	162
31	118	---	465	296	---	813	---	418	---	272	777	---
TOTAL	4141	11435	3635	15487	67892	25506	22891	53350	16748	32683	15511	8304
MEAN	134	381	117	500	2425	823	763	1721	558	1054	500	277
MAX	170	2820	465	1610	6820	3480	2520	6000	2880	4540	2410	634
MIN	108	109	54	240	292	327	344	278	214	127	170	162
CFSM	.21	.59	.18	.77	3.73	1.27	1.17	2.65	.86	1.62	.77	.43
IN.	.24	.65	.21	.89	3.89	1.46	1.31	3.05	.96	1.87	.89	.48
CAL YR 1989	TOTAL 295173	MEAN 809	MAX 6990	MIN 54	CFSM 1.24	IN. 16.89						
WTR YR 1990	TOTAL 277583	MEAN 761	MAX 6820	MIN 54	CFSM 1.17	IN. 15.89						

## GREAT MIAMI RIVER BASIN

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 mi<sup>2</sup>.

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.--Estimated daily discharges: Dec. 20-30 and Feb. 3-21. Records fair. Sediment data collected at this site 1970 to 1974.

COOPERATION.--Gage-height tapes, and 7 discharge measurements furnished by Miami Conservancy District.

AVERAGE DISCHARGE.--57 years, 147 ft<sup>3</sup>/s, 12.33 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,000 ft<sup>3</sup>/s Jan. 22, 1959, gage height 12.05 ft, from rating curve extended above 4,000 ft<sup>3</sup>/s on basis of estimate of peak flow based on contracted-opening measurement at site 3 mi downstream with drainage area of 235 mi<sup>2</sup> adjusted to gage site by 0.8 power of the drainage-area ratio; minimum discharge, 2.1 ft<sup>3</sup>/s Jan. 21, 1963, gage height, 2.33 ft, result of freezeup; minimum daily, 24 ft<sup>3</sup>/s Feb. 2, 3, 1945, Jan. 13, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,400 ft<sup>3</sup>/s and maximum (\*).

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 13	1330	1,550	5.67	June 9	1630	*2,280	*6.71
May 17	1000	1,770	6.00				

Minimum daily discharge 64 ft<sup>3</sup>/s Dec. 27-29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	118	100	112	185	112	238	236	146	239	189	189	115
2	118	99	117	123	310	230	329	141	236	185	177	113
3	117	99	112	112	250	227	235	141	240	170	164	110
4	113	99	110	128	520	209	208	295	219	167	164	109
5	112	99	115	152	400	202	195	752	210	159	160	109
6	113	101	112	123	320	192	175	384	206	153	152	107
7	115	103	108	113	280	180	166	300	217	150	150	108
8	112	114	109	108	230	175	163	260	587	150	146	114
9	112	128	106	107	270	182	160	244	1660	147	144	134
10	116	118	102	108	240	178	239	241	761	146	142	116
11	118	110	104	109	210	234	516	220	497	176	139	115
12	115	107	104	100	190	222	269	219	416	644	136	119
13	106	106	102	94	180	196	225	889	362	441	142	118
14	104	107	103	94	220	186	213	520	326	379	141	121
15	104	130	98	94	700	180	199	353	398	342	138	128
16	103	373	115	94	600	199	188	965	306	275	135	120
17	104	217	114	96	400	212	179	1140	278	241	132	119
18	102	167	105	106	360	185	167	597	265	225	131	113
19	109	149	84	103	340	173	161	450	246	213	131	120
20	115	144	74	132	310	168	165	395	238	209	134	119
21	116	135	70	216	275	163	270	355	232	248	131	116
22	110	130	68	156	286	165	213	323	227	272	129	125
23	110	126	67	134	287	158	191	298	222	330	126	123
24	108	122	66	130	272	153	179	281	213	250	126	122
25	108	123	66	126	229	147	171	268	201	226	125	103
26	105	121	65	117	224	147	166	350	200	217	123	100
27	102	120	64	115	228	144	161	314	194	198	121	97
28	102	125	64	109	258	141	159	277	189	194	119	97
29	102	118	64	108	---	142	156	302	189	186	125	97
30	102	114	70	108	---	166	153	274	190	181	116	97
31	103	---	311	107	---	233	---	252	---	186	115	---
TOTAL	3394	3904	3081	3707	8501	5727	6207	11946	9964	7249	4303	3404
MEAN	109	130	99.4	120	304	185	207	385	332	234	139	113
MAX	118	373	311	216	700	238	516	1140	1660	644	189	134
MIN	102	99	64	94	112	141	153	141	189	146	115	97
CFSM	.68	.80	.61	.74	1.87	1.14	1.28	2.38	2.05	1.44	.86	.70
IN.	.78	.90	.71	.85	1.95	1.32	1.43	2.74	2.29	1.66	.99	.78

CAL YR 1989	TOTAL 58744	MEAN 161	MAX 1560	MIN 64	CFSM .99	IN. 13.49
WTR YR 1990	TOTAL 71387	MEAN 196	MAX 1660	MIN 64	CFSM 1.21	IN. 16.39

## 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 mi<sup>2</sup>.

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.--Estimated daily discharges: Dec. 16-31. Records good except for periods of estimated discharge, which are fair. 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 23.0 ft<sup>3</sup>/s in 1990, 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.--25 years, 311 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,700 ft<sup>3</sup>/s June 26, 1971, gage height, 16.00 ft, from rating curve extended above 3,060 ft<sup>3</sup>/s; minimum daily, 60 ft<sup>3</sup>/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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 4	0900	2,810	10.10	May 17	0600	*4,220	*11.91
Feb. 15	1900	3,850	11.46	June 9	1430	3,090	10.48
May 5	0130	3,790	11.39	July 12	1300	2,520	9.68
May 13	1300	3,380	10.87				

Minimum daily discharge, 130 ft<sup>3</sup>/s Dec. 25-28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER '89 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	197	177	197	484	323	433	537	274	432	308	295	209
2	200	174	196	281	1050	422	662	266	423	299	286	206
3	195	172	190	251	773	409	485	263	427	292	278	203
4	192	170	187	297	1850	375	431	669	398	282	287	201
5	191	168	187	359	992	359	393	1970	378	277	313	201
6	191	171	190	276	734	346	358	872	372	273	277	199
7	189	189	186	240	632	324	334	631	392	267	268	204
8	188	241	179	227	542	320	317	524	1500	262	261	229
9	188	267	176	219	512	331	305	467	2390	266	255	453
10	194	227	174	225	533	325	588	441	1180	265	250	289
11	189	208	175	220	465	729	1060	406	784	330	245	251
12	184	198	174	210	429	520	589	432	656	1460	240	280
13	182	191	168	192	402	429	475	2090	587	816	260	258
14	180	190	168	187	425	391	439	1140	621	727	253	297
15	179	338	163	184	2190	365	412	817	685	616	240	336
16	180	865	160	182	1910	441	384	1920	540	477	235	267
17	184	454	155	189	964	459	363	2590	499	408	231	245
18	180	342	150	221	733	391	335	1080	468	372	237	235
19	202	292	150	211	631	361	323	798	439	351	236	249
20	203	277	150	430	542	343	334	686	430	368	235	238
21	206	258	145	689	497	331	498	614	416	514	264	229
22	200	242	140	449	503	322	426	561	401	833	245	238
23	194	229	135	359	503	312	374	519	402	820	235	236
24	189	220	135	323	482	302	346	487	383	513	229	229
25	184	215	130	300	415	297	326	473	362	422	225	224
26	180	219	130	276	402	290	312	557	348	376	222	220
27	179	212	130	255	422	281	302	523	339	352	217	214
28	176	218	130	241	475	274	298	490	331	336	212	211
29	174	206	135	246	---	283	297	659	324	323	236	214
30	174	200	140	238	---	328	285	528	318	314	220	211
31	180	---	900	229	---	482	---	466	---	305	212	---
TOTAL	5824	7530	5725	8690	20331	11575	12588	24213	17225	13824	7699	7276
MEAN	188	251	185	280	726	373	420	781	574	446	248	243
MAX	206	865	900	689	2190	729	1060	2590	2390	1460	313	453
MIN	174	168	130	182	323	274	285	263	318	262	212	199

CAL YR 1989 TOTAL 127239 MEAN 349 MAX 3970 MIN 130  
WTR YR 1990 TOTAL 142500 MEAN 390 MAX 2590 MIN 130



## GREAT MIAMI RIVER BASIN

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 mi<sup>2</sup>.

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: December 20, 21, 23-30. 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.--77 years, (1904-05, 1914-90), 492 ft<sup>3</sup>/s, 13.64 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,500 ft<sup>3</sup>/s Jan. 21, 1959, gage height, 15.76 ft, from rating curve extended above 14,000 ft<sup>3</sup>/s on basis of slope-area and contracted opening measurements of peak flow; minimum daily discharge, 30 ft<sup>3</sup>/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 ft<sup>3</sup>/s computed by Miami Conservancy District.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,570 ft<sup>3</sup>/s July 12 gage height, 9.38 ft; minimum daily, 220 ft<sup>3</sup>/s Dec. 23-29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	364	352	326	803	504	689	821	417	752	456	473	309
2	371	347	286	501	1450	674	998	405	737	422	459	302
3	362	344	276	467	1140	650	720	412	734	424	442	298
4	358	341	274	543	2650	603	634	1160	683	412	445	280
5	359	340	275	637	1610	587	576	2690	657	434	503	262
6	356	358	287	520	1340	558	522	1320	664	446	452	258
7	353	395	274	465	1210	516	492	999	664	385	435	293
8	351	483	266	446	1090	517	465	827	2430	378	423	397
9	352	458	260	433	1100	517	454	723	2810	427	414	730
10	375	406	258	438	1040	504	902	604	1770	409	423	471
11	356	380	260	428	748	1130	1590	552	1230	648	439	425
12	350	366	256	376	694	846	898	620	1230	4310	431	462
13	347	359	249	311	649	736	704	2790	1140	2050	472	380
14	343	357	249	303	724	675	648	1680	1600	2050	458	480
15	339	595	240	300	3060	636	600	1260	1330	1770	428	497
16	341	1240	252	296	3150	778	558	2450	1030	1120	388	388
17	350	705	243	314	1530	755	531	3630	874	696	360	359
18	345	553	244	372	1370	659	495	2190	691	642	373	338
19	412	487	265	379	1240	627	479	1800	644	597	356	371
20	388	468	255	898	1130	546	513	1310	633	800	355	372
21	391	442	240	1130	1060	485	723	926	614	1350	400	378
22	376	420	226	754	940	478	613	856	608	2240	372	361
23	371	405	220	615	768	449	545	783	610	1660	356	355
24	366	393	220	561	680	435	510	738	576	906	347	344
25	360	389	220	540	621	426	487	727	568	737	337	335
26	356	396	220	510	649	419	471	873	543	661	326	327
27	354	365	220	473	690	408	459	818	487	586	320	323
28	348	389	220	449	745	400	455	892	483	500	316	319
29	344	358	220	429	---	458	453	1530	506	476	358	367
30	345	349	310	381	---	533	435	1000	496	465	335	373
31	366	---	1470	363	---	692	---	828	---	491	317	---
TOTAL	11149	13240	9081	15435	33582	18386	18751	37810	27794	28948	12313	11154
MEAN	360	441	293	498	1199	593	625	1220	926	934	397	372
MAX	412	1240	1470	1130	3150	1130	1590	3630	2810	4310	503	730
MIN	339	340	220	296	504	400	435	405	483	378	316	258
CFSM	.73	.90	.60	1.02	2.45	1.21	1.28	2.49	1.89	1.91	.81	.76
IN.	.85	1.01	.69	1.17	2.55	1.40	1.42	2.87	2.11	2.20	.93	.85

CAL YR 1989 TOTAL 213221 MEAN 584 MAX 5250 MIN 220 CFSM 1.19 IN. 16.19  
WTR YR 1990 TOTAL 237643 MEAN 651 MAX 4310 MIN 220 CFSM 1.33 IN. 18.04

## GREAT MIAMI RIVER BASIN

189

## 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 mi<sup>2</sup>.

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.--Estimated daily discharges: Dec. 16-30. Records good, except those for period of estimated record which are 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.--76 years, 631 ft<sup>3</sup>/s, 13.50 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,200 ft<sup>3</sup>/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 ft<sup>3</sup>/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 ft<sup>3</sup>/s, computed by Miami Conservancy District.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,560 ft<sup>3</sup>/s July 13, gage height, 14.68 ft; minimum daily, 270 ft<sup>3</sup>/s Dec. 28, 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	413	398	411	1280	526	833	1060	552	1010	556	590	380
2	423	387	367	669	1670	799	1380	535	958	501	570	374
3	414	382	355	577	1680	777	998	536	958	495	560	365
4	406	381	344	613	3430	724	843	1210	875	495	545	353
5	407	378	342	786	2710	692	753	3930	825	487	659	325
6	408	406	350	651	1850	667	681	2020	819	532	575	316
7	404	439	363	576	1610	622	631	1430	879	466	540	318
8	401	562	348	545	1430	610	595	1160	2120	455	527	395
9	398	568	337	526	1380	623	571	999	3010	721	515	825
10	420	498	333	521	1470	610	948	840	2520	675	505	611
11	404	456	334	515	1050	1430	2350	752	1460	859	524	506
12	394	433	331	488	947	1180	1310	783	1380	5060	524	512
13	389	417	320	400	851	964	983	3250	1290	4940	561	488
14	385	410	319	379	931	848	860	2930	1480	2810	550	452
15	379	542	310	374	2920	784	800	1890	2980	2540	521	688
16	379	1560	320	369	5330	974	732	3120	1400	1740	500	493
17	391	935	320	371	2250	1010	690	4720	1240	1070	452	445
18	382	694	310	419	1770	845	640	3450	935	924	460	420
19	443	600	310	458	1560	772	613	2360	837	829	448	445
20	435	565	300	962	1380	712	616	1910	827	815	505	439
21	426	538	300	1610	1270	612	891	1280	789	1740	501	458
22	413	507	300	1050	1190	600	844	1160	764	2320	473	429
23	407	488	290	810	1020	572	721	1060	757	2200	447	426
24	402	469	280	716	871	553	670	983	728	1250	427	417
25	398	460	280	657	759	540	634	937	678	987	418	400
26	395	478	280	629	783	526	611	1130	677	855	409	388
27	391	442	280	575	812	515	594	1110	599	778	398	382
28	387	460	270	548	892	505	587	1040	580	667	390	377
29	383	431	270	551	---	542	594	2250	582	628	429	373
30	383	418	370	496	---	696	567	1440	576	596	419	469
31	404	---	1590	469	---	878	---	1150	---	606	389	---
TOTAL	12464	15702	11234	19590	44342	23015	24767	51917	34533	39597	15331	13269
MEAN	402	523	362	632	1584	742	826	1675	1151	1277	495	442
MAX	443	1560	1590	1610	5330	1430	2350	4720	3010	5060	659	825
MIN	379	378	270	369	526	505	567	535	576	455	389	316
CFSM	.63	.82	.57	1.00	2.49	1.17	1.30	2.64	1.81	2.01	.78	.70
IN.	.73	.92	.66	1.15	2.60	1.35	1.45	3.04	2.02	2.32	.90	.78

CAL YR 1989 TOTAL 245204 MEAN 672 MAX 4860 MIN 186 CFSM 1.06 IN. 14.36  
WTR YR 1990 TOTAL 305761 MEAN 838 MAX 5330 MIN 270 CFSM 1.32 IN. 17.91

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.

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.

GAGE.--Water-stage recorder. Datum of gage is 700.00 ft above National Geodetic Vertical Datum of 1929 as requested by cooperator (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.

AVERAGE DISCHARGE.--61 years (1929-90). 2,182 ft<sup>3</sup>/s.

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 ft<sup>3</sup>/s, computed by Miami Conservancy District.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 26,000 ft<sup>3</sup>/s Feb. 16, gage height 30.95 ft; minimum daily, 420 ft<sup>3</sup>/s Dec. 27-29.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	737	679	1080	5180	1260	3260	5980	1460	2200	1180	1280	1250
2	730	666	1020	3470	5470	2960	7050	1370	2040	1040	1240	998
3	715	639	970	2200	11100	2780	5660	1330	2150	1040	1120	867
4	682	630	922	1810	14100	2530	4200	3400	2220	965	1160	793
5	663	622	907	3230	15900	2270	3330	12700	2040	873	1430	749
6	671	700	907	3220	10700	1980	2690	10400	1910	848	1350	694
7	672	769	832	2210	7320	1850	2300	6120	1890	776	1450	628
8	651	1060	750	1790	5900	1750	2000	4010	4670	747	1220	698
9	646	1130	694	1590	5020	1710	1800	2990	12200	1590	1080	1310
10	671	1310	648	1510	4790	1670	2630	2480	14400	1460	980	2000
11	671	1190	600	1650	4010	5580	10200	2160	8040	1560	952	1920
12	663	1070	580	1640	3350	8830	10500	2210	5110	13400	918	1390
13	650	987	560	1340	2800	5790	6760	9770	3850	17500	1010	1120
14	639	815	540	1150	2840	3760	4830	15300	3360	13900	1910	1010
15	618	1270	520	1090	11200	3040	3820	11600	7540	14500	2360	1350
16	599	6610	490	1050	24400	3490	3100	14700	3940	9770	1620	1650
17	595	6990	480	1010	23200	6230	2590	22700	2940	5540	1180	1170
18	562	3710	470	1100	18600	4560	2250	20700	2250	3930	1100	942
19	667	2400	460	1260	13700	3290	2000	14100	1890	2930	3120	944
20	730	1870	460	2420	9190	2640	1840	8910	1880	2260	2640	866
21	759	1610	450	6030	5580	2250	2660	5050	1740	4570	2240	808
22	782	1590	450	5390	4780	2030	3220	3910	1630	5640	2440	843
23	784	1570	440	3510	4590	1860	2880	3180	1580	8910	3470	1050
24	800	1310	440	2610	4330	1720	2410	2700	1570	6770	2520	1100
25	786	1220	440	2120	3600	1660	2110	2440	1450	4290	1570	1010
26	750	1190	430	1850	3040	1530	1890	3030	1380	2870	1270	882
27	710	1170	420	1590	2940	1420	1770	3280	1250	2200	1100	775
28	671	1200	420	1400	3070	1370	1680	3100	1550	1800	1030	715
29	663	1140	420	1330	---	1490	1680	4340	1380	1570	1120	676
30	650	1120	660	1280	---	1880	1580	3280	1220	1440	2110	749
31	665	---	2750	1230	---	3090	---	2580	---	1350	1890	---
TOTAL	21252	48237	21210	68260	226780	90270	107410	205300	101270	137219	49880	30957
MEAN	686	1608	684	2202	8099	2912	3580	6623	3376	4426	1609	1032
MAX	800	6990	2750	6030	24400	8830	10500	22700	14400	17500	3470	2000
MIN	562	622	420	1010	1260	1370	1580	1330	1220	747	918	628
CAL YR 1989	TOTAL 1072390		MEAN 2938	MAX 27800	MIN 420							
WTR YR 1990	TOTAL 1108045		MEAN 3036	MAX 24400	MIN 420							

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	15	15	102	143	58	365	43	63	25	22	14
2	13	12	14	51	403	56	230	39	75	23	20	14
3	13	12	13	46	194	53	121	44	63	22	19	14
4	11	12	12	70	1300	45	99	1120	51	20	64	14
5	11	12	13	79	308	43	82	719	47	20	57	14
6	12	25	22	56	176	40	65	200	54	19	28	11
7	12	58	18	44	164	36	57	121	50	18	23	11
8	11	115	13	40	121	37	51	95	53	18	20	15
9	12	49	12	38	152	42	47	75	49	261	18	46
10	15	27	11	38	167	64	409	71	42	121	18	16
11	13	18	10	36	115	646	315	57	37	280	17	13
12	13	15	9.2	34	98	172	130	136	33	2220	16	21
13	12	13	8.4	28	84	108	95	974	32	310	34	14
14	13	12	7.8	27	227	87	86	266	58	441	19	40
15	15	247	7.2	29	1620	72	74	750	44	191	15	18
16	16	206	6.8	28	676	243	65	1100	32	101	16	13
17	20	72	6.4	35	215	138	58	1220	30	65	15	13
18	18	44	6.2	46	132	94	50	260	28	49	18	12
19	40	30	5.8	41	107	74	47	142	27	41	39	26
20	23	26	5.6	528	81	61	58	110	59	43	37	15
21	19	23	5.4	282	71	56	575	87	35	65	60	13
22	15	19	5.3	129	91	53	152	74	40	56	37	16
23	13	18	5.2	90	82	48	100	64	34	57	24	15
24	12	16	5.0	74	75	46	78	56	30	50	19	14
25	12	15	4.9	65	56	44	64	66	25	37	17	12
26	11	22	4.8	55	51	41	57	332	24	32	17	11
27	11	17	4.7	47	61	38	53	170	182	29	15	10
28	11	24	4.6	43	67	37	58	116	55	26	18	10
29	12	17	4.5	55	---	89	59	187	31	25	53	11
30	12	15	20	49	---	152	47	97	26	24	24	11
31	20	---	318	49	---	331	---	74	---	24	17	---
TOTAL	452	1206	598.8	2334	7037	3104	3747	8865	1409	4713	816	477
MEAN	14.6	40.2	19.3	75.3	251	100	125	286	47.0	152	26.3	15.9
MAX	40	247	318	528	1620	646	575	1220	182	2220	64	46
MIN	11	12	4.5	27	51	36	47	39	24	18	15	10
CAL YR 1989	TOTAL	35898.8	MEAN	98.4	MAX	2790	MIN	4.5				
WTR YR 1990	TOTAL	34758.8	MEAN	95.2	MAX	2220	MIN	4.5				



## GREAT MIAMI RIVER BASIN

## 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 mi<sup>2</sup>.

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.--Estimated daily discharges: Dec. 11-30 and Sept. 14, 15. 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.--53 years, 2,458 ft<sup>3</sup>/s, 12.31 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 61,800 ft<sup>3</sup>/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 ft<sup>3</sup>/s Sept. 7, 1925.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 26, 1913 reached a discharge of 257,000 ft<sup>3</sup>/s, computed by Miami Conservancy District.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 25,300 ft<sup>3</sup>/s Feb. 16, gage height, 12.90 ft; minimum daily, 490 ft<sup>3</sup>/s Dec. 28, 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	931	876	1300	5170	1750	3730	6450	1730	2720	1540	1540	1580
2	953	820	1230	3940	4850	3450	7200	1590	2610	1340	1480	1250
3	931	793	1170	2660	10600	3240	6090	1580	2660	1340	1370	1110
4	884	770	1140	2260	14600	3000	4630	5510	2670	1270	1410	1010
5	870	768	1100	3220	15900	2750	3820	13100	2510	1170	1820	965
6	900	924	1160	3690	10900	2480	3160	10700	2450	1140	1570	910
7	866	1010	1060	2670	7650	2290	2760	6630	2540	1070	1740	853
8	818	1500	942	2210	6210	2200	2450	4510	3540	998	1470	929
9	801	1470	886	1990	5420	2180	2240	3480	10900	1510	1330	2210
10	854	1600	832	1850	5220	2130	3720	2960	13700	2770	1230	2290
11	863	1490	800	1950	4530	7820	9370	2590	8570	2060	1180	2370
12	828	1320	760	2010	3900	8980	10400	2710	5450	14000	1140	1740
13	814	1250	700	1700	3320	6370	7050	9590	4290	17700	1300	1430
14	799	1100	660	1440	3290	4300	5200	14900	3850	13700	1950	2000
15	761	1680	640	1360	11200	3580	4280	13000	7330	14100	2740	3200
16	736	5860	620	1330	23400	4350	3550	14500	4490	10200	2010	2080
17	753	7340	600	1280	23200	6370	3050	22900	3430	6000	1480	1520
18	729	4270	580	1430	19000	5070	2670	21200	2680	4450	1300	1230
19	917	2880	580	1510	13700	3850	2450	14300	2320	3490	3140	1320
20	1000	2320	560	3300	9810	3170	2250	9410	2440	2770	3050	1180
21	1000	2000	540	6050	6070	2780	4500	5540	2240	4620	3090	1110
22	991	1940	540	5870	5250	2550	3830	4450	2170	5550	2830	1190
23	994	1960	520	4050	4980	2350	3380	3710	2080	8360	3840	1310
24	1010	1640	520	3080	4780	2180	2850	3230	1990	7230	3060	1370
25	968	1520	500	2620	4160	2100	2520	2990	1840	4780	1920	1310
26	914	1520	500	2340	3560	1960	2250	4700	1740	3380	1550	1180
27	864	1500	500	2040	3450	1820	2080	4180	1790	2640	1320	1040
28	821	1520	490	1800	3510	1750	1980	3790	2000	2180	1240	967
29	794	1420	490	1770	---	1930	1990	5430	1800	1900	1560	975
30	793	1360	760	1730	---	2600	1840	3970	1600	1720	2210	1030
31	862	---	3050	1630	---	3630	---	3200	---	1620	2390	---
TOTAL	27019	56421	25730	79950	234210	106960	120010	222080	110400	146598	59260	42659
MEAN	872	1881	830	2579	8365	3450	4000	7164	3680	4729	1912	1422
MAX	1010	7340	3050	6050	23400	8980	10400	22900	13700	17700	3840	3200
MIN	729	768	490	1280	1750	1750	1840	1580	1600	998	1140	853
CFSM	.32	.69	.31	.95	3.09	1.27	1.48	2.64	1.36	1.74	.71	.52
IN.	.37	.77	.35	1.10	3.21	1.47	1.65	3.05	1.51	2.01	.81	.59

CAL YR 1989 TOTAL 1157913 MEAN 3172 MAX 27000 MIN 490 CFMS 1.17 IN. 15.89  
WTR YR 1990 TOTAL 1231297 MEAN 3373 MAX 23400 MIN 490 CFMS 1.24 IN. 16.90

## 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 mi<sup>2</sup>.

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 1978-1990; minimum, 0.4 mg/L Aug. 27, 1981, Aug. 2, 1982.

## EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 1,320 microsiemens Dec. 29; minimum, 280 microsiemens July 12.

pH: Maximum, 9.2 units Aug. 12; minimum, 7.5 units June 9, 10.

WATER TEMPERATURES: Maximum, 28.5°C July 5, 9, Sept. 6; minimum, 0.0°C on several days during winter.

DISSOLVED OXYGEN: Maximum, >20.0 mg/L July 2, 6, Aug. 11, 12; minimum, 5.7 mg/L June 15.

## GREAT MIAMI RIVER BASIN

03271510 GREAT MIAMI RIVER NEAR LINDEN AVENUE AT MIAMISBURG, OH

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	884	864	875	---	---	---	820	810	815	776	630	676
2	870	848	860	---	---	---	832	808	820	646	594	622
3	872	852	863	---	---	---	838	814	829	686	640	658
4	878	854	867	---	---	---	844	822	835	736	688	709
5	890	866	879	---	---	---	846	822	839	742	706	723
6	894	876	883	---	---	---	848	826	840	704	672	686
7	894	872	882	---	---	---	848	830	840	720	688	705
8	882	874	877	---	---	---	918	840	866	768	718	736
9	---	---	---	---	---	---	926	862	889	774	752	764
10	---	---	---	---	---	---	924	898	912	796	766	781
11	882	856	866	---	---	---	928	896	910	806	792	799
12	886	866	879	---	---	---	944	908	928	808	790	799
13	892	878	890	---	---	---	950	918	936	840	808	822
14	---	---	---	---	---	---	966	938	952	828	812	821
15	---	---	---	---	---	---	962	936	950	838	818	828
16	---	---	---	---	---	---	1030	970	1000	848	828	839
17	---	---	---	---	---	---	1030	1010	1020	860	808	849
18	---	---	---	---	---	---	1020	982	1000	866	842	854
19	---	---	---	---	---	---	1040	988	1000	874	818	856
20	---	---	---	---	---	---	1000	988	997	818	712	753
21	---	---	---	---	---	---	1010	994	1000	720	684	699
22	---	---	---	814	796	806	1040	1000	1020	698	678	690
23	902	884	896	816	798	806	1050	1040	1050	718	694	704
24	894	874	884	832	810	820	1060	1020	1040	754	718	735
25	908	878	893	814	798	807	1030	1010	1020	780	748	763
26	922	890	906	820	800	811	1020	986	1010	800	776	786
27	916	898	906	824	804	815	1030	1010	1020	806	790	794
28	---	---	---	822	806	814	1030	1000	1020	808	796	802
29	---	---	---	820	806	815	1320	984	1080	1220	804	964
30	---	---	---	818	810	814	1260	1020	1170	1100	928	1010
31	---	---	---	---	---	---	1170	800	1020	924	892	904
MONTH	922	848	882	832	796	812	1320	800	956	1220	594	778
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	984	894	923	760	738	747	720	604	686	780	752	768
2	932	724	849	762	746	754	646	600	633	792	772	783
3	716	578	617	756	730	743	---	---	---	802	738	785
4	570	480	527	756	742	747	---	---	---	804	392	630
5	520	466	487	776	754	759	---	---	---	520	400	466
6	598	526	560	790	766	773	---	---	---	594	502	554
7	652	602	631	788	766	777	---	---	---	658	592	622
8	678	650	662	800	778	786	---	---	---	702	660	677
9	698	678	685	800	790	795	---	---	---	736	702	717
10	706	694	700	800	604	776	---	---	---	758	728	740
11	732	702	712	662	452	578	---	---	---	772	750	758
12	748	728	738	640	568	588	---	---	---	778	712	755
13	766	744	753	656	580	607	---	---	---	670	474	554
14	774	754	766	706	658	682	---	---	---	524	472	499
15	750	492	619	732	702	720	---	---	---	548	452	510
16	478	330	370	720	682	697	---	---	---	564	454	523
17	378	334	347	706	644	688	---	---	---	446	400	415
18	418	376	394	678	642	656	---	---	---	474	406	437
19	506	416	458	716	680	696	764	738	746	542	474	504
20	592	506	550	752	716	731	770	746	762	624	550	585
21	634	592	612	772	748	757	770	488	622	678	628	651
22	666	630	648	798	770	779	712	640	691	712	676	694
23	686	664	672	802	782	790	736	708	721	738	708	723
24	722	686	701	860	790	814	734	708	721	762	738	746
25	722	694	704	834	792	807	744	720	728	778	758	770
26	726	714	720	814	788	801	756	726	743	766	552	636
27	798	720	737	820	794	807	774	734	749	720	594	688
28	762	730	743	824	786	804	782	738	763	744	654	723
29	---	---	---	814	728	791	778	746	762	656	622	636
30	---	---	---	788	712	740	780	750	763	732	630	678
31	---	---	---	762	720	733	---	---	---	766	734	745
MONTH	984	330	639	860	452	739	782	488	721	804	392	644

## 03271510 GREAT MIAMI RIVER NEAR LINDEN AVENUE AT MIAMISBURG, OH

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	780	764	773	818	778	805	816	788	803	702	648	675
2	790	766	778	794	760	778	820	786	803	756	708	739
3	824	760	774	818	782	799	826	802	814	804	756	782
4	770	752	762	830	782	810	840	762	809	824	790	810
5	790	756	764	842	790	816	804	714	758	840	802	828
6	806	636	772	848	812	831	776	740	760	868	830	848
7	772	722	742	864	826	842	782	762	769	866	842	852
8	772	638	752	856	814	835	802	782	792	884	838	863
9	600	460	489	846	668	807	820	802	811	860	390	644
10	460	382	416	636	434	496	828	788	812	716	622	667
11	542	434	492	694	580	655	816	772	794	720	712	718
12	622	548	588	646	280	407	798	726	762	---	---	---
13	662	622	641	466	360	396	762	696	746	---	---	---
14	690	500	655	492	456	482	776	712	749	---	---	---
15	634	438	517	506	476	491	732	634	690	---	---	---
16	646	536	607	558	502	526	698	636	670	---	---	---
17	684	644	664	616	556	587	678	656	666	---	---	---
18	742	688	715	654	614	634	734	674	711	---	---	---
19	766	732	749	676	648	663	738	564	681	---	---	---
20	766	656	731	708	670	688	576	542	555	---	---	---
21	754	702	730	720	544	647	566	398	535	---	---	---
22	770	674	735	614	558	587	610	498	557	---	---	---
23	754	716	740	600	510	565	606	552	586	---	---	---
24	768	744	757	590	536	559	550	458	498	---	---	---
25	770	738	762	642	594	618	656	560	607	---	---	---
26	830	756	793	700	646	673	722	662	702	---	---	---
27	846	786	835	732	696	712	776	718	751	---	---	---
28	824	656	763	748	730	740	796	722	780	---	---	---
29	814	752	784	768	748	758	812	710	753	---	---	---
30	802	740	784	790	764	775	776	720	739	---	---	---
31	---	---	---	808	778	796	736	630	682	---	---	---
MONTH	846	382	702	864	280	670	840	398	714	884	390	766
YEAR	1320	280	743									

PH (STANDARD UNITS), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	8.3	8.0	8.2	---	---	---	8.7	8.5	8.6	8.1	8.0	8.1
2	8.3	8.0	8.1	---	---	---	8.7	8.5	8.6	8.1	8.0	8.1
3	8.4	8.0	8.2	---	---	---	8.7	8.5	8.6	8.1	8.0	8.1
4	8.5	8.1	8.3	---	---	---	8.7	8.5	8.6	8.2	8.1	8.1
5	8.4	8.0	8.3	---	---	---	8.7	8.4	8.5	8.2	8.1	8.1
6	8.3	8.1	8.2	---	---	---	8.5	8.3	8.4	8.3	8.2	8.2
7	8.5	8.2	8.3	---	---	---	8.6	8.3	8.4	8.3	8.2	8.2
8	8.4	8.3	8.4	---	---	---	8.7	8.3	8.5	8.3	8.2	8.3
9	---	---	---	---	---	---	8.8	8.3	8.5	8.4	8.3	8.3
10	---	---	---	---	---	---	8.6	8.3	8.5	8.3	8.2	8.3
11	8.8	8.4	8.7	---	---	---	8.6	8.3	8.5	8.4	8.2	8.3
12	9.0	8.5	8.8	---	---	---	8.7	8.2	8.5	8.4	8.3	8.4
13	8.9	8.7	8.8	---	---	---	8.8	8.3	8.6	8.5	8.3	8.4
14	---	---	---	---	---	---	8.8	8.4	8.6	8.6	8.3	8.4
15	---	---	---	---	---	---	8.8	8.4	8.6	8.5	8.3	8.4
16	---	---	---	---	---	---	8.7	8.4	8.6	8.5	8.2	8.3
17	---	---	---	---	---	---	8.8	8.4	8.6	8.3	8.2	8.2
18	---	---	---	---	---	---	8.7	8.4	8.5	8.2	8.1	8.1
19	---	---	---	---	---	---	8.7	8.3	8.5	8.3	8.0	8.2
20	---	---	---	---	---	---	8.7	8.3	8.5	8.3	8.0	8.2
21	---	---	---	---	---	---	8.7	8.3	8.5	8.1	8.0	8.0
22	---	---	---	8.5	8.5	8.5	8.7	8.3	8.5	8.0	8.0	8.0
23	8.6	8.5	8.5	8.5	8.4	8.5	8.6	8.4	8.5	8.1	8.0	8.0
24	8.7	8.3	8.5	8.6	8.4	8.5	8.6	8.2	8.4	8.1	8.0	8.1
25	8.7	8.3	8.5	8.5	8.4	8.5	8.5	8.2	8.4	8.1	8.0	8.1
26	8.7	8.3	8.5	8.5	8.4	8.5	8.5	8.2	8.4	8.2	8.1	8.1
27	8.8	8.3	8.5	8.5	8.4	8.4	8.5	8.2	8.3	8.3	8.1	8.2
28	---	---	---	8.5	8.4	8.4	8.5	8.1	8.3	8.3	8.1	8.2
29	---	---	---	8.5	8.3	8.4	8.5	8.1	8.2	8.3	8.1	8.2
30	---	---	---	8.6	8.3	8.5	8.2	8.0	8.1	8.4	8.1	8.2
31	---	---	---	---	---	---	8.1	8.0	8.1	8.5	8.2	8.3
MONTH	9.0	8.0	8.4	8.6	8.3	8.5	8.8	8.0	8.5	8.6	8.0	8.2



PH (STANDARD UNITS), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	8.5	8.2	8.4	8.3	8.2	8.3	8.4	8.1	8.3	8.3	8.1	8.2
2	8.4	8.3	8.3	8.4	8.2	8.3	8.3	8.0	8.2	8.3	8.0	8.2
3	8.3	8.1	8.2	8.3	8.3	8.3	8.3	8.2	8.3	8.2	8.1	8.1
4	8.4	8.0	8.1	8.4	8.3	8.3	8.4	8.2	8.3	8.3	7.8	8.1
5	8.1	8.0	8.0	8.4	8.3	8.4	8.5	8.3	8.4	7.9	7.8	7.9
6	8.2	8.1	8.1	8.4	8.3	8.3	8.6	8.4	8.5	8.0	7.9	7.9
7	8.2	8.2	8.2	8.5	8.3	8.4	8.7	8.5	8.6	8.1	7.9	8.0
8	8.3	8.2	8.2	8.4	8.3	8.4	8.8	8.5	8.6	8.1	8.0	8.0
9	8.3	8.2	8.3	8.5	8.3	8.4	8.8	8.5	8.7	8.2	8.0	8.1
10	8.3	8.2	8.3	8.5	8.3	8.4	8.6	8.2	8.5	8.3	8.1	8.2
11	8.3	8.3	8.3	8.4	8.1	8.2	8.2	8.0	8.1	8.3	8.1	8.3
12	8.4	8.3	8.3	8.2	8.0	8.1	8.1	7.9	8.0	8.2	8.1	8.2
13	8.4	8.3	8.4	8.2	8.0	8.1	8.1	8.0	8.1	8.1	7.8	7.9
14	8.4	8.3	8.3	8.2	8.1	8.2	8.2	8.1	8.1	7.8	7.6	7.7
15	8.3	8.1	8.2	8.3	8.2	8.2	8.2	8.1	8.2	7.8	7.7	7.8
16	8.1	7.9	8.0	8.3	8.2	8.2	8.3	8.2	8.2	7.9	7.7	7.8
17	8.0	7.9	7.9	8.3	8.2	8.2	8.3	8.2	8.2	7.7	7.6	7.6
18	8.0	7.9	8.0	8.3	8.1	8.2	8.4	8.3	8.3	7.8	7.6	7.7
19	8.1	8.0	8.1	8.3	8.2	8.3	8.7	8.3	8.5	7.9	7.7	7.8
20	8.2	8.1	8.1	8.4	8.2	8.3	8.7	8.4	8.6	7.9	7.8	7.9
21	8.2	8.2	8.2	8.4	8.3	8.4	8.5	8.0	8.3	7.9	7.8	7.9
22	8.2	8.2	8.2	8.5	8.4	8.4	8.5	8.1	8.3	8.0	7.9	7.9
23	8.2	8.2	8.2	8.5	8.4	8.4	8.5	8.3	8.4	8.2	7.9	8.0
24	8.3	8.2	8.3	8.6	8.4	8.5	8.4	8.3	8.4	8.2	8.1	8.2
25	8.3	8.2	8.2	8.7	8.5	8.6	8.5	8.3	8.4	8.2	8.1	8.2
26	8.3	8.2	8.2	8.7	8.5	8.6	8.6	8.3	8.4	8.2	8.0	8.1
27	8.3	8.2	8.2	8.8	8.5	8.6	8.6	8.3	8.4	8.1	8.0	8.1
28	8.3	8.2	8.2	8.8	8.5	8.7	8.4	8.2	8.3	8.2	8.1	8.2
29	---	---	---	8.7	8.5	8.6	8.4	8.3	8.3	8.2	8.0	8.1
30	---	---	---	8.5	8.3	8.4	8.5	8.2	8.4	8.2	8.0	8.0
31	---	---	---	8.4	8.3	8.4	---	---	---	8.3	8.1	8.2
MONTH	8.5	7.9	8.2	8.8	8.0	8.4	8.8	7.9	8.3	8.3	7.6	8.0
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE				JULY			AUGUST			SEPTEMBER		
1	8.3	8.1	8.2	8.8	8.3	8.6	8.7	8.4	8.6	8.5	8.2	8.3
2	8.3	8.2	8.3	8.9	8.6	8.7	8.8	8.5	8.6	8.5	8.2	8.4
3	8.4	8.1	8.3	8.8	8.5	8.7	8.8	8.5	8.7	8.6	8.3	8.4
4	8.3	8.3	8.3	8.9	8.5	8.7	8.7	8.5	8.6	8.7	8.3	8.4
5	8.4	8.2	8.3	8.9	8.5	8.6	8.6	8.4	8.5	8.7	8.3	8.5
6	8.4	8.2	8.3	8.9	8.4	8.6	8.6	8.3	8.5	8.7	8.3	8.4
7	8.2	8.0	8.1	8.9	8.3	8.6	8.7	8.4	8.5	8.6	8.2	8.4
8	8.2	8.1	8.1	9.0	8.4	8.7	8.8	8.5	8.7	8.4	8.2	8.3
9	8.0	7.5	7.7	8.9	8.4	8.7	8.8	8.5	8.6	8.3	8.0	8.1
10	7.6	7.5	7.5	8.4	7.8	7.9	8.9	8.5	8.6	8.2	8.0	8.1
11	7.8	7.6	7.7	8.1	7.9	8.0	9.1	8.4	8.7	8.2	8.1	8.1
12	7.9	7.8	7.8	8.1	7.7	7.9	9.2	8.6	8.9	---	---	---
13	8.1	7.9	8.0	7.8	7.7	7.8	8.9	8.6	8.7	---	---	---
14	8.1	8.0	8.0	8.0	7.9	7.9	8.9	8.3	8.6	---	---	---
15	8.0	7.6	7.8	8.0	7.9	7.9	8.8	8.2	8.5	---	---	---
16	8.0	7.8	7.9	8.0	7.9	8.0	8.4	8.2	8.3	---	---	---
17	8.0	7.9	8.0	8.1	8.0	8.0	8.5	8.2	8.3	---	---	---
18	8.2	7.9	8.0	8.2	8.0	8.1	8.6	8.1	8.3	---	---	---
19	8.5	8.2	8.3	8.2	8.1	8.2	8.5	8.0	8.3	---	---	---
20	8.4	8.2	8.3	8.3	8.1	8.2	8.0	7.9	8.0	---	---	---
21	8.5	8.1	8.3	8.3	8.0	8.1	8.0	7.9	7.9	---	---	---
22	8.4	8.3	8.4	8.1	8.0	8.1	8.0	7.8	7.9	---	---	---
23	8.4	8.2	8.3	8.2	8.0	8.1	8.1	8.0	8.0	---	---	---
24	8.5	8.3	8.4	8.1	8.0	8.1	8.0	7.9	8.0	---	---	---
25	8.5	8.3	8.4	8.2	8.0	8.1	8.2	7.9	8.0	---	---	---
26	8.5	8.1	8.4	8.3	8.1	8.2	8.2	8.1	8.2	---	---	---
27	8.5	8.3	8.4	8.4	8.2	8.3	8.4	8.1	8.2	---	---	---
28	8.4	8.1	8.3	8.5	8.2	8.4	8.5	8.2	8.3	---	---	---
29	8.4	8.2	8.4	8.6	8.4	8.5	8.4	8.2	8.3	---	---	---
30	8.5	8.2	8.3	8.6	8.4	8.5	8.4	8.2	8.3	---	---	---
31	---	---	---	8.6	8.5	8.5	8.4	8.2	8.3	---	---	---
MONTH	8.5	7.5	8.1	9.0	7.7	8.3	9.2	7.8	8.4	8.7	8.0	8.3
YEAR	9.2	7.5	8.3									

## GREAT MIAMI RIVER BASIN

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03271510 GREAT MIAMI RIVER NEAR LINDEN AVENUE AT MIAMISBURG, OH

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	18.0	16.5	17.5	---	---	---	5.5	4.0	4.5	1.0	.5	.5
2	19.0	17.5	18.0	---	---	---	5.0	3.5	4.5	1.5	.5	1.0
3	19.5	17.0	18.0	---	---	---	3.5	2.0	3.0	2.5	1.5	2.0
4	17.5	15.5	16.5	---	---	---	2.5	2.0	2.0	4.0	2.5	3.5
5	16.5	14.5	15.5	---	---	---	3.5	2.0	3.0	4.0	2.5	3.0
6	16.0	14.5	15.5	---	---	---	5.0	3.0	4.0	2.5	1.5	2.0
7	16.0	13.0	15.0	---	---	---	4.5	3.5	4.0	2.5	1.5	2.5
8	14.5	14.0	14.0	---	---	---	4.0	2.5	3.5	3.5	2.5	3.0
9	---	---	---	---	---	---	3.5	2.0	2.5	4.0	3.0	3.5
10	---	---	---	---	---	---	3.5	2.0	2.5	4.5	3.5	4.0
11	15.0	13.0	13.5	---	---	---	3.5	2.5	3.0	4.0	3.5	3.5
12	17.5	14.0	16.0	---	---	---	3.5	2.5	3.0	3.5	2.5	3.0
13	19.0	17.5	18.5	---	---	---	3.0	1.5	2.5	2.5	2.0	2.5
14	---	---	---	---	---	---	2.5	1.5	2.0	3.0	2.0	2.5
15	---	---	---	---	---	---	1.0	.0	1.0	4.5	2.5	3.5
16	---	---	---	---	---	---	.0	.0	.0	6.0	4.0	5.5
17	---	---	---	---	---	---	.0	.0	.0	8.0	6.0	7.0
18	---	---	---	---	---	---	.0	.0	.0	8.5	8.0	8.5
19	---	---	---	---	---	---	1.0	.0	.5	8.0	6.5	7.0
20	---	---	---	---	---	---	1.0	.0	.5	6.0	5.5	6.0
21	---	---	---	---	---	---	.5	.0	.5	5.5	4.5	5.0
22	---	---	---	6.0	5.0	5.5	.0	.0	.0	4.5	4.0	4.5
23	12.0	10.0	11.0	5.0	3.5	4.5	.0	.0	.0	4.5	4.0	4.5
24	14.0	10.5	12.0	4.5	3.5	4.0	.0	.0	.0	5.5	4.5	5.0
25	15.0	12.5	13.5	4.5	3.5	4.0	.0	.0	.0	6.5	5.5	6.0
26	15.5	13.0	14.0	6.0	4.5	5.5	.5	.0	.0	6.0	4.5	5.0
27	16.0	13.5	14.5	8.5	6.0	7.5	1.0	.0	.5	5.5	4.5	5.0
28	---	---	---	9.0	8.0	8.5	2.0	1.0	1.0	6.0	5.0	5.5
29	---	---	---	8.0	5.5	7.0	2.0	1.0	1.5	5.0	4.0	5.0
30	---	---	---	5.5	4.5	5.5	2.0	1.5	2.0	5.0	4.0	4.5
31	---	---	---	---	---	---	2.0	.5	1.5	5.5	4.0	5.0
MONTH	19.5	10.0	15.0	9.0	3.5	6.0	5.5	.0	1.5	8.5	.5	4.0
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	5.5	5.0	5.5	6.0	5.0	5.5	12.5	11.5	12.0	19.5	18.0	19.0
2	6.5	6.0	6.0	6.5	5.5	6.0	12.5	10.0	11.5	18.0	16.5	17.5
3	6.0	5.0	5.5	7.5	6.5	7.0	10.0	8.5	9.0	16.5	15.5	16.0
4	5.5	4.0	5.0	7.0	6.5	7.0	9.5	8.0	8.5	15.5	14.0	15.0
5	4.0	3.5	4.0	8.0	7.0	7.5	10.0	9.0	9.5	15.0	13.5	14.5
6	4.5	4.0	4.0	8.5	7.5	8.0	11.0	10.0	10.5	14.0	13.0	13.5
7	6.0	5.0	5.5	7.5	6.5	7.0	10.5	9.5	10.0	16.0	13.5	14.5
8	7.0	5.5	6.0	8.0	7.0	7.5	11.0	9.5	10.0	17.5	15.5	16.0
9	8.0	7.0	7.5	10.0	8.0	9.0	12.0	10.5	11.5	18.5	17.0	17.5
10	8.5	7.5	8.0	12.0	9.5	10.5	13.0	12.0	12.5	18.5	16.0	17.5
11	8.0	7.0	7.5	13.5	12.0	13.0	12.5	10.0	11.5	16.5	15.0	16.0
12	7.5	6.5	7.0	14.0	12.5	13.5	10.0	9.0	9.5	16.5	15.0	16.0
13	9.0	7.0	7.5	15.5	13.5	14.5	10.0	8.5	9.0	15.0	14.0	14.5
14	9.0	8.0	8.5	16.5	15.0	15.5	10.5	10.0	10.0	14.5	13.5	14.0
15	7.5	7.0	7.5	16.5	16.0	16.5	11.5	10.0	10.5	16.0	14.5	15.0
16	7.5	6.5	7.0	16.0	14.5	15.5	12.5	11.5	12.0	16.0	15.5	16.0
17	6.0	4.5	5.0	14.5	13.0	14.0	13.5	12.5	13.0	17.0	16.0	16.5
18	4.5	4.0	4.5	13.0	11.5	12.0	13.0	12.0	12.5	17.0	16.0	16.5
19	5.5	4.5	5.0	12.0	10.0	11.0	13.0	12.0	12.5	17.0	16.5	16.5
20	5.5	4.5	5.0	9.5	8.5	9.0	14.0	12.5	13.0	17.5	16.5	17.0
21	6.0	4.5	5.0	9.5	8.5	9.0	15.0	14.0	14.5	17.5	16.5	17.0
22	7.5	6.0	6.5	10.0	9.5	10.0	16.0	14.0	15.0	16.5	15.5	16.0
23	7.5	7.5	7.5	10.5	10.0	10.5	17.0	15.5	16.5	17.0	15.5	16.0
24	7.5	5.0	6.5	10.0	9.0	9.5	18.5	17.0	17.5	17.5	16.5	17.0
25	5.0	3.5	4.0	10.5	9.0	9.5	20.5	18.5	19.5	18.0	17.0	17.5
26	3.5	2.5	3.0	11.0	9.0	10.0	21.5	20.0	20.5	17.5	17.0	17.0
27	5.0	3.5	4.0	11.5	9.5	10.5	22.5	20.5	21.5	18.5	16.5	17.5
28	6.0	5.0	5.5	11.0	10.0	10.5	21.5	20.0	21.0	18.5	17.0	18.0
29	---	---	---	10.0	10.0	10.0	19.5	18.5	19.5	17.5	16.5	17.0
30	---	---	---	11.5	9.5	10.5	20.5	18.0	19.0	18.5	17.0	17.5
31	---	---	---	12.5	11.5	12.0	---	---	---	19.0	17.5	18.5
MONTH	9.0	2.5	6.0	16.5	5.0	10.5	22.5	8.0	13.5	19.5	13.0	16.5

## GREAT MIAMI RIVER BASIN

03271510 GREAT MIAMI RIVER NEAR LINDEN AVENUE AT MIAMISBURG, OH

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	20.0	18.5	19.0	26.5	24.5	25.5	25.0	23.0	24.0	26.0	24.0	24.5
2	20.5	20.0	20.0	27.0	24.5	25.5	25.5	23.0	24.0	26.5	24.5	25.5
3	21.5	20.0	21.0	27.0	24.0	25.5	25.5	23.0	24.0	26.5	24.0	25.0
4	20.5	18.0	19.5	27.5	24.5	26.0	25.0	23.5	24.0	27.0	23.5	25.0
5	18.5	17.0	18.0	28.5	25.0	26.5	24.5	23.0	23.5	27.5	24.0	25.5
6	19.5	18.0	18.5	28.0	25.0	26.0	24.5	23.0	23.5	28.5	24.5	26.5
7	20.0	19.0	19.5	26.5	23.5	25.0	24.0	22.5	23.0	27.5	25.5	26.5
8	22.0	19.5	20.5	27.5	23.0	25.0	24.0	22.0	22.5	25.5	24.0	24.5
9	21.5	20.0	21.0	28.5	24.5	26.5	24.5	22.0	23.0	24.0	22.0	23.0
10	21.5	20.5	21.0	27.0	25.0	26.0	25.5	22.5	23.5	23.5	23.0	23.0
11	21.5	20.0	21.0	26.5	25.0	26.0	26.0	23.0	24.5	23.5	23.0	23.5
12	21.5	20.0	21.0	25.0	21.5	23.0	26.0	23.5	24.5	---	---	---
13	22.5	20.0	21.5	21.0	19.5	20.0	25.0	23.5	24.0	---	---	---
14	23.5	21.5	22.5	20.0	19.5	20.0	24.5	22.5	23.5	---	---	---
15	23.5	22.5	23.0	20.5	19.5	20.0	24.0	23.0	23.5	---	---	---
16	24.0	22.5	23.0	22.0	20.0	20.5	24.5	22.5	23.5	---	---	---
17	24.5	23.0	24.0	23.0	21.0	22.0	25.0	23.0	24.0	---	---	---
18	25.5	24.0	24.5	24.0	22.0	23.0	26.5	23.5	24.5	---	---	---
19	25.5	24.0	24.5	24.5	23.0	24.0	26.0	24.5	25.5	---	---	---
20	24.5	22.0	23.5	25.0	24.5	24.5	25.5	24.5	25.0	---	---	---
21	23.5	21.5	22.5	25.0	23.5	24.0	25.5	24.5	25.0	---	---	---
22	23.0	22.0	22.5	23.5	22.5	23.0	25.0	23.5	24.0	---	---	---
23	21.5	20.0	21.0	22.5	21.5	22.0	23.5	22.5	23.0	---	---	---
24	21.5	19.5	20.5	23.0	21.5	22.0	23.5	22.5	23.0	---	---	---
25	23.0	20.5	21.5	23.0	21.5	22.5	24.5	23.0	23.5	---	---	---
26	24.0	21.5	22.5	24.0	22.5	23.0	25.5	23.5	24.5	---	---	---
27	25.0	22.5	23.5	24.0	23.0	23.5	27.0	24.0	25.5	---	---	---
28	24.5	23.0	23.5	25.0	23.0	24.0	27.5	25.0	26.0	---	---	---
29	25.0	24.0	24.5	26.0	24.0	25.0	26.0	24.5	25.5	---	---	---
30	26.0	23.5	24.5	26.0	24.5	25.0	25.5	24.0	24.5	---	---	---
31	---	---	---	25.5	24.0	25.0	25.0	23.5	24.5	---	---	---
MONTH	26.0	17.0	22.0	28.5	19.5	24.0	27.5	22.0	24.0	28.5	22.0	25.0
YEAR	28.5	.0	14.0									

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	10.4	8.2	9.0	---	---	---	14.3	11.9	12.7	12.2	11.6	12.0
2	11.7	7.9	9.3	---	---	---	13.6	11.7	12.5	12.4	12.1	12.2
3	14.7	7.9	10.2	---	---	---	14.3	11.7	12.7	12.1	11.7	11.9
4	15.0	8.3	10.9	---	---	---	14.3	12.1	12.9	11.7	11.0	11.4
5	14.6	8.4	10.7	---	---	---	14.6	11.8	12.9	11.7	10.9	11.3
6	15.6	8.4	10.8	---	---	---	13.0	11.1	11.9	11.8	11.6	11.7
7	16.8	10.4	13.7	---	---	---	14.0	10.9	12.0	11.9	11.3	11.6
8	15.8	11.3	12.4	---	---	---	15.2	10.8	12.5	11.5	10.6	11.1
9	---	---	---	---	---	---	15.0	10.6	12.4	11.3	10.5	10.8
10	---	---	---	---	---	---	12.7	10.3	11.3	10.8	9.9	10.4
11	16.5	10.3	12.7	---	---	---	13.3	9.8	11.2	11.4	9.9	10.5
12	19.0	10.1	14.9	---	---	---	14.0	9.3	11.3	11.0	9.9	10.3
13	17.4	14.2	15.8	---	---	---	17.3	9.5	12.8	11.8	9.8	10.6
14	---	---	---	---	---	---	16.3	11.1	13.3	11.2	9.4	10.2
15	---	---	---	---	---	---	16.3	11.1	13.2	11.0	8.8	9.8
16	---	---	---	---	---	---	16.0	11.6	13.4	10.5	7.9	9.1
17	---	---	---	---	---	---	16.3	11.6	13.5	8.1	6.7	7.6
18	---	---	---	---	---	---	16.7	11.6	13.7	7.0	6.2	6.5
19	---	---	---	---	---	---	15.8	11.3	13.1	8.4	6.2	7.1
20	---	---	---	---	---	---	16.3	11.2	13.3	7.3	6.9	7.1
21	---	---	---	---	---	---	15.8	11.0	13.1	7.9	6.9	7.4
22	---	---	---	12.3	11.8	12.0	15.1	11.3	13.0	8.4	8.0	8.2
23	12.3	9.8	11.0	12.8	11.8	12.2	15.0	11.0	12.9	8.8	8.3	8.6
24	12.8	9.2	10.5	13.2	12.1	12.5	15.0	10.7	12.7	9.3	8.8	8.9
25	12.7	8.7	10.1	12.6	11.9	12.3	14.3	10.5	12.2	10.5	8.5	9.3
26	16.1	8.4	10.5	13.0	11.4	12.1	14.7	10.1	12.1	12.0	10.1	10.9
27	16.2	8.2	10.7	12.0	10.6	11.4	13.5	10.0	11.5	11.9	10.5	11.1
28	---	---	---	11.5	10.4	10.7	14.8	10.1	12.1	11.8	10.5	10.9
29	---	---	---	12.9	10.5	11.5	14.3	10.1	11.6	11.8	10.5	10.9
30	---	---	---	13.7	11.1	12.2	11.2	10.6	10.9	13.5	10.5	11.5
31	---	---	---	---	---	---	11.6	10.7	11.2	14.0	10.7	11.9
MONTH	19.0	7.9	11.4	13.7	10.4	11.9	17.3	9.3	12.4	14.0	6.2	10.1





## GREAT MIAMI RIVER BASIN

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 mi<sup>2</sup>.

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. 10-30. Records good, except those for estimated period which are 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.--28 years, 197 ft<sup>3</sup>/s, 13.58 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,300 ft<sup>3</sup>/s Mar. 4, 1963, gage height, 14.40 ft, from rating curve extended above 7,000 ft<sup>3</sup>/s on basis of contracted-opening measurement at gage height 18.8 ft; minimum daily, 2.5 ft<sup>3</sup>/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 ft<sup>3</sup>/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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 15	1700	5,760	7.85	May 16	1400	*6,640	*7.89

Minimum daily discharge, 13 ft<sup>3</sup>/s Dec. 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	20	46	452	181	192	663	115	154	37	49	55
2	21	20	44	185	1100	183	705	100	152	33	41	42
3	20	20	41	137	752	171	377	96	166	32	38	36
4	19	19	39	234	3030	138	272	887	135	30	42	30
5	18	19	41	412	1270	122	220	2130	121	28	187	29
6	18	23	44	229	689	110	177	779	109	26	124	27
7	17	29	43	162	561	91	150	446	108	25	69	25
8	17	118	36	134	429	86	128	306	110	23	52	24
9	16	169	32	118	408	98	115	236	225	26	43	32
10	16	102	30	129	547	98	290	210	264	33	38	28
11	16	68	28	141	357	2060	904	169	148	42	35	24
12	16	52	26	116	284	853	425	236	107	2200	32	26
13	16	44	24	78	243	447	281	2230	92	1170	32	24
14	16	40	23	72	299	313	233	1110	89	1190	33	45
15	15	294	21	70	3270	243	197	1560	125	821	31	46
16	15	1200	20	64	2830	593	168	5110	90	381	28	30
17	15	466	19	67	895	555	148	3800	73	225	26	25
18	16	252	19	108	526	322	119	986	65	148	27	22
19	20	159	18	116	382	237	107	526	58	106	27	28
20	24	135	17	913	275	191	112	374	78	88	28	27
21	26	114	17	952	227	168	669	284	97	252	205	24
22	24	87	16	485	242	156	439	232	73	325	446	24
23	22	76	16	324	262	139	280	195	68	553	241	22
24	22	64	15	266	231	120	218	170	63	282	123	21
25	21	59	15	219	164	113	181	167	52	179	75	21
26	20	61	14	182	154	104	155	635	47	121	54	19
27	20	56	14	142	167	92	141	593	45	91	43	18
28	19	58	14	125	224	84	140	331	45	77	36	17
29	19	54	13	123	---	106	181	295	41	66	121	16
30	18	46	40	120	---	219	133	222	39	58	174	15
31	20	---	674	101	---	588	---	179	---	52	83	---
TOTAL	583	3924	1459	6976	19999	8992	8328	24709	3039	8720	2583	822
MEAN	18.8	131	47.1	225	714	290	278	797	101	281	83.3	27.4
MAX	26	1200	674	952	3270	2060	904	5110	264	2200	446	55
MIN	15	19	13	64	154	84	107	96	39	23	26	15
CFSM	.10	.66	.24	1.14	3.63	1.47	1.41	4.05	.51	1.43	.42	.14
IN.	.11	.74	.28	1.32	3.78	1.70	1.57	4.67	.57	1.65	.49	.16

CAL YR 1989 TOTAL 85997 MEAN 236 MAX 7470 MIN 11 CFSM 1.20 IN. 16.24  
WTR YR 1990 TOTAL 90134 MEAN 247 MAX 5110 MIN 13 CFSM 1.25 IN. 17.02

## 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 mi<sup>2</sup>.

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: Dec. 9-30, Feb. 16 to Mar. 20 and May 26 to July 10. 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 8 discharge measurements furnished by Miami Conservancy District.

AVERAGE DISCHARGE.--72 years (1914-23, 1927-90), 266 ft<sup>3</sup>/s, 13.14 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,390 ft<sup>3</sup>/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 ft<sup>3</sup>/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 ft<sup>3</sup>/s, computed by Miami Conservancy District.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,180 ft<sup>3</sup>/s Feb. 16, gage height 26.70 ft; minimum daily, 2.1 ft<sup>3</sup>/s Dec. 27, 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	38	72	676	229	280	838	167	240	50	73	92
2	30	38	70	317	1250	260	971	157	230	48	66	71
3	29	38	66	236	1080	240	524	160	250	45	60	59
4	27	37	63	233	3180	220	388	1720	210	42	59	50
5	27	37	63	505	2170	190	323	3950	190	39	151	45
6	27	40	68	309	974	180	268	1710	180	37	174	43
7	27	45	69	228	797	170	229	1130	170	34	102	40
8	26	100	60	194	639	160	201	792	200	32	77	39
9	26	216	57	173	557	150	183	501	270	39	64	255
10	26	144	54	165	761	200	563	434	330	50	56	94
11	27	97	50	183	518	3400	1280	363	210	104	51	57
12	27	74	52	168	414	1300	621	384	130	2130	48	78
13	27	60	49	132	352	650	417	2890	110	2150	47	77
14	27	53	45	116	344	520	345	2230	120	1670	47	193
15	27	179	41	114	1820	450	302	2000	160	1650	46	279
16	28	1470	38	110	5280	800	259	4690	120	1020	43	103
17	30	626	35	107	1800	900	233	5690	95	747	41	70
18	31	339	33	133	900	500	199	2860	74	464	40	55
19	36	224	30	160	620	350	177	1290	62	270	40	91
20	40	182	29	929	450	290	177	995	90	200	40	91
21	43	162	28	1350	330	255	841	803	130	194	195	64
22	44	132	26	663	350	236	684	677	110	382	553	59
23	42	115	25	430	370	219	401	586	100	566	284	54
24	41	103	24	349	320	199	304	427	88	363	170	47
25	40	94	23	291	250	190	252	298	72	234	111	43
26	38	94	22	257	230	176	219	700	66	166	83	40
27	37	90	21	208	250	165	198	1000	62	131	67	37
28	37	87	21	187	320	155	185	520	58	112	56	35
29	36	85	30	180	---	170	223	420	56	98	313	33
30	36	76	110	180	---	340	187	350	54	88	259	32
31	37	---	940	164	---	785	---	290	---	79	136	---
TOTAL	1005	5075	2314	9447	26555	14100	11992	40184	4237	13234	3552	2326
MEAN	32.4	169	74.6	305	948	455	400	1296	141	427	115	77.5
MAX	44	1470	940	1350	5280	3400	1280	5690	330	2150	553	279
MIN	26	37	21	107	229	150	177	157	54	32	40	32
CFSM	.12	.62	.27	1.11	3.45	1.65	1.45	4.71	.51	1.55	.42	.28
IN.	.14	.69	.31	1.28	3.59	1.91	1.62	5.44	.57	1.79	.48	.31

CAL YR 1989 TOTAL 125716 MEAN 344 MAX 6840 MIN 21 CFSM 1.25 IN. 17.01  
WTR YR 1990 TOTAL 134021 MEAN 367 MAX 5690 MIN 21 CFSM 1.34 IN. 18.13

## GREAT MIAMI RIVER BASIN

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 mi<sup>2</sup>.

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: Dec. 14-30. Records good except those for periods of estimated record, which are fair. Water-quality data collected at this site 1972 to 1974.

COOPERATION.--Gage-height tapes, and 9 discharge measurements furnished by Miami Conservancy District.

AVERAGE DISCHARGE.--19 years (1972-90), 72.4 ft<sup>3</sup>/s, 14.25 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,200 ft<sup>3</sup>/s May 26, 1989, gage height 18.67 ft, present datum; minimum daily, 1.2 ft<sup>3</sup>/s July 17, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1500 ft<sup>3</sup>/s and maximum (\*).

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 15	1300	1,780	7.97	May 17	0315	2,190	8.58
Mar. 11	0445	*3,730	*10.37	Aug. 21	1645	1,540	7.57
May 4	1800	1,580	7.63				

Minimum daily discharge, 5.0 ft<sup>3</sup>/s Dec. 27, 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.5	16	19	123	91	72	242	42	62	29	17	38
2	7.4	15	19	50	382	68	253	38	65	18	15	28
3	7.3	14	17	43	263	61	146	37	62	15	14	22
4	7.0	14	16	80	690	50	110	619	49	14	25	18
5	6.4	14	17	107	400	47	89	541	44	12	34	16
6	6.4	19	18	64	252	44	71	249	42	11	20	15
7	6.6	27	18	47	234	39	61	151	44	11	16	13
8	6.3	65	15	41	184	39	54	107	40	10	14	12
9	5.6	55	14	37	185	43	50	85	36	12	13	46
10	6.5	34	14	36	227	61	240	77	33	25	12	21
11	6.8	25	14	37	157	1340	299	61	29	34	11	15
12	7.0	21	13	33	121	390	150	102	27	525	10	32
13	7.0	18	12	25	105	215	105	658	25	241	11	23
14	7.0	17	10	24	108	149	94	336	26	384	11	118
15	6.4	142	9.5	23	1040	114	79	363	124	240	9.3	112
16	6.8	310	9.0	22	801	289	68	917	47	120	8.6	42
17	8.1	126	8.2	23	329	220	60	1210	32	73	7.9	26
18	9.0	76	7.8	33	201	137	48	352	26	52	13	20
19	12	54	7.2	33	150	102	46	204	23	41	12	52
20	16	49	6.8	317	109	81	48	146	52	38	18	40
21	13	39	6.4	308	92	73	270	109	53	118	334	27
22	13	32	6.0	172	101	68	187	88	38	117	252	25
23	12	29	5.8	116	97	59	115	74	36	147	107	23
24	14	25	5.6	92	84	53	87	65	31	80	56	20
25	15	24	5.4	77	62	52	71	72	24	54	37	17
26	11	25	5.2	62	58	48	61	278	21	38	27	16
27	11	23	5.0	52	67	43	55	195	24	31	21	14
28	11	24	5.0	46	78	41	54	132	21	27	18	12
29	10	21	7.0	48	---	63	55	129	19	24	299	10
30	10	20	20	45	---	108	45	90	22	22	138	11
31	13	---	321	40	---	225	---	72	---	19	60	---
TOTAL	286.1	1373	656.9	2256	6668	4394	3313	7599	1177	2582	1640.8	884
MEAN	9.23	45.8	21.2	72.8	238	142	110	245	39.2	83.3	52.9	29.5
MAX	16	310	321	317	1040	1340	299	1210	124	525	334	118
MIN	5.6	14	5.0	22	58	39	45	37	19	10	7.9	10
CFSM	.13	.66	.31	1.05	3.45	2.05	1.60	3.55	.57	1.21	.77	.43
IN.	.15	.74	.35	1.22	3.59	2.37	1.79	4.10	.63	1.39	.88	.48

CAL YR 1989	TOTAL 36073.6	MEAN 98.8	MAX 5520	MIN 4.6	CFSM 1.43	IN. 19.45
WTR YR 1990	TOTAL 32829.8	MEAN 89.9	MAX 1340	MIN 5.0	CFSM 1.30	IN. 17.70

## GREAT MIAMI RIVER BASIN

203

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 mi<sup>2</sup>.

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: Oct. 1-28 and Dec. 12-31. Records good except those for estimated discharges which are fair. 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 9 discharge measurements furnished by Miami Conservancy District.

AVERAGE DISCHARGE.--59 years (1931-90), 3,311 ft<sup>3</sup>/s, 12.39 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 352,000 ft<sup>3</sup>/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 ft<sup>3</sup>/s Jan. 21, 1959, gage height 79.47 ft; minimum daily discharge, 155 ft<sup>3</sup>/s Sept 27, 1941.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 38,400 ft<sup>3</sup>/s May 17, gage height, 70.86 ft; minimum daily, 620 ft<sup>3</sup>/s Dec. 28, 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1080	850	1550	6460	2650	4480	7130	2460	3700	1990	1920	2270
2	1110	807	1420	4990	5830	4350	9600	2220	3310	1780	1890	1770
3	1080	829	1310	3440	12500	4020	8180	2120	4230	1600	1810	1500
4	1000	813	1270	2890	20800	3750	6090	11400	3340	1570	1830	1360
5	990	810	1250	3550	21900	3440	5020	25800	3160	1500	2160	1280
6	1030	965	1250	4480	14800	3110	4160	16000	3320	1400	2070	1230
7	980	1010	1280	3410	10700	2790	3560	9850	4350	1360	2040	1130
8	920	1480	1150	2780	8590	2640	3150	6580	3090	1290	1960	1170
9	900	1900	1090	2520	7420	2580	2870	4990	9590	1280	1750	2420
10	970	1720	1030	2350	7550	2580	5500	4190	13600	3350	1610	2610
11	980	1680	986	2300	6470	18400	13500	3660	10600	2160	1510	2640
12	930	1530	950	2430	5480	13900	13100	3400	6380	14800	1440	2260
13	910	1390	900	2230	4730	9570	9200	14700	4920	21900	1380	2020
14	890	1300	860	1910	4300	6320	6710	19600	4050	17300	1560	1750
15	850	1730	820	1780	15600	5020	5500	18800	7140	17200	2700	3460
16	820	7330	790	1750	32300	6430	4610	26700	5530	13100	2420	2370
17	840	9010	760	1690	29000	8290	3940	36000	4010	7720	1860	2100
18	810	5530	740	1880	22300	7170	3420	28700	3260	5450	1610	1640
19	1070	3610	720	1900	16700	5300	3100	18700	2750	4290	2080	1670
20	1180	2800	700	4560	12400	4400	2870	12700	2680	3440	3280	1780
21	1180	2390	700	8100	8150	3770	5170	7810	2920	3940	3490	1490
22	1170	2120	680	7760	6680	3390	5840	5920	2590	5820	3840	1450
23	1170	2120	680	5500	6240	3130	4710	4970	2710	8170	3800	1430
24	1200	1930	660	4200	5910	2940	3880	4310	2470	8650	3700	1580
25	1130	1730	660	3510	5350	2860	3370	3860	2260	5820	2480	1540
26	1050	1680	640	3170	4490	2660	2980	6840	2110	4170	1980	1460
27	980	1680	640	2760	4280	2490	2720	7440	2000	3220	1720	1320
28	920	1750	620	2490	4380	2330	2580	5440	2220	2730	1560	1210
29	890	1710	620	2400	---	2270	2590	9180	2160	2390	4160	1140
30	813	1610	760	2510	---	3320	2480	5830	1940	2180	2980	1390
31	834	---	3000	2390	---	4720	---	4450	---	2020	3170	---
TOTAL	30677	65814	30486	104090	307500	152420	157530	334620	126390	173590	71760	52440
MEAN	990	2194	983	3358	10980	4917	5251	10790	4213	5600	2315	1748
MAX	1200	9010	3000	8100	32300	18400	13500	36000	13600	21900	4160	3460
MIN	810	807	620	1690	2650	2270	2480	2120	1940	1280	1380	1130
CFSM	.27	.60	.27	.92	3.03	1.35	1.45	2.97	1.16	1.54	.64	.48
IN.	.31	.67	.31	1.07	3.15	1.56	1.61	3.43	1.30	1.78	.74	.54

CAL YR 1989 TOTAL 1582987 MEAN 4337 MAX 41900 MIN 620 CFSM 1.19 IN. 16.22  
WTR YR 1990 TOTAL 1607317 MEAN 4404 MAX 36000 MIN 620 CFSM 1.21 IN. 16.47



## GREAT MIAMI RIVER BASIN

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 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1966 to current year.

REMARKS.--Four parameter (Specific conductance, pH, Water temperature, and Dissolved oxygen) water quality monitor at site from July 1966 to September 1981. See records of daily discharge for station at Hamilton (station 032740000).

## WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
OCT 17...	1315	170	860	8.6	19.0	18.0	29	7.1	77	K2400	K4000
JAN 24...	0815	4310	700	8.4	10.0	5.5	8.0	11.2	92	K2600	K4900
MAR 28...	1015	2350	815	8.5	10.5	9.5	2.4	11.8	105	K490	K130
MAY 22...	1145	5890	674	8.1	15.0	15.5	32	9.0	93	K10000	K460
JUL 17...	1215	7480	510	7.8	16.0	12.0	3.0	10.6	100	K3600	K610
SEP 06...	1310	1220	715	8.9	31.5	27.5	4.8	10.1	132	K230	K72

DATE	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
OCT 17...	330	81	31	52	5.1	225	72	237	89	74	0.5
JAN 24...	320	80	28	20	3.3	239	5	204	61	45	0.2
MAR 28...	350	85	33	31	3.0	295	9	257	79	56	0.2
MAY 22...	300	77	26	16	2.9	295	0	242	52	32	0.4
JUL 17...	260	65	23	12	4.1	214	0	175	38	24	0.1
SEP 06...	330	80	31	42	4.5	308	7	264	71	62	0.4

## GREAT MIAMI RIVER BASIN

03274600 GREAT MIAMI RIVER AT NEW BALTIMORE, OH

DATE	SILICA, DIS- SOLVED (MG/L SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)
OCT 17...	2.3	512	0.06	2.50	0.13	0.07	0.80	0.60	0.43	0.36	500
JAN 24...	7.4	461	0.07	8.30	0.20	0.20	1.1	0.25	0.17	0.19	<10
MAR 28...	3.4	493	0.07	3.90	0.02	0.02	0.90	0.20	0.18	0.15	--
MAY 22...	7.9	388	0.06	6.00	0.07	0.09	1.5	0.27	0.13	0.14	<10
JUL 17...	8.8	338	0.07	7.80	0.07	0.01	1.8	0.31	0.15	0.16	20
SEP 06...	4.6	458	0.03	1.90	0.06	0.02	0.90	0.29	0.23	0.21	--

DATE	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)
OCT 17...	1	94	<0.5	<1.0	2	<3	6	690	<1	11
JAN 24...	<1	68	<0.5	1.0	<1	<3	10	17	<10	5
MAR 28...	--	--	--	--	--	--	--	--	--	--
MAY 22...	1	69	<0.5	<1.0	<1	<3	16	11	<1	7
JUL 17...	1	62	0.5	<1.0	<1	<3	5	20	<1	4
SEP 06...	--	--	--	--	--	--	--	--	--	--

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SEDI- MENT, SUS- PENDE (MG/L) (80154)
OCT 17...	50	0.3	<10	7	1	<1.0	750	<6	25	125
JAN 24...	10	<0.1	<10	<10	<1	<1.0	660	<6	11	44
MAR 28...	--	--	--	--	--	--	--	--	--	13
MAY 22...	8	<0.1	<10	3	<1	<1.0	560	<6	11	84
JUL 17...	4	<0.1	<10	4	<1	<1.0	500	<6	6	140
SEP 06...	--	--	--	--	--	--	--	--	--	114

K Results based on colony count outside the acceptable range.

## GROUND-WATER RECORDS

## 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.

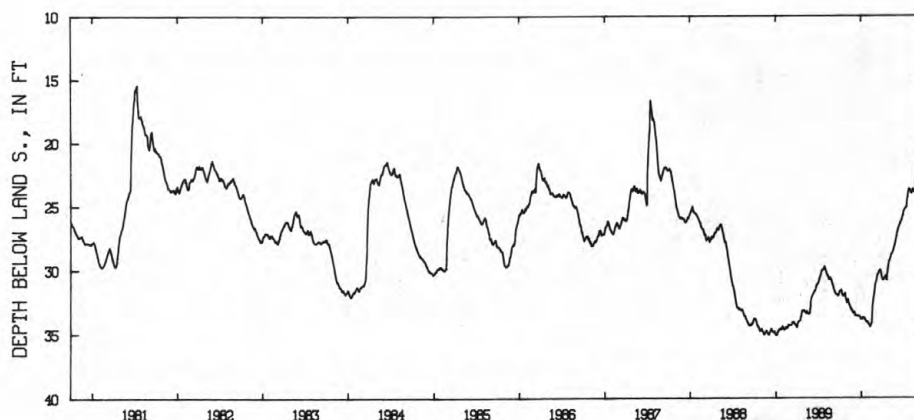
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31.68	32.35	33.29	33.77	34.18	31.32	30.69	29.28	27.34	25.47	23.90	21.67
2	31.65	32.34	33.27	33.75	34.24	31.12	30.73	29.23	27.25	25.41	23.94	21.66
3	31.65	32.35	33.29	33.75	34.23	31.00	30.76	29.20	27.11	25.33	23.97	21.54
4	31.63	32.34	33.32	33.81	34.25	30.98	30.79	29.15	27.03	25.30	23.99	21.45
5	31.61	32.32	33.37	33.81	34.28	30.91	30.78	29.05	27.01	25.26	23.99	21.41
6	31.58	32.32	33.46	33.82	34.32	30.85	30.77	29.00	26.93	25.26	23.91	21.35
7	31.58	32.45	33.55	33.78	34.39	30.80	30.75	28.95	26.85	25.23	23.88	21.37
8	31.57	32.51	33.55	33.70	34.40	30.72	30.73	28.89	26.78	25.20	23.80	21.39
9	31.57	32.59	33.54	33.68	34.43	30.56	30.70	28.84	26.69	25.19	23.71	21.29
10	31.73	32.61	33.55	33.71	34.36	30.49	30.62	28.73	26.64	25.12	23.66	21.24
11	31.83	32.67	33.57	33.69	34.27	30.39	30.60	28.74	26.63	25.12	23.71	21.21
12	31.94	32.72	33.57	33.72	34.19	30.32	30.59	28.74	26.58	25.11	23.75	21.22
13	31.99	32.77	33.56	33.73	34.16	30.33	30.57	28.71	26.51	25.12	23.84	21.29
14	31.99	32.82	33.57	33.72	34.16	30.29	30.51	28.70	26.46	25.05	23.89	21.34
15	32.01	32.84	33.58	33.74	34.07	30.28	30.48	28.60	26.40	24.83	23.89	21.26
16	32.02	32.92	33.58	33.77	33.78	30.26	30.45	28.56	26.37	24.67	23.85	21.24
17	32.02	32.94	33.57	33.80	33.32	30.12	30.62	28.49	26.30	24.49	23.85	21.25
18	32.01	33.00	33.55	33.88	32.97	30.10	30.69	28.45	26.22	24.39	23.85	21.21
19	31.96	33.00	33.56	33.89	32.67	30.08	30.73	28.42	26.21	24.30	23.76	21.06
20	31.92	33.12	33.57	33.90	32.59	30.07	30.77	28.31	26.19	24.12	23.61	20.98
21	31.88	33.11	33.60	33.95	32.39	30.03	30.77	28.26	26.16	23.98	23.22	20.93
22	31.88	33.08	33.60	34.00	32.23	30.00	30.37	28.20	26.12	23.87	22.98	20.77
23	31.85	33.17	33.60	34.00	32.12	30.03	30.23	28.14	26.01	23.75	22.73	20.71
24	31.81	33.21	33.59	34.05	32.02	30.01	30.11	28.07	25.99	23.67	22.50	20.67
25	31.84	33.21	33.58	34.04	31.97	30.00	29.98	28.00	25.88	23.68	22.30	20.54
26	32.06	33.25	33.63	34.04	31.82	30.15	29.83	27.91	25.82	23.69	22.07	20.37
27	32.21	33.31	33.64	34.02	31.64	30.28	29.68	27.85	25.77	23.70	21.88	20.33
28	32.25	33.37	33.66	34.04	31.48	30.37	29.54	27.71	25.74	23.72	21.80	20.35
29	32.27	33.33	33.66	34.09	---	30.45	29.46	27.59	25.71	23.73	21.73	20.45
30	32.30	33.29	33.81	34.12	---	30.54	29.36	27.52	25.56	23.79	21.72	20.64
31	32.55	---	33.82	34.16	---	30.63	---	27.44	---	23.86	21.71	---
MAX	32.55	33.37	33.82	34.16	34.43	31.32	30.79	29.28	27.34	25.47	23.99	21.67
CAL YR 1989	LOW 35.12											
WTR YR 1990	LOW 34.43											



— 405303082170700 AS-2 ASHLAND WTR DEPT AT WELL FLD ASHLAND OH  
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

## GROUND-WATER RECORDS

## 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.

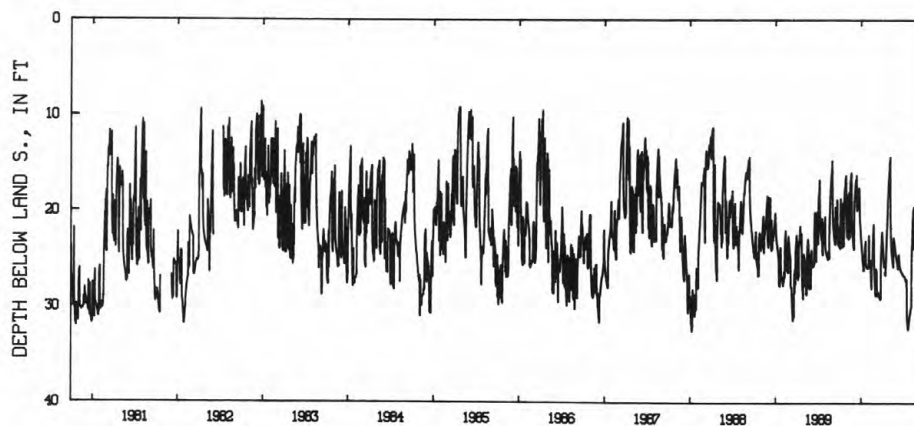
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--August 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 33.91 ft below land-surface datum, Sept. 29, 1990; minimum daily low, 3.10 ft, above land-surface, Feb. 23, 1978.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.59	21.52	23.65	22.52	25.90	27.22	22.49	16.93	24.70	26.69	30.20	24.05
2	23.34	22.09	23.85	22.83	25.85	27.86	22.18	16.55	24.82	26.70	30.09	24.21
3	23.66	22.59	23.96	23.19	25.69	28.43	22.70	16.13	25.05	26.73	30.01	24.35
4	23.81	22.70	20.17	23.62	25.51	28.79	23.16	15.61	25.19	26.76	29.88	24.43
5	23.89	18.31	19.09	23.89	22.52	26.18	23.56	14.87	25.33	26.79	26.13	24.55
6	20.29	20.96	18.52	24.25	24.82	26.00	24.07	14.70	25.48	26.82	25.09	24.62
7	19.37	22.07	18.31	24.56	25.06	26.03	24.54	14.40	25.63	26.85	24.24	24.79
8	18.68	22.37	17.89	24.90	25.06	26.11	24.99	20.43	25.80	26.87	23.48	24.86
9	22.34	22.86	17.41	25.24	25.12	26.25	25.36	21.57	26.01	26.95	22.81	24.97
10	23.00	22.87	17.01	25.44	25.41	28.79	25.77	22.58	25.68	27.07	22.12	25.04
11	23.30	18.78	16.84	25.72	25.64	28.82	---	23.44	24.89	27.21	21.43	25.10
12	23.61	18.06	16.68	26.04	26.45	28.76	---	23.86	24.52	27.28	20.69	25.16
13	23.73	22.06	18.65	26.15	27.20	28.71	26.37	24.43	24.92	27.26	19.79	25.22
14	20.27	22.56	16.24	25.62	27.68	28.60	26.51	24.56	25.24	27.18	19.92	25.29
15	19.17	22.72	18.72	25.18	28.02	28.54	26.63	24.85	25.57	27.09	23.89	25.33
16	22.08	18.97	19.89	24.83	25.32	28.45	26.66	25.06	25.75	30.50	19.53	25.41
17	23.05	17.78	19.91	24.47	25.12	28.49	25.92	25.13	25.88	31.08	20.57	25.43
18	23.35	17.10	18.90	24.16	25.00	28.63	25.33	25.37	25.97	31.48	21.18	25.42
19	23.59	16.91	18.65	23.91	24.99	28.76	24.71	25.51	26.07	31.85	21.60	25.45
20	23.64	16.27	18.16	23.55	25.23	28.85	24.12	25.80	26.15	32.14	21.68	25.47
21	19.68	16.19	18.03	23.12	23.78	28.94	23.50	22.91	26.24	32.31	21.88	25.59
22	19.03	15.98	18.03	25.42	23.07	29.09	22.75	22.77	26.29	32.13	22.08	26.07
23	18.48	20.30	18.01	25.53	22.49	29.15	22.10	22.99	26.35	31.87	23.72	26.56
24	17.99	21.30	17.84	25.70	21.81	29.19	21.45	23.21	26.39	31.63	24.04	26.97
25	17.63	21.86	17.58	25.82	21.37	29.09	20.80	23.35	26.44	31.40	22.86	27.34
26	20.01	22.49	17.75	25.84	24.37	28.99	20.09	23.58	26.47	31.19	23.02	27.72
27	17.10	22.59	19.24	25.89	25.72	25.47	19.33	23.81	26.52	30.99	24.53	33.39
28	16.79	22.99	20.28	25.91	26.56	24.72	18.55	24.00	26.56	30.82	24.70	33.91
29	16.53	23.18	20.92	25.89	---	24.08	18.04	24.22	26.62	30.64	23.60	28.11
30	16.28	23.45	21.45	25.92	---	23.48	17.46	24.40	26.65	30.48	23.76	27.02
31	20.46	---	22.08	25.95	---	22.98	---	24.56	---	30.34	23.90	---
MAX	23.89	23.45	23.96	26.15	28.02	29.19	26.66	25.80	26.65	32.31	30.20	33.91
CAL YR 1989	LOW 31.41											
WTR YR 1990	LOW 33.91											



405425082173000 AS-3 ASHLAND W D ASHLAND BATES WELLFIELD NR ASHLAND OH  
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)



## GROUND-WATER RECORDS

## 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.--Periodic 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	DATE	WATER LEVEL
Oct. 16, 1989	18.38	Apr. 11, 1990	17.42	July 20, 1990	16.63

## 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.

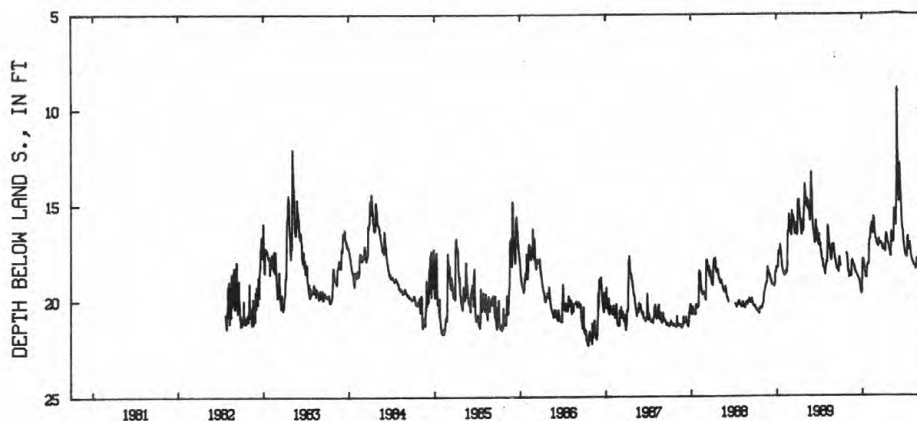
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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 8.87 ft below land-surface datum, May 31, 1990.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	18.37	18.44	18.80	16.86	16.80	17.31	17.57	10.97	17.28	17.83	18.54
2	---	18.44	18.47	18.00	16.80	16.88	17.26	17.64	11.83	17.37	17.88	18.58
3	---	18.57	18.49	17.83	16.79	16.98	17.10	17.69	12.46	17.46	17.94	18.63
4	---	18.48	18.52	17.83	16.79	17.02	17.17	17.69	13.07	17.58	18.00	18.68
5	---	18.51	18.54	17.83	16.57	17.04	17.27	17.18	13.76	17.65	18.02	18.72
6	---	18.80	18.57	17.86	16.28	17.06	17.29	16.51	14.24	17.67	18.01	18.79
7	---	18.76	18.59	17.93	16.28	17.08	17.32	16.39	14.57	17.48	18.02	18.80
8	---	18.72	18.63	18.03	16.12	17.09	17.35	16.51	14.82	17.63	18.08	18.84
9	---	18.73	18.65	18.13	16.23	17.14	17.41	16.57	14.60	17.73	18.15	18.86
10	---	18.57	18.69	18.21	16.23	17.17	17.45	16.68	13.64	17.74	18.17	18.87
11	---	18.58	18.74	18.27	15.94	17.17	17.44	16.78	12.82	17.75	18.17	18.88
12	---	18.67	18.76	18.37	16.10	16.82	16.73	16.89	13.16	17.61	18.18	18.94
13	---	18.72	18.77	18.48	16.23	16.78	16.55	16.96	13.87	17.30	18.21	18.95
14	---	18.74	18.80	18.56	16.35	16.85	16.51	16.94	14.36	16.83	18.24	18.95
15	---	18.75	18.80	18.66	16.50	16.94	16.51	16.84	14.43	16.65	18.24	18.94
16	18.68	18.69	18.84	18.74	16.43	17.06	16.59	16.91	14.36	16.79	18.29	18.78
17	---	18.03	18.88	18.79	15.85	17.07	16.71	16.61	14.81	16.96	18.33	18.78
18	---	17.91	18.91	18.82	15.61	16.97	16.78	15.75	15.19	17.08	18.36	18.83
19	---	17.91	18.91	18.82	15.64	16.97	16.88	15.20	15.57	17.22	18.37	18.86
20	---	17.90	18.94	18.81	15.70	16.96	16.93	15.47	15.86	17.30	18.27	18.86
21	---	17.97	18.97	18.43	16.10	16.97	16.96	15.46	16.06	17.33	18.07	18.81
22	---	18.02	19.08	18.20	16.29	17.01	16.97	15.45	16.21	16.99	18.02	18.76
23	---	18.06	19.15	18.15	16.42	17.06	17.03	15.64	16.28	17.00	17.83	18.73
24	---	18.08	19.27	18.11	16.44	17.06	17.08	15.81	16.29	16.98	17.96	18.68
25	---	18.12	19.35	18.08	16.52	17.06	17.15	16.02	16.46	17.17	18.08	18.71
26	17.54	18.17	19.45	18.11	16.61	17.10	17.19	16.06	16.61	17.32	18.18	18.82
27	17.58	18.17	19.53	18.10	16.71	17.19	17.22	15.11	16.81	17.46	18.24	18.87
28	17.63	18.24	19.58	18.12	16.77	17.25	17.34	14.80	16.98	17.55	18.33	18.95
29	17.65	18.28	19.63	18.10	---	17.31	17.42	14.27	17.09	17.68	18.38	18.98
30	17.88	18.37	19.65	17.34	---	17.35	17.45	12.55	17.19	17.75	18.42	18.98
31	18.10	---	19.58	16.89	---	17.34	---	8.87	---	17.81	18.48	---
MAX	18.68	18.80	19.65	18.82	16.86	17.35	17.45	17.69	17.19	17.81	18.48	18.98
CAL YR 1989	LOW 19.65											
WTR YR 1990	LOW 19.65											



— 392009082072200 AT-5 ATHENS WELL FIELD ATHENS OH  
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

## GROUND WATER RECORDS

## 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.--Periodic measurements 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, 4.47 ft below land-surface datum, Apr. 30, 1990.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM  
INSTANTANEOUS OBSERVATIONS

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 30, 1989	5.94	Apr. 30, 1990	4.47	Sept. 28, 1990	4.73

## 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.

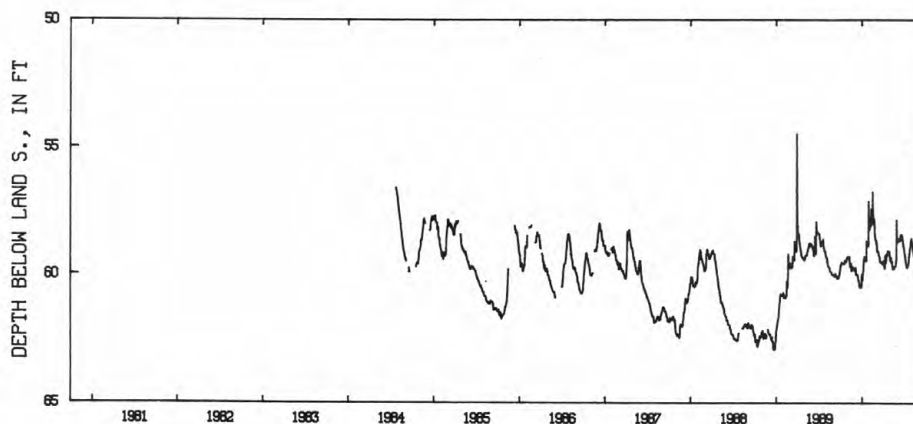
DATUM.--Elevation of land-surface datum is 1,265 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter, 1.5 ft. above land-surface datum.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59.78	59.29	59.83	60.00	58.24	58.65	59.50	59.26	58.73	59.01	58.67	60.35
2	59.68	59.29	59.83	60.22	58.25	58.65	59.50	59.38	58.74	59.12	58.73	60.38
3	59.62	59.33	59.79	60.23	58.25	58.65	59.50	59.45	58.70	59.18	58.76	60.45
4	59.62	59.35	59.79	60.17	58.15	58.75	59.45	59.45	58.63	59.24	58.79	60.48
5	59.62	59.35	59.72	59.97	57.80	58.86	59.52	59.32	58.65	59.29	58.82	60.48
6	59.55	59.34	59.79	59.92	57.95	59.03	59.57	59.37	58.65	59.38	58.92	60.47
7	59.52	59.34	60.00	59.84	58.09	59.10	59.67	59.45	58.68	59.49	59.02	60.40
8	59.52	59.34	60.00	59.69	58.10	59.10	59.74	59.51	58.68	59.54	59.09	60.35
9	59.55	59.29	60.00	59.54	58.09	59.08	59.75	59.52	58.68	59.57	59.12	60.35
10	59.55	59.46	59.98	59.40	57.40	59.06	59.72	59.48	58.58	59.64	59.15	60.38
11	59.56	59.52	59.98	59.40	57.74	59.09	59.25	59.64	58.66	59.68	59.23	60.40
12	59.56	59.65	59.99	59.29	57.91	59.13	59.50	59.68	58.67	59.68	59.31	60.40
13	59.58	59.70	60.00	59.45	57.91	59.20	59.52	59.71	58.67	59.72	59.35	60.40
14	59.58	59.69	60.05	59.46	57.98	59.23	59.52	59.78	58.66	59.73	59.42	60.40
15	59.57	59.68	60.06	59.44	57.87	59.25	59.38	59.78	58.44	59.69	59.49	60.28
16	59.56	59.56	60.15	59.45	56.75	59.28	59.27	59.78	58.51	59.65	59.55	60.25
17	59.54	59.68	60.22	59.45	57.50	59.28	59.18	59.74	58.53	59.65	59.62	60.25
18	59.58	59.83	60.25	59.41	57.73	59.38	59.27	59.75	58.52	59.63	59.66	60.26
19	59.57	59.85	60.25	59.46	57.85	59.46	59.27	59.76	58.44	59.54	59.70	60.26
20	59.48	59.80	60.26	59.46	58.00	59.50	59.24	59.76	58.43	59.50	59.77	60.05
21	59.43	59.69	60.34	58.68	58.02	59.50	59.13	59.68	58.49	59.35	59.83	60.02
22	59.50	59.70	60.46	58.86	58.02	59.50	59.06	59.66	58.51	59.27	59.86	59.94
23	59.50	59.72	60.50	58.92	57.82	59.50	59.06	59.66	58.49	59.14	59.90	59.83
24	59.50	59.77	60.50	58.88	58.03	59.52	59.06	59.66	58.57	59.03	59.96	59.82
25	59.50	59.77	60.44	58.88	58.40	59.52	59.07	59.66	58.71	58.99	60.02	59.82
26	59.48	59.73	60.35	58.83	58.49	59.53	59.08	59.64	58.76	58.94	60.06	59.81
27	59.45	59.74	60.36	58.85	58.53	59.57	59.08	59.49	58.83	58.84	60.09	59.79
28	59.42	59.74	60.50	58.87	58.63	59.57	59.08	59.47	58.88	58.76	60.09	59.83
29	59.38	59.81	60.51	58.86	---	59.57	59.10	59.35	58.92	58.68	60.09	59.83
30	59.36	59.81	60.51	57.12	---	59.57	59.15	57.85	58.95	58.63	60.18	59.83
31	59.31	---	60.41	58.02	---	59.53	---	58.55	---	58.59	60.29	---
MAX	59.78	59.85	60.51	60.23	58.63	59.57	59.75	59.78	58.95	59.73	60.29	60.48
CAL YR 1989	LOW 62.28											
WTR YR 1990	LOW 60.51											



400118081082200 B-3 VILLAGE OF MT OLIVETT AT MT OLIVETT OH  
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)



## GROUND-WATER RECORDS

## 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. 25, 1989	10.50	Apr. 17, 1990	10.09

## 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.

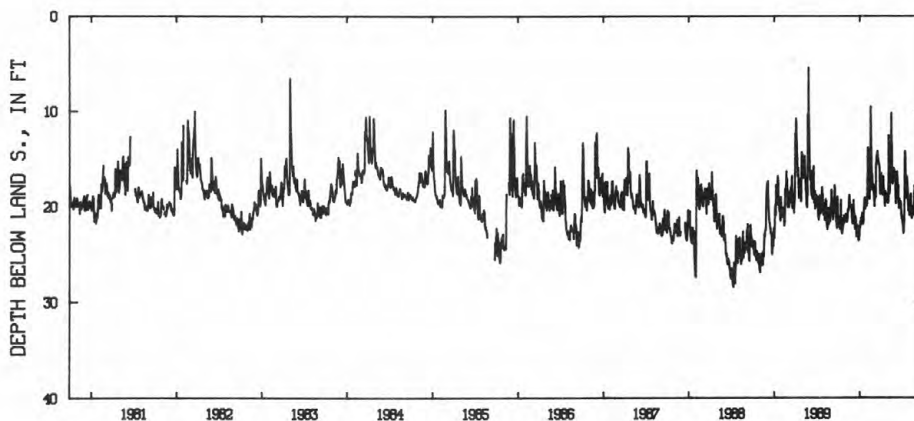
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.20	21.15	21.80	22.10	19.90	17.80	17.00	19.00	---	21.35	20.20	19.00
2	21.45	21.15	21.80	22.25	19.60	18.15	17.05	19.65	17.10	21.35	20.75	19.95
3	21.45	20.80	20.80	22.25	18.90	18.70	16.50	19.65	16.70	21.00	20.95	20.50
4	21.10	21.30	20.80	21.60	17.30	19.05	16.55	19.50	17.80	21.75	20.30	20.65
5	21.95	21.50	20.50	21.80	13.80	19.75	17.30	19.50	19.45	21.80	20.30	19.60
6	22.15	21.60	19.30	21.70	13.90	19.95	17.70	12.50	19.70	21.70	20.15	19.25
7	21.20	21.65	20.60	21.20	14.50	18.20	18.40	15.30	19.00	22.60	19.05	19.80
8	22.20	21.65	20.75	21.75	16.80	18.45	18.40	16.45	18.75	22.65	19.00	20.70
9	22.35	21.45	20.80	21.90	17.80	19.10	18.40	17.50	18.60	22.80	18.70	20.70
10	21.80	21.25	20.80	21.80	18.35	19.00	18.80	18.60	17.45	22.65	19.90	19.30
11	21.80	20.80	21.90	21.05	18.95	19.00	18.20	18.70	16.35	21.80	20.90	19.60
12	19.80	20.40	22.35	20.70	19.20	15.50	16.85	17.25	17.00	21.30	21.25	19.55
13	19.30	20.30	22.40	20.80	17.50	15.55	16.90	17.40	17.85	19.00	21.20	19.50
14	21.90	20.25	21.10	21.00	18.30	14.70	18.00	15.90	18.70	15.10	21.00	19.65
15	22.60	20.40	21.35	21.00	18.30	14.80	18.35	14.80	17.90	14.20	21.05	19.55
16	22.00	20.05	22.40	21.05	15.00	14.80	18.30	14.50	17.80	14.50	20.55	19.35
17	22.75	19.10	21.90	21.85	9.50	14.35	18.75	11.70	19.25	15.15	20.00	18.85
18	22.85	18.80	22.60	20.65	10.60	14.20	18.50	10.20	19.75	16.60	20.10	19.30
19	22.80	19.20	23.15	20.40	12.10	14.50	19.40	12.95	20.20	18.20	20.30	19.35
20	22.30	19.55	22.25	20.30	14.00	14.80	19.95	13.50	20.05	18.80	20.90	19.00
21	22.35	19.85	22.90	19.60	15.95	15.05	19.50	15.40	19.20	19.10	20.60	18.30
22	22.10	20.10	22.10	19.10	17.00	15.25	19.10	17.50	20.00	18.10	20.50	19.15
23	21.25	20.15	22.00	19.85	16.55	15.40	18.45	17.65	19.70	16.90	18.60	19.15
24	21.40	20.10	22.10	19.10	16.90	15.55	18.65	16.75	19.45	17.15	18.55	19.20
25	21.40	20.10	23.00	20.25	17.60	15.65	19.05	16.60	19.70	17.65	17.80	19.25
26	20.95	20.10	22.65	19.40	18.20	15.80	19.40	16.70	19.50	18.10	18.35	18.85
27	21.80	19.85	23.50	19.80	18.30	15.90	19.50	15.95	19.60	19.40	19.10	18.90
28	21.30	20.70	23.55	20.00	17.70	17.60	19.50	16.55	19.90	19.40	19.30	19.95
29	21.45	21.25	23.45	19.30	---	18.40	19.40	16.55	21.00	20.45	19.70	20.05
30	21.45	21.55	23.40	19.45	---	18.70	19.45	16.10	20.50	20.25	18.50	20.35
31	21.40	---	23.10	19.80	---	17.40	---	16.55	---	20.05	18.65	---
MAX	22.85	21.65	23.55	22.25	19.90	19.95	19.95	19.65	21.00	22.80	21.25	20.70
CAL YR 1989	LOW 23.55											
WTR YR 1990	LOW 23.55											



— 391904084371800 BU-12 CITY OF CINCINNATI GTMIAMI WFLD NR ROSS OH  
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

## GROUND-WATER RECORDS

## 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.

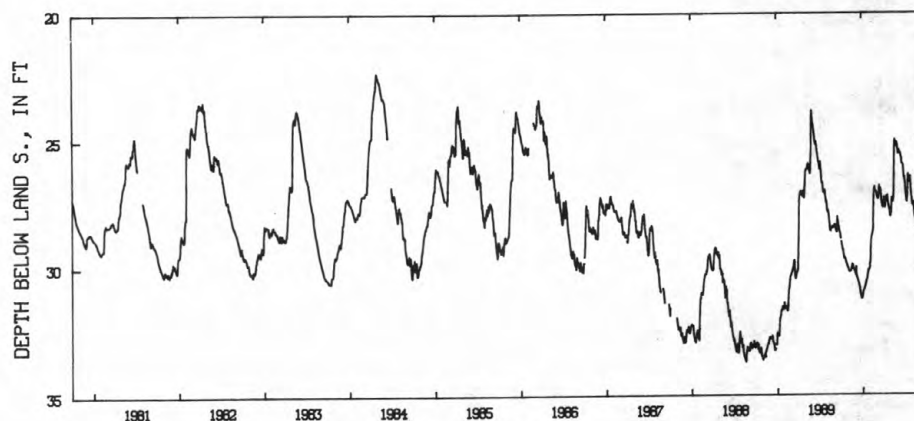
Measuring point: Floor of instrument shelter 1.93 ft above land-surface datum.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28.87	30.06	30.22	31.18	30.03	27.03	27.62	28.00	25.34	26.47	27.38	28.01
2	---	30.05	30.25	31.10	29.88	27.07	27.63	28.00	25.35	26.61	27.45	28.02
3	29.00	30.10	30.30	31.04	29.87	27.11	27.54	27.90	25.45	26.70	27.54	28.14
4	29.05	30.14	30.28	30.97	29.77	27.13	27.25	27.88	25.55	26.82	27.56	28.30
5	29.12	30.16	29.99	30.95	29.57	27.20	27.33	27.72	25.51	26.95	27.56	28.38
6	29.14	30.19	30.32	30.92	29.26	27.27	27.49	27.48	25.47	27.05	27.45	28.42
7	29.19	30.20	30.36	30.90	29.05	27.28	27.50	27.33	25.40	27.12	27.44	28.48
8	29.25	30.16	30.33	30.89	28.94	27.28	27.63	27.28	25.47	27.25	27.45	28.53
9	29.30	30.19	30.42	30.87	28.85	27.32	27.66	27.29	25.51	27.38	27.46	28.45
10	29.33	30.19	30.46	30.82	28.77	27.33	27.50	27.35	25.54	27.43	27.65	28.36
11	29.38	30.16	30.48	30.80	28.73	27.27	27.45	27.40	25.51	27.44	27.78	28.40
12	29.46	30.16	30.51	30.77	28.72	27.20	27.43	27.43	25.50	27.28	27.92	28.30
13	29.51	30.15	30.56	30.76	28.70	27.07	27.34	27.42	25.54	27.18	28.00	28.24
14	29.59	30.13	30.56	30.70	28.60	27.00	27.22	27.26	25.59	26.93	27.98	28.20
15	29.65	30.10	30.61	30.67	28.58	26.80	27.26	27.12	25.64	26.63	28.07	28.11
16	29.67	30.06	30.65	30.62	28.45	26.87	27.35	27.00	25.66	26.38	28.11	28.07
17	29.66	30.04	30.68	30.57	27.95	26.89	27.37	26.52	25.72	26.35	28.21	28.10
18	29.66	29.95	30.72	30.51	27.50	26.90	27.30	25.95	25.78	26.44	28.30	28.16
19	29.65	29.89	30.76	30.51	27.23	26.92	27.18	25.50	25.91	26.53	28.32	28.07
20	29.68	29.90	30.81	30.52	27.02	27.01	27.35	25.12	25.93	26.63	28.41	27.85
21	29.70	29.95	30.85	30.45	26.95	26.97	27.45	25.00	25.95	26.65	28.38	27.84
22	29.76	29.97	30.91	30.38	26.90	27.10	27.48	25.04	25.95	26.55	28.21	28.00
23	29.79	30.03	30.99	30.32	26.84	27.25	27.54	25.07	25.98	26.45	28.12	28.14
24	29.83	30.07	31.05	30.23	26.94	27.35	27.59	25.17	25.98	26.49	28.05	28.14
25	29.86	30.08	31.08	30.20	27.01	27.42	27.63	25.25	25.98	26.44	28.07	28.18
26	29.88	30.11	31.15	30.12	27.03	27.50	27.67	25.26	26.10	26.63	28.07	28.18
27	29.90	30.13	31.20	30.11	27.00	27.56	27.72	25.19	26.23	26.77	28.25	27.95
28	29.90	30.13	31.22	30.14	27.04	27.61	27.77	25.18	26.37	26.96	28.39	28.00
29	29.97	30.17	31.25	30.10	---	27.65	27.83	25.11	26.48	27.07	28.30	28.34
30	30.01	30.16	31.26	30.10	---	27.63	27.90	25.15	26.47	27.17	28.20	28.39
31	30.01	---	31.25	30.08	---	27.65	---	25.17	---	27.26	28.04	---
MAX	30.01	30.20	31.26	31.18	30.03	27.65	27.90	28.00	26.48	27.44	28.41	28.53
CAL YR 1989	LOW 32.70											
WTR YR 1990	LOW 31.26											



— 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.

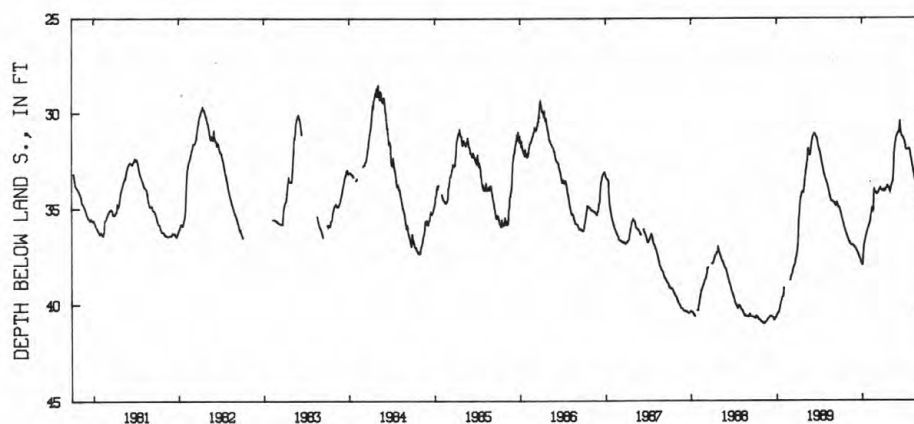
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35.05	36.48	37.00	37.90	35.83	34.16	34.07	34.04	31.16	31.38	32.40	33.85
2	35.11	36.51	37.01	37.92	35.77	34.13	34.07	34.06	31.14	31.40	32.47	33.87
3	35.17	36.55	37.03	37.92	35.75	34.17	34.08	34.15	31.12	31.44	32.53	33.92
4	35.20	36.58	37.03	37.92	35.68	34.18	34.06	34.03	31.07	31.49	32.61	33.94
5	35.24	36.63	37.05	37.66	35.67	34.19	33.98	33.93	31.07	31.54	32.70	33.96
6	35.30	36.65	37.09	37.40	35.60	34.24	33.99	33.88	31.05	31.62	32.76	33.99
7	35.37	36.67	37.12	37.25	35.53	34.25	34.05	33.81	31.02	31.66	32.80	34.04
8	35.42	36.70	37.13	37.10	35.46	34.22	34.08	33.77	30.98	31.71	32.88	34.06
9	35.47	36.72	37.15	36.99	35.33	34.18	34.10	33.73	31.00	31.80	32.94	34.07
10	35.52	36.76	37.17	36.90	35.24	34.17	34.08	33.69	31.02	31.87	33.00	34.09
11	35.58	36.79	37.20	36.81	35.18	34.16	34.00	33.69	31.02	31.92	33.08	34.11
12	35.63	36.81	37.23	36.73	35.10	34.14	34.02	33.66	30.73	31.90	33.13	34.09
13	35.68	36.83	37.26	36.72	35.00	34.15	34.02	33.58	30.53	31.91	33.22	34.11
14	35.72	36.84	37.29	36.65	34.93	34.12	33.95	33.56	30.41	31.91	33.30	34.11
15	35.76	36.86	37.33	36.59	34.99	34.09	33.92	33.48	30.57	31.90	33.36	34.12
16	35.82	36.87	37.36	36.53	35.11	34.06	33.92	33.35	30.77	31.90	33.43	34.16
17	35.89	36.87	37.39	36.47	35.14	34.00	33.91	33.16	30.90	31.90	33.49	34.21
18	35.94	36.88	37.42	36.40	35.14	33.97	33.91	32.89	30.99	31.89	33.52	34.22
19	35.96	36.88	37.45	36.38	35.06	33.97	33.88	32.60	31.07	31.87	33.60	34.22
20	36.00	36.85	37.48	36.30	35.03	33.97	33.84	32.31	31.11	31.85	33.68	34.19
21	36.05	36.87	37.52	36.25	34.65	33.95	33.78	32.11	31.15	31.84	33.72	34.16
22	36.10	36.88	37.55	36.21	34.30	33.89	33.77	31.94	31.20	31.84	33.77	34.11
23	36.13	36.89	37.57	36.17	34.04	33.93	33.78	31.80	31.20	31.84	33.81	34.15
24	36.17	36.89	37.58	36.11	33.95	33.97	33.84	31.69	31.23	31.85	33.85	34.17
25	36.22	36.89	37.62	36.07	34.11	33.99	33.88	31.58	31.26	31.88	33.89	34.17
26	36.26	36.91	37.67	36.04	34.13	34.01	33.88	31.50	31.25	31.94	33.93	34.18
27	36.30	36.92	37.70	36.03	34.14	34.04	33.88	31.43	31.25	32.02	33.95	34.20
28	36.33	36.95	37.74	35.99	34.16	34.06	33.88	31.35	31.28	32.09	34.01	34.22
29	36.36	36.96	37.79	35.94	---	34.06	33.90	31.26	31.32	32.15	34.06	34.27
30	36.39	36.96	37.82	35.90	---	34.07	33.98	31.24	31.35	32.25	33.88	34.29
31	36.44	---	37.85	35.86	---	34.07	---	31.20	---	32.34	33.83	---
MAX	36.44	36.96	37.85	37.92	35.83	34.25	34.10	34.15	31.35	32.34	34.06	34.29

CAL YR 1989 LOW 40.57  
WTR YR 1990 LOW 37.92392021084340300 BU-56 HAMILTON WATER WKS AT FAIRFIELD OH  
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)



GROUND-WATER RECORDS  
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.

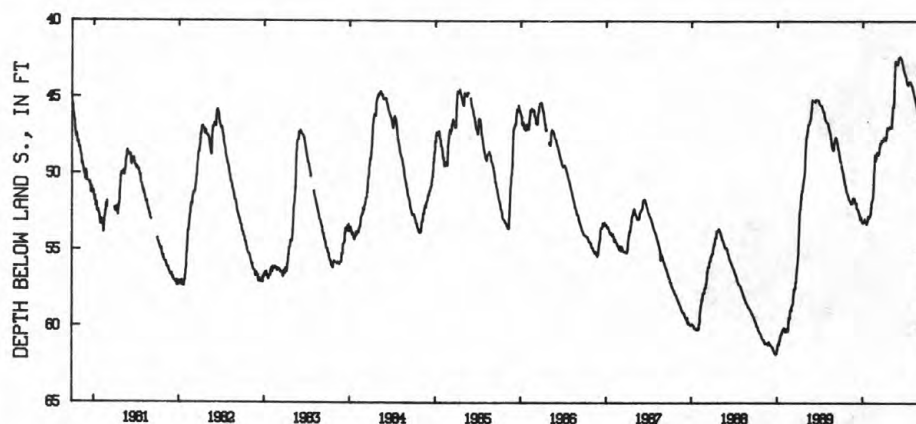
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49.25	51.50	51.91	53.20	52.81	48.98	47.62	47.00	42.67	43.50	44.36	46.15
2	---	51.55	51.92	53.23	52.80	48.68	47.61	---	42.56	43.56	44.44	46.15
3	49.43	51.62	51.95	53.24	52.72	48.59	47.59	---	42.45	43.61	44.50	46.14
4	49.57	51.66	51.96	53.21	52.67	48.59	47.59	---	42.36	43.66	44.53	46.14
5	49.62	51.69	51.90	53.11	52.62	48.62	47.59	46.96	42.38	43.72	44.58	46.14
6	49.65	51.72	51.95	53.12	52.61	48.68	47.63	46.65	42.39	43.80	44.66	46.14
7	49.75	51.74	52.26	53.12	52.25	48.76	47.70	46.32	42.40	43.89	44.75	46.12
8	49.81	51.75	52.30	53.06	52.23	48.77	47.75	46.13	42.40	43.97	44.82	46.08
9	49.91	51.78	52.30	53.03	51.88	48.73	47.78	45.94	42.32	44.02	44.87	46.05
10	49.95	51.83	52.30	52.97	51.80	48.70	47.78	45.58	42.33	44.10	44.92	46.02
11	50.05	51.85	52.32	52.97	51.78	48.70	47.58	45.66	42.37	44.15	45.00	46.00
12	50.15	51.92	52.35	53.04	51.71	48.61	47.60	45.67	42.40	44.17	45.05	45.96
13	50.27	51.95	52.38	53.13	51.66	48.52	47.60	45.63	42.42	44.18	45.11	45.94
14	50.29	51.96	52.42	53.15	51.57	48.32	47.27	45.58	42.45	44.15	45.20	45.90
15	50.42	51.96	52.44	53.18	51.51	48.21	47.10	45.23	42.49	44.00	45.27	45.74
16	50.48	51.91	52.52	53.21	51.21	48.15	47.05	44.72	42.55	43.98	45.35	45.76
17	50.58	51.92	52.58	53.22	51.03	48.10	46.95	44.04	42.61	44.00	45.42	45.86
18	50.71	51.94	52.63	53.28	50.50	47.95	47.04	43.44	42.67	44.00	45.50	45.91
19	50.72	51.95	52.65	53.30	49.90	47.98	47.06	43.08	42.78	44.00	45.56	45.91
20	50.75	51.72	52.70	53.22	49.88	48.00	47.06	42.65	42.85	44.00	45.63	45.93
21	50.80	51.59	52.80	53.10	49.61	48.00	47.05	42.60	42.92	43.96	45.72	45.93
22	50.93	51.60	52.93	53.10	49.00	47.93	47.02	42.64	43.00	43.95	45.77	45.89
23	51.03	51.64	52.98	53.10	48.74	47.80	47.00	42.69	43.05	43.99	45.83	45.85
24	51.08	51.66	53.00	52.90	48.89	47.82	46.95	42.76	43.13	44.02	45.90	45.87
25	51.16	51.66	53.00	52.79	49.14	47.83	46.97	42.79	43.21	44.08	45.98	45.87
26	51.22	51.64	52.85	52.85	49.16	47.83	46.98	42.79	43.27	44.13	46.05	45.85
27	51.26	51.64	52.89	52.87	48.99	47.84	46.99	42.82	43.28	44.17	46.10	45.88
28	51.30	51.72	53.00	52.90	48.98	47.84	46.98	42.82	43.36	44.20	46.15	45.91
29	51.34	51.85	53.07	52.77	---	47.84	46.88	42.82	43.39	44.22	46.16	45.95
30	51.36	51.88	53.10	52.77	---	47.74	46.93	42.82	43.44	44.25	46.16	45.99
31	51.39	---	53.11	52.79	---	47.66	---	42.77	---	44.30	46.15	---
MAX	51.39	51.96	53.11	53.30	52.81	48.98	47.78	47.00	43.44	44.30	46.16	46.15
CAL YR 1989	LOW 61.61											
WTR YR 1990	LOW 53.30											



— 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 Two mile 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 1989 TO SEPTEMBER 1990

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L) (00340)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNESIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTASSIUM, DIS-SOLVED (MG/L AS K) (00935)	BICARBONATE WATER DIS IT FIELD HCO3 (MG/L AS) (00453)
NOV 08...	1420	930	7.4	5.0	15.5	11	120	34	33	3.7	400
FEB 22...	1000	960	7.3	15.5	15.5	15	110	32	33	4.4	397
APR 24...	1345	630	7.4	16.5	10.5	31	--	--	--	--	402
AUG 23...	1215	850	7.6	25.0	17.0	<10	110	33	33	3.4	397

DATE	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLORIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUORIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L AS) (70300)	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) (01034)
NOV 08...	326	89	54	0.2	12	522	<0.01	1.8	<1	<1	18
FEB 22...	325	89	58	0.2	11	559	<0.01	1.9	--	--	--
APR 24...	330	--	--	--	--	--	0.02	1.8	--	--	--
AUG 23...	325	89	60	0.2	11	546	<0.01	1.9	<1	<1	14

DATE	CHROMIUM, DIS-SOLVED (UG/L AS CR) (01030)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	MANGANESE, DIS-SOLVED (UG/L AS MN) (01056)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN) (01092)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
NOV 08...	20	2	5	4	<1	1	2	10	8	1.1
FEB 22...	--	--	--	4	--	--	3	--	--	1.0
APR 24...	--	--	--	--	--	--	--	--	--	1.0
AUG 23...	20	4	2	<3	1	<1	3	<10	8	0.8

## GROUND-WATER RECORDS

## BUTLER COUNTY--Continued

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	DATE	WATER LEVEL
Oct. 25, 1989	12.38	Apr. 17, 1990	9.14	Sept. 12, 1990	10.53

## GROUND-WATER RECORDS

## 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.

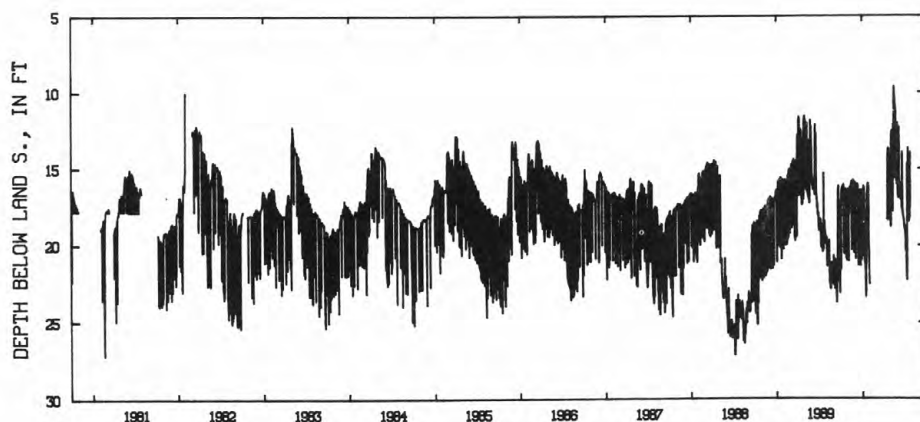
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water. Water level affected by pumping of nearby North Hamilton well field and by stage of the Great Miami River.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.36	16.37	15.96	20.70	---	---	---	14.15	12.03	18.78	---	---
2	17.20	20.54	15.94	16.41	---	---	---	18.74	16.13	18.82	---	---
3	21.59	16.56	15.97	20.63	---	---	---	18.79	16.65	19.06	---	---
4	17.02	21.03	20.87	16.93	---	---	---	18.72	16.81	18.75	---	---
5	16.58	16.68	16.19	20.38	---	---	---	13.54	16.91	20.36	---	---
6	16.40	18.06	16.12	16.42	---	---	---	12.80	16.91	19.60	---	---
7	16.35	16.40	16.14	16.18	---	---	---	12.54	12.62	18.98	---	---
8	16.29	16.35	16.09	20.28	---	---	---	12.56	12.30	20.70	---	---
9	16.23	16.32	16.06	16.25	---	---	---	12.58	16.55	21.98	---	---
10	16.19	16.28	16.05	20.16	---	---	---	12.72	16.43	22.24	---	---
11	16.17	16.21	16.05	20.48	---	---	---	12.83	15.93	21.23	---	---
12	16.36	16.22	16.05	21.12	---	---	---	17.80	16.47	16.27	---	---
13	16.38	16.21	16.05	21.13	---	---	---	12.99	16.90	14.67	---	---
14	16.07	16.17	16.12	20.82	---	---	---	12.51	17.00	18.01	---	---
15	20.35	16.14	21.05	22.72	---	---	---	12.15	16.52	17.97	---	---
16	20.55	16.03	21.29	23.35	---	---	---	15.68	16.42	13.65	---	---
17	16.69	15.86	16.55	22.91	---	---	---	10.75	16.59	17.87	---	---
18	20.58	20.31	21.30	17.83	---	---	18.31	9.66	16.77	17.21	---	---
19	19.51	15.91	16.59	21.24	---	---	18.35	9.70	17.51	17.40	---	---
20	16.70	16.97	16.49	17.16	---	---	14.06	9.99	17.70	18.46	---	---
21	16.33	15.80	16.47	16.62	---	---	13.93	10.34	13.95	18.29	---	---
22	16.35	15.80	16.47	20.16	---	---	13.78	10.65	17.58	18.19	---	---
23	16.55	15.79	16.49	16.39	---	---	13.69	10.85	17.68	17.49	---	---
24	16.50	15.82	16.43	16.11	---	---	13.73	11.10	18.01	17.49	---	---
25	20.67	15.79	21.33	15.99	---	---	17.95	11.24	18.14	13.96	---	---
26	20.83	15.87	16.61	15.98	---	---	18.23	15.38	18.16	---	---	---
27	16.82	20.49	16.49	---	---	---	18.22	15.48	18.27	---	---	---
28	20.97	16.10	16.49	16.19	---	---	18.35	15.82	18.32	---	---	---
29	16.57	16.00	16.46	20.20	---	---	14.38	15.85	18.53	---	---	---
30	16.70	15.95	20.95	20.50	---	---	14.22	16.02	18.86	---	---	---
31	16.61	---	16.61	22.53	---	---	---	12.26	---	---	---	---
MAX	21.59	21.03	21.33	23.35	---	---	18.35	18.79	18.86	22.24	---	---
CAL YR 1989	LOW 23.70											
WTR YR 1990	LOW 23.35											



— 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.--Digital recorder - - 60-minute punch.

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.

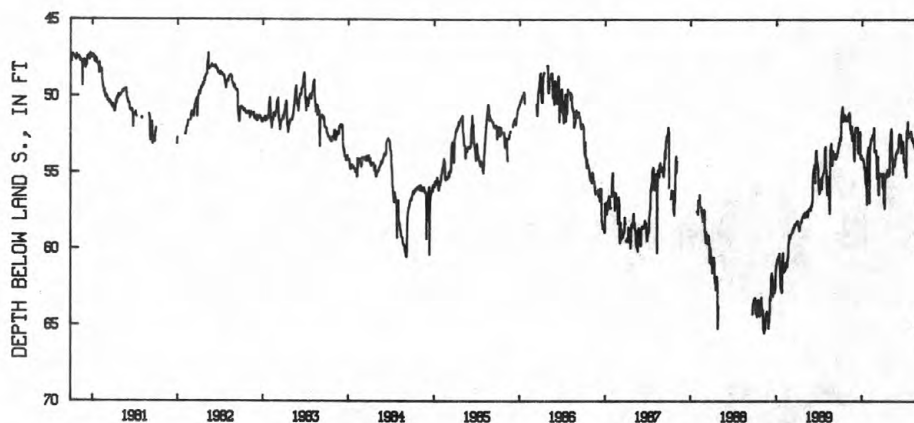
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52.72	51.60	54.24	54.13	54.67	53.68	56.03	53.43	53.66	54.22	52.65	---
2	52.89	51.44	52.54	54.13	55.11	53.53	56.01	53.05	53.51	54.29	52.82	---
3	52.89	51.33	52.33	54.08	57.03	53.85	55.22	53.53	53.53	54.29	52.87	---
4	52.72	51.28	52.15	54.11	53.51	53.93	55.09	52.61	53.67	54.69	52.79	---
5	51.68	51.15	52.05	54.10	53.44	53.95	57.06	52.31	53.46	54.67	52.75	---
6	51.28	51.27	52.24	54.12	53.20	55.27	55.99	52.27	53.43	54.90	52.90	---
7	51.22	51.19	52.33	54.21	53.12	55.39	55.40	52.15	53.37	54.85	52.92	---
8	51.00	51.10	52.23	54.17	53.05	55.22	55.32	52.35	52.74	54.88	53.05	---
9	50.90	51.11	52.11	54.29	52.83	54.13	57.38	53.19	52.65	55.31	52.98	---
10	50.69	51.25	52.05	54.40	52.84	54.03	55.56	53.83	52.47	55.27	52.96	---
11	51.14	51.59	52.12	54.51	52.76	53.96	55.52	54.21	52.64	52.44	52.98	---
12	51.30	52.02	52.12	54.69	52.82	55.68	55.36	54.02	52.70	52.27	53.16	---
13	51.38	52.15	52.05	54.77	52.70	56.20	55.34	54.27	52.62	52.20	53.31	---
14	51.64	52.03	52.09	54.64	52.78	56.43	55.18	55.12	52.59	52.40	53.32	53.30
15	51.20	52.05	53.45	55.13	52.58	56.48	55.24	54.41	52.53	52.12	53.38	53.33
16	51.29	52.41	53.56	55.37	52.76	55.67	55.32	54.33	52.75	51.68	53.39	53.51
17	51.49	52.45	53.69	55.41	52.84	55.04	55.01	54.33	52.81	52.70	53.41	53.74
18	51.51	52.06	53.75	55.76	52.69	55.06	55.24	54.43	53.17	52.73	53.41	53.68
19	51.27	51.96	53.74	55.77	52.48	55.12	55.16	54.47	53.73	52.64	53.51	52.20
20	51.22	52.72	52.71	55.67	52.49	55.16	55.17	54.41	53.16	52.59	---	51.97
21	51.38	52.90	52.55	55.95	52.35	55.10	54.82	54.58	53.11	52.54	---	51.86
22	51.50	52.39	52.55	56.03	52.07	55.09	54.91	54.56	52.98	52.45	---	51.72
23	51.55	52.45	52.42	57.11	52.89	55.22	55.04	54.19	52.96	52.58	---	51.71
24	51.59	52.50	52.35	54.22	53.55	55.17	55.13	54.12	53.66	52.56	---	51.70
25	51.52	52.42	52.34	53.83	53.64	55.16	55.24	54.05	53.09	52.57	---	52.79
26	51.42	52.56	53.96	53.78	53.62	55.23	55.26	53.86	53.00	52.62	---	53.28
27	51.41	52.54	54.01	53.64	53.53	55.27	55.21	53.82	53.44	52.46	---	53.39
28	51.37	53.77	54.09	53.59	53.66	55.13	55.04	53.70	53.36	52.44	---	53.49
29	51.40	53.93	53.97	53.37	---	55.09	55.09	53.79	54.31	52.31	---	53.51
30	51.39	54.16	53.91	53.36	---	55.75	55.06	53.69	54.12	52.36	---	53.65
31	51.47	---	53.89	53.43	---	55.98	---	53.65	---	52.49	---	---
MAX	52.89	54.16	54.24	57.11	57.03	56.48	57.38	55.12	54.31	55.31	53.51	53.74
CAL YR 1989	LOW 62.87											
WTR YR 1990	LOW 57.38											



392939084231700 BU-3 ARMCO STEEL CORP MIDDLETOWN OH  
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

## GROUND-WATER RECORDS

## 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.--Digital recorder - - 60-minute punch.

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.

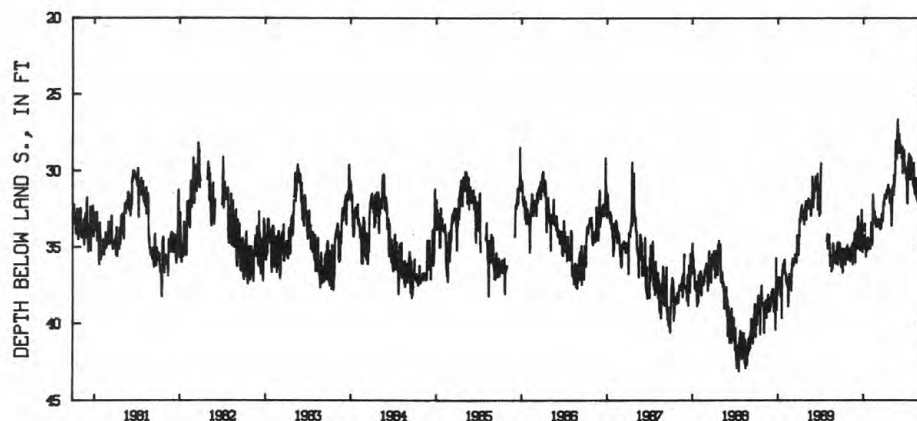
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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, 26.62 ft below land-surface datum, May 28, 1990.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35.17	35.58	34.42	33.78	34.42	33.63	31.80	32.71	28.82	29.79	30.85	28.79
2	35.32	35.77	34.38	33.70	34.57	33.36	31.56	33.60	27.73	30.16	30.67	27.97
3	35.10	35.06	33.83	33.89	34.32	33.18	31.54	32.88	27.58	29.98	31.02	29.21
4	36.16	35.62	35.10	34.31	33.35	33.25	31.55	32.68	28.08	30.63	29.48	30.92
5	36.67	35.84	34.46	34.13	34.82	33.30	31.64	31.45	28.00	30.52	30.03	30.67
6	36.55	35.92	34.74	33.82	34.30	33.65	31.71	31.22	28.61	30.88	30.91	32.00
7	35.34	35.69	34.41	33.45	34.19	33.39	31.81	30.98	28.34	31.87	31.15	31.44
8	35.23	35.77	34.42	34.91	34.85	33.16	31.69	30.95	28.28	32.03	31.44	30.70
9	35.79	35.62	33.06	34.66	34.63	33.37	31.55	31.25	28.37	32.14	30.47	30.77
10	35.76	35.44	32.99	35.17	32.12	33.66	31.72	31.13	29.02	31.24	31.52	31.81
11	35.09	35.28	33.91	34.77	31.53	33.20	31.25	31.58	28.77	30.44	31.51	31.17
12	35.74	34.93	34.71	35.62	31.86	33.20	31.35	30.82	28.70	29.38	30.48	31.02
13	35.80	35.39	34.73	35.40	33.46	33.27	31.36	30.26	29.11	29.99	30.54	31.10
14	35.86	35.28	35.08	34.41	33.12	33.78	31.21	31.02	29.01	29.24	31.44	31.16
15	35.22	35.29	34.82	35.25	33.18	33.82	31.33	30.71	29.01	28.87	31.68	31.05
16	36.02	34.73	34.28	34.70	33.40	33.59	31.36	30.36	29.20	29.13	31.52	31.13
17	36.14	36.15	33.67	35.22	33.29	33.63	30.90	30.15	28.42	30.32	31.82	31.21
18	35.22	34.84	35.21	35.23	32.64	33.73	31.28	29.61	30.16	30.22	31.80	31.47
19	35.18	34.96	35.12	35.04	33.07	33.65	31.18	28.64	29.26	30.56	31.38	30.89
20	35.28	35.02	34.83	34.66	33.07	33.31	31.42	28.00	29.46	30.44	31.99	31.11
21	35.15	34.77	33.70	34.36	33.08	32.81	31.44	29.19	29.26	29.03	31.73	31.00
22	35.08	34.58	33.44	34.82	32.99	33.12	31.58	28.35	29.43	29.59	30.49	30.37
23	34.97	34.77	33.34	34.91	33.13	33.32	31.22	28.28	28.61	29.58	30.63	30.61
24	35.14	34.29	33.55	34.80	33.66	33.19	31.89	29.21	28.73	30.53	31.20	31.07
25	34.87	34.04	32.56	35.04	33.61	33.24	32.09	28.10	29.50	29.17	30.70	31.92
26	35.25	34.03	33.26	34.65	33.51	32.65	32.09	27.66	29.61	30.49	30.74	31.97
27	35.43	34.31	35.10	34.49	33.38	32.39	32.13	26.93	29.52	30.15	30.69	31.12
28	35.80	36.02	35.14	34.81	33.64	32.04	31.85	26.62	29.91	29.77	30.62	31.52
29	35.75	34.67	35.30	34.99	---	32.12	31.32	27.35	29.77	29.86	30.38	30.62
30	35.48	34.38	34.82	35.11	---	32.26	32.33	27.73	30.15	29.56	30.09	30.83
31	35.64	---	34.66	35.00	---	31.85	---	28.40	---	29.96	30.60	---
MAX	36.67	36.15	35.30	35.62	34.85	33.82	32.33	33.60	30.16	32.14	31.99	32.00
CAL YR 1989	LOW 39.65											
WTR YR 1990	LOW 36.67											



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.

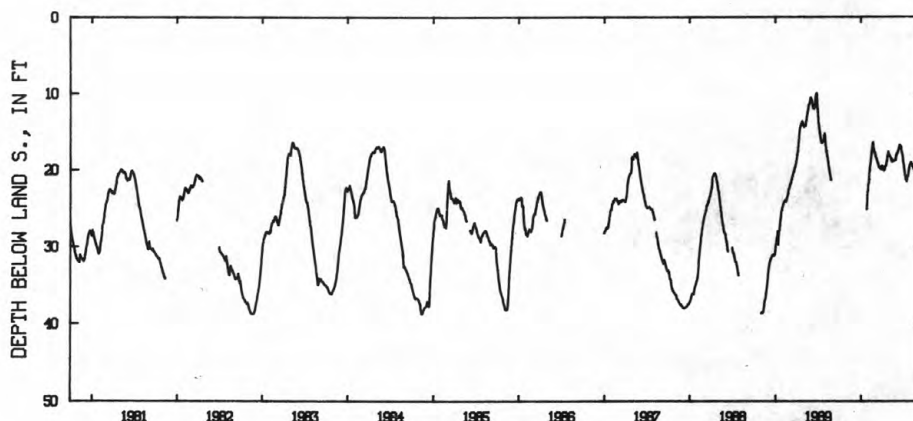
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	22.32	17.74	19.52	18.02	18.14	18.96	19.14	20.16
2	---	---	---	---	21.92	17.75	19.56	18.09	17.92	19.14	19.07	20.34
3	---	---	---	---	21.83	18.01	19.60	18.17	17.89	19.28	19.04	20.50
4	---	---	---	---	21.57	18.10	19.63	18.14	18.03	19.61	19.04	20.49
5	---	---	---	---	21.36	18.22	19.81	18.30	17.87	19.83	19.23	20.57
6	---	---	---	---	20.67	18.47	19.83	18.37	17.79	20.07	19.23	20.58
7	---	---	---	---	20.32	18.42	20.00	18.41	17.83	20.31	19.30	20.46
8	---	---	---	---	20.12	18.46	20.10	18.44	17.69	20.60	19.29	19.78
9	---	---	---	---	19.62	18.65	20.11	18.47	17.56	20.68	19.31	18.93
10	---	---	---	---	19.36	18.71	20.06	18.54	17.50	20.86	19.42	18.30
11	---	---	---	---	19.16	18.80	20.12	18.76	17.37	21.10	19.61	17.63
12	---	---	---	---	18.90	18.93	19.98	18.64	17.16	21.30	19.69	17.49
13	---	---	---	---	18.56	19.01	19.94	18.98	17.04	21.35	19.73	17.61
14	---	---	---	---	18.39	19.08	19.70	18.95	16.98	21.37	19.82	17.66
15	---	---	---	---	18.02	19.15	19.62	18.95	16.83	21.53	19.86	17.90
16	---	---	---	---	17.47	19.22	19.56	18.99	16.76	21.46	19.94	18.15
17	---	---	---	---	17.52	19.41	19.50	18.96	16.97	21.22	19.96	18.21
18	---	---	---	---	17.23	19.58	19.50	18.91	17.05	21.05	20.13	18.13
19	---	---	---	---	16.88	19.70	19.25	18.83	16.91	20.94	20.28	18.26
20	---	---	---	---	16.73	19.65	19.21	18.79	16.98	20.87	20.28	18.33
21	---	---	---	---	16.45	19.67	18.99	18.92	17.09	20.85	20.24	18.25
22	---	---	---	---	16.41	19.66	18.95	18.80	17.00	20.70	20.16	18.31
23	---	---	---	---	16.88	19.81	18.77	18.79	17.39	20.51	20.13	18.48
24	---	---	---	---	17.22	19.75	18.33	18.80	17.63	20.24	20.07	18.51
25	---	---	---	25.17	17.21	19.81	18.17	18.78	17.76	19.96	20.06	18.47
26	---	---	---	25.13	17.40	19.94	17.98	18.79	17.74	19.81	20.03	18.69
27	---	---	---	24.71	17.53	19.90	17.83	18.83	17.96	19.60	20.08	18.76
28	---	---	---	23.82	17.82	19.95	17.68	18.80	18.07	19.44	19.92	18.75
29	---	---	---	22.95	---	19.96	17.84	18.78	18.23	19.37	20.04	18.81
30	---	---	---	22.92	---	19.99	17.85	18.58	18.52	19.31	20.10	18.94
31	---	---	---	22.81	---	19.53	---	18.40	---	19.20	20.13	---
MAX	---	---	---	25.17	22.32	19.99	20.12	18.99	18.52	21.53	20.28	20.58

CAL YR 1989 LOW 30.06  
WTR YR 1990 LOW 25.17403709081052800 C-1 MUNICIPAL WELL FIELD CARROLLTON OH  
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

## GROUND-WATER RECORDS

## 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.

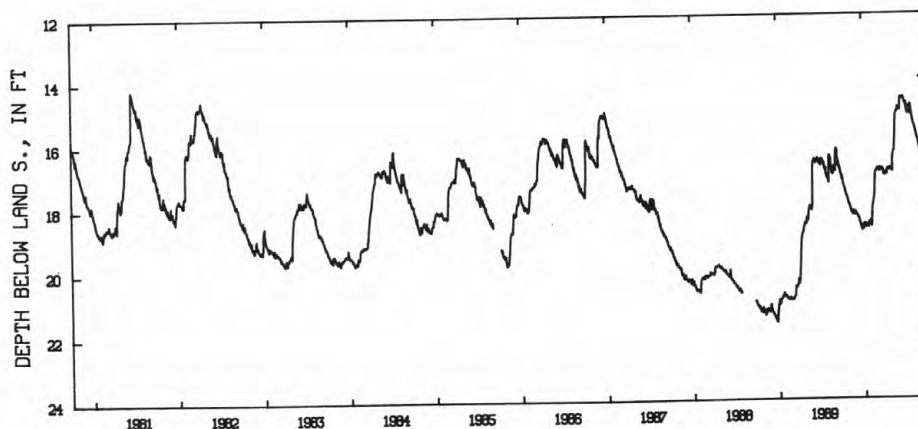
DATUM.--Elevation of land-surface datum is 1030 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 4.50 ft above land-surface datum.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.05	17.97	18.26	18.56	18.59	16.86	17.03	16.89	14.98	14.82	15.32	16.28
2	17.14	17.99	18.26	18.53	18.62	16.82	16.99	16.88	14.98	14.82	15.36	16.31
3	17.20	18.03	18.27	18.54	18.55	16.83	16.97	16.91	14.96	14.78	15.40	16.33
4	17.21	18.04	18.28	18.57	18.49	16.83	16.95	16.91	15.00	14.78	15.43	16.33
5	17.25	18.05	18.29	18.55	18.28	16.86	16.98	16.47	15.00	14.90	15.46	16.37
6	17.31	18.10	18.32	18.57	18.13	16.86	16.97	16.45	15.00	14.97	15.48	16.41
7	17.32	18.15	18.33	18.57	18.01	16.87	16.98	16.37	15.02	15.01	15.49	16.43
8	17.36	18.17	18.35	18.55	17.98	16.90	17.01	16.32	15.02	15.03	15.51	16.48
9	17.40	18.11	18.37	18.58	17.93	16.91	17.01	16.31	14.80	15.09	15.55	16.17
10	17.40	18.17	18.37	18.62	17.88	16.89	16.97	16.29	14.68	15.13	15.57	16.04
11	17.45	18.20	18.36	18.64	17.84	16.80	16.87	16.28	14.62	15.13	15.62	16.08
12	17.49	18.13	18.42	18.65	17.76	16.80	16.87	16.27	14.62	15.07	15.66	16.10
13	17.49	18.18	18.48	18.65	17.72	16.82	16.88	16.18	14.64	14.89	15.66	16.16
14	17.54	18.24	18.49	18.60	17.72	16.85	16.86	15.99	14.64	14.90	15.71	16.21
15	17.55	18.25	18.50	18.57	17.67	16.88	16.83	15.92	14.64	14.89	15.74	16.20
16	17.59	18.15	18.51	18.60	17.46	16.87	16.84	15.82	14.65	14.92	15.77	16.10
17	17.62	18.15	18.56	18.61	17.27	16.82	16.85	15.66	14.67	14.98	15.80	16.20
18	17.65	18.15	18.62	18.62	17.13	16.87	16.85	15.42	14.67	15.03	15.84	16.25
19	17.66	18.18	18.62	18.65	16.98	16.89	16.85	15.29	14.61	15.08	15.87	16.26
20	17.67	18.19	18.60	18.63	16.93	16.88	16.89	15.17	14.61	15.11	15.89	16.29
21	17.69	18.21	18.65	18.53	16.91	16.85	16.82	15.12	14.62	15.14	15.89	16.30
22	17.74	18.24	18.69	18.49	16.91	16.84	16.81	15.12	14.65	14.93	15.90	16.36
23	17.74	18.26	18.71	18.51	16.89	16.86	16.81	15.10	14.62	14.84	15.94	16.40
24	17.77	18.15	18.74	18.51	16.89	16.87	16.84	15.08	14.65	14.88	16.00	16.33
25	17.80	18.17	18.63	18.49	16.90	16.87	16.85	15.08	14.67	14.96	16.04	16.35
26	17.83	18.18	18.60	18.50	16.87	16.94	16.80	15.04	14.69	15.04	16.07	16.40
27	17.86	18.18	18.66	18.51	16.86	16.97	16.82	15.03	14.71	15.08	16.13	16.46
28	17.89	18.21	18.71	18.50	16.83	17.01	16.82	15.03	14.76	15.13	16.16	16.49
29	17.93	18.20	18.72	18.44	---	17.03	16.85	14.92	14.78	15.18	16.17	16.55
30	17.94	18.24	18.71	18.47	---	17.01	16.86	14.96	14.80	15.23	16.20	16.50
31	17.94	---	18.69	18.58	---	16.98	---	14.98	---	15.28	16.25	---
MAX	17.94	18.26	18.74	18.65	18.62	17.03	17.03	16.91	15.02	15.28	16.25	16.55
CAL YR 1989	LOW 21.04											
WTR YR 1990	LOW 18.74											



400638083453900 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.

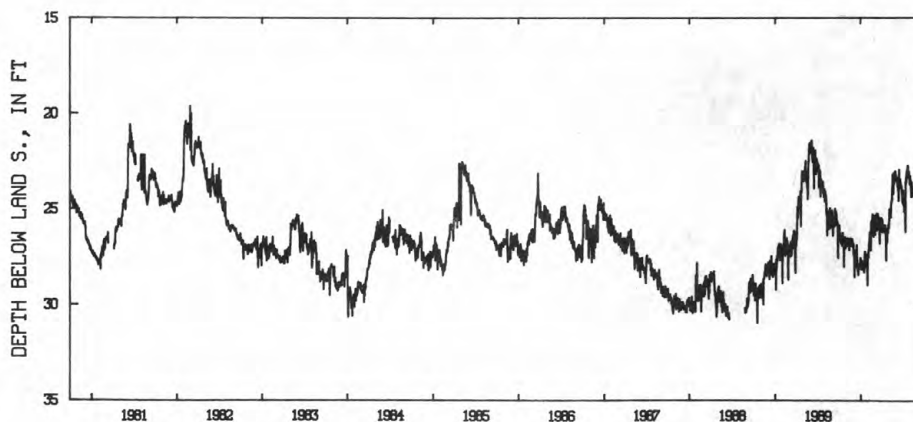
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26.04	26.82	26.82	27.56	27.76	25.58	25.96	25.83	23.27	24.14	23.32	25.25
2	25.98	26.67	26.90	27.72	27.35	25.36	25.67	26.03	23.34	24.05	23.67	24.73
3	25.88	26.59	27.36	28.13	27.40	25.66	26.24	25.71	23.54	24.79	23.53	25.32
4	26.05	26.90	27.41	27.89	27.54	26.37	25.56	25.69	23.59	24.62	23.77	25.05
5	26.61	26.83	27.18	27.90	27.16	25.79	25.94	25.02	23.61	24.50	24.02	24.96
6	26.25	26.92	27.49	27.72	27.23	25.97	26.09	25.24	23.48	24.78	24.39	25.68
7	26.58	26.94	28.56	28.15	27.12	25.78	25.89	25.02	23.66	25.16	23.63	25.57
8	26.63	26.54	27.60	27.73	26.72	25.65	26.03	25.17	23.40	24.90	23.62	25.39
9	26.63	26.89	27.65	27.78	26.69	25.48	25.86	25.18	23.86	24.90	24.18	25.35
10	26.83	26.63	27.68	27.78	26.23	26.13	25.95	25.01	23.67	24.94	23.85	25.20
11	26.49	26.57	27.83	27.96	26.87	25.25	26.17	25.45	24.03	25.83	24.02	25.84
12	26.41	26.88	28.08	27.99	26.81	25.85	26.23	24.79	24.00	26.21	24.22	26.02
13	26.50	26.88	27.45	27.95	26.97	26.13	25.93	24.67	24.59	23.62	24.35	25.52
14	26.56	27.06	27.79	27.85	27.16	25.47	26.05	24.60	23.94	23.72	24.17	25.06
15	26.92	27.15	27.62	28.00	26.22	25.34	26.13	24.55	22.95	23.35	24.28	25.28
16	26.45	26.80	26.90	28.26	25.69	25.27	25.88	24.61	23.76	23.62	24.35	25.85
17	26.62	26.78	27.41	28.29	26.38	25.50	26.19	23.96	23.49	23.35	23.99	26.87
18	26.26	26.78	27.75	27.89	25.62	25.50	26.08	23.97	23.75	23.06	24.26	27.14
19	26.56	26.91	28.11	27.56	25.94	25.64	26.12	23.23	23.46	23.01	24.17	25.42
20	26.75	26.81	28.05	27.24	25.64	25.48	27.49	23.19	23.70	23.25	24.35	25.53
21	26.60	26.56	28.26	27.97	25.80	25.46	27.69	23.95	23.64	22.99	24.48	25.33
22	27.01	26.63	27.87	27.73	25.29	25.62	26.57	24.24	23.82	22.76	24.34	25.62
23	28.04	26.94	28.45	27.44	25.65	26.02	26.27	23.43	23.91	22.77	24.22	27.13
24	26.90	26.71	28.16	27.45	26.07	26.83	26.12	23.70	23.88	23.11	24.37	27.30
25	26.71	26.77	28.13	27.39	25.88	25.62	26.74	23.49	23.82	23.40	24.60	25.60
26	26.91	26.76	28.13	27.82	26.47	26.09	26.26	23.25	23.94	23.38	24.52	25.63
27	26.49	26.60	28.07	28.10	26.31	25.62	26.10	23.11	24.07	23.07	24.66	27.03
28	26.85	26.83	27.95	27.82	25.80	25.60	26.04	23.32	24.29	23.35	24.68	25.70
29	26.80	26.79	28.00	27.57	---	25.61	26.27	23.15	24.34	23.27	24.78	26.16
30	27.05	27.00	28.06	27.90	---	25.79	25.85	23.04	24.69	23.74	25.40	25.82
31	26.56	---	28.01	29.00	---	25.50	---	23.24	---	23.37	26.15	---
MAX	28.04	27.15	28.56	29.00	27.76	26.83	27.69	26.03	24.69	26.21	26.15	27.30
CAL YR 1989	LOW 29.24											
WTR YR 1990	LOW 29.00											



— 395639084012200 CL-9 CITY OF NEW CARLISLE AT NEW CARLISLE OH  
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS  
CLARK COUNTY--Continued

225

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.

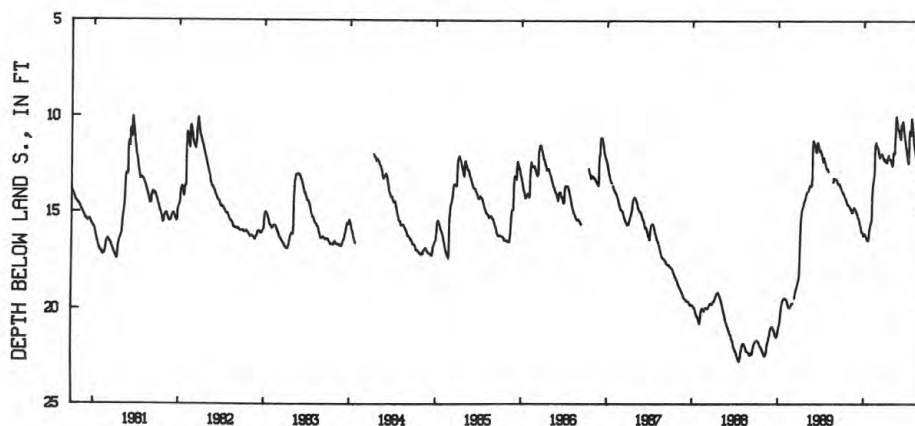
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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, 9.98 ft below land-surface datum, May 20, 1990.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.92	14.73	15.04	16.13	15.58	11.65	12.33	12.50	10.81	11.69	11.09	13.25
2	13.96	14.76	15.06	16.13	15.53	11.65	12.30	12.55	10.84	11.77	11.24	13.29
3	14.00	14.79	15.11	16.15	15.47	11.75	12.29	12.58	10.90	11.87	11.36	13.30
4	14.02	14.81	15.11	16.21	15.32	11.81	12.25	12.58	10.99	11.97	11.45	13.32
5	14.01	14.82	15.15	16.21	14.97	11.88	12.31	12.44	11.03	12.05	11.52	13.35
6	14.04	14.85	15.23	16.21	14.38	11.98	12.34	12.21	11.09	12.17	11.61	13.37
7	14.04	14.88	15.29	16.21	14.02	12.02	12.38	12.03	11.16	12.26	11.68	13.47
8	14.11	14.89	15.31	16.22	13.82	12.04	12.41	11.92	11.18	12.33	11.76	13.50
9	14.13	14.93	15.34	16.26	13.65	12.11	12.41	11.88	10.76	12.42	11.86	13.50
10	14.16	14.98	15.38	16.31	13.51	12.15	12.39	11.89	10.55	12.47	11.96	13.47
11	14.19	14.99	15.43	16.32	13.39	12.13	12.35	11.96	10.41	12.47	12.06	13.48
12	14.25	15.03	15.46	16.37	13.30	12.10	12.25	11.96	10.41	12.43	12.12	13.50
13	14.30	15.03	15.52	16.41	13.21	12.05	12.17	11.90	10.49	11.63	12.22	13.50
14	14.30	15.02	15.58	16.43	13.13	12.00	12.11	11.50	10.53	11.15	12.27	13.51
15	14.31	15.02	15.64	16.46	13.04	11.99	12.04	11.11	10.24	10.90	12.34	13.51
16	14.32	14.96	15.69	16.48	12.72	11.99	12.02	10.96	10.24	10.76	12.42	13.54
17	14.37	14.93	15.73	16.49	12.01	11.95	12.17	10.77	10.29	10.74	12.49	13.56
18	14.41	14.86	15.78	16.51	11.67	11.97	12.20	10.22	10.37	10.78	12.53	13.57
19	14.44	14.86	15.84	16.51	11.44	11.97	12.23	10.00	10.52	10.89	12.57	13.61
20	14.49	14.78	15.90	16.50	11.42	11.98	12.22	9.98	10.64	10.97	12.63	13.65
21	14.56	14.79	16.01	16.41	11.40	11.99	12.21	10.09	10.76	10.97	12.68	13.65
22	14.59	14.81	16.06	16.34	11.35	12.05	12.21	10.21	10.84	10.80	12.72	13.67
23	14.59	14.85	16.08	16.20	11.38	12.12	12.22	10.30	10.94	10.25	12.77	13.72
24	14.61	14.87	16.08	16.04	11.50	12.14	12.25	10.42	11.05	10.10	12.84	13.73
25	14.62	14.85	16.06	15.94	11.55	12.16	12.27	10.49	11.11	10.18	12.90	13.76
26	14.64	14.88	16.07	15.85	11.55	12.21	12.30	10.58	11.22	10.28	12.95	13.83
27	14.66	14.89	16.12	15.78	11.57	12.25	12.33	10.65	11.32	10.41	13.00	13.86
28	14.67	14.96	16.18	15.73	11.63	12.29	12.36	10.66	11.43	10.53	13.08	13.88
29	14.69	14.97	16.23	15.68	---	12.32	12.42	10.68	11.54	10.66	13.13	13.88
30	14.69	15.00	16.26	15.62	---	12.33	12.46	10.72	11.60	10.79	13.17	13.90
31	14.71	---	16.26	15.59	---	12.33	---	10.76	---	10.96	13.20	---
MAX	14.71	15.03	16.26	16.51	15.58	12.33	12.46	12.58	11.60	12.47	13.20	13.90
CAL YR 1989	LOW 21.17											
WTR YR 1990	LOW 16.51											



— 395840083495200 CL-7 OH DIV WTR EAGLE CITY RD NR SPRINGFIELD OH  
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

## GROUND-WATER RECORDS

## COSHOCTON 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.

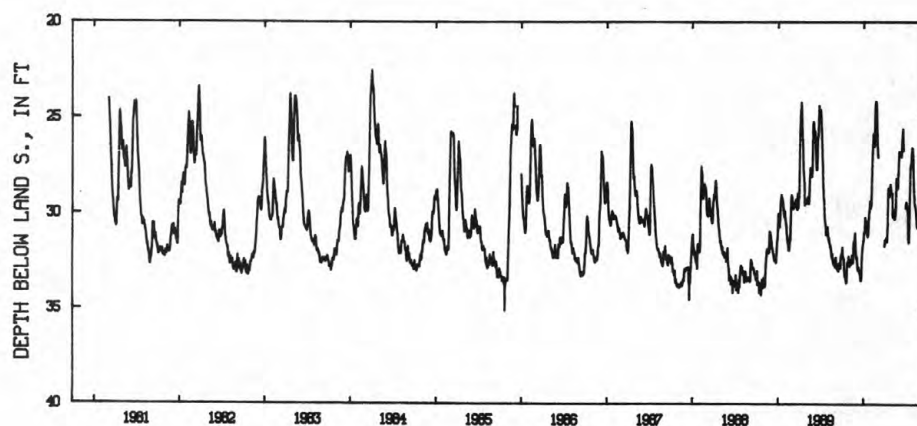
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31.97	32.79	32.42	31.43	29.62	26.59	31.40	---	26.83	29.48	28.16	30.17
2	31.80	32.77	32.32	31.01	29.55	26.96	31.55	---	26.80	29.45	28.49	30.24
3	32.09	32.76	32.28	31.05	29.36	27.10	31.56	28.99	26.89	29.53	28.81	30.14
4	32.23	32.64	32.55	31.08	28.72	---	31.50	30.22	---	29.64	29.07	30.23
5	32.33	32.45	32.71	30.91	28.15	---	31.43	30.18	---	29.70	29.25	30.47
6	32.42	32.54	32.85	30.72	27.71	---	31.42	29.92	---	29.78	29.52	30.67
7	32.43	32.56	32.95	30.26	27.23	---	31.32	29.80	---	29.88	29.60	30.85
8	32.38	32.64	32.99	30.33	26.84	---	31.40	29.90	---	29.99	29.61	31.00
9	32.61	32.68	32.96	30.44	26.50	---	31.47	30.01	---	30.56	29.67	31.06
10	32.99	32.62	32.84	30.55	26.20	---	31.50	30.16	---	31.37	29.75	30.98
11	33.18	32.45	32.93	30.66	25.87	---	31.40	30.30	27.07	31.32	29.82	30.61
12	33.30	32.22	32.95	30.73	26.00	---	30.92	30.32	26.80	31.55	29.91	30.40
13	33.35	32.51	33.05	30.63	26.21	---	30.61	30.32	26.39	31.45	30.09	30.22
14	33.21	32.57	33.12	30.44	26.44	---	29.35	30.34	26.15	30.81	30.33	30.05
15	33.11	32.61	33.15	30.81	26.55	---	28.77	30.17	26.05	30.04	30.48	29.99
16	33.40	32.61	33.21	31.01	26.47	---	28.70	30.04	25.80	29.27	30.75	30.02
17	33.53	32.45	33.20	31.17	25.89	---	28.86	29.94	25.63	28.76	30.59	30.00
18	33.63	32.07	33.39	31.24	25.00	---	28.94	29.64	26.17	28.10	30.67	29.87
19	33.66	31.64	33.47	31.21	24.42	---	29.01	29.07	26.76	27.66	30.68	29.97
20	33.59	31.49	33.53	30.97	24.32	---	29.10	28.50	---	27.51	30.67	30.08
21	33.22	31.55	33.54	30.69	24.21	---	29.15	28.20	---	27.60	30.71	30.10
22	32.72	31.58	33.35	30.40	24.16	---	29.08	28.20	---	27.48	30.66	30.12
23	32.59	31.37	32.98	30.20	24.20	---	28.80	28.40	---	27.27	30.40	30.12
24	32.61	31.13	32.41	30.00	24.21	---	28.65	28.62	---	27.08	30.07	30.15
25	32.64	31.06	32.18	29.91	24.57	---	28.52	28.76	---	26.83	29.77	30.27
26	32.68	31.39	32.00	29.80	25.21	---	28.61	28.75	---	26.61	29.48	30.43
27	32.71	31.80	31.85	29.68	25.69	---	28.76	28.43	---	26.65	29.27	30.58
28	32.51	32.04	31.73	29.39	26.19	---	28.88	27.93	---	26.66	29.50	30.68
29	32.28	32.24	31.65	29.69	---	---	---	28.05	29.74	26.91	29.69	30.70
30	32.56	32.34	31.58	29.74	---	31.74	---	27.56	29.59	27.26	29.84	30.60
31	32.72	---	31.43	29.75	---	31.65	---	27.26	---	27.73	30.00	---
MAX	33.66	32.79	33.54	31.43	29.62	31.74	31.56	30.34	29.74	31.55	30.75	31.06
CAL YR 1989	LOW 33.66											
WTR YR 1990	LOW 33.66											



401256081525100 CS-3  
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

## COSHOCTON 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 Coshocton.

Owner: City of Coshocton.

AQUIFER.--Sand and gravel of Quaternary Age.

WELL CHARACTERISTICS.--Drilled test well, diameter 6 in., depth 40 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 8.50 ft above land-surface datum.

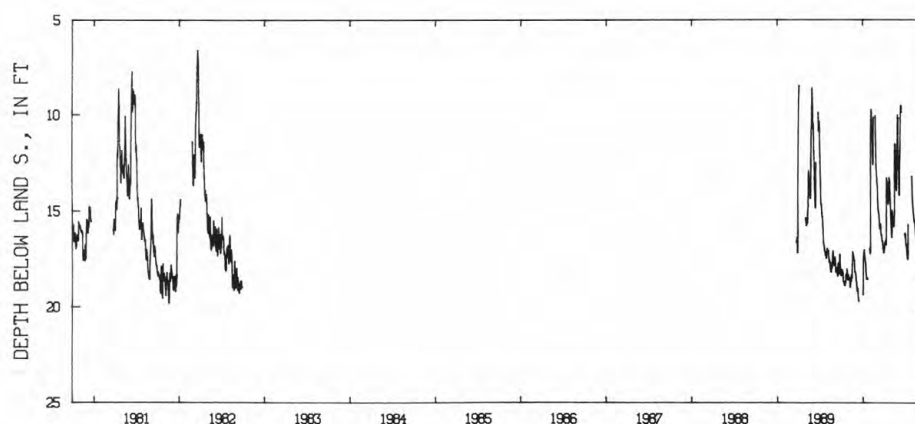
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.34	18.46	18.23	19.32	17.19	12.67	17.08	15.26	10.30	16.14	14.18	16.98
2	18.29	18.43	18.30	19.05	17.22	13.09	17.00	15.46	10.16	16.17	14.50	16.85
3	18.29	18.51	18.54	17.50	16.98	13.30	16.90	15.80	12.18	16.67	14.68	17.13
4	18.04	18.51	18.62	17.43	15.45	13.51	16.88	16.22	12.69	16.79	14.90	17.37
5	18.08	18.50	18.61	17.33	12.80	13.72	16.62	16.34	13.51	16.76	15.10	17.72
6	18.15	18.65	18.81	17.11	11.07	14.18	16.63	15.81	14.07	16.72	15.16	18.14
7	18.15	18.96	19.14	17.00	10.25	14.54	16.69	14.95	14.17	16.97	15.33	18.55
8	18.27	18.95	19.14	17.20	9.71	14.84	16.67	15.16	14.17	17.24	15.42	18.71
9	18.66	18.65	19.04	17.38	9.83	15.02	16.51	15.39	12.35	17.44	15.55	18.56
10	18.68	18.64	19.00	17.43	10.42	15.06	16.73	15.59	12.38	17.47	15.54	18.15
11	18.67	18.62	19.25	17.50	10.62	15.09	16.74	15.66	11.91	17.48	15.52	17.81
12	18.70	18.44	19.48	17.60	11.11	15.25	15.45	15.73	10.21	17.20	15.63	17.25
13	18.78	18.29	19.53	17.75	11.82	15.51	14.15	15.80	9.49	15.70	15.83	16.92
14	18.83	18.41	19.68	18.08	12.41	15.68	13.27	15.80	9.68	---	16.07	16.74
15	18.86	18.47	---	18.22	12.59	15.88	13.43	15.46	9.50	---	16.16	17.14
16	18.85	18.46	---	18.37	12.35	15.92	13.49	15.28	9.62	---	16.15	17.18
17	18.72	17.95	---	18.48	10.12	15.84	13.70	15.12	9.85	---	16.31	17.34
18	18.74	17.33	---	18.53	---	15.66	14.11	13.19	---	---	16.47	17.80
19	18.64	17.11	---	18.53	---	15.76	14.46	11.95	---	---	16.60	17.80
20	18.32	17.18	---	18.52	---	16.15	14.62	11.51	---	---	16.60	17.79
21	18.30	17.25	---	18.50	---	16.24	14.61	11.57	---	---	16.46	17.97
22	18.31	17.36	---	---	---	16.24	14.44	11.85	---	---	16.32	17.97
23	18.27	17.40	---	---	---	16.40	13.93	12.50	---	---	15.95	17.58
24	18.24	17.46	---	---	---	16.54	13.59	13.32	---	---	15.46	17.45
25	18.00	17.54	---	---	10.04	16.55	13.26	13.92	---	---	15.12	17.61
26	18.19	17.54	---	---	10.86	16.55	13.31	13.92	---	---	15.29	17.73
27	18.42	17.87	---	---	11.41	16.70	13.52	13.35	---	---	15.36	17.86
28	18.57	18.17	---	---	12.13	16.87	13.88	12.36	---	---	15.60	17.91
29	18.57	18.17	---	---	---	16.90	14.08	11.91	16.18	---	15.87	17.68
30	18.30	18.17	---	---	---	17.16	14.60	10.65	16.25	13.19	16.36	17.79
31	18.46	---	---	16.95	---	17.15	---	10.00	---	13.68	16.98	---
MAX	18.86	18.96	19.68	19.32	17.22	17.16	17.08	16.34	16.25	17.48	16.98	18.71
CAL YR 1989	LOW 19.68											
WTR YR 1990	LOW 19.68											



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.

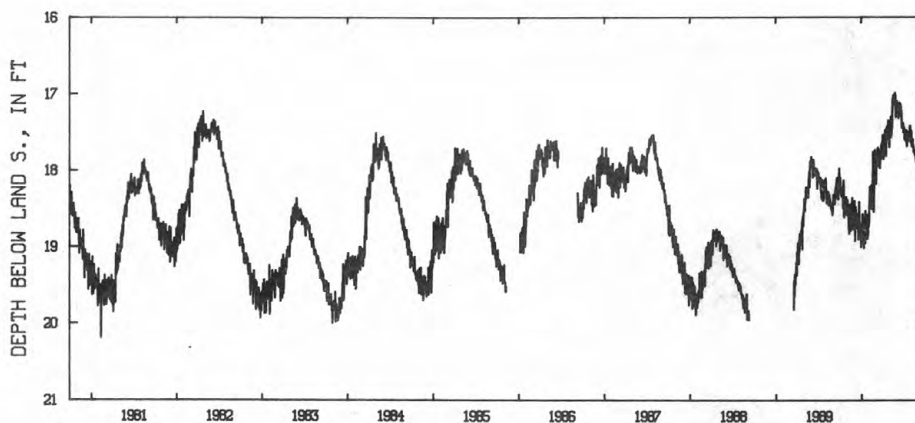
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.98	18.59	18.58	19.01	18.59	18.02	17.66	17.64	17.21	17.44	17.63	17.98
2	18.27	18.49	18.52	18.99	18.75	17.74	17.66	17.70	17.13	17.51	17.60	17.95
3	18.30	18.57	18.65	18.74	18.74	17.99	17.67	17.70	17.10	17.46	17.64	18.05
4	18.27	18.49	18.53	18.84	18.69	18.02	17.54	17.53	17.28	17.45	17.49	18.00
5	18.10	18.40	18.41	18.85	18.69	18.02	17.75	17.43	17.27	17.48	17.63	17.91
6	18.25	18.60	18.77	18.76	18.49	18.19	17.75	17.42	17.15	17.59	17.69	17.87
7	18.27	18.50	18.93	18.74	18.49	18.18	17.84	17.42	17.28	17.60	17.69	17.99
8	18.28	18.47	18.77	18.58	18.43	17.95	17.86	17.38	17.15	17.52	17.67	18.03
9	18.33	18.49	18.49	18.62	18.22	17.91	17.76	17.30	17.20	17.54	17.65	18.02
10	18.29	18.76	18.53	18.86	18.36	17.92	17.60	17.39	17.28	17.61	17.60	18.06
11	18.35	18.69	18.68	18.64	18.38	17.89	17.72	17.57	17.32	17.56	17.67	18.09
12	18.29	18.84	18.65	18.94	18.49	17.87	17.77	17.49	17.22	17.62	17.69	18.05
13	18.31	18.60	18.57	19.02	18.31	17.85	17.72	17.45	17.16	17.62	17.71	18.07
14	18.23	18.50	18.65	18.83	18.50	17.71	17.48	17.45	17.12	17.48	17.77	17.95
15	18.27	18.46	18.71	18.80	18.20	17.76	17.48	17.24	17.18	17.61	17.74	18.01
16	18.23	18.69	18.77	18.82	18.35	17.76	17.49	17.07	17.21	17.69	17.75	18.19
17	18.50	18.71	18.74	18.69	18.52	17.73	17.78	17.06	17.22	17.69	17.74	18.30
18	18.51	18.80	18.73	18.96	18.31	17.87	17.82	17.13	17.14	17.62	17.75	18.19
19	18.14	18.78	18.66	18.96	18.22	17.96	17.64	17.07	17.23	17.60	17.78	18.07
20	18.20	18.45	18.75	18.54	18.30	17.94	17.46	17.02	17.17	17.51	17.81	18.14
21	18.59	18.64	18.91	18.67	18.10	17.76	17.45	17.14	17.29	17.53	17.77	18.08
22	18.62	18.54	18.90	18.71	17.76	17.77	17.49	17.15	17.23	17.51	17.79	18.03
23	18.47	18.60	18.83	18.73	18.02	17.98	17.43	17.13	17.28	17.60	17.79	18.17
24	18.48	18.61	18.68	18.71	18.46	17.89	17.45	17.12	17.39	17.61	17.89	18.17
25	18.49	18.37	18.42	18.73	18.55	17.81	17.51	17.08	17.45	17.62	17.89	18.00
26	18.48	18.53	18.79	18.84	18.36	17.82	17.45	16.99	17.38	17.60	17.88	18.16
27	18.47	18.52	18.73	18.80	18.07	17.86	17.41	17.07	17.38	17.54	17.86	18.22
28	18.44	18.78	18.88	18.90	18.12	17.79	17.35	17.02	17.40	17.48	17.79	18.18
29	18.42	18.78	18.74	18.59	---	17.69	17.61	17.21	17.39	17.42	17.83	18.13
30	18.36	18.51	18.77	18.67	---	17.65	17.58	17.30	17.39	17.46	17.92	18.19
31	18.52	---	18.71	18.86	---	17.66	---	17.31	---	17.59	17.98	---
MAX	18.62	18.84	18.93	19.02	18.75	18.19	17.86	17.70	17.45	17.69	17.98	18.30
CAL YR 1989	LOW 20.24											
WTR YR 1990	LOW 19.02											

400514084345700 D-2  
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

## GROUND-WATER RECORDS

## 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.

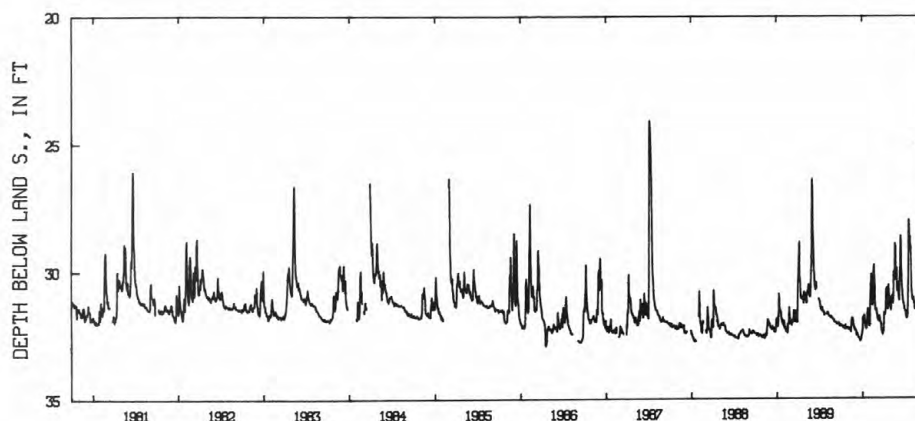
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32.13	32.27	32.32	32.33	32.14	31.56	32.36	31.43	30.60	31.54	30.90	31.67
2	32.15	32.28	32.35	32.30	31.95	31.52	32.12	31.51	30.49	31.57	30.99	31.73
3	32.18	32.31	32.37	31.90	31.30	31.66	32.10	31.55	30.49	31.59	31.06	31.77
4	32.18	32.31	32.36	31.82	31.01	31.71	31.64	31.50	30.92	31.61	31.10	31.83
5	32.15	32.29	32.38	31.90	30.80	31.73	31.75	31.16	30.98	31.67	31.16	31.82
6	32.16	32.31	32.49	31.93	30.57	31.82	31.72	31.04	31.05	31.75	31.17	31.81
7	32.18	32.30	32.53	31.92	30.42	31.85	31.73	30.98	31.17	31.80	31.14	31.86
8	32.18	32.28	32.50	31.88	30.14	31.89	31.72	31.04	31.15	31.83	31.05	31.86
9	32.22	32.25	32.47	31.75	30.89	31.95	31.72	31.03	30.50	31.86	31.12	31.85
10	32.18	32.34	32.50	31.95	31.15	31.97	31.63	31.15	30.30	31.86	31.24	31.85
11	32.24	32.34	32.53	31.97	31.29	31.97	31.41	31.30	30.07	31.75	31.30	31.73
12	32.24	32.40	32.56	32.04	31.36	31.95	30.74	31.30	29.88	31.80	31.35	31.71
13	32.26	32.36	32.57	32.15	31.23	31.89	30.75	31.20	28.88	31.62	31.45	31.75
14	32.23	32.17	32.60	32.16	31.32	31.78	30.72	30.92	28.65	31.43	31.51	31.76
15	32.22	32.10	32.63	32.24	31.00	31.77	30.68	30.05	28.96	30.81	31.37	31.80
16	32.21	31.98	32.64	32.27	30.85	31.88	30.93	30.40	29.85	30.48	31.37	31.87
17	32.28	31.85	32.65	32.27	30.09	31.95	31.18	30.40	30.17	29.92	31.47	31.89
18	32.27	31.93	32.65	32.27	29.91	32.03	31.24	30.37	30.42	28.62	31.52	31.74
19	32.20	31.93	32.65	32.26	29.77	32.03	31.50	30.34	30.63	28.01	31.55	31.60
20	32.14	31.88	32.67	32.08	30.10	32.02	31.52	29.80	30.75	28.20	31.55	31.60
21	32.25	31.98	32.74	31.82	30.28	32.05	31.40	28.94	30.99	28.77	---	31.58
22	32.28	32.04	32.74	31.75	30.55	32.18	30.70	29.30	31.01	28.65	---	31.58
23	32.27	32.11	32.74	31.49	30.96	32.35	30.56	29.06	31.14	28.65	---	31.62
24	32.27	32.16	32.72	31.55	31.25	32.33	30.91	30.02	31.21	29.20	---	31.46
25	32.27	32.17	32.67	31.62	31.50	32.38	31.02	30.30	31.27	29.20	---	31.56
26	32.27	32.24	32.70	32.00	31.55	32.43	31.05	30.37	31.30	29.00	---	31.68
27	32.27	32.26	32.65	31.99	31.48	32.47	31.07	30.19	31.35	29.08	---	31.72
28	32.26	32.30	32.57	32.08	31.57	32.50	31.05	29.90	31.41	29.62	---	31.75
29	32.24	32.34	32.54	32.08	---	32.48	31.14	30.66	31.42	30.20	31.58	31.77
30	32.22	32.29	32.50	---	---	32.44	31.34	30.80	31.53	30.53	31.63	31.80
31	32.24	---	32.41	32.17	---	32.39	---	30.59	---	30.76	31.67	---
MAX	32.28	32.40	32.74	32.33	32.14	32.50	32.36	31.55	31.53	31.86	31.67	31.89

CAL YR 1989 LOW 32.74  
WTR YR 1990 LOW 32.74402126083040400 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.

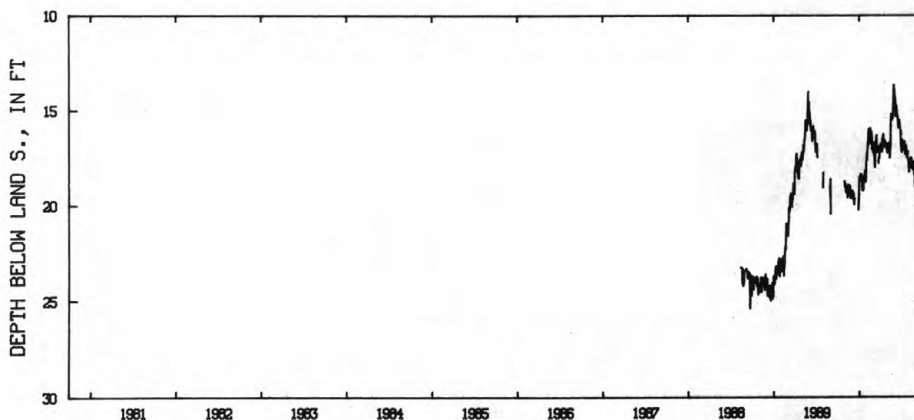
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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, 13.65 ft below land-surface datum, May 30, 1990.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	19.02	19.20	18.53	17.58	17.01	16.99	17.05	14.07	16.86	17.68	---
2	---	18.90	19.35	18.47	17.38	16.80	16.87	17.17	13.91	17.05	17.90	---
3	---	18.88	19.55	18.70	17.26	16.67	16.83	17.22	14.17	17.18	18.24	---
4	---	18.88	19.25	18.45	17.62	17.26	16.75	17.20	14.32	16.70	17.95	---
5	---	18.86	19.38	18.57	17.15	17.17	16.82	16.75	14.31	16.55	18.03	---
6	---	19.31	19.63	18.34	16.97	17.10	16.87	16.76	14.50	16.92	17.55	---
7	---	19.10	19.49	18.72	16.65	17.37	17.03	16.79	15.31	16.70	17.76	---
8	---	18.99	19.33	18.36	16.86	17.16	17.14	16.72	14.95	16.63	17.93	---
9	---	19.16	19.43	18.53	16.64	17.93	17.16	16.86	14.76	16.67	17.62	---
10	---	19.19	19.93	18.60	16.15	17.98	17.02	16.75	15.13	16.92	17.46	---
11	---	19.10	19.66	18.37	15.97	17.18	16.44	17.04	14.75	16.97	17.47	---
12	---	19.56	---	18.40	16.28	16.85	16.75	16.80	15.22	17.08	17.49	---
13	---	19.55	---	18.52	16.45	16.77	16.49	17.49	15.30	17.09	17.50	---
14	---	19.36	---	19.18	16.75	16.68	16.26	17.12	15.23	16.84	17.90	---
15	---	19.21	---	19.18	16.52	16.54	16.23	17.03	15.27	16.62	18.04	---
16	---	18.93	---	18.88	16.07	16.37	16.58	16.85	15.42	16.75	17.96	---
17	---	19.05	---	19.13	16.00	16.30	16.92	16.00	15.51	16.96	17.72	---
18	---	18.91	---	19.20	15.94	17.20	16.92	15.42	15.90	17.29	17.69	---
19	---	19.45	---	19.13	16.17	16.85	16.75	15.18	15.92	17.08	17.68	---
20	---	18.95	---	18.78	16.07	17.18	16.64	15.38	15.89	17.01	18.11	---
21	---	19.14	---	18.46	16.25	17.17	16.58	15.24	15.83	16.87	18.07	---
22	---	19.07	---	18.46	16.19	16.89	16.57	15.38	15.70	16.85	17.80	---
23	---	18.98	---	18.57	16.15	16.90	16.65	15.49	15.50	17.25	17.68	---
24	---	19.41	---	18.31	16.21	---	16.70	15.35	15.64	17.35	18.18	---
25	---	19.59	---	18.51	16.52	17.75	16.76	15.38	15.83	17.33	17.95	---
26	---	19.34	---	18.15	17.05	17.50	16.79	15.30	15.90	17.48	18.38	---
27	---	---	---	18.12	17.04	17.45	16.80	14.95	15.96	17.50	18.05	---
28	---	---	---	18.54	17.12	17.48	16.80	14.92	16.04	17.31	17.90	---
29	---	19.47	20.20	18.75	---	17.42	16.83	14.43	16.07	17.15	19.00	---
30	18.72	19.22	19.90	18.34	---	17.22	16.97	13.65	16.78	---	18.23	---
31	18.88	---	19.45	17.90	---	17.01	---	13.68	---	17.60	18.47	---
MAX	18.88	19.59	20.20	19.20	17.62	17.98	17.16	17.49	16.78	17.60	19.00	---
CAL YR 1989	LOW 24.12											
WTR YR 1990	LOW 20.20											



— 393450082403600 F-7 P65 WTR CO NR AMANDA OH  
MAXIMUM DAILY DEPTH BELOW LAND S. (FT), DEPTH TO WATER BL. LSD

## GROUND-WATER RECORDS

## 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.

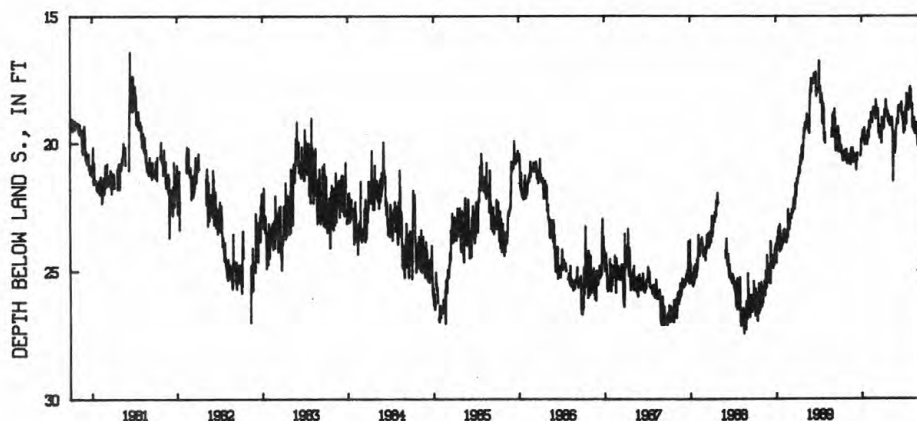
DATUM.--Elevation of land-surface datum is 820 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 3.00 ft above land-surface datum.

REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--June 1978 to current year.

EXTREMES 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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.75	20.55	20.65	19.85	19.70	18.60	19.40	19.25	19.30	19.25	17.90	20.05
2	20.00	20.80	20.60	20.00	19.80	18.60	19.35	19.20	19.25	19.60	18.55	19.85
3	20.30	20.80	20.60	19.90	19.45	19.05	19.25	19.30	19.05	19.30	18.60	19.60
4	20.35	20.65	20.60	19.80	19.15	18.30	19.25	19.30	19.25	19.30	18.60	19.85
5	20.10	20.45	20.45	19.75	19.30	19.00	19.45	19.10	19.10	19.35	18.65	19.85
6	20.35	20.65	20.60	19.70	19.45	18.50	19.30	19.10	19.20	19.50	18.55	20.05
7	20.15	20.80	20.70	19.50	19.40	19.00	19.40	19.10	19.25	19.10	18.45	19.45
8	20.10	20.75	20.60	19.70	19.40	18.65	19.40	19.15	19.00	19.20	19.20	19.55
9	20.20	20.75	20.60	19.65	19.10	18.85	19.00	19.00	18.60	18.60	19.40	19.60
10	20.40	20.75	20.70	19.65	19.10	18.70	18.75	19.10	18.55	19.10	19.35	20.10
11	20.35	20.70	21.05	19.60	18.80	18.75	18.70	19.10	18.60	18.85	19.40	20.00
12	20.45	20.55	20.45	19.70	18.80	18.80	19.00	19.00	18.70	19.20	19.35	19.70
13	20.65	20.65	20.45	19.80	19.00	18.65	18.95	19.15	18.55	19.25	19.50	19.85
14	20.60	20.45	20.70	19.40	19.05	18.85	18.75	19.50	18.60	18.05	19.40	19.70
15	20.70	20.50	20.40	19.60	19.10	19.20	18.60	19.50	18.75	18.40	19.00	19.45
16	20.60	20.80	---	20.05	19.00	19.60	18.30	19.50	18.75	18.10	19.40	19.60
17	20.50	20.85	---	20.00	19.20	19.40	18.70	21.50	18.50	18.60	19.40	19.85
18	20.40	20.75	---	19.90	18.80	19.35	18.65	20.80	18.60	18.40	19.60	20.25
19	20.40	20.25	---	19.95	18.75	19.30	18.60	19.85	18.70	18.70	19.55	19.00
20	20.40	20.20	---	20.05	18.95	19.50	18.80	19.60	18.60	18.70	19.50	19.10
21	20.40	20.50	---	19.75	18.60	19.80	18.80	20.10	18.80	18.45	19.30	19.55
22	20.30	20.55	---	19.95	18.90	19.60	18.75	20.30	18.40	18.70	19.20	18.35
23	20.50	20.55	---	19.75	18.85	19.50	18.85	20.40	18.50	18.30	19.40	18.30
24	20.30	20.30	---	19.75	18.70	19.50	18.75	20.20	18.90	18.10	19.20	18.35
25	20.60	20.20	---	19.70	18.65	19.45	19.10	20.40	18.90	18.10	19.65	18.35
26	20.60	20.45	---	19.75	18.60	19.45	19.15	20.30	18.85	18.40	19.65	18.40
27	20.60	20.65	---	20.05	18.90	19.65	19.10	20.25	18.80	17.85	19.50	19.00
28	20.70	20.45	---	19.65	18.90	20.00	19.00	20.10	19.00	18.00	19.70	19.30
29	20.35	20.75	20.50	19.50	---	19.50	18.90	19.70	19.10	17.80	19.80	19.40
30	20.25	20.40	20.40	19.70	---	19.00	19.05	19.40	18.90	---	20.00	19.30
31	20.45	---	20.25	19.70	---	19.40	---	19.35	---	18.20	20.10	---
MAX	20.70	20.85	21.05	20.05	19.80	20.00	19.45	21.50	19.30	19.60	20.10	20.25
CAL YR 1989	LOW 24.70											
WTR YR 1990	LOW 21.50											



394257082362900 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.

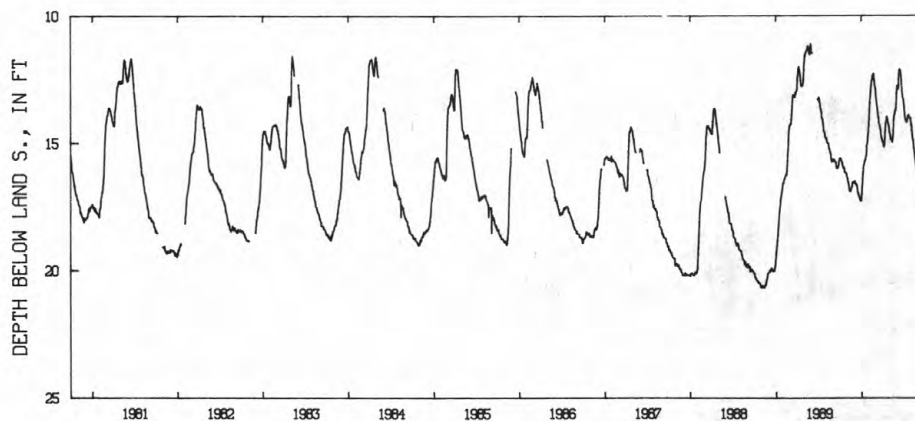
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.67	16.30	16.55	17.29	14.55	12.80	14.87	14.45	13.21	13.28	14.15	16.37
2	15.60	16.36	16.54	17.29	14.40	12.81	14.94	14.55	13.07	13.40	14.20	16.48
3	15.63	16.37	16.56	17.18	14.32	12.87	14.94	14.62	12.86	13.50	14.32	16.54
4	15.64	16.39	16.56	17.05	14.15	13.01	14.99	14.64	12.76	13.66	14.31	16.59
5	15.63	16.44	16.51	16.90	13.99	13.15	15.00	14.65	12.78	13.77	14.31	16.60
6	15.61	16.52	16.50	16.75	13.80	13.26	15.01	14.70	12.84	13.81	14.47	16.64
7	15.65	16.54	16.62	16.67	13.51	13.36	15.11	14.84	12.90	13.98	14.63	16.65
8	15.67	16.54	16.62	16.46	13.43	13.42	15.11	14.87	12.90	14.03	14.66	16.76
9	15.72	16.62	16.61	16.25	13.24	13.46	15.16	14.87	12.85	14.06	14.78	16.80
10	15.72	16.69	16.61	16.17	13.04	13.58	15.15	14.84	12.81	14.09	14.85	16.93
11	15.76	16.73	16.62	16.08	12.95	13.64	15.08	14.84	12.51	14.11	14.92	16.93
12	15.77	16.82	16.65	15.90	12.82	13.73	14.95	14.85	12.25	14.15	14.93	16.95
13	15.80	16.87	16.65	15.88	12.72	13.78	14.77	14.84	12.17	14.18	15.04	17.05
14	15.88	16.91	16.67	15.87	12.62	13.85	14.57	14.98	12.11	14.18	15.16	17.06
15	15.92	16.91	16.70	15.80	12.58	14.00	14.42	14.98	12.11	14.18	15.25	17.02
16	15.92	16.90	16.77	15.76	12.53	13.99	14.27	14.90	12.16	14.18	15.31	17.06
17	15.98	16.90	16.87	15.74	12.50	14.01	14.18	14.79	12.16	14.15	15.35	17.13
18	16.00	16.89	16.96	15.68	12.50	14.20	14.16	14.70	12.18	14.05	15.44	17.17
19	15.98	16.88	16.96	15.68	12.39	14.24	14.13	14.54	12.23	14.04	15.54	17.20
20	15.96	16.80	16.96	15.67	12.35	14.27	14.09	14.28	12.38	14.00	15.64	17.23
21	16.00	16.76	17.04	15.58	12.34	14.31	13.98	14.11	12.44	13.93	15.68	17.24
22	16.06	16.76	17.04	15.53	12.32	14.33	13.98	13.98	12.48	13.95	15.72	17.28
23	16.17	16.74	17.07	15.50	12.28	14.35	14.04	13.92	12.68	13.91	15.83	17.28
24	16.18	16.70	17.13	15.45	12.32	14.49	14.06	13.91	12.82	13.94	15.88	17.30
25	16.18	16.64	17.13	15.09	12.46	14.50	14.18	13.84	13.00	14.00	16.00	17.31
26	16.18	16.55	17.16	15.05	12.53	14.60	14.20	13.75	13.07	14.02	16.03	17.31
27	16.17	16.58	17.18	15.05	12.56	14.72	14.26	13.75	13.17	14.02	16.07	17.40
28	16.18	16.56	17.25	14.98	12.69	14.75	14.30	13.75	13.23	14.02	16.11	17.40
29	16.18	16.57	17.28	14.88	---	14.80	14.30	13.72	13.25	14.02	16.18	17.46
30	16.20	16.57	17.29	14.75	---	14.80	14.36	13.61	13.26	14.03	16.27	17.46
31	16.23	---	17.29	14.66	---	14.87	---	13.45	---	14.04	16.30	---
MAX	16.23	16.91	17.29	17.29	14.55	14.87	15.16	14.98	13.26	14.18	16.30	17.46
CAL YR 1989	LOW 19.61											
WTR YR 1990	LOW 17.46											



394544082271000 F-1  
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

## GROUND-WATER RECORDS

## 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.

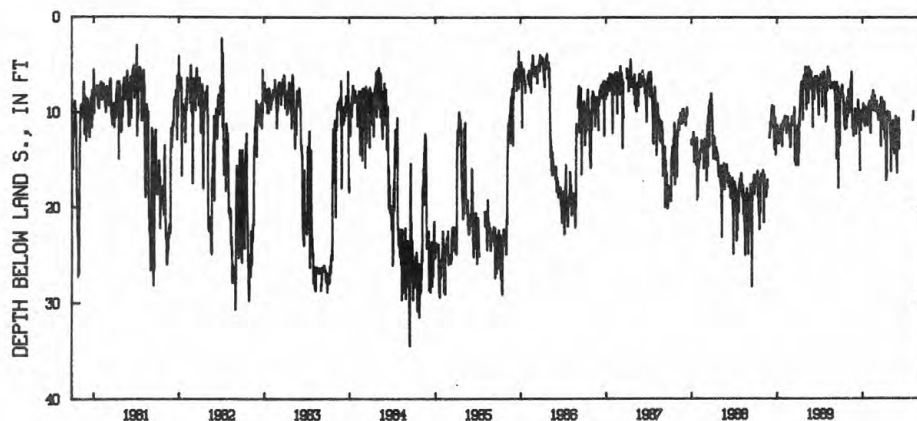
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.20	8.70	9.70	10.80	8.80	9.10	9.60	12.60	13.60	---	---	---
2	8.40	7.60	10.60	10.60	9.40	8.80	9.90	16.20	11.20	---	---	---
3	8.00	8.40	11.20	10.50	9.40	9.40	9.10	13.10	11.10	---	---	---
4	7.40	7.60	12.30	9.10	12.20	9.70	8.90	13.40	11.40	---	---	---
5	7.90	8.50	10.60	9.40	9.80	10.00	9.00	13.50	10.60	---	10.80	10.90
6	7.40	10.00	10.20	9.70	9.60	9.70	12.80	13.90	13.90	---	10.40	---
7	7.10	8.90	10.20	10.60	9.40	10.30	10.00	12.20	11.80	---	9.90	11.40
8	7.20	10.00	10.90	10.30	9.60	10.10	10.40	13.00	12.30	---	---	10.40
9	8.40	7.50	11.30	11.20	9.70	10.80	10.90	11.40	---	---	---	10.30
10	8.20	7.60	11.10	9.80	8.30	10.60	11.10	11.40	---	---	---	---
11	8.20	7.90	11.10	11.50	8.30	9.80	17.20	10.90	---	---	---	---
12	9.90	6.90	9.30	9.60	9.00	10.20	16.50	13.20	---	---	---	---
13	10.20	6.70	8.70	9.40	9.40	10.60	16.90	11.60	---	---	---	---
14	10.10	6.50	9.60	9.70	8.40	10.00	16.20	11.70	---	---	---	---
15	11.40	6.40	9.60	10.20	8.00	9.60	11.40	11.00	---	---	---	---
16	10.60	5.70	9.90	10.70	7.70	9.80	11.10	14.40	---	---	---	---
17	11.20	6.90	11.50	10.70	9.80	9.20	10.60	12.50	---	---	---	---
18	11.80	11.60	11.00	11.30	9.40	9.40	9.90	13.70	---	---	---	---
19	9.60	11.70	11.80	10.60	8.20	10.10	10.00	12.20	---	---	---	---
20	9.00	10.70	15.00	10.40	9.30	13.60	10.00	12.00	---	---	---	---
21	10.00	11.10	16.10	10.40	9.20	8.50	10.30	11.40	---	---	---	---
22	10.50	12.00	---	10.40	8.90	8.40	10.30	12.30	---	---	---	---
23	10.10	12.50	---	11.40	8.20	9.40	10.60	10.40	---	---	---	---
24	11.70	10.40	---	10.00	8.80	8.50	10.80	13.00	---	---	---	---
25	9.40	---	11.90	9.40	9.30	8.70	10.00	14.90	---	---	---	---
26	9.20	---	10.60	10.80	9.30	9.40	10.00	14.40	---	---	---	---
27	10.60	---	10.60	9.90	9.90	8.90	10.40	15.60	---	---	---	---
28	8.50	11.90	9.80	10.00	9.50	11.80	10.70	16.40	---	---	---	---
29	10.40	11.90	11.00	9.00	---	9.60	11.50	11.70	---	---	---	---
30	9.90	9.60	11.00	9.00	---	11.60	12.20	11.20	---	---	---	---
31	9.50	---	10.80	9.60	---	10.40	---	10.80	---	---	---	---
MAX	11.80	12.50	16.10	11.50	12.20	13.60	17.20	16.40	13.90	---	10.80	11.40

CAL YR 1989 LOW 18.00  
WTR YR 1990 LOW 17.20395053082361900 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.

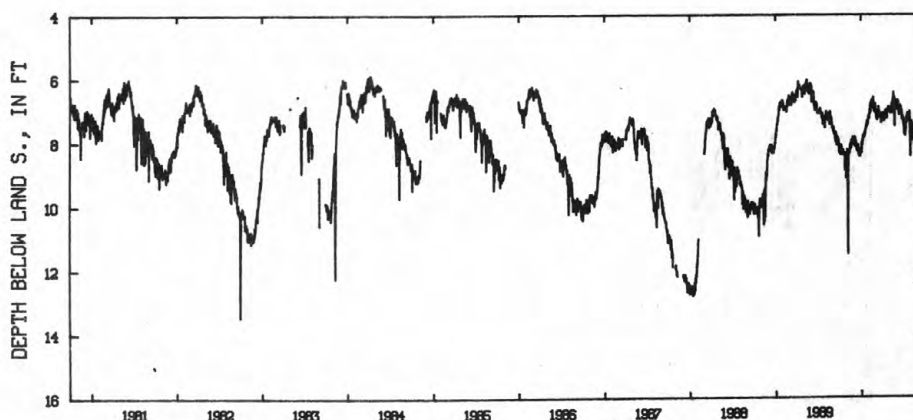
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.20	8.50	8.00	8.20	7.20	7.00	7.35	7.00	6.70	7.45	7.90	8.10
2	8.10	8.35	7.90	8.20	7.25	6.81	7.10	7.05	6.80	7.40	7.95	8.15
3	8.11	8.25	7.85	8.35	7.20	6.90	7.25	7.05	6.75	7.55	7.70	8.25
4	8.25	8.50	8.05	8.05	7.15	7.10	7.10	7.00	6.90	7.75	7.50	8.25
5	8.40	11.30	7.85	8.00	7.25	7.00	7.25	7.00	7.00	7.50	7.35	8.40
6	8.30	11.50	7.90	8.10	7.10	7.10	7.30	7.10	6.85	7.50	7.40	8.45
7	8.20	9.55	8.15	7.95	7.00	7.25	7.35	7.05	6.80	7.80	7.55	8.50
8	8.10	8.65	8.00	7.90	7.10	7.10	7.35	6.95	6.70	7.80	7.55	8.40
9	8.15	8.35	7.95	7.95	6.90	7.30	7.20	7.00	6.75	7.75	7.45	8.50
10	8.40	8.35	8.05	7.80	6.80	7.30	7.10	6.90	6.85	7.50	7.65	8.35
11	8.30	8.25	8.05	7.85	7.05	7.05	7.15	7.00	7.00	7.60	7.50	8.35
12	8.35	8.30	8.10	7.85	6.90	7.25	7.30	6.90	7.15	7.25	7.90	8.50
13	8.40	8.35	8.25	7.80	6.75	7.25	7.15	6.80	6.90	7.30	7.90	8.35
14	8.40	8.25	8.10	7.80	6.95	7.00	7.05	7.10	6.90	7.40	7.75	8.25
15	8.35	8.10	8.10	7.85	6.70	7.15	7.15	7.00	7.00	7.20	8.05	8.45
16	8.25	8.15	8.30	7.70	6.90	7.10	7.00	6.75	6.85	7.30	8.10	8.30
17	8.40	8.05	8.10	7.80	6.90	6.90	7.05	6.65	6.90	7.35	7.85	8.55
18	8.35	8.20	8.10	7.75	6.70	7.10	7.25	6.80	7.05	7.10	8.15	8.55
19	8.35	8.20	8.30	7.70	6.75	7.15	7.05	6.60	7.00	7.10	8.00	8.35
20	8.35	7.95	8.10	7.60	6.85	7.05	7.15	6.45	6.90	7.10	8.25	8.35
21	8.40	7.95	8.30	7.60	6.65	7.15	7.25	6.60	7.05	7.10	8.15	8.50
22	8.35	8.05	8.40	7.50	6.60	7.10	7.10	6.60	7.10	7.10	7.95	8.45
23	8.35	8.00	8.25	7.55	6.75	7.10	7.00	6.60	7.00	7.15	7.85	8.45
24	8.90	8.00	8.45	7.50	6.85	7.25	7.00	7.50	7.30	7.15	7.80	8.60
25	8.40	8.00	8.40	7.35	6.95	7.20	7.00	7.50	7.25	7.25	8.00	8.50
26	8.60	7.85	8.25	7.50	7.05	7.20	6.95	6.75	7.20	7.30	8.15	8.60
27	8.45	7.95	8.45	7.45	6.80	7.40	6.95	6.75	7.25	7.05	8.15	8.75
28	8.60	7.90	8.45	7.35	7.05	7.40	6.90	6.85	7.20	7.40	8.20	8.55
29	9.15	7.90	8.30	7.45	---	7.20	6.95	6.85	7.25	7.75	8.10	8.65
30	8.60	8.10	8.30	7.35	---	7.15	6.95	6.80	7.25	8.45	8.05	8.65
31	8.55	---	8.35	7.30	---	7.25	---	6.90	---	8.00	8.45	---
MAX	9.15	11.50	8.45	8.35	7.25	7.40	7.35	7.50	7.30	8.45	8.45	8.75

CAL YR 1989 LOW 11.50  
WTR YR 1990 LOW 11.50

— 393153083322000 FA-1  
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

## GROUND-WATER RECORDS

## 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.

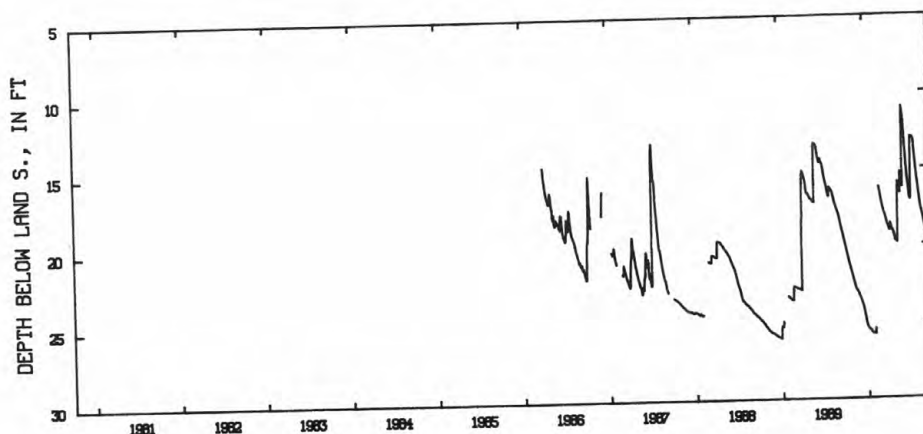
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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, 11.03 ft below land-surface datum, June 11, 1990

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.83	21.99	23.37	25.37	25.83	16.39	18.65	19.45	15.39	15.66	13.95	18.20
2	19.90	22.05	23.41	25.40	25.84	16.49	18.71	19.53	15.47	15.86	14.13	18.29
3	19.97	22.10	23.45	25.44	25.84	16.58	18.75	19.62	15.55	16.05	14.34	18.38
4	20.04	22.16	23.50	25.46	25.50	16.67	18.77	19.72	15.67	16.24	14.54	18.47
5	20.12	22.24	23.53	25.48	---	16.77	18.80	19.77	15.84	16.40	14.73	18.56
6	20.20	22.31	23.58	25.49	---	16.87	18.84	19.78	16.02	16.57	14.92	18.65
7	20.27	22.37	23.62	25.50	---	16.97	18.88	19.77	16.18	16.73	15.11	18.75
8	20.35	22.43	23.67	25.51	---	17.06	18.94	19.74	16.28	16.89	15.27	18.85
9	20.43	22.50	23.72	25.53	---	17.14	19.00	19.74	16.30	17.05	15.42	18.95
10	20.50	22.55	23.77	25.54	---	17.24	19.07	19.75	13.50	17.05	15.57	19.03
11	20.58	22.61	23.83	25.55	---	17.32	19.10	19.77	11.03	17.06	15.72	19.12
12	20.65	22.68	23.87	25.57	---	17.41	19.11	19.84	11.22	17.10	15.90	19.17
13	20.74	22.75	23.93	25.58	---	17.48	19.11	19.89	11.39	17.02	16.07	19.24
14	20.80	22.81	23.98	25.60	---	17.55	18.97	19.90	11.58	15.68	16.23	19.33
15	20.88	22.86	24.06	25.63	---	17.62	18.66	19.55	11.62	14.90	16.40	19.40
16	20.96	22.90	24.12	25.65	---	17.69	18.72	18.82	11.75	13.00	16.53	19.49
17	21.03	22.95	24.19	25.67	---	17.74	18.77	17.73	11.92	13.04	16.67	19.58
18	21.11	22.97	24.26	25.69	---	17.80	18.83	16.45	12.23	13.08	16.81	19.66
19	21.18	22.99	24.34	25.73	---	17.87	18.90	15.95	12.54	13.11	16.97	19.77
20	21.24	23.00	24.41	25.76	---	17.93	18.98	16.02	12.82	13.15	17.10	19.82
21	21.30	23.02	24.49	25.78	---	17.97	19.05	16.07	13.11	13.15	17.25	19.91
22	21.36	23.05	24.56	25.79	---	18.03	19.10	16.12	13.41	13.04	17.34	19.99
23	21.42	23.07	24.65	25.80	---	18.09	19.11	16.19	13.74	13.06	17.50	20.07
24	21.48	23.11	24.74	25.80	---	18.15	19.11	16.28	14.02	13.08	17.60	20.14
25	21.53	23.14	24.83	25.80	---	18.20	19.11	16.38	14.30	13.10	17.67	20.20
26	21.59	23.17	24.92	25.80	---	18.26	19.14	16.49	14.57	13.13	17.72	20.25
27	21.66	23.21	25.01	25.80	---	18.32	19.17	16.58	14.82	13.17	17.79	20.32
28	21.72	23.25	25.10	25.80	16.29	18.37	19.22	16.68	15.07	13.22	17.88	20.38
29	21.78	23.30	25.18	25.80	---	18.45	19.29	16.69	15.28	13.30	17.95	20.45
30	21.86	23.38	25.25	25.82	---	18.51	19.38	15.36	15.48	13.45	18.03	20.46
31	21.93	---	25.35	25.82	---	18.58	---	15.32	---	13.75	18.11	---
MAX	21.93	23.38	25.35	25.82	25.84	18.58	19.38	19.90	16.30	17.10	18.11	20.46
CAL YR 1989	LOW 25.35											
WTR YR 1990	LOW 25.84											



394956083002700 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.--Type F continuous recorder.

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.

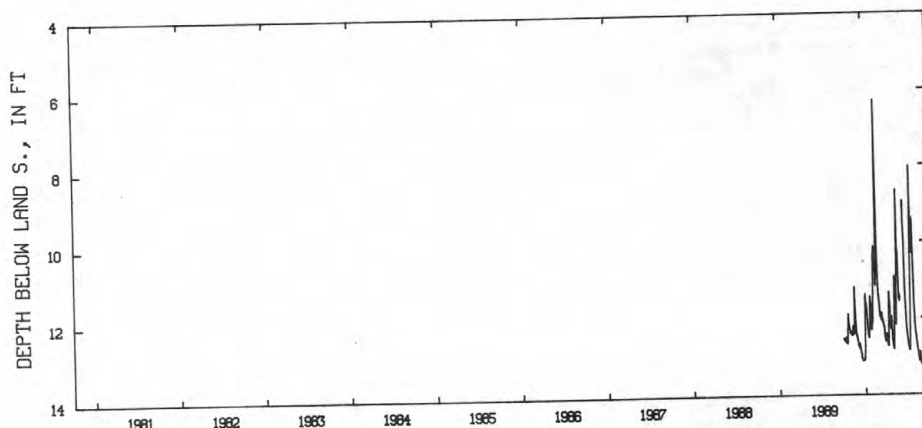
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--April 1946 to September 1982 continuous, periodic October 1982 to September 1989, continuous 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.DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.53	12.35	12.62	11.50	12.14	11.53	12.49	12.72	---	12.51	12.08	13.20
2	12.55	12.36	12.65	11.38	12.05	11.62	12.49	12.77	---	12.56	12.22	13.22
3	12.57	12.41	12.71	11.57	11.50	11.73	12.41	12.81	---	12.62	12.32	13.25
4	12.58	12.41	12.72	11.62	11.39	11.82	12.48	12.80	---	12.67	12.40	13.27
5	12.53	12.42	12.73	11.62	10.47	11.91	12.55	12.41	---	12.71	12.42	13.27
6	12.58	12.45	12.77	11.67	10.36	11.95	12.60	11.50	---	12.76	12.43	13.27
7	12.59	12.44	12.77	11.76	10.23	11.97	12.64	10.91	---	12.79	12.53	13.28
8	12.62	12.42	12.66	11.84	10.14	11.94	12.68	11.07	---	12.81	12.59	13.23
9	12.63	12.30	12.70	11.90	10.21	11.93	12.72	11.40	---	12.85	12.65	13.10
10	12.62	12.21	12.76	12.05	10.35	12.00	12.73	11.74	---	12.83	12.70	13.00
11	12.50	12.25	12.80	12.11	10.30	12.05	12.72	12.00	---	12.66	12.75	12.88
12	12.54	12.33	12.83	12.24	10.65	11.87	11.70	12.16	---	12.35	12.80	12.96
13	12.60	12.37	12.87	12.32	10.95	11.95	11.33	12.17	---	10.35	12.85	12.84
14	12.63	12.42	12.91	12.38	11.14	12.00	11.49	11.85	9.12	9.80	12.88	12.67
15	12.65	12.43	12.95	12.43	11.14	12.04	11.60	10.99	8.94	8.04	12.94	12.70
16	12.66	12.40	13.02	12.48	10.50	12.08	11.70	10.89	9.52	9.01	13.02	12.66
17	12.67	11.19	13.05	12.51	6.28	12.06	11.85	10.00	9.70	9.42	13.06	12.83
18	12.28	11.49	13.07	12.51	6.80	12.12	12.03	8.66	9.91	9.67	13.10	12.91
19	12.27	11.72	13.09	12.32	7.95	12.15	12.16	9.17	10.60	9.83	13.13	12.96
20	11.90	11.90	13.10	12.32	8.66	12.17	12.26	10.18	11.13	10.18	13.13	12.97
21	12.00	12.08	13.12	11.56	9.32	12.21	12.28	10.26	11.32	10.32	12.93	12.99
22	12.10	12.19	13.10	11.44	10.00	12.23	12.18	10.25	11.55	10.31	12.89	13.03
23	12.16	12.30	13.11	11.57	10.48	12.24	11.96	10.60	11.72	9.40	12.95	13.04
24	12.21	12.38	13.11	11.58	10.85	12.32	11.98	11.09	11.91	9.56	13.04	13.02
25	12.25	12.43	13.10	11.58	11.12	12.41	12.14	11.44	12.03	10.00	13.09	13.07
26	12.27	12.47	13.08	11.69	11.30	12.48	12.29	11.49	12.15	10.56	13.14	13.13
27	12.31	12.46	13.10	11.95	11.41	12.53	12.39	11.38	12.25	10.92	13.17	13.18
28	12.35	12.52	13.08	12.23	11.44	12.57	12.55	11.56	12.33	11.31	13.22	13.22
29	12.38	12.54	13.08	12.30	---	12.59	12.57	11.42	12.38	11.66	13.21	13.25
30	12.40	12.57	13.01	12.20	---	12.61	12.67	---	12.45	11.77	13.16	13.26
31	12.41	---	12.76	12.08	---	12.58	---	---	---	11.94	13.17	---
MAX	12.67	12.57	13.12	12.51	12.14	12.61	12.73	12.81	12.45	12.85	13.22	13.28

WTR YR 1990 LOW 13.28

395118082573300 FR-3  
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

## GROUND-WATER RECORDS

## 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.

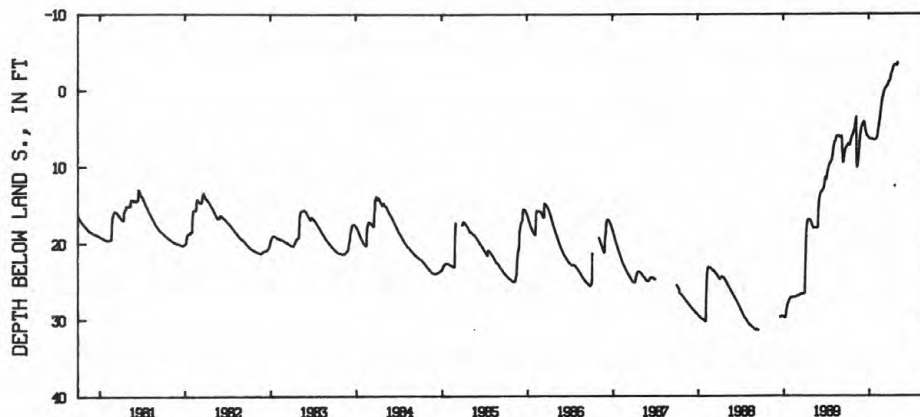
REMARKS.--Water level affected by nearby gravel mining operation.

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, 3.60 ft above land-surface datum, May 5, 1990.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.31	4.93	4.77	6.31	6.43	.96	-1.27	-3.24	---	---	---	---
2	7.24	4.78	4.67	6.36	6.37	.83	-1.39	-3.24	---	---	---	---
3	7.18	4.61	4.59	6.38	6.31	.71	-1.49	-3.28	---	---	---	---
4	7.14	4.42	4.53	6.40	6.25	.56	-1.64	-3.44	---	---	---	---
5	7.08	4.22	4.45	6.43	6.19	.44	-1.81	-3.60	---	---	---	---
6	7.04	4.02	4.38	6.45	6.06	.33	-1.98	---	---	---	---	---
7	7.06	3.78	4.33	6.47	5.86	.21	-2.12	---	---	---	---	---
8	7.11	3.53	4.27	6.48	5.64	.10	-2.21	---	---	---	---	---
9	7.14	3.39	4.23	6.47	5.39	.00	-2.29	---	---	---	---	---
10	7.23	10.15	4.19	6.41	5.14	-.06	-2.35	---	---	---	---	---
11	7.24	10.15	4.15	6.39	4.89	-.14	-2.43	---	---	---	---	---
12	7.11	10.05	4.13	6.40	4.67	-.19	-2.53	---	---	---	---	---
13	6.97	9.91	4.25	6.42	4.47	-.21	-2.64	---	---	---	---	---
14	6.83	9.71	4.54	6.43	4.27	-.26	-2.78	---	---	---	---	---
15	6.69	9.49	4.81	6.46	4.08	-.30	-2.93	---	---	---	---	---
16	6.55	9.25	5.04	6.47	3.90	-.35	-3.04	---	---	---	---	---
17	6.42	8.96	5.22	6.50	3.67	-.40	-3.14	---	---	---	---	---
18	6.30	8.53	5.39	6.52	3.42	-.49	-3.20	---	---	---	---	---
19	6.19	8.14	5.54	6.54	3.17	-.57	-3.22	---	---	---	---	---
20	6.11	7.74	5.66	6.54	2.90	-.60	-3.24	---	---	---	---	---
21	6.03	7.32	5.77	6.54	2.67	-.59	-3.26	---	---	---	---	---
22	5.97	6.90	5.85	6.55	2.44	-.59	-3.29	---	---	---	---	---
23	5.91	6.53	5.94	6.56	2.22	-.64	-3.22	---	---	---	---	---
24	5.85	6.19	5.99	6.57	1.97	-.78	-3.35	---	---	---	---	---
25	5.78	5.89	6.03	6.57	1.71	-.87	-3.36	---	---	---	---	---
26	5.69	5.64	6.06	6.56	1.50	-.98	-3.30	---	---	---	---	---
27	5.56	5.40	6.09	6.54	1.30	-1.05	-3.25	---	---	---	---	---
28	5.45	5.20	6.15	6.53	1.13	-1.14	-3.24	---	---	---	---	---
29	5.35	5.03	6.20	6.52	---	-1.14	-3.24	---	---	---	---	---
30	5.23	4.88	6.24	6.51	---	-1.14	-3.24	---	---	---	---	---
31	5.08	---	6.27	6.48	---	-1.18	---	---	---	---	---	---
MAX	7.31	10.15	6.27	6.57	6.43	.96	-1.27	-3.24	---	---	---	---

CAL YR 1989 LOW 29.79  
WTR YR 1990 LOW 10.15395157083003500 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.

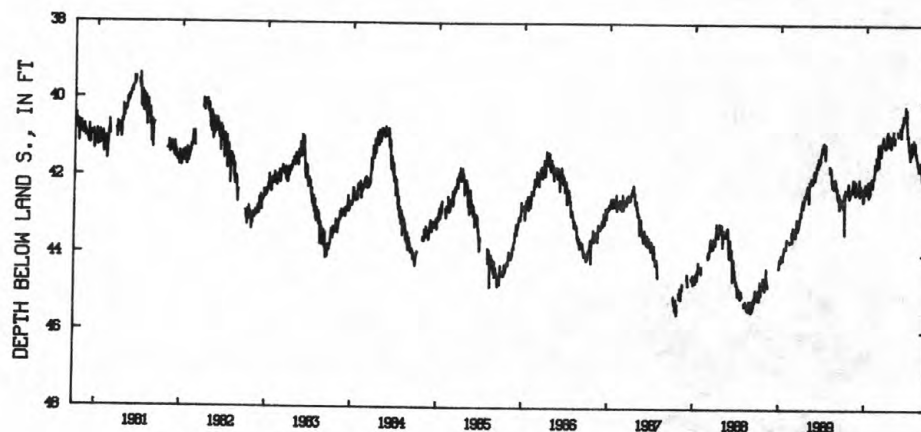
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42.42	42.34	42.30	42.39	42.02	41.40	40.86	40.94	40.75	41.00	41.32	42.04
2	42.39	42.28	42.25	42.40	42.01	41.10	40.81	41.05	40.69	41.05	41.37	41.97
3	43.35	42.36	42.27	42.34	41.99	41.13	40.80	41.08	40.54	41.23	41.38	42.03
4	43.46	42.34	42.18	42.24	41.99	41.16	40.78	40.93	40.60	41.10	41.32	42.05
5	42.43	42.23	42.02	42.27	42.00	41.25	40.85	---	40.63	41.14	41.35	42.03
6	42.30	42.21	42.35	42.28	41.91	41.41	41.04	---	40.55	41.16	41.43	42.03
7	42.34	42.19	42.46	42.30	41.88	41.41	41.12	---	40.59	41.36	41.47	42.04
8	42.40	42.05	42.38	42.28	41.83	41.25	41.15	---	40.54	41.42	41.47	42.03
9	42.40	42.03	42.26	42.20	41.62	41.11	41.12	---	40.36	41.50	41.50	42.07
10	42.36	42.25	42.20	42.26	41.62	41.11	40.86	---	40.42	41.44	41.54	42.10
11	42.36	42.32	42.30	42.28	41.74	41.07	---	---	40.49	41.21	41.62	42.27
12	42.38	42.36	42.25	42.08	41.75	41.07	---	---	40.43	41.10	41.60	42.25
13	42.41	42.26	42.24	42.40	41.68	41.07	---	---	40.45	41.10	41.67	42.16
14	42.31	42.18	42.28	42.49	41.70	41.00	---	---	40.40	41.09	41.67	41.99
15	42.32	42.05	42.32	42.45	41.44	40.96	---	---	40.36	41.05	41.60	41.97
16	42.35	42.20	42.41	42.42	41.73	40.91	40.90	40.77	40.42	41.31	41.80	42.18
17	42.40	42.25	42.39	42.44	41.74	40.97	41.19	40.78	40.37	41.37	41.70	42.23
18	42.40	42.44	42.40	42.35	41.55	41.03	41.20	40.88	40.13	41.32	41.70	42.25
19	42.15	42.43	42.35	42.36	41.62	41.15	41.14	40.88	40.27	41.29	41.77	42.09
20	42.13	42.10	42.35	42.40	41.66	41.15	41.05	40.78	40.27	41.30	41.75	42.16
21	42.35	42.25	42.53	42.21	41.60	41.11	40.96	40.78	40.50	41.25	41.61	42.16
22	42.42	42.25	42.60	42.05	41.38	41.05	40.99	40.85	40.50	41.14	41.59	42.03
23	42.49	42.29	42.60	42.07	41.11	41.20	40.97	---	40.20	41.00	41.57	42.17
24	42.52	42.35	42.54	42.07	41.42	41.17	41.00	---	40.54	40.99	41.68	42.19
25	42.48	42.29	42.25	42.01	41.68	41.14	41.00	---	40.70	41.02	41.70	42.15
26	42.44	42.25	42.28	42.00	41.68	41.14	40.97	40.67	40.75	41.06	41.78	42.21
27	42.43	42.25	42.23	42.11	41.44	41.20	40.89	40.71	40.91	41.10	41.82	42.33
28	42.41	42.34	42.32	42.13	41.44	41.15	40.77	40.75	40.90	41.10	41.78	42.33
29	42.37	42.40	42.31	42.17	---	41.10	---	40.78	40.85	41.07	41.86	42.35
30	42.32	42.29	42.22	42.23	---	40.97	40.93	40.85	40.85	41.06	41.92	42.38
31	42.32	---	42.14	42.14	---	40.86	---	40.92	---	41.18	42.04	---
MAX	43.46	42.44	42.60	42.49	42.02	41.41	41.20	41.08	40.91	41.50	42.04	42.38
CAL YR 1989	LOW 44.20											
WTR YR 1990	LOW 43.46											



400101083021800 FR-10  
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

## GROUND-WATER RECORDS

239

## 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. 10, 1989	31.24	Apr. 12, 1990	26.73



## 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.

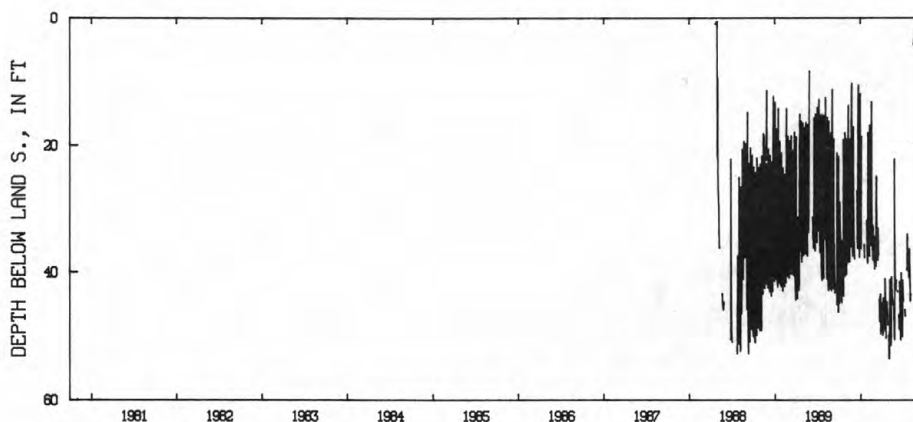
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--March 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 53.50 ft below land-surface datum, May 3, 1990; minimum daily low, 0.55 ft below land-surface datum, Apr. 27, 1988.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.80	39.10	37.40	11.90	38.50	38.20	44.70	49.80	42.70	41.20	41.70	2.10
2	39.00	40.20	29.30	31.20	38.40	38.30	47.40	52.00	41.20	43.00	44.40	2.10
3	43.40	40.30	17.10	34.30	29.80	39.40	49.00	53.50	---	44.50	43.40	2.00
4	44.80	34.00	26.80	36.30	18.00	34.80	47.40	53.40	42.60	---	---	2.00
5	43.20	19.00	31.50	35.60	21.10	34.40	48.00	49.90	---	---	---	1.90
6	41.70	34.10	35.80	27.70	34.10	37.00	49.80	44.70	---	---	---	1.80
7	29.00	37.00	37.20	18.70	36.30	38.00	49.40	41.10	---	---	---	1.80
8	37.10	37.30	37.90	---	37.30	38.80	44.50	48.50	42.90	---	---	1.70
9	33.70	38.50	---	---	37.40	39.00	44.00	50.60	42.90	---	---	1.70
10	39.20	33.10	---	---	27.40	30.20	46.60	51.40	---	45.80	---	1.60
11	41.30	18.80	---	---	16.90	26.30	46.20	50.90	---	46.80	---	1.50
12	43.20	13.70	---	---	32.00	24.90	47.20	49.90	---	---	---	1.50
13	44.70	32.60	---	---	30.20	32.30	47.60	42.10	---	---	---	1.40
14	40.60	35.80	---	---	32.30	35.50	49.00	40.70	46.60	---	---	1.40
15	39.80	37.10	---	---	33.90	37.10	44.30	44.80	47.20	---	---	1.20
16	35.00	38.00	---	---	35.20	37.60	41.00	42.70	48.90	45.20	---	1.20
17	39.40	38.30	---	---	35.80	38.00	43.70	44.70	---	---	4.20	1.42
18	41.80	30.90	---	35.70	17.60	33.00	44.80	44.00	41.40	---	4.10	1.40
19	43.00	19.00	27.20	37.60	13.20	35.00	46.20	45.00	44.00	39.40	3.90	1.30
20	43.60	32.00	34.60	---	30.80	37.20	50.20	---	45.60	39.60	3.70	4.60
21	43.60	33.60	36.20	---	34.10	---	50.20	---	48.80	38.30	3.50	2.10
22	19.10	36.00	35.00	---	35.50	44.20	---	---	50.50	34.00	3.30	1.50
23	33.40	33.10	17.40	---	37.70	46.20	---	45.00	45.80	37.50	3.10	1.40
24	37.40	16.80	12.90	---	38.00	47.70	44.60	47.10	---	39.50	3.00	1.40
25	38.90	12.40	10.60	---	32.70	43.80	45.60	49.20	40.10	38.80	2.80	1.30
26	40.10	10.30	32.00	38.00	34.20	45.60	46.40	50.50	42.80	39.90	2.70	1.30
27	40.60	30.60	34.20	---	36.60	43.40	46.80	42.00	45.00	39.20	2.60	1.40
28	31.10	35.10	36.20	---	37.70	49.60	48.20	22.20	47.60	40.80	2.50	1.40
29	18.00	36.90	37.60	31.90	---	46.80	---	38.30	50.00	38.10	2.40	1.40
30	33.50	37.00	29.10	36.10	---	46.20	---	41.50	46.90	36.30	2.20	1.20
31	37.80	---	16.70	37.50	---	46.80	---	42.50	---	39.40	2.20	---
MAX	44.80	40.30	37.90	38.00	38.50	49.60	50.20	53.50	50.50	46.80	44.40	4.60
CAL YR 1989	LOW 46.20											
WTR YR 1990	LOW 53.50											



394330083531400 GR-11 C S UNIV NR WILBERFORCE OH  
MAXIMUM DAILY DEPTH BELOW LAND S. (FT), FROM GRAPHIC RECORDER

## GROUND-WATER RECORDS

## GREENE COUNTY--Continued

394411083561300. Local number, GR-1.

LOCATION.--Lat 39°44'11", long 83°56'13", 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.

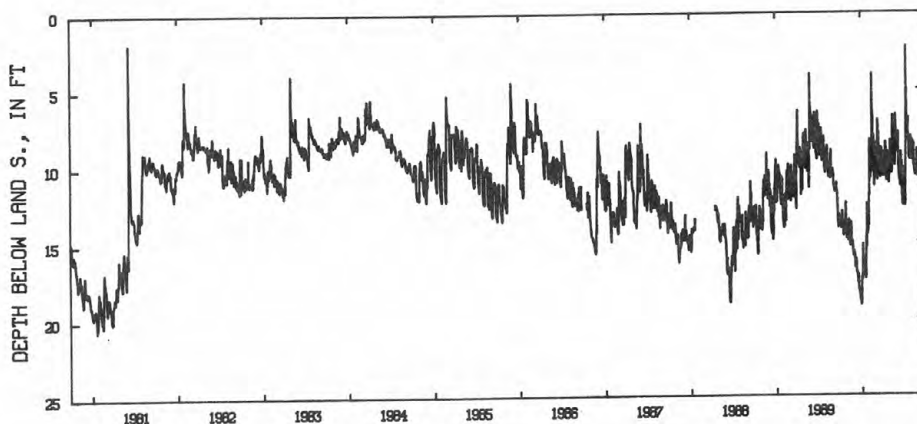
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.59	14.63	15.86	17.61	13.94	9.88	10.71	10.63	8.67	10.79	8.10	10.48
2	13.57	14.75	15.95	17.31	11.85	10.19	9.42	10.64	8.84	11.31	8.26	10.22
3	13.59	14.39	16.13	17.54	11.94	10.45	9.64	9.33	8.55	10.14	8.29	10.42
4	13.83	14.75	16.51	17.34	11.96	8.85	9.67	10.54	8.98	10.18	9.64	10.60
5	13.89	14.92	16.68	16.77	9.11	8.98	10.16	9.70	8.76	12.36	9.56	10.35
6	14.09	14.77	16.10	15.16	8.31	9.01	10.54	8.37	9.10	12.38	8.41	10.77
7	13.83	14.79	16.42	15.84	10.37	8.99	9.87	9.69	8.66	12.66	8.37	11.12
8	13.98	13.54	16.12	16.38	9.39	10.49	10.03	9.75	8.78	12.64	8.43	11.09
9	13.84	14.05	16.32	16.63	10.84	10.60	10.72	9.91	7.81	12.04	8.51	10.87
10	12.98	14.37	16.94	16.00	10.32	10.75	10.10	10.20	9.88	9.91	8.69	10.75
11	13.69	14.78	17.05	16.28	9.03	10.94	9.11	10.29	10.21	9.36	8.74	9.31
12	13.55	14.91	16.97	16.50	9.24	7.02	9.82	10.51	10.79	8.20	9.66	10.10
13	13.88	15.07	17.09	16.67	10.45	7.41	9.97	10.34	10.89	2.23	10.00	10.82
14	14.00	15.27	17.27	17.04	9.39	9.17	9.79	9.41	10.92	5.15	8.58	10.76
15	14.48	14.94	17.26	17.27	9.42	9.36	8.48	9.28	10.97	4.99	9.75	10.57
16	14.58	14.99	17.69	16.91	4.01	7.83	9.70	6.79	11.14	6.14	10.28	11.24
17	14.59	13.72	17.14	17.24	5.45	9.43	8.83	6.75	11.35	7.33	10.34	11.15
18	14.13	14.17	17.40	17.41	6.32	10.07	10.08	6.80	10.80	6.93	10.45	10.99
19	14.29	15.16	18.07	17.29	6.80	10.32	10.99	8.93	10.86	7.19	10.58	11.05
20	13.59	15.22	18.18	15.47	7.09	10.09	10.95	9.10	9.12	7.25	10.66	11.21
21	13.99	15.15	18.15	14.89	8.79	10.71	10.64	9.03	10.44	6.89	10.54	11.40
22	14.22	15.10	18.03	14.47	8.93	10.48	10.78	9.17	10.37	8.04	10.53	11.23
23	14.41	14.99	18.19	15.35	8.09	10.79	9.68	9.35	9.74	8.06	10.57	11.40
24	14.47	15.40	18.57	12.49	9.52	10.68	9.09	9.68	10.73	9.31	10.57	10.90
25	12.61	15.60	18.72	13.63	11.35	8.82	10.32	10.01	11.87	9.53	10.65	11.77
26	12.42	15.84	18.81	13.74	10.47	9.02	10.74	9.61	12.21	9.47	10.64	11.86
27	13.96	15.93	18.83	14.17	10.91	10.63	10.42	8.70	12.53	9.57	10.52	10.17
28	14.15	15.59	18.98	14.47	8.49	10.57	10.36	8.67	12.62	9.62	8.99	10.88
29	14.69	15.59	19.05	13.96	---	8.91	11.00	6.69	11.25	9.45	8.93	11.56
30	14.78	15.73	19.13	13.52	---	10.56	11.15	7.63	10.58	9.59	10.39	10.96
31	14.41	---	18.74	13.81	---	10.64	---	8.43	---	9.24	10.74	---
MAX	14.78	15.93	19.13	17.61	13.94	10.94	11.15	10.64	12.62	12.66	10.74	11.86
CAL YR 1989	LOW 19.13											
WTR YR 1990	LOW 19.13											



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.

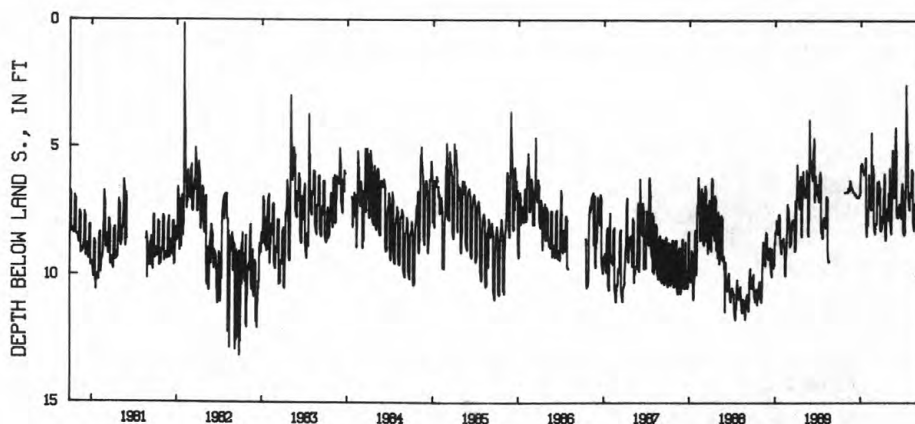
EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 20.40 ft below land-surface datum, Nov. 5, 1977; minimum daily low, 0.15 ft below land-surface datum, Feb. 1, 1982.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	6.75	6.77	5.71	8.05	8.27	8.06	6.86	5.14	8.24	6.82	6.28
2	---	6.76	6.78	5.73	7.38	8.28	7.69	6.88	5.33	8.31	6.88	8.18
3	---	6.77	6.78	5.76	7.38	8.39	7.74	6.95	7.42	8.36	6.93	8.33
4	---	6.77	6.79	5.73	7.35	7.98	7.77	6.91	7.61	8.38	6.94	8.41
5	---	6.77	6.81	5.63	6.07	7.98	7.85	5.82	7.71	8.43	6.93	8.44
6	---	6.78	6.82	5.66	6.47	7.99	7.88	7.69	7.75	8.38	5.88	8.45
7	---	6.77	6.87	5.68	6.98	8.04	7.97	7.88	7.75	8.42	5.88	8.45
8	---	6.74	6.85	5.74	6.75	8.01	7.09	8.06	7.76	8.41	5.90	8.42
9	---	6.61	6.84	5.83	6.87	7.98	6.92	8.08	7.73	8.31	5.96	7.60
10	---	6.61	6.87	5.84	6.97	7.98	6.90	8.25	7.76	6.71	5.97	7.65
11	---	6.65	6.90	5.87	7.07	7.80	6.30	8.36	7.33	6.98	6.04	7.68
12	---	6.69	6.90	5.97	7.26	6.37	6.05	8.38	7.42	6.58	7.88	7.68
13	---	6.70	6.90	6.00	7.38	6.73	6.16	7.58	7.44	2.55	7.98	7.65
14	---	6.71	6.94	5.98	7.45	6.88	6.29	7.19	7.44	3.34	8.08	7.63
15	---	6.68	6.96	6.07	7.46	7.07	8.31	6.89	7.22	3.36	8.16	7.57
16	---	6.51	6.96	6.08	4.42	7.16	8.43	5.33	7.34	3.80	8.17	7.17
17	---	6.31	6.96	6.05	5.27	7.18	8.57	5.11	7.34	4.29	8.25	7.28
18	---	6.36	6.95	6.07	5.86	7.23	8.63	5.49	7.34	4.59	8.17	7.38
19	---	6.42	6.97	6.02	6.98	6.33	8.50	5.91	7.57	4.81	7.40	7.38
20	---	6.50	6.97	6.02	7.08	6.39	7.98	6.07	7.64	4.90	7.26	7.41
21	---	6.53	6.97	5.46	5.71	6.51	7.69	6.38	7.70	4.85	7.21	7.48
22	---	6.56	6.97	5.41	5.74	6.57	7.65	6.63	7.74	6.08	7.18	7.51
23	---	6.58	6.97	5.51	5.85	6.62	7.41	6.77	7.78	7.07	7.18	6.85
24	---	6.61	6.96	7.97	6.18	6.68	7.59	6.88	6.99	7.08	7.24	6.53
25	6.78	6.62	6.90	8.17	6.03	8.17	7.67	6.97	6.69	7.08	7.26	6.52
26	6.78	6.67	6.91	8.29	7.96	8.25	7.71	6.66	6.54	7.26	7.26	6.63
27	6.77	6.67	6.88	8.48	7.99	8.27	7.78	5.22	6.42	7.38	6.26	6.65
28	6.76	6.74	6.87	7.98	8.08	8.27	7.82	5.07	6.47	7.45	6.26	6.67
29	6.76	6.74	6.87	7.98	---	8.27	7.85	4.44	6.65	6.84	6.27	6.61
30	6.76	6.77	6.77	7.98	---	8.18	6.79	4.23	6.73	6.77	6.25	8.40
31	6.76	---	6.11	8.05	---	8.18	---	4.82	---	6.80	6.27	---
MAX	6.78	6.78	6.97	8.48	8.08	8.39	8.63	8.38	7.78	8.43	8.25	8.45

CAL YR 1989 LOW 10.05

WTR YR 1990 LOW 8.63



394425083551100 GR-10  
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

## GROUND-WATER RECORDS

## 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 measured low, 66.63 ft below land-surface datum, Apr. 17, 1990.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM  
INSTANTANEOUS OBSERVATIONS

DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 25, 1989	68.19	Apr. 17, 1990	66.63



## 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 Miamiville.

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.--Digital recorder -- 60-minute punch.

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.

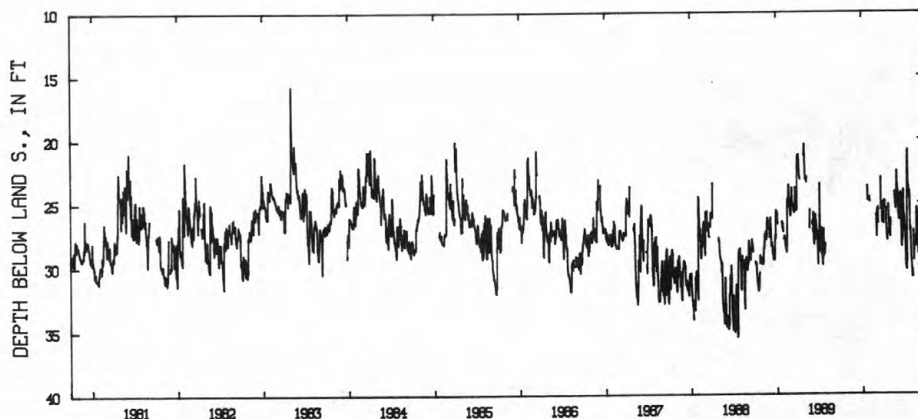
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	24.61	---	---	27.30	23.68	26.07	30.10	26.07
2	---	---	---	---	24.57	---	---	27.68	24.18	26.38	30.50	25.66
3	---	---	---	---	24.86	25.95	25.28	26.30	23.95	26.88	30.83	26.31
4	---	---	---	---	24.95	26.59	26.67	26.83	24.57	27.13	30.31	26.84
5	---	---	---	---	---	27.67	24.88	---	25.55	27.45	30.80	27.89
6	---	---	---	---	---	26.37	25.10	---	25.99	28.89	---	28.19
7	---	---	---	---	---	25.55	25.25	---	25.91	29.93	---	28.28
8	---	---	---	---	---	26.17	25.36	---	26.15	29.99	---	28.43
9	---	---	---	---	---	26.19	24.88	---	26.36	30.08	27.24	26.78
10	---	---	---	---	---	25.41	---	---	24.29	30.26	29.55	26.61
11	---	---	---	---	---	26.64	---	---	24.93	29.67	29.18	26.12
12	---	---	---	---	---	---	---	---	25.37	29.67	28.52	26.98
13	---	---	---	---	---	---	---	---	25.70	22.66	28.55	27.08
14	---	---	---	---	25.09	---	25.45	---	25.84	21.43	28.00	26.79
15	---	---	---	---	---	---	26.69	---	25.55	20.89	28.37	25.32
16	---	---	---	---	---	---	26.75	---	24.25	22.75	27.65	24.87
17	---	---	---	---	---	---	27.47	---	24.67	23.65	28.00	25.50
18	---	---	---	---	---	---	27.72	---	26.60	23.73	28.17	26.17
19	---	---	---	---	---	---	27.95	---	28.43	23.74	28.33	26.40
20	---	---	---	---	---	---	27.92	---	28.47	24.14	28.40	24.91
21	---	---	---	---	---	---	27.11	24.18	27.72	24.30	28.35	24.69
22	---	---	---	---	---	23.05	---	24.47	27.98	24.64	25.46	25.11
23	---	---	---	---	---	25.53	---	24.73	27.87	24.12	25.43	25.24
24	---	---	---	23.72	---	---	25.18	25.12	27.49	25.16	25.92	25.29
25	---	---	---	24.06	25.36	---	25.41	25.50	26.71	27.13	26.58	25.43
26	---	---	---	24.86	---	---	26.32	25.11	24.26	27.27	26.59	26.86
27	---	---	---	---	---	25.12	26.45	24.26	24.03	26.99	26.87	27.17
28	---	---	---	24.64	---	26.59	27.22	24.27	25.68	27.77	28.51	27.37
29	---	---	---	---	---	25.01	27.55	23.84	26.19	28.72	29.01	27.53
30	---	---	---	---	---	25.42	27.39	22.54	27.19	29.44	25.98	27.63
31	---	---	---	---	---	26.38	---	23.44	---	29.46	25.89	---
MAX	---	---	---	24.86	25.36	27.67	27.95	27.68	28.47	30.26	30.83	28.43
CAL YR 1989	LOW 29.90											
WTR YR 1990	LOW 30.83											



391101084172100 H-3  
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

## GROUND-WATER RECORDS

## 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.

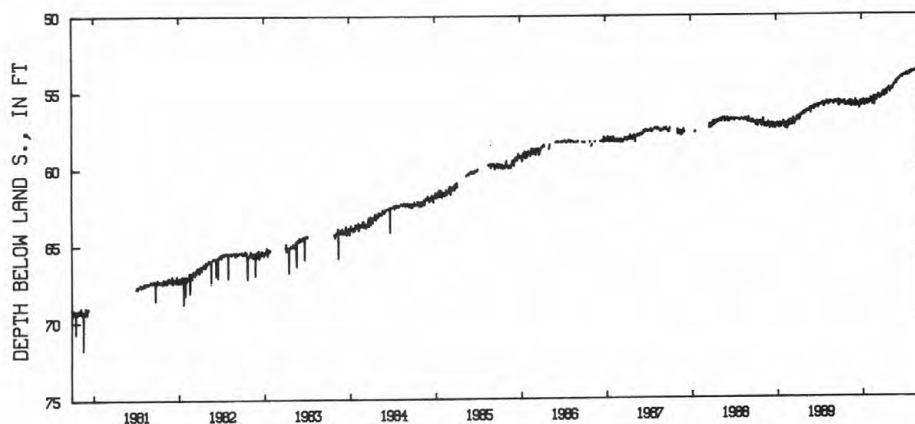
Measuring point: Floor of instrument shelter 8.13 ft above land-surface datum.

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, 53.37 ft below land-surface datum, Sept. 9, 1990.DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55.65	55.95	55.88	55.97	55.68	55.61	55.14	55.03	54.51	53.99	53.88	53.71
2	55.74	55.85	55.81	55.97	55.73	55.37	55.18	55.10	54.39	54.04	53.85	53.68
3	55.84	55.93	55.89	55.85	55.71	55.43	55.17	55.12	54.31	54.00	53.79	53.72
4	55.87	55.88	55.81	55.80	55.79	55.49	55.05	54.96	54.41	53.98	53.72	53.73
5	55.74	55.75	55.58	55.86	55.84	55.46	55.21	54.88	54.42	53.96	53.77	53.61
6	55.71	55.79	55.84	55.83	55.73	55.66	55.28	54.89	54.29	54.04	53.84	53.52
7	55.79	55.73	56.06	55.80	55.71	55.67	55.37	54.92	54.34	54.06	53.85	53.56
8	55.76	55.67	55.97	55.64	55.70	55.52	55.40	54.89	54.24	53.99	53.83	53.59
9	55.84	55.68	55.80	55.59	55.47	55.37	55.31	54.80	54.25	53.93	53.78	53.37
10	55.72	55.87	55.72	55.77	55.57	55.39	55.10	54.84	54.32	53.95	53.72	53.61
11	55.82	55.86	55.82	55.63	55.62	55.34	55.23	54.96	54.34	53.90	53.74	53.64
12	55.78	55.99	55.80	55.87	55.72	55.35	55.28	54.93	54.28	53.93	53.77	53.61
13	55.81	55.87	55.76	55.99	55.55	55.37	55.29	54.91	54.21	53.92	53.76	53.59
14	55.75	55.76	55.85	55.86	55.68	55.24	55.04	54.93	54.16	53.84	53.78	53.47
15	55.74	55.66	55.91	55.81	55.51	55.26	54.99	54.84	54.15	53.96	53.77	53.48
16	55.68	55.85	55.96	55.86	55.74	55.27	54.98	54.70	54.17	54.03	53.75	53.60
17	55.85	55.89	55.96	55.76	55.93	55.27	55.23	54.73	54.16	54.05	53.73	53.75
18	55.92	56.06	55.97	55.95	55.83	55.39	55.31	54.77	54.10	54.01	53.71	53.72
19	55.74	56.06	55.89	55.94	55.76	55.52	55.21	54.70	54.10	53.96	53.69	53.49
20	55.65	55.72	55.97	55.68	55.85	55.55	55.09	54.56	54.06	53.86	53.73	53.54
21	55.85	55.86	56.13	55.64	55.71	55.42	54.96	54.62	54.12	53.84	53.68	53.51
22	55.96	55.82	56.16	55.65	55.38	55.34	54.98	54.65	54.05	53.81	53.65	53.42
23	55.92	55.92	56.12	55.67	55.43	55.48	54.92	54.64	54.03	53.89	53.67	53.54
24	55.93	55.95	56.00	55.62	55.82	55.46	54.93	54.61	54.12	53.93	53.72	53.56
25	55.94	55.75	55.70	55.67	55.95	55.43	54.96	54.57	54.17	53.98	53.74	53.41
26	55.98	55.75	55.79	55.77	55.89	55.41	54.92	54.46	54.12	53.94	53.72	53.43
27	55.98	55.74	55.75	55.81	55.63	55.44	54.87	54.46	54.06	53.89	53.69	53.49
28	55.94	55.95	55.87	55.91	55.68	55.36	54.80	54.38	54.06	53.83	53.59	53.49
29	55.89	56.03	55.76	55.64	---	55.25	54.89	54.52	54.00	53.75	53.65	53.43
30	55.79	55.87	55.71	55.69	---	55.16	54.94	54.59	54.01	53.73	53.64	53.47
31	55.87	---	55.67	55.84	---	55.14	---	54.59	---	53.82	53.69	---
MAX	55.98	56.06	56.16	55.99	55.95	55.67	55.40	55.12	54.51	54.06	53.88	53.75
CAL YR 1989	LOW 57.50											
WTR YR 1990	LOW 56.16											



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.

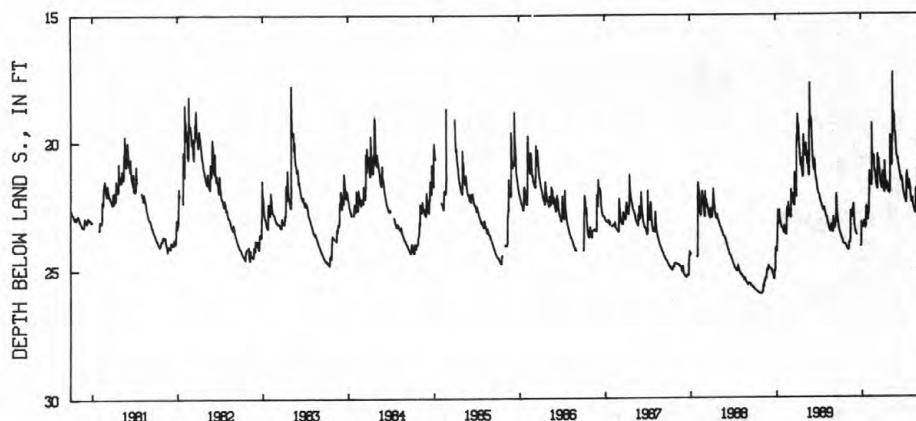
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.57	24.20	23.09	23.17	22.82	21.16	21.51	22.06	20.57	22.02	22.29	21.21
2	23.60	24.21	23.27	23.35	22.65	21.33	21.21	21.92	20.60	22.08	22.35	21.64
3	23.63	24.23	23.34	23.40	22.20	21.44	21.41	22.00	20.61	22.13	22.40	21.81
4	23.66	24.25	23.40	23.40	22.03	21.52	21.55	22.00	20.66	22.18	22.41	21.91
5	23.69	24.25	23.45	23.29	21.19	21.61	21.70	19.78	20.69	22.23	22.41	22.05
6	23.71	24.25	23.52	23.23	21.45	21.70	21.81	20.33	20.76	22.25	22.29	22.19
7	23.75	24.25	23.55	23.29	21.36	21.76	21.89	20.60	20.68	22.28	22.36	22.30
8	23.77	24.21	23.57	23.33	21.41	21.81	21.96	20.60	20.86	22.32	22.25	22.36
9	23.80	23.96	23.60	23.36	21.42	21.85	22.01	20.38	20.94	22.35	22.43	22.37
10	23.83	23.96	23.63	23.38	21.29	21.88	22.01	20.65	20.96	22.40	22.50	22.00
11	23.85	23.96	23.67	23.25	21.37	21.88	20.80	20.87	21.00	22.43	22.55	22.01
12	23.89	23.96	---	23.15	21.62	20.52	21.18	20.97	21.11	22.32	22.60	22.14
13	23.91	23.97	---	23.13	21.75	20.81	21.34	20.80	21.20	21.34	22.64	22.01
14	23.96	23.86	---	23.13	21.59	20.96	21.45	19.83	21.25	21.34	22.67	22.13
15	23.99	23.83	---	23.30	21.56	21.07	21.54	19.97	21.22	21.21	22.69	22.15
16	24.00	22.75	---	23.35	19.30	21.07	21.63	19.10	21.34	21.33	22.75	22.19
17	24.01	22.79	---	23.38	20.36	20.71	21.74	17.30	21.40	21.42	22.78	22.27
18	24.03	22.90	---	23.40	20.70	20.91	21.82	18.56	21.47	21.48	22.82	22.32
19	24.03	22.93	---	23.40	20.82	21.05	21.88	18.88	21.54	21.74	22.83	22.32
20	24.03	22.99	---	23.30	20.71	21.15	21.91	19.08	21.56	21.90	22.80	21.85
21	24.01	23.00	---	22.66	20.58	21.20	21.91	19.15	21.41	21.90	22.77	22.02
22	24.02	22.84	---	22.56	20.57	21.44	21.65	18.97	21.45	21.75	22.00	22.11
23	24.03	22.73	---	22.61	20.57	21.57	21.73	18.92	21.53	21.66	21.86	22.15
24	24.04	22.67	---	22.63	20.61	21.63	21.71	19.43	21.52	21.55	21.97	22.20
25	24.06	22.65	---	22.89	20.68	21.65	21.77	19.67	21.63	21.60	22.06	22.29
26	24.08	22.62	---	23.00	21.13	21.73	21.92	19.72	21.69	21.72	22.32	22.36
27	24.10	22.60	---	23.07	21.20	21.80	22.00	19.68	21.76	21.78	22.40	22.41
28	24.11	22.48	---	23.09	21.19	21.85	22.03	19.82	21.87	21.84	22.63	22.46
29	24.13	22.61	24.11	23.09	---	21.87	22.03	19.93	21.93	21.88	22.65	22.50
30	24.15	22.93	24.11	22.92	---	21.87	22.04	20.22	21.98	22.10	21.10	22.53
31	24.16	---	24.05	22.86	---	21.83	---	20.40	---	22.21	21.30	---
MAX	24.16	24.25	24.11	23.40	22.82	21.88	22.04	22.06	21.98	22.43	22.83	22.53
CAL YR 1989	LOW 24.32											
WTR YR 1990	LOW 24.25											



391214084470100 H-1  
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

## GROUND-WATER RECORDS

## 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.--Periodic 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, 46.50 ft below land-surface datum, Sept. 14, 1990.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM  
INSTANTANEOUS OBSERVATIONS

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 25, 1989	51.04	Apr. 17, 1990	49.03	Sept. 14, 1990	46.50



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.

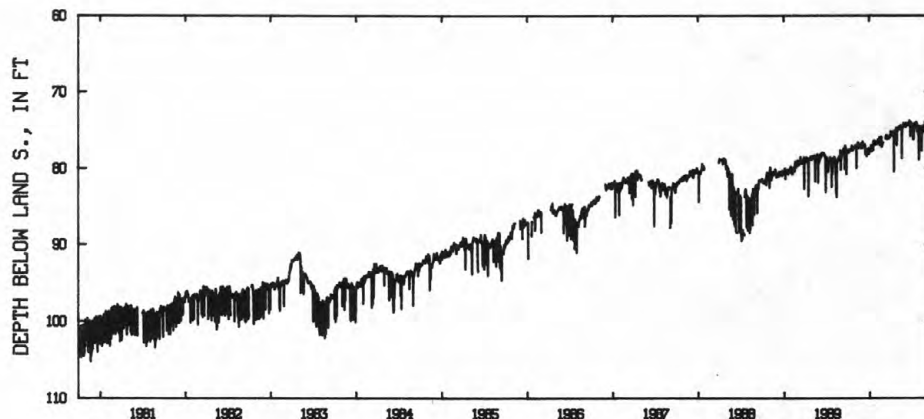
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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, 72.85 ft below land-surface datum, Sept. 22, 1990.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77.65	77.35	77.19	78.10	76.60	76.65	75.90	75.20	74.48	74.10	75.75	74.35
2	---	77.20	77.10	77.90	76.70	76.70	75.75	75.20	74.30	74.20	78.90	74.25
3	77.85	77.30	77.25	77.70	76.60	---	75.75	75.10	74.20	74.75	78.40	74.70
4	77.95	77.20	77.10	77.60	76.80	---	75.20	74.75	74.40	75.15	75.20	74.60
5	77.90	77.00	76.55	77.55	76.85	---	75.35	74.70	74.25	74.95	74.55	74.85
6	77.60	77.20	77.00	77.65	76.85	---	75.30	74.80	74.40	75.20	74.50	74.75
7	77.75	77.05	77.35	77.60	76.70	---	75.65	74.85	74.60	75.50	74.50	74.40
8	77.80	77.00	77.10	77.30	76.60	---	75.75	74.90	74.15	76.00	74.75	74.65
9	77.90	80.00	76.90	77.35	76.25	---	75.70	74.65	74.20	76.20	74.90	73.95
10	77.65	77.00	76.90	77.40	76.35	---	75.30	74.60	74.45	76.25	75.00	73.80
11	77.70	76.95	77.00	77.00	76.50	---	75.50	74.90	74.40	76.00	75.40	73.80
12	77.75	77.30	77.00	77.50	76.70	---	75.55	74.60	74.30	75.00	75.60	73.85
13	77.65	77.10	76.85	77.80	76.30	76.10	75.60	74.85	74.25	74.60	75.05	73.70
14	77.70	76.90	77.00	77.60	76.50	75.90	75.25	74.90	74.15	74.15	77.70	73.40
15	77.70	76.65	77.10	77.60	76.00	75.80	75.20	74.75	74.10	74.20	74.75	73.90
16	77.50	76.95	77.35	77.60	76.45	75.75	75.20	74.40	74.35	74.40	74.65	74.10
17	77.65	77.00	78.20	77.30	77.00	75.70	75.60	74.60	74.30	74.45	74.70	74.20
18	77.70	77.40	78.00	77.45	76.65	76.10	80.45	74.70	74.25	74.60	74.85	74.05
19	77.65	77.20	77.60	77.65	76.90	76.15	75.55	74.60	74.35	74.60	75.35	73.40
20	77.10	76.90	77.85	76.50	76.95	76.20	75.35	74.55	74.05	74.40	75.30	73.10
21	77.40	77.05	78.15	76.65	76.75	76.00	75.25	74.60	74.10	74.10	74.40	73.00
22	77.70	77.00	78.30	76.65	75.90	75.80	75.15	78.70	74.10	74.00	74.95	72.85
23	77.60	77.30	78.40	76.60	76.00	76.05	75.10	74.70	73.80	74.20	74.70	73.15
24	77.60	77.30	78.10	76.45	76.90	76.05	75.20	74.75	73.90	74.15	74.85	73.15
25	77.65	77.00	77.55	76.40	77.20	76.05	75.15	74.50	74.35	74.40	74.90	72.95
26	77.50	77.05	77.95	76.65	77.15	76.10	75.15	74.40	73.90	75.20	74.90	72.90
27	77.50	76.80	77.70	76.80	76.70	76.05	75.00	74.30	75.80	75.00	75.10	73.60
28	77.50	77.25	77.90	76.95	76.75	75.90	74.70	74.10	74.15	75.30	74.80	73.50
29	77.40	77.40	77.70	76.50	---	76.00	75.00	74.30	74.10	75.35	73.95	73.35
30	77.25	77.10	77.65	76.80	---	76.00	77.00	74.50	74.15	75.20	73.85	73.40
31	77.20	---	77.40	76.75	---	75.80	---	74.55	---	75.60	73.85	---
MAX	77.95	80.00	78.40	78.10	77.20	76.70	80.45	78.70	75.80	76.25	78.90	74.85
CAL YR 1989	LOW 83.80											
WTR YR 1990	LOW 80.45											



391341084275300 H-8  
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

## GROUND-WATER RECORDS

## 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.

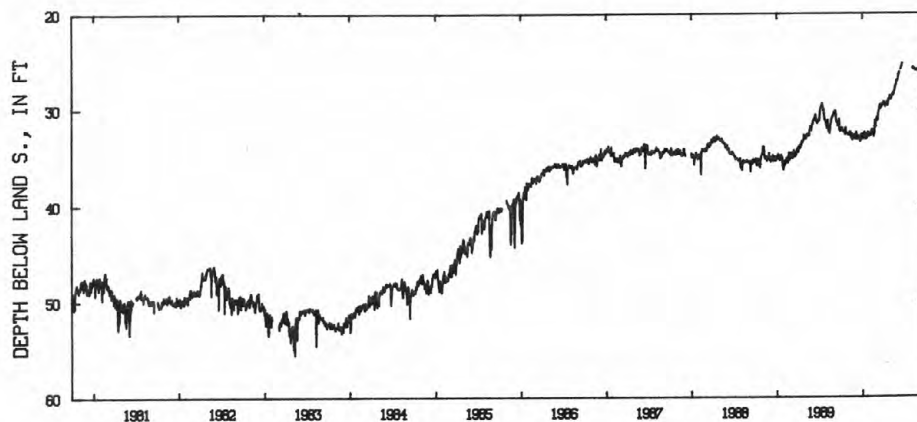
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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, 24.90 ft below land-surface datum, June 27, 1990.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32.00	32.76	33.00	33.18	32.80	31.35	29.33	28.93	26.94	---	25.76	26.80
2	---	32.71	32.90	33.18	32.58	31.01	29.33	29.03	26.77	---	25.77	26.95
3	32.23	32.75	33.00	33.01	32.63	30.91	29.35	29.05	26.45	---	25.72	27.16
4	32.32	32.75	32.92	32.83	32.64	31.02	29.32	28.98	26.50	---	25.67	27.27
5	32.21	32.60	32.46	32.90	32.80	31.00	29.35	28.64	26.50	---	25.68	27.26
6	32.02	32.62	32.76	32.88	32.67	31.22	29.50	28.69	26.26	---	25.80	27.23
7	32.20	32.60	33.24	32.85	32.57	31.22	29.69	28.73	26.26	---	25.88	27.26
8	32.24	32.46	33.23	32.60	32.57	30.97	29.80	28.67	26.18	---	25.88	27.46
9	32.39	32.42	33.00	32.49	32.21	30.53	29.77	28.57	---	---	25.85	27.55
10	32.28	32.80	32.78	32.71	32.17	30.38	29.47	28.38	---	---	25.77	27.70
11	32.38	32.80	32.91	32.55	32.24	30.27	29.48	28.65	---	---	25.85	27.80
12	32.40	33.00	32.91	33.06	32.42	30.16	29.63	28.63	---	---	25.91	27.58
13	32.47	32.91	32.87	33.18	32.26	30.12	29.69	28.50	25.90	---	25.87	27.30
14	32.42	32.77	32.93	33.07	32.30	29.91	29.47	28.55	25.80	---	25.96	26.98
15	32.39	32.60	33.00	32.94	32.21	29.71	29.27	28.39	25.64	---	25.98	26.58
16	32.34	32.85	33.16	32.98	32.44	29.70	29.26	28.24	25.65	---	25.98	26.50
17	32.55	32.93	33.17	32.82	32.92	29.59	29.50	28.12	25.59	---	25.98	26.77
18	32.72	33.30	33.15	33.12	32.89	29.75	29.67	28.18	25.48	---	25.94	26.77
19	32.57	33.30	33.04	33.13	32.64	29.94	29.61	28.09	25.34	---	25.92	26.50
20	32.01	32.80	33.13	32.60	32.71	29.97	29.42	27.70	25.27	---	25.98	26.78
21	32.11	32.91	33.41	32.59	32.54	29.83	29.16	27.63	---	---	25.96	26.91
22	32.43	32.91	33.48	32.63	31.95	29.58	29.16	27.62	---	---	25.90	27.00
23	32.48	33.01	33.48	32.62	31.23	29.77	29.06	27.61	---	---	25.90	27.32
24	32.58	33.07	33.27	32.47	31.60	29.77	29.01	27.48	---	---	25.98	27.50
25	32.66	32.88	32.76	32.55	31.93	29.65	29.04	27.37	---	---	26.03	27.43
26	32.67	32.79	32.76	32.72	31.92	29.57	29.00	27.02	---	---	26.03	27.43
27	32.70	32.75	32.72	32.88	31.36	29.57	28.90	27.04	24.90	---	25.98	27.68
28	32.70	33.08	32.88	32.94	31.37	29.52	28.65	27.04	---	---	25.85	27.77
29	32.67	33.17	32.82	32.55	---	29.47	28.71	27.05	---	---	25.80	27.80
30	32.59	33.00	32.77	32.55	---	29.33	28.80	27.12	---	---	26.05	27.92
31	32.60	---	32.64	---	---	29.29	---	27.05	---	---	26.50	---
MAX	32.72	33.30	33.48	33.18	32.92	31.35	29.80	29.05	26.94	---	26.50	27.92
CAL YR 1989	LOW 36.37											
WTR YR 1990	LOW 33.48											



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.

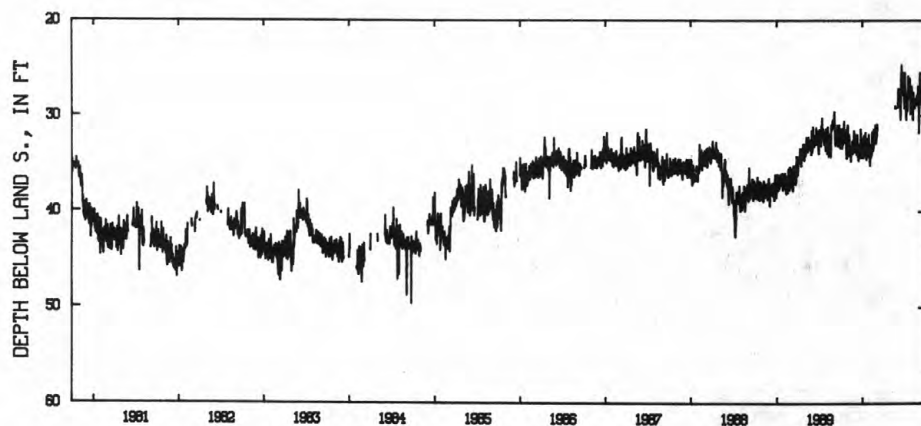
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31.40	32.80	33.80	32.40	34.50	32.40	---	---	28.60	25.50	28.40	28.30
2	32.00	33.90	33.80	33.10	35.20	32.00	---	---	29.10	26.80	28.50	26.50
3	32.80	34.20	32.80	33.60	34.40	32.20	---	---	27.20	27.70	30.20	25.50
4	32.90	34.20	32.00	34.20	33.00	30.90	---	---	27.90	27.80	30.40	27.00
5	32.60	32.00	32.60	34.40	33.10	31.60	---	---	28.60	27.80	28.10	28.20
6	33.40	32.50	33.40	34.20	33.70	---	---	---	28.90	30.20	27.60	28.30
7	33.40	33.30	33.80	32.10	34.30	---	---	---	28.90	30.40	28.40	28.20
8	31.40	33.40	34.10	32.40	34.20	---	---	---	28.50	28.10	28.60	28.20
9	31.80	33.80	33.80	32.80	34.10	---	---	---	29.00	29.20	28.80	27.60
10	33.00	34.20	32.00	33.40	33.70	---	---	---	27.20	29.30	29.00	27.20
11	32.30	34.10	33.20	34.00	31.70	---	---	---	27.40	29.50	29.20	29.00
12	31.50	33.20	33.80	34.30	33.00	---	---	---	30.40	29.30	28.90	29.20
13	31.40	34.80	34.30	33.80	33.40	---	---	---	29.80	27.60	28.70	28.20
14	31.00	33.40	34.30	31.80	33.70	---	---	---	26.40	27.90	28.20	28.50
15	30.60	33.60	34.70	33.60	33.60	---	---	---	25.50	25.90	28.40	27.90
16	31.60	33.70	34.00	34.20	33.00	---	---	---	25.40	26.70	28.40	26.50
17	32.60	33.60	33.00	34.00	33.30	---	---	---	24.70	27.20	28.70	27.00
18	32.80	34.00	33.40	34.60	31.40	---	---	---	25.60	28.00	28.90	27.20
19	32.60	32.70	34.20	34.40	31.90	---	---	---	26.30	28.10	28.50	27.60
20	32.50	32.80	34.40	34.20	32.30	---	---	---	26.90	28.10	28.20	27.70
21	32.60	33.70	34.10	32.40	32.50	---	---	29.00	27.80	27.50	27.90	27.60
22	31.60	33.90	33.40	33.00	32.40	---	---	29.20	27.50	26.10	28.60	27.50
23	32.40	33.10	33.40	33.00	32.90	---	---	29.20	26.60	27.10	28.60	26.20
24	33.20	32.60	32.80	33.30	32.50	---	---	---	25.50	27.80	28.70	26.70
25	34.00	33.00	31.40	33.60	31.00	---	---	---	26.30	29.80	28.10	27.00
26	34.40	31.60	32.90	34.20	31.60	---	---	---	27.00	28.60	26.90	27.20
27	34.50	32.10	34.00	33.20	32.90	---	---	---	27.90	28.70	27.80	27.90
28	33.60	33.50	34.40	32.00	32.90	---	---	---	28.30	28.40	28.10	28.00
29	31.50	33.50	33.80	33.40	---	---	---	---	29.20	26.90	28.00	27.70
30	31.00	33.60	33.70	33.90	---	---	---	---	27.40	27.40	31.80	26.00
31	31.10	---	33.40	34.40	---	---	---	---	---	28.30	30.70	---
MAX	34.50	34.80	34.70	34.60	35.20	32.40	---	29.20	30.40	30.40	31.80	29.20
CAL YR 1989	LOW 38.20											
WTR YR 1990	LOW 35.20											



391608084254400 H-6  
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

## GROUND-WATER RECORDS

## 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.

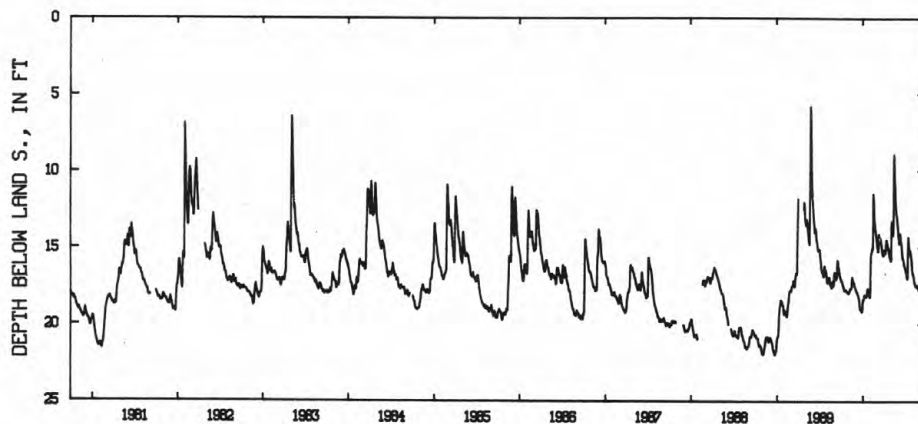
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.96	17.93	17.57	18.98	18.19	14.12	15.52	15.72	13.40	16.24	16.37	17.72
2	17.05	17.96	17.62	18.71	18.23	14.18	15.52	15.75	13.57	16.30	16.48	17.62
3	17.14	17.98	17.66	18.50	18.22	14.34	15.49	15.84	13.75	16.35	16.62	17.47
4	17.17	17.98	17.68	18.42	17.98	14.46	15.28	15.84	14.00	16.38	16.70	17.40
5	17.17	17.96	17.74	18.43	17.46	14.63	15.13	15.74	14.18	16.48	16.73	17.50
6	17.20	17.94	17.79	18.43	16.60	14.81	15.17	14.35	14.35	16.59	16.78	17.61
7	17.23	17.93	17.84	18.38	15.87	14.90	15.19	13.45	14.42	16.63	16.87	17.78
8	17.25	17.87	17.86	18.24	15.51	14.98	15.27	13.30	14.65	16.63	16.92	17.89
9	17.28	17.81	17.91	18.15	15.38	15.12	15.29	13.49	14.73	16.73	17.02	17.89
10	17.40	17.76	17.96	18.10	15.34	15.24	15.36	13.83	14.70	16.88	17.16	17.89
11	17.45	17.76	17.99	18.10	15.27	15.24	15.36	14.02	14.38	17.00	17.29	17.84
12	17.50	17.70	18.03	18.11	15.13	14.91	15.13	14.17	14.07	17.02	17.30	17.77
13	17.58	17.66	18.08	18.11	15.05	14.38	14.85	14.19	14.23	16.94	17.33	17.74
14	17.65	17.64	18.13	18.11	15.03	14.12	14.57	14.05	14.46	16.27	17.42	17.73
15	17.67	17.67	18.18	18.15	15.12	14.29	14.50	13.47	14.68	15.45	17.47	17.74
16	17.71	17.67	18.22	18.15	15.01	14.42	14.52	12.95	14.71	14.75	17.48	17.66
17	17.80	17.57	18.30	18.15	13.83	14.45	14.68	11.88	14.73	14.30	17.52	17.53
18	17.83	17.30	18.38	18.21	12.30	14.44	14.71	9.92	14.91	14.45	17.54	17.42
19	17.84	17.08	18.49	18.21	11.52	14.40	14.80	8.95	15.12	14.75	17.54	17.39
20	17.83	16.95	18.63	18.18	11.70	---	14.93	9.17	15.38	15.05	17.55	17.43
21	17.82	17.03	18.82	18.10	12.02	14.45	15.07	9.83	15.58	15.26	17.54	17.47
22	17.80	17.11	18.95	17.93	12.45	14.60	15.07	10.50	15.69	15.29	17.50	17.50
23	17.76	17.20	19.04	17.76	12.90	14.73	15.00	11.05	15.72	15.29	17.45	17.50
24	17.78	17.24	19.06	17.69	13.23	14.86	15.03	11.55	15.74	15.27	17.47	17.45
25	17.83	17.25	19.06	17.82	13.43	14.92	15.15	12.00	15.80	15.20	17.50	17.45
26	17.83	17.30	19.05	17.93	13.56	15.09	15.32	12.39	15.82	15.32	17.51	17.53
27	17.88	17.32	19.03	17.94	13.75	15.20	15.49	12.56	15.93	15.49	17.55	17.60
28	17.89	17.39	19.09	17.97	13.91	15.33	15.57	12.81	16.05	15.63	17.67	17.68
29	17.89	17.47	19.16	17.97	---	15.42	15.61	12.87	16.17	15.68	17.75	17.74
30	17.88	17.54	19.17	17.98	---	15.46	15.65	13.00	16.21	15.87	17.75	17.74
31	17.91	---	19.15	18.06	---	15.46	---	13.19	---	16.10	17.75	---
MAX	17.91	17.98	19.17	18.98	18.23	15.46	15.65	15.84	16.21	17.02	17.75	17.89
CAL YR 1989	LOW 21.06											
WTR YR 1990	LOW 19.17											



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 1989 TO SEPTEMBER 1990

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	CALCIUM DIS- SOLVED (MG/L) AS CA (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L) AS MG (00925)	SODIUM, DIS- SOLVED (MG/L) AS NA (00930)	POTAS- SIUM, DIS- SOLVED (MG/L) AS K (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)
NOV 08...	1510	785	7.6	5.0	17.0	<10	84	29	34	4.0	286
JAN 23...	1530	800	7.7	11.0	16.5	<10	83	29	36	4.0	290
APR 30...	1300	780	7.6	18.5	16.5	28	--	--	--	--	300
AUG 23...	1045	690	7.7	26.0	17.0	10	79	27	28	3.4	267

DATE	ALKA- LITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	SULFATE DIS- SOLVED (MG/L) AS SO4 (00945)	CHLO- RIDE, DIS- SOLVED (MG/L) AS CL (00940)	FLUO- RIDE, DIS- SOLVED (MG/L) AS F (00950)	SILICA, DIS- SOLVED (MG/L) AS SIO2 (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	NITRO- GEN, NITRITE TOTAL (MG/L) AS N (00615)	NITRO- GEN, NO2+NO3 TOTAL (MG/L) AS N (00630)	ARSENIC TOTAL (UG/L) AS AS (01002)	ARSENIC DIS- SOLVED (UG/L) AS AS (01000)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L) AS CR (01034)
NOV 08...	234	73	55	0.4	9.4	428	0.03	2.2	<1	<1	<1
JAN 23...	237	78	60	0.3	9.0	469	0.02	2.0	--	--	--
APR 30...	242	--	--	--	--	--	0.02	2.8	--	--	--
AUG 23...	219	68	48	1.1	8.4	458	0.02	2.7	<1	<1	<1

DATE	CHRO- MIUM, DIS- SOLVED (UG/L) AS CR (01030)	COPPER, TOTAL RECOV- ERABLE (UG/L) AS CU (01042)	COPPER, DIS- SOLVED (UG/L) AS CU (01040)	IRON, DIS- SOLVED (UG/L) AS FE (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L) AS PB (01051)	LEAD, DIS- SOLVED (UG/L) AS PB (01049)	MANGA- NESE, DIS- SOLVED (UG/L) AS MN (01056)	ZINC, TOTAL RECOV- ERABLE (UG/L) AS ZN (01092)	ZINC, DIS- SOLVED (UG/L) AS ZN (01090)	CARBON, ORGANIC TOTAL (MG/L) AS C (00680)
NOV 08...	<1	3	4	12	<1	<1	270	20	12	1.5
JAN 23...	--	--	--	13	--	--	290	--	--	1.3
APR 30...	--	--	--	--	--	--	--	--	--	1.1
AUG 23...	<1	4	2	15	1	<1	240	<10	8	0.8

## GROUND-WATER RECORDS

## 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.

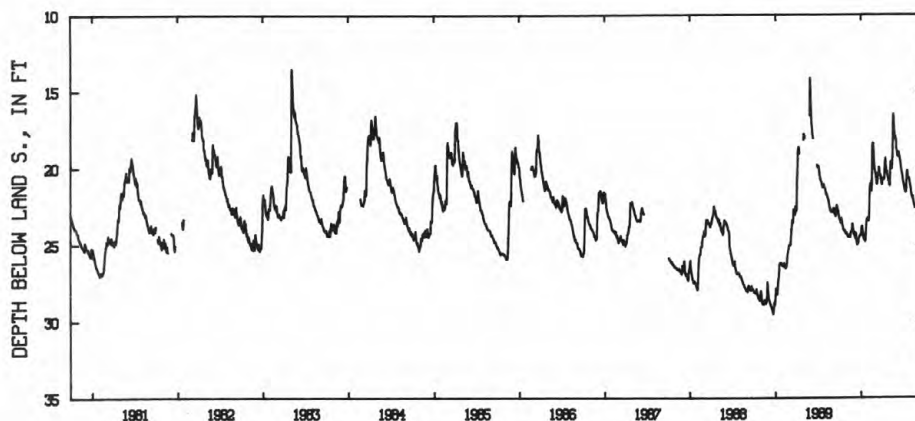
DATUM.--Elevation of land-surface datum is 541.57 ft above National Geodetic Vertical Datum of 1929. (Levels by Miami Conservancy District.) Measuring point: Floor of instrument shelter 3.00 ft above land-surface datum.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.33	24.35	24.34	24.34	23.29	20.19	21.06	20.97	18.65	20.93	21.29	22.79
2	23.39	24.38	24.36	24.19	23.47	20.30	20.91	21.06	18.80	20.99	21.45	22.75
3	23.44	24.43	24.22	24.02	23.48	20.38	20.80	21.15	18.88	21.08	21.53	22.67
4	23.49	24.45	24.22	23.88	23.34	20.38	20.74	21.17	18.96	21.15	21.66	22.77
5	23.54	24.46	24.37	23.83	22.92	20.45	20.70	21.11	19.08	21.24	21.78	22.85
6	23.60	24.51	24.50	23.82	22.19	20.67	20.78	20.26	19.24	21.33	21.81	22.91
7	23.62	24.53	24.59	23.94	21.64	20.83	20.78	19.70	19.25	21.43	21.86	22.98
8	23.57	24.53	24.63	24.11	21.35	20.93	20.70	19.62	19.20	21.51	21.93	23.08
9	23.29	24.53	24.50	24.26	21.15	21.05	20.70	19.67	19.25	21.55	21.97	23.16
10	23.36	24.48	24.30	24.41	21.05	21.08	20.76	19.82	19.24	21.56	21.99	23.16
11	23.51	24.48	24.51	24.51	21.06	20.99	20.63	19.98	19.14	21.59	21.86	23.17
12	23.64	24.40	24.67	24.62	21.20	20.85	20.18	20.08	19.00	21.55	22.02	23.19
13	23.70	24.45	24.78	24.67	21.40	20.55	19.82	20.07	19.11	21.46	22.16	23.19
14	23.77	24.49	24.87	24.54	21.53	20.36	19.55	19.84	19.25	21.06	22.25	23.24
15	23.85	24.53	24.95	24.40	21.49	20.39	19.39	19.56	19.34	20.77	22.33	23.25
16	23.93	24.54	25.02	24.53	21.16	20.44	19.57	19.29	19.41	20.46	22.38	23.27
17	24.03	24.46	25.01	24.67	20.14	20.33	19.92	18.68	19.50	20.24	22.44	23.27
18	24.04	24.31	24.88	24.77	19.21	19.99	20.13	17.43	19.56	20.18	22.54	23.25
19	24.10	24.21	24.98	24.81	18.66	19.99	20.31	16.64	19.72	20.25	22.61	23.25
20	24.13	24.15	24.95	24.73	18.43	20.12	20.32	16.52	19.83	20.41	22.61	23.25
21	24.14	24.15	24.76	24.40	18.39	20.27	20.40	16.65	19.96	20.60	22.61	23.25
22	24.07	24.17	24.64	24.06	18.48	20.42	20.36	17.07	20.10	20.69	22.60	23.31
23	24.11	24.10	24.59	23.75	18.66	20.54	20.24	17.43	20.19	20.71	22.58	23.33
24	24.16	23.85	24.55	23.50	18.99	20.47	20.40	17.76	20.28	20.71	22.58	23.33
25	24.21	23.66	24.52	23.40	19.44	20.51	20.53	17.99	20.35	20.67	22.41	23.36
26	24.25	23.71	24.48	23.33	19.74	20.60	20.64	18.12	20.44	20.73	22.56	23.42
27	24.28	23.86	24.46	23.33	19.97	20.75	20.75	18.05	20.54	20.81	22.60	23.45
28	24.30	24.06	24.43	23.30	20.09	20.88	20.86	17.93	20.64	20.94	22.70	23.49
29	24.23	24.15	24.43	23.29	---	20.99	20.86	18.12	20.73	21.05	22.74	23.55
30	24.23	24.24	24.43	23.27	---	21.07	20.91	18.14	20.84	21.12	22.72	23.60
31	24.31	---	24.42	23.26	---	21.10	---	18.16	---	21.18	22.74	---
MAX	24.31	24.54	25.02	24.81	23.48	21.10	21.06	21.17	20.84	21.59	22.74	23.60
CAL YR 1989	LOW 28.27											
WTR YR 1990	LOW 25.02											



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.

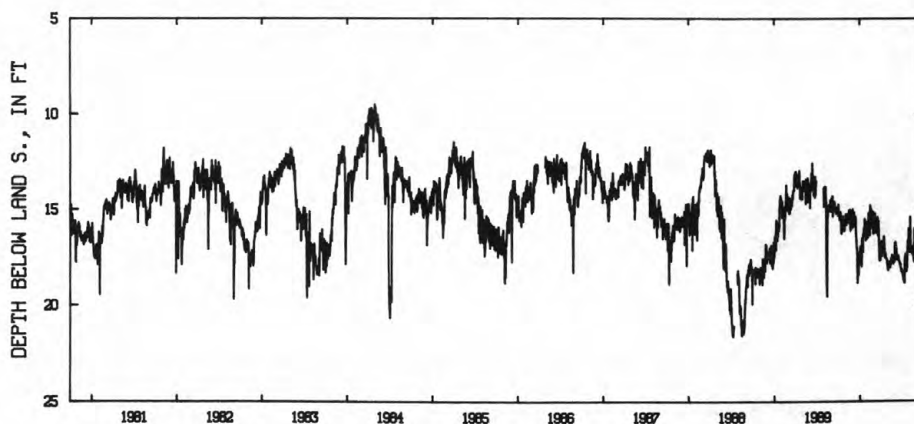
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.80	15.75	15.25	17.50	16.10	16.25	17.00	18.05	16.85	18.20	16.75	16.90
2	14.75	15.50	15.00	17.60	16.50	15.30	16.75	18.15	16.80	18.25	16.90	16.95
3	15.05	15.25	15.85	17.00	16.30	15.20	17.10	18.10	16.70	18.35	17.20	17.05
4	15.15	15.80	15.20	17.25	16.35	15.80	16.65	18.00	16.80	18.35	15.55	17.05
5	15.20	15.75	15.40	16.90	16.45	15.90	17.20	17.75	16.90	18.50	15.40	17.25
6	15.10	15.50	15.90	16.90	15.90	15.80	17.40	17.70	16.90	18.60	16.10	17.20
7	15.45	15.60	15.50	17.30	16.00	15.20	17.30	17.80	17.10	18.70	17.20	17.10
8	15.55	15.25	15.15	17.20	15.20	15.40	17.20	17.80	17.30	18.70	17.20	17.55
9	15.10	15.25	15.45	17.95	15.90	16.05	17.20	17.80	17.60	18.70	17.00	17.30
10	15.15	15.30	15.85	17.70	15.55	16.20	16.80	17.70	17.60	18.80	17.15	17.35
11	15.15	15.30	15.50	16.60	15.60	15.55	16.75	18.00	17.50	18.80	17.10	18.90
12	15.30	15.60	15.35	16.50	15.15	15.80	16.95	17.85	17.40	17.80	17.30	17.90
13	15.55	15.70	15.75	17.20	16.35	15.90	16.70	17.75	17.40	17.50	17.25	19.45
14	16.10	15.65	15.40	16.90	15.60	16.05	16.45	17.85	17.45	17.45	16.90	18.00
15	16.25	15.45	15.50	17.20	14.80	15.90	16.40	17.75	17.40	17.60	17.00	17.25
16	16.00	15.20	16.20	16.25	14.80	15.80	16.80	17.55	17.55	17.30	17.15	17.30
17	15.70	15.05	16.50	16.30	14.90	15.60	17.00	17.50	17.60	18.15	17.40	17.65
18	16.15	15.45	16.55	16.40	15.40	16.20	17.45	17.55	17.65	18.20	17.50	17.80
19	15.55	15.40	16.90	16.00	15.35	15.40	17.50	17.45	17.70	18.20	17.30	17.60
20	15.75	15.30	17.00	16.00	15.00	16.35	17.30	17.35	17.75	18.20	17.70	17.65
21	15.80	15.00	17.00	16.30	15.95	16.20	17.25	17.50	17.80	18.05	17.20	17.30
22	15.35	15.75	18.00	15.50	15.30	15.60	17.40	17.55	17.90	18.00	16.00	17.30
23	15.80	16.10	18.80	15.50	15.35	16.10	17.50	17.65	17.80	17.35	16.75	17.45
24	15.75	15.30	18.60	16.40	15.70	16.55	17.55	17.80	17.85	17.00	16.60	17.60
25	15.70	15.50	17.45	16.10	15.90	17.10	17.55	17.80	18.00	16.60	16.70	17.65
26	15.65	15.10	17.90	16.10	15.70	17.55	17.55	17.55	18.10	16.70	16.60	17.30
27	15.60	15.30	18.15	16.60	15.10	17.65	17.60	17.60	18.20	16.75	16.65	17.40
28	16.10	15.30	18.37	16.50	16.20	17.25	17.60	17.55	18.22	16.85	16.50	17.45
29	16.00	15.45	17.80	15.80	---	17.50	17.85	17.70	18.10	16.00	16.60	17.35
30	15.60	15.95	17.85	15.65	---	17.60	17.95	17.65	18.10	16.90	16.70	17.45
31	15.55	---	17.20	16.10	---	17.40	---	16.75	---	16.85	16.60	---
MAX	16.25	16.10	18.80	17.95	16.50	17.65	17.95	18.15	18.22	18.80	17.70	19.45
CAL YR 1989	LOW 19.50											
WTR YR 1990	LOW 19.45											



404218083503700 HN-1  
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

## GROUND-WATER RECORDS

## 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. 16, 1989	18.67	Apr. 11, 1990	15.92



## 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.

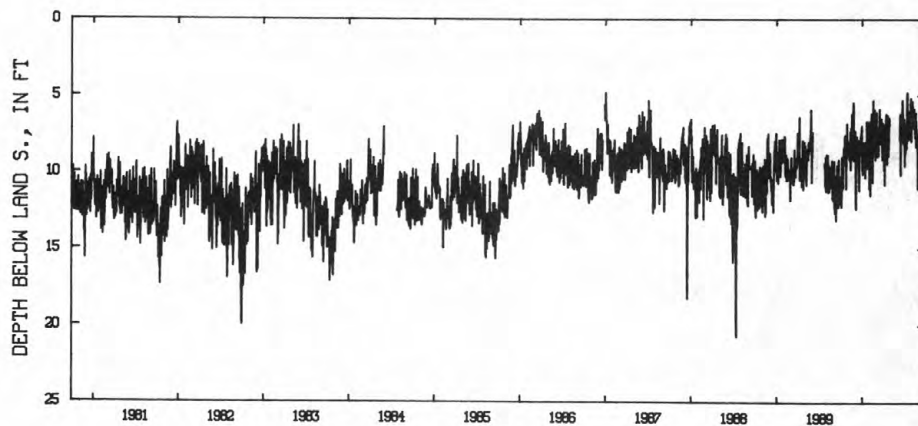
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.58	8.39	8.50	6.99	7.20	8.05	6.80	---	---	6.53	7.08	8.72
2	10.31	8.70	8.64	9.24	11.07	7.77	7.66	---	---	7.50	6.62	7.79
3	11.96	7.99	7.31	9.86	9.63	6.58	8.41	---	---	9.60	6.81	8.99
4	12.15	8.83	8.53	9.47	6.70	6.09	8.22	---	---	7.63	5.87	10.18
5	10.95	8.04	11.18	10.14	10.54	7.35	8.47	---	---	8.54	5.37	9.99
6	12.28	8.38	12.14	8.87	11.43	7.78	9.84	---	---	8.75	6.60	10.53
7	11.46	9.03	12.40	8.05	11.51	7.80	9.04	---	---	6.84	5.78	10.86
8	9.02	9.18	9.00	9.83	7.59	8.81	6.89	---	---	6.96	6.70	10.90
9	11.17	8.59	9.06	9.93	7.71	8.97	10.83	---	---	8.49	6.99	7.98
10	10.88	9.18	7.70	---	6.97	7.11	9.50	---	---	8.45	7.10	8.65
11	10.99	9.25	8.56	---	6.18	7.12	8.49	---	---	8.40	6.04	10.18
12	11.00	7.32	8.99	8.33	8.76	8.31	7.88	---	7.89	7.51	5.87	8.90
13	11.00	8.87	9.55	8.55	9.61	8.91	7.92	---	6.50	5.07	7.16	10.47
14	8.93	9.85	9.58	8.57	9.90	7.20	6.61	---	6.21	4.81	6.24	10.47
15	9.03	9.03	9.20	9.81	10.18	7.45	6.20	---	10.11	4.81	6.54	9.06
16	8.41	7.11	9.02	10.37	10.68	7.57	7.43	---	10.17	7.38	7.44	8.96
17	8.92	8.21	7.90	8.05	8.56	6.35	8.10	---	6.23	7.88	7.72	8.71
18	9.08	8.31	9.27	---	5.31	5.88	8.98	---	7.58	7.68	6.10	8.72
19	8.39	6.20	10.37	---	7.91	7.19	9.46	---	7.95	6.65	6.14	9.30
20	7.77	9.13	10.62	---	6.50	7.72	8.56	---	6.36	6.65	8.36	9.73
21	7.60	8.36	11.21	6.72	7.63	8.09	6.76	---	6.28	6.01	6.64	10.56
22	8.69	8.68	9.13	9.27	7.35	8.13	6.30	---	7.78	6.01	7.99	9.45
23	9.30	7.19	8.86	9.75	6.83	6.92	8.51	---	5.30	6.17	7.17	8.72
24	9.51	6.02	8.50	8.91	5.91	6.70	8.02	---	6.11	7.78	7.62	9.47
25	9.36	5.47	8.27	8.07	6.66	6.51	8.95	---	6.32	7.25	7.67	9.71
26	11.09	5.91	8.20	8.36	7.11	7.86	8.36	---	7.10	6.76	7.49	9.62
27	9.13	9.25	8.28	7.34	8.53	8.12	7.88	---	6.83	7.84	9.39	11.36
28	8.95	8.39	7.63	6.71	9.19	8.16	6.46	---	8.11	5.53	11.08	11.44
29	6.83	8.29	7.63	7.77	---	8.34	6.49	---	6.64	5.19	10.09	9.98
30	8.27	8.68	7.50	7.58	---	9.19	6.94	---	6.65	7.81	9.14	9.24
31	8.51	---	7.32	8.14	---	7.41	---	---	7.96	10.20	---	---
MAX	12.28	9.85	12.40	10.37	11.51	9.19	10.83	---	10.17	9.60	11.08	11.44
CAL YR 1989	LOW 13.17											
WTR YR 1990	LOW 12.40											



402344082300700 K-1  
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

## GROUND-WATER RECORDS

## 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.

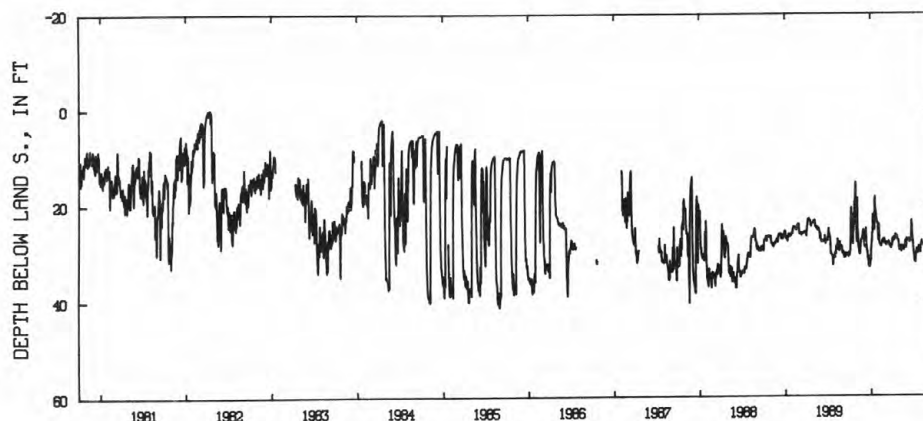
EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 41.29 ft below land-surface datum, Aug. 29, 1985; minimum daily low, 0.55 ft above land-surface, Apr. 13, 1980.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30.25	26.27	26.31	31.68	25.64	27.66	28.66	28.77	29.12	27.71	30.09	31.32
2	30.68	27.63	26.55	30.15	27.24	27.82	28.35	29.36	27.35	29.02	29.06	31.39
3	30.67	27.86	27.37	29.05	27.55	28.07	27.43	29.59	27.15	30.19	28.57	31.73
4	30.05	21.75	27.82	28.25	27.55	28.19	27.08	29.60	27.53	30.71	28.37	32.18
5	29.67	18.69	28.50	28.00	24.08	28.31	27.26	29.43	27.55	30.59	28.57	32.44
6	29.54	24.39	28.90	27.33	26.46	28.50	27.71	28.61	27.42	31.37	28.05	32.41
7	28.20	26.02	29.00	26.01	27.78	28.51	27.74	28.67	27.66	31.89	27.61	32.53
8	22.60	27.27	28.82	25.92	28.15	28.51	27.37	29.08	27.67	32.00	28.05	32.60
9	23.19	28.61	26.95	25.83	28.38	28.37	26.91	29.34	27.29	31.80	28.38	32.41
10	20.69	29.06	25.80	22.10	28.52	28.18	27.18	29.84	27.49	32.14	28.40	31.40
11	24.53	28.98	24.97	22.52	28.54	27.95	27.52	29.89	27.61	32.16	28.27	31.04
12	25.59	29.45	26.57	23.92	28.63	27.93	27.38	29.65	27.36	31.60	28.28	31.25
13	26.21	29.89	28.56	24.44	28.60	28.25	27.15	28.88	27.22	30.70	28.16	31.38
14	26.85	30.35	28.94	24.44	28.79	28.41	26.80	28.59	27.41	29.85	28.24	31.35
15	27.26	30.46	29.54	24.73	28.76	28.46	26.48	28.95	27.82	30.16	28.27	30.90
16	27.97	29.94	29.82	25.28	28.20	28.22	26.28	29.25	27.92	30.23	28.61	30.21
17	28.27	30.24	29.72	25.24	28.11	27.90	26.82	29.01	27.57	29.24	28.87	30.22
18	24.28	29.31	30.67	20.42	28.00	27.75	27.10	28.85	27.19	29.64	29.04	30.24
19	24.79	28.36	31.25	18.36	27.58	27.77	27.22	28.70	27.38	29.91	29.12	30.19
20	25.70	27.45	31.54	20.96	27.93	28.06	27.26	28.94	27.59	30.03	28.91	30.31
21	21.80	27.33	30.83	21.68	27.93	28.45	27.24	29.34	27.59	30.18	28.88	30.33
22	24.04	27.27	31.79	21.30	27.76	28.79	26.88	29.59	27.07	30.16	28.93	30.23
23	24.23	27.26	32.59	22.12	27.24	28.85	26.52	29.35	27.04	29.47	28.75	30.26
24	19.36	27.34	33.02	22.75	27.56	28.57	26.96	28.68	23.33	29.07	28.65	30.15
25	22.39	27.33	33.08	22.91	28.09	28.31	27.37	29.05	24.50	28.79	28.84	29.91
26	23.10	26.67	32.54	23.07	28.16	28.75	27.51	29.14	25.49	29.45	28.95	30.04
27	18.76	26.42	32.91	23.61	28.12	28.96	27.53	28.55	26.22	29.96	29.04	30.48
28	16.59	25.60	33.07	23.99	27.23	29.18	27.45	28.05	27.20	30.04	29.12	30.62
29	15.30	25.58	32.71	23.89	---	28.72	27.59	27.53	28.03	29.52	29.32	30.53
30	19.47	25.32	32.30	23.86	---	28.34	27.62	28.15	28.04	29.70	29.67	29.91
31	23.26	---	31.65	24.03	---	28.43	---	29.06	---	29.96	30.95	---
MAX	30.68	30.46	33.08	31.68	28.79	29.18	28.66	29.89	29.12	32.16	30.95	32.60

CAL YR 1989 LOW 33.08

WTR YR 1990 LOW 33.08



— 395301083272200 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.

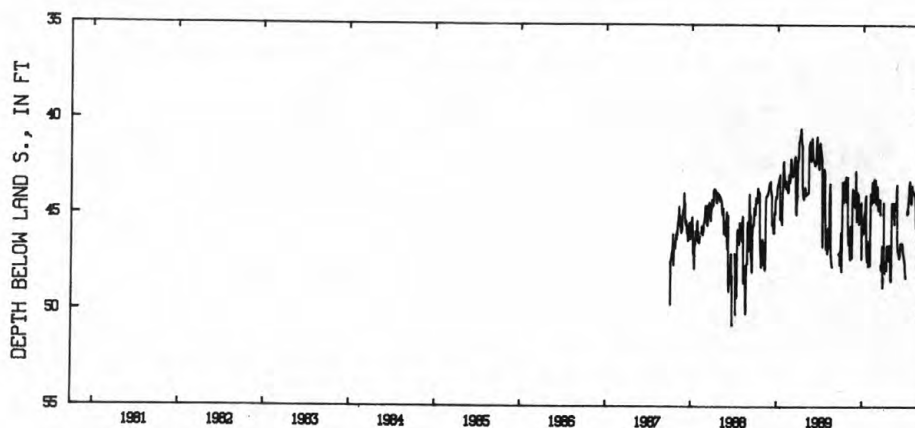
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45.85	46.25	44.20	45.11	47.58	44.10	44.30	48.27	46.85	47.49	43.67	45.78
2	46.31	46.43	43.96	45.60	47.58	43.80	47.00	48.38	46.88	47.90	43.70	45.88
3	47.63	46.51	42.67	45.77	45.46	43.45	47.50	48.35	46.86	48.09	43.70	46.00
4	47.90	46.01	43.72	45.87	43.83	43.47	47.68	47.60	46.93	48.20	43.69	48.10
5	46.75	45.69	44.03	45.92	44.10	43.51	47.93	44.70	47.04	---	43.68	48.35
6	45.47	46.25	44.12	45.51	44.23	43.91	47.97	44.32	47.15	---	43.73	48.44
7	44.35	46.75	45.29	45.13	44.38	44.48	---	44.75	47.20	---	43.77	48.52
8	43.22	47.03	44.75	44.92	44.38	44.53	---	44.90	46.97	---	43.79	48.62
9	43.63	47.25	44.53	44.92	44.32	44.68	---	44.93	47.04	---	43.80	48.27
10	43.92	47.28	43.78	44.90	44.12	44.72	47.37	44.99	47.07	44.73	43.82	48.03
11	44.11	45.52	44.39	44.73	43.23	44.11	47.75	45.07	46.45	44.90	43.88	47.38
12	44.25	45.88	44.46	44.70	43.64	44.25	47.82	44.61	46.51	44.90	43.93	46.93
13	44.30	46.72	44.00	44.29	43.86	44.38	47.63	44.31	46.49	44.87	43.95	46.77
14	44.05	46.98	43.89	44.13	44.20	44.42	46.59	44.45	46.47	44.79	44.08	46.88
15	43.82	46.98	44.99	43.94	44.21	44.45	46.56	44.50	46.41	44.25	44.35	47.02
16	43.42	47.18	45.42	45.90	44.27	44.45	46.87	44.56	46.44	44.08	45.10	47.07
17	43.18	47.20	44.41	46.50	44.00	44.15	47.15	45.42	46.44	44.00	45.59	47.76
18	43.58	44.39	44.43	46.84	43.70	44.93	47.27	44.46	46.43	43.84	45.38	48.00
19	43.66	43.95	44.43	47.09	43.08	---	47.30	44.33	46.45	43.42	44.97	48.08
20	43.67	43.61	44.64	47.38	43.49	47.56	47.30	44.52	46.46	43.35	45.08	48.18
21	43.32	44.25	44.93	47.27	43.55	47.77	46.80	44.64	46.53	43.25	45.12	47.88
22	42.95	44.41	45.09	46.38	43.78	47.81	46.56	44.67	46.73	43.18	45.13	47.60
23	43.58	44.50	45.15	46.31	43.96	47.65	47.04	44.50	46.90	43.54	45.85	47.61
24	44.11	44.10	44.90	46.56	43.70	47.34	47.19	44.50	46.95	43.92	46.35	47.61
25	44.29	43.82	44.48	47.62	43.10	46.64	47.28	44.47	47.02	44.14	46.07	47.58
26	43.86	43.69	44.30	47.31	43.70	46.56	47.32	43.76	47.10	44.27	45.83	47.23
27	43.53	44.10	45.21	47.38	44.20	48.30	47.35	43.51	47.20	44.35	45.11	47.24
28	43.15	44.48	47.26	46.54	44.37	48.72	46.60	43.38	47.28	44.31	45.50	47.25
29	42.99	44.55	45.34	46.54	---	48.20	46.52	46.07	47.30	43.80	45.72	47.25
30	45.33	44.55	45.10	47.35	---	---	47.60	46.55	47.42	43.41	45.62	47.18
31	45.89	---	---	47.54	---	44.95	---	46.82	---	43.58	45.67	---
MAX	47.90	47.28	47.26	47.62	47.58	48.72	47.97	48.38	47.42	48.20	46.35	48.62
CAL YR 1989	LOW 47.90											
WTR YR 1990	LOW 48.72											



— 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.

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.

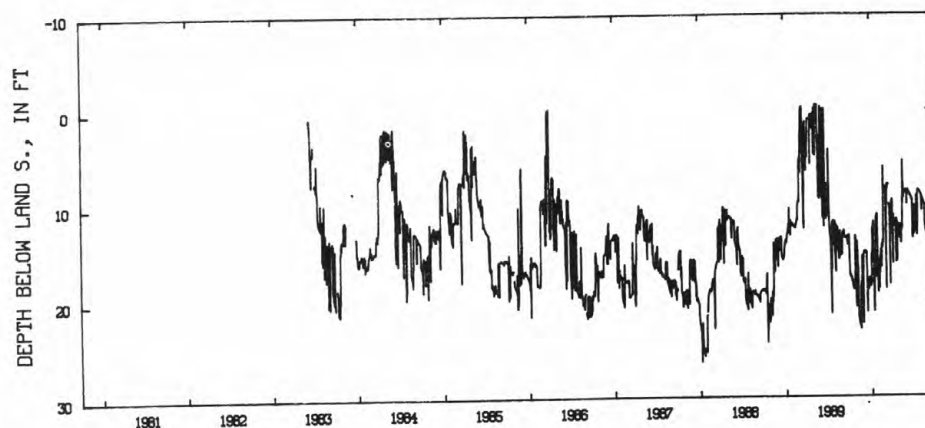
PERIOD OF RECORD.--June 1983 to current year.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.30	14.50	15.10	18.10	16.70	8.50	9.60	12.35	8.50	10.20	8.85	13.40
2	17.05	13.85	14.90	18.15	16.70	8.50	9.50	12.35	8.50	12.25	8.90	13.55
3	17.30	16.65	14.95	15.15	16.45	8.40	9.70	13.55	8.55	13.15	8.90	13.60
4	17.45	14.80	14.95	15.60	18.05	8.20	15.35	12.50	8.65	13.10	8.95	13.70
5	17.30	16.50	14.95	15.40	18.70	8.10	16.10	12.10	9.95	11.40	9.00	13.60
6	17.35	16.55	14.90	15.40	16.00	18.75	11.95	12.10	8.90	10.15	9.10	13.80
7	17.65	21.60	15.10	12.40	15.70	12.40	11.10	12.15	9.00	12.65	10.60	13.90
8	17.60	21.75	14.95	15.40	17.10	12.25	11.90	12.15	9.00	12.90	9.30	14.00
9	17.60	22.00	14.90	14.60	15.80	8.30	12.00	12.65	8.45	12.00	9.30	14.00
10	17.60	22.25	14.95	12.00	15.30	10.00	11.95	14.00	8.50	10.60	9.40	14.10
11	18.00	22.35	14.95	11.80	15.25	8.10	11.80	12.70	8.60	10.50	9.50	14.20
12	17.85	22.50	15.10	20.70	14.70	8.40	11.85	12.70	8.65	12.00	9.55	14.25
13	17.85	22.50	15.10	21.10	15.00	7.85	11.75	12.45	8.70	11.80	9.60	14.30
14	17.90	22.50	19.35	20.65	16.50	8.05	12.30	12.50	8.72	11.75	9.75	14.35
15	18.50	22.50	21.20	17.20	14.90	7.90	11.65	12.45	8.80	12.05	9.85	14.40
16	18.60	22.95	18.45	17.10	14.20	7.85	11.70	9.20	8.90	9.00	9.90	14.50
17	18.60	18.60	18.50	17.40	14.25	7.90	11.55	9.90	8.90	11.80	9.95	14.65
18	18.80	18.45	18.60	17.50	14.10	7.90	16.00	5.40	8.95	13.20	10.00	14.65
19	18.80	18.35	18.65	17.60	14.50	---	15.70	8.00	9.05	12.15	10.10	14.75
20	18.55	18.10	18.50	17.40	14.15	10.00	11.74	7.95	9.10	10.45	11.80	14.85
21	18.60	18.35	18.80	12.40	13.80	10.20	11.55	9.30	9.15	8.55	12.15	14.90
22	18.80	18.25	17.75	11.60	14.00	10.25	11.75	8.55	9.15	8.50	12.20	15.00
23	18.55	15.60	17.70	11.45	12.75	18.25	15.90	8.60	9.20	8.45	12.55	15.10
24	18.45	15.35	17.80	11.20	6.00	10.50	11.95	---	9.35	8.50	12.70	15.15
25	13.30	20.90	17.65	11.15	8.50	11.55	12.00	8.70	9.40	8.55	12.80	15.20
26	13.30	21.45	18.00	11.10	8.50	11.45	12.10	8.70	9.40	8.60	12.90	15.35
27	13.40	22.35	18.00	11.05	8.45	13.15	13.30	8.80	9.50	8.60	12.95	15.40
28	19.20	15.95	18.40	11.00	8.50	11.60	12.10	8.75	9.50	8.60	13.00	15.50
29	20.10	15.40	18.40	16.75	---	12.30	12.15	8.45	13.00	8.65	13.10	15.50
30	20.65	15.15	18.50	19.00	---	10.90	12.30	8.45	13.50	8.70	13.20	15.60
31	17.95	---	18.35	19.10	---	9.70	---	8.50	---	8.80	13.30	---
MAX	20.65	22.95	21.20	21.10	18.70	18.75	16.10	14.00	13.50	13.20	13.30	15.60

CAL YR 1989 LOW 22.95  
WTR YR 1990 LOW 22.95



— 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	DATE	WATER LEVEL
Oct. 20, 1989	7.94	Apr. 20, 1990	5.66	July 19, 1990	5.16
Dec. 19, 1989	8.56	May 18, 1990	4.53		
Jan. 18, 1990	7.58	June 14, 1990	4.73		

## GROUND-WATER RECORDS

## 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 measured low, 29.70 ft below land-surface datum, Apr. 2, 1990.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM  
INSTANTANEOUS OBSERVATIONS

DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 3, 1989	32.42	Apr. 2, 1990	29.70

## 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.

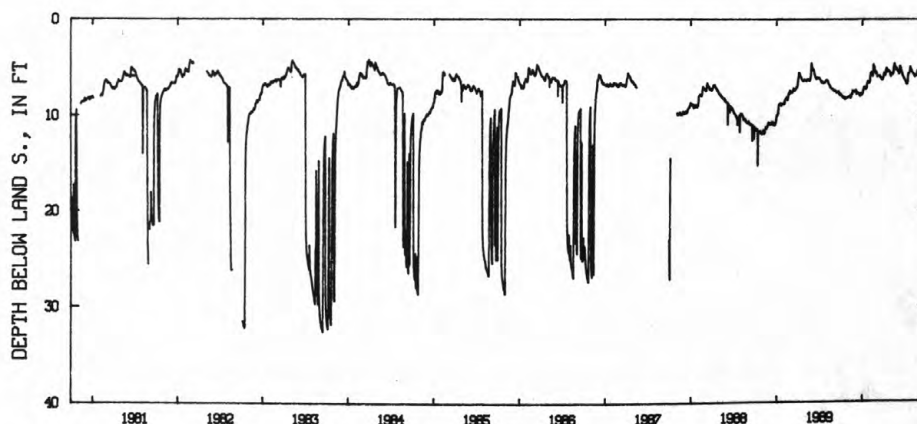
REMARKS.--Influenced by seasonal water demand for nearby wildlife refuge.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.81	8.09	7.49	7.76	6.52	5.61	6.01	5.78	5.37	6.29	5.50	5.86
2	7.88	8.10	7.43	7.75	6.46	5.49	5.82	5.89	5.39	6.34	5.54	5.92
3	7.96	8.08	7.51	7.58	6.40	5.61	5.70	5.94	5.35	6.39	5.57	6.03
4	7.98	8.09	7.50	7.41	5.93	5.68	5.55	5.88	5.51	6.44	5.60	6.07
5	7.95	8.03	7.37	7.40	5.82	5.78	5.63	5.68	5.57	6.50	5.65	6.04
6	7.94	8.05	7.58	7.28	5.57	5.97	5.65	5.63	5.56	6.62	5.64	6.03
7	8.02	8.03	7.76	7.22	5.59	5.96	5.74	5.60	5.68	6.69	5.65	6.08
8	8.04	7.98	7.70	7.11	5.58	5.93	5.82	5.59	5.62	6.70	5.71	6.11
9	8.12	7.91	7.60	7.04	5.49	5.88	5.80	5.56	5.47	6.70	5.72	6.11
10	8.07	8.09	7.58	7.10	5.60	5.88	5.69	5.54	5.06	6.76	5.80	6.15
11	8.16	8.07	7.67	7.05	5.70	5.88	5.57	5.71	4.87	6.72	5.91	6.15
12	8.15	8.16	7.65	7.16	5.79	5.90	5.26	5.71	4.93	6.61	5.97	6.15
13	8.17	8.14	7.62	7.24	5.79	5.92	5.13	5.57	5.03	6.49	5.98	6.16
14	8.14	8.06	7.66	7.23	5.92	5.87	5.05	5.52	5.07	6.18	5.96	6.08
15	8.15	7.98	7.67	7.18	5.81	5.89	5.09	5.13	5.22	5.76	5.83	6.08
16	8.16	7.81	7.73	7.20	5.44	5.88	5.11	4.95	5.33	5.63	5.83	6.12
17	8.28	7.84	7.76	7.14	4.96	5.84	5.35	4.79	5.39	5.63	5.86	6.24
18	8.32	7.79	7.79	7.20	4.71	5.95	5.46	4.62	5.46	5.63	5.85	6.23
19	8.25	7.79	7.76	7.20	4.85	6.07	5.45	4.61	5.61	5.64	5.88	6.11
20	8.09	7.46	7.78	7.02	4.99	6.08	5.44	4.67	5.68	5.63	5.89	6.11
21	8.15	7.54	7.91	6.74	4.99	6.05	5.39	4.81	5.83	5.57	5.85	6.12
22	8.27	7.51	7.97	6.64	4.93	6.04	5.37	4.94	5.83	5.47	5.76	5.95
23	8.24	7.51	7.96	6.55	5.03	6.21	5.33	5.04	5.81	5.30	5.63	6.00
24	8.22	7.53	7.91	6.45	5.32	6.20	5.35	5.17	5.94	4.97	5.38	6.02
25	8.21	7.43	7.72	6.42	5.55	6.20	5.41	5.27	6.05	4.98	5.46	5.97
26	8.18	7.48	7.82	6.53	5.56	6.25	5.44	5.16	6.05	5.09	5.50	6.01
27	8.16	7.46	7.82	6.53	5.54	6.30	5.46	5.12	6.12	5.16	5.56	6.08
28	8.14	7.56	7.88	6.62	5.62	6.29	5.44	5.05	6.20	5.21	5.57	6.13
29	8.12	7.56	7.87	6.52	---	6.24	5.58	5.16	6.20	5.29	5.62	6.15
30	8.09	7.49	7.85	6.48	---	6.16	5.66	5.26	6.24	5.35	5.72	6.21
31	8.06	---	7.73	6.60	---	6.08	---	5.33	---	5.43	5.81	---
MAX	8.32	8.16	7.97	7.76	6.52	6.30	6.01	5.94	6.24	6.76	5.98	6.24
CAL YR 1989	LOW 9.99											
WTR YR 1990	LOW 8.32											



403413083170500 MN-4  
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

## GROUND-WATER RECORDS

## 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.

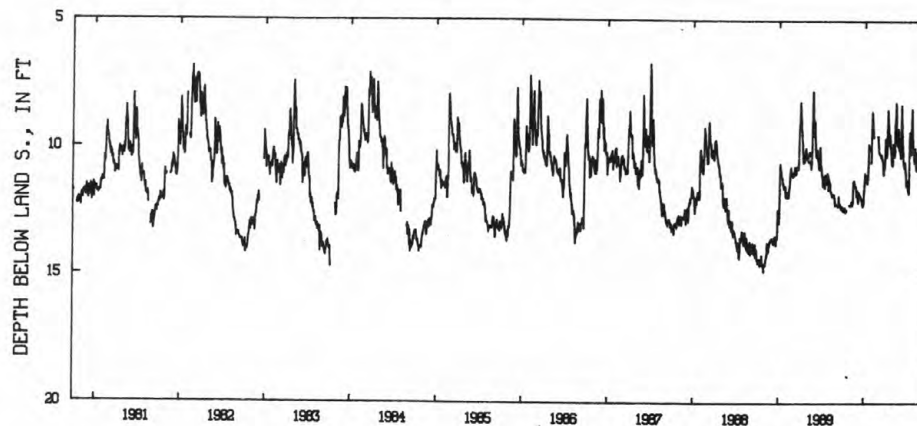
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.38	12.27	11.90	11.80	10.56	9.55	10.42	10.63	10.01	11.25	10.25	10.62
2	12.40	12.26	11.73	11.67	10.52	9.53	10.10	10.67	10.08	11.23	10.38	10.92
3	12.47	12.27	11.66	11.50	9.66	9.69	9.66	10.67	10.05	11.23	10.50	10.86
4	12.43	12.25	11.73	11.34	8.86	9.83	9.62	10.63	10.10	11.33	10.57	10.99
5	12.40	12.22	11.82	11.15	8.55	10.00	9.81	10.31	10.16	11.36	10.48	11.13
6	12.36	12.27	12.04	11.00	8.72	10.14	9.86	9.83	10.22	11.52	10.04	11.22
7	12.44	12.22	12.15	11.02	8.92	10.20	10.03	9.88	10.38	11.58	10.00	11.17
8	12.50	12.17	12.08	11.09	9.05	10.18	10.35	10.02	10.38	11.68	10.17	11.19
9	12.50	12.10	11.97	11.17	9.22	10.22	10.28	10.07	9.04	11.67	10.33	11.08
10	12.37	12.19	11.72	11.21	9.37	10.22	10.23	10.15	8.30	11.77	10.67	11.06
11	12.35	12.17	11.78	11.12	9.57	10.25	9.64	10.32	8.86	11.73	10.78	11.11
12	12.43	12.26	11.82	11.20	---	10.26	8.50	10.32	9.05	11.43	10.85	11.07
13	12.48	12.20	11.82	11.30	---	10.26	8.69	10.12	9.43	11.00	10.85	11.07
14	12.53	12.20	11.85	11.31	---	10.27	8.85	9.05	9.70	9.94	10.19	11.04
15	12.52	12.12	11.86	11.36	---	10.35	9.07	9.04	9.90	9.52	10.35	11.03
16	12.48	11.68	11.88	11.38	---	10.35	9.24	8.75	10.10	9.37	10.17	11.04
17	12.44	11.33	11.88	11.25	---	10.25	9.54	8.21	10.15	9.62	10.32	10.94
18	12.45	11.31	11.95	11.22	---	10.30	9.70	8.44	10.48	9.86	10.47	11.00
19	---	11.30	11.93	11.22	---	10.42	9.83	8.67	10.62	10.03	10.78	11.15
20	---	11.28	11.96	10.80	---	10.44	9.87	9.60	10.65	10.24	10.71	11.17
21	---	11.35	12.01	10.50	---	10.47	9.82	9.81	10.75	10.24	10.71	11.23
22	---	11.36	12.06	9.86	---	10.51	9.46	9.78	10.77	9.68	10.40	11.18
23	---	11.47	12.08	9.87	---	10.63	9.50	9.65	10.68	9.00	9.49	11.00
24	---	11.47	12.07	10.04	---	10.68	9.76	9.82	10.55	8.45	9.75	11.13
25	---	11.48	12.20	10.10	---	10.98	9.95	9.90	10.59	8.77	9.88	11.14
26	---	11.56	12.29	---	---	11.04	10.00	9.63	10.76	9.22	10.13	11.15
27	---	11.50	12.27	---	---	10.89	10.08	9.23	10.93	9.57	10.33	11.26
28	---	11.61	12.27	---	---	10.84	10.20	9.31	10.86	9.74	10.74	11.41
29	---	11.78	12.25	---	---	10.81	10.31	9.56	11.00	10.02	10.47	11.41
30	12.24	11.86	12.20	---	---	10.75	10.61	9.68	11.46	10.16	10.62	11.42
31	12.24	---	12.09	10.58	---	10.70	---	10.04	---	10.24	10.66	---
MAX	12.53	12.27	12.29	11.80	10.56	11.04	10.61	10.67	11.46	11.77	10.85	11.42
CAL YR 1989	LOW 12.99											
WTR YR 1990	LOW 12.53											



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.

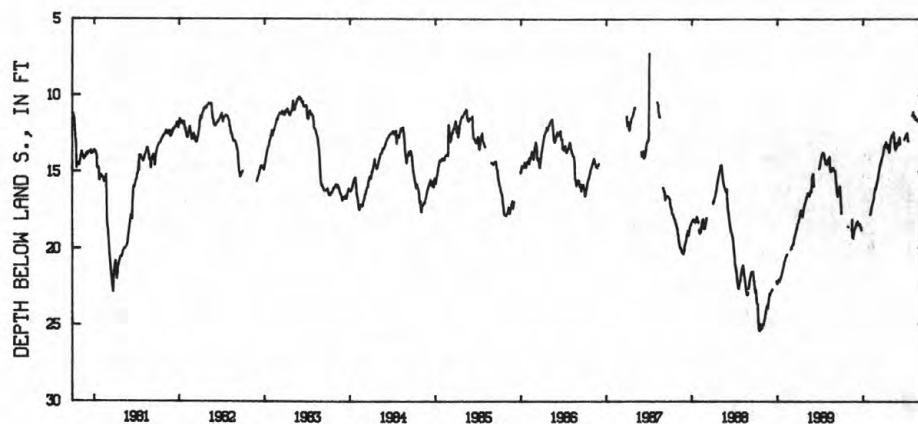
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.27	---	18.63	---	17.83	15.97	13.54	12.88	13.27	12.79	11.32	11.52
2	17.75	---	18.56	---	17.73	15.81	13.44	12.83	13.22	12.76	11.28	11.50
3	---	---	18.50	---	17.82	15.71	13.36	12.80	13.13	12.70	11.23	11.48
4	---	---	18.46	---	17.68	15.67	13.32	12.73	13.00	12.66	11.18	11.47
5	---	---	18.36	---	17.63	15.61	13.26	12.63	12.98	12.61	11.10	11.42
6	---	---	18.34	---	17.55	15.52	13.28	12.69	12.89	12.57	11.15	11.36
7	---	---	18.38	---	17.43	15.47	13.25	12.72	12.80	12.55	11.30	11.26
8	---	---	18.37	---	17.37	15.39	13.25	12.71	12.75	12.55	11.45	11.26
9	---	18.95	18.28	---	17.26	15.27	13.21	12.65	12.91	12.50	11.46	11.23
10	---	---	18.26	---	17.18	15.17	13.18	12.52	13.06	12.47	11.47	11.22
11	---	---	18.46	---	17.11	15.07	13.05	12.52	13.20	12.50	11.47	11.22
12	---	---	18.50	---	17.06	14.99	13.16	12.52	---	12.75	11.47	11.20
13	---	---	18.46	---	17.01	14.92	13.42	12.44	---	13.00	11.40	11.18
14	---	---	18.42	---	16.97	14.83	13.44	12.75	---	13.01	11.55	11.16
15	---	18.75	18.41	---	16.92	14.71	13.37	12.68	---	13.01	11.60	11.03
16	---	18.89	18.44	---	16.77	14.64	13.35	12.80	---	---	11.62	11.01
17	---	18.13	18.44	---	16.77	14.56	13.40	13.05	---	---	11.62	11.08
18	---	19.32	18.46	---	16.71	14.45	13.44	13.26	---	---	11.57	11.08
19	---	19.34	18.46	---	16.44	14.42	13.50	13.40	---	---	11.55	11.02
20	---	19.34	18.47	---	16.33	14.40	13.50	13.44	---	---	11.55	11.00
21	---	19.37	18.55	---	16.28	14.38	13.38	13.54	---	---	11.56	10.98
22	---	19.26	18.63	---	16.21	14.24	13.26	13.58	---	---	11.62	10.86
23	---	19.14	18.67	---	16.06	14.14	13.58	13.52	---	---	11.62	10.85
24	---	19.03	18.68	---	16.09	14.12	13.68	13.48	---	---	11.65	10.85
25	---	18.92	18.67	---	16.17	14.06	13.74	13.38	---	---	11.71	10.82
26	---	18.81	18.83	---	16.17	14.00	13.62	13.31	---	---	11.72	10.81
27	---	18.76	18.85	---	16.06	13.97	13.49	13.15	---	---	11.72	10.99
28	---	18.72	---	---	15.98	13.92	13.35	13.11	12.91	---	11.65	10.92
29	---	18.72	---	---	---	13.83	13.18	13.11	12.88	---	11.57	10.90
30	18.61	18.66	---	---	---	13.79	13.07	13.22	12.83	---	11.54	10.88
31	18.64	---	---	---	---	13.61	---	13.30	---	11.33	11.65	---
MAX	18.64	19.37	18.85	---	17.83	15.97	13.74	13.58	13.27	13.01	11.72	11.52
CAL YR 1989	LOW 22.34											
WTR YR 1990	LOW 19.37											



403601083110400 MN-2  
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

## GROUND-WATER RECORDS

## 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.

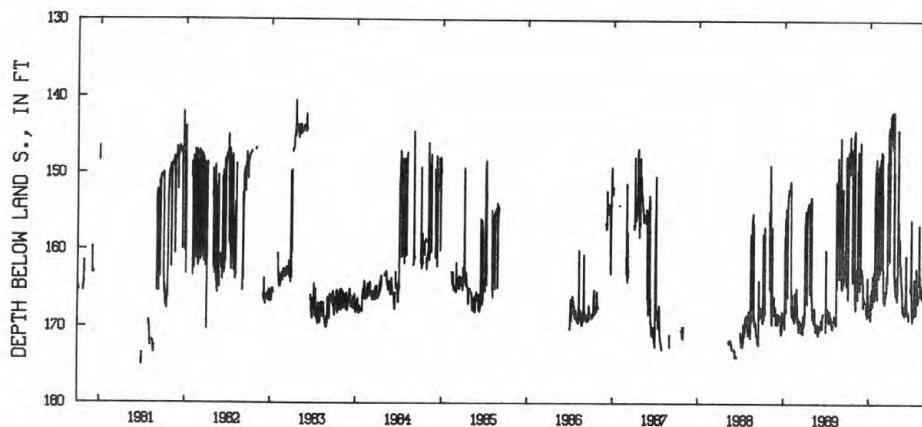
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	162.20	163.20	164.20	167.20	148.00	162.70	145.60	166.60	168.50	156.00	---	150.40
2	158.70	165.40	163.00	168.40	163.80	162.60	146.10	166.40	168.40	164.60	164.50	150.40
3	166.40	166.80	163.40	167.90	165.00	165.40	142.50	164.00	167.80	167.20	164.60	150.40
4	165.10	167.50	163.40	168.00	165.80	165.70	145.80	161.10	167.70	168.20	156.70	162.20
5	148.20	167.80	164.20	168.50	166.40	166.70	142.70	145.20	167.60	168.70	164.20	164.80
6	147.20	165.20	164.80	168.40	153.00	166.10	142.10	144.20	167.00	169.30	163.20	165.90
7	148.10	166.00	167.50	169.00	151.00	166.00	142.30	161.50	167.40	167.40	165.00	167.00
8	148.40	162.50	166.60	169.10	150.50	167.00	142.40	156.10	167.00	168.80	165.60	167.30
9	148.00	163.60	166.20	165.70	149.70	166.90	146.00	161.80	160.70	168.30	166.00	167.70
10	148.40	163.80	166.40	167.60	163.50	166.30	146.10	161.80	165.70	168.60	164.50	168.20
11	150.00	163.80	166.60	166.70	163.60	165.40	141.90	161.60	168.00	168.00	165.20	168.60
12	145.10	165.40	166.70	166.70	148.90	166.00	146.00	158.50	168.40	166.50	165.10	168.70
13	147.60	166.40	166.80	165.20	162.50	166.00	146.70	159.70	168.10	166.90	165.10	166.90
14	147.70	149.40	166.90	166.70	148.80	165.40	143.40	161.60	168.30	163.80	165.60	166.50
15	147.00	163.30	166.80	165.80	148.80	165.50	142.30	162.10	168.00	164.60	166.30	166.60
16	147.40	147.10	---	167.30	163.00	165.50	141.90	163.00	168.00	164.80	166.30	165.30
17	147.60	161.80	---	163.40	148.70	164.80	161.00	162.00	168.00	165.80	165.40	165.60
18	147.80	162.70	---	166.60	148.70	163.40	163.20	163.10	168.60	167.60	165.50	166.10
19	147.70	162.80	---	165.40	148.00	163.40	149.80	163.80	168.30	168.30	166.00	166.30
20	146.90	161.50	167.20	165.90	161.10	164.20	163.60	164.20	169.00	168.40	165.50	164.40
21	148.00	165.30	168.10	165.70	162.40	148.50	164.10	165.20	---	167.70	151.60	166.00
22	162.40	165.00	168.30	162.90	147.20	158.60	164.80	165.00	---	166.00	151.60	166.20
23	164.20	164.00	167.60	166.50	147.10	161.70	165.20	165.80	168.40	162.40	147.40	166.20
24	163.70	147.10	168.20	162.90	147.40	145.20	165.00	167.50	---	165.20	149.80	165.60
25	151.00	145.90	168.80	166.20	148.00	144.90	165.90	168.00	---	166.40	150.30	166.00
26	146.80	162.60	163.60	153.40	147.40	144.20	163.50	168.10	---	165.00	150.40	166.10
27	149.60	163.20	166.40	152.20	162.40	143.90	164.40	167.60	165.20	166.40	150.40	166.20
28	146.10	163.30	166.60	149.80	152.70	143.90	164.40	167.30	165.40	166.90	150.20	166.20
29	145.30	164.10	168.60	150.00	---	160.20	165.20	168.30	164.50	166.40	150.10	166.50
30	144.90	162.40	168.20	149.40	---	161.40	166.00	167.40	165.20	165.80	150.10	166.60
31	144.40	---	167.30	149.20	---	144.60	---	167.70	---	166.40	150.40	---
MAX	166.40	167.80	168.80	169.10	166.40	167.00	166.00	168.30	169.00	169.30	166.30	168.70
CAL YR 1989	LOW 171.10											
WTR YR 1990	LOW 169.30											



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.

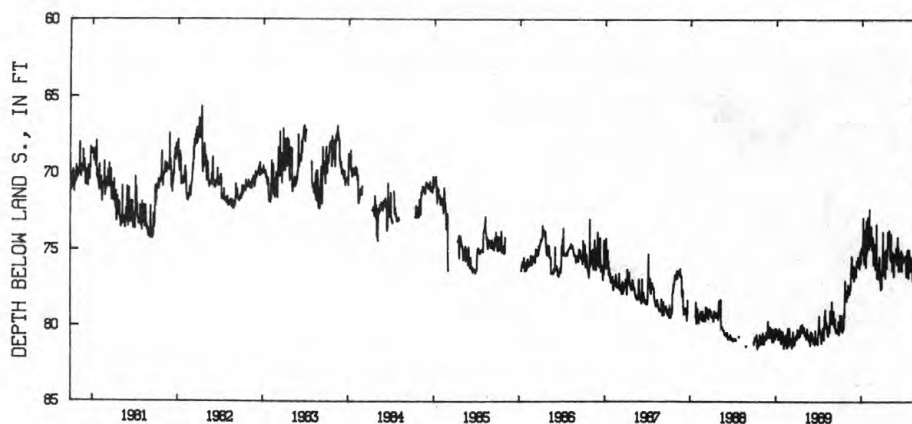
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	79.32	78.10	76.64	75.35	75.04	75.73	73.93	74.81	75.23	75.52	75.97	77.55
2	80.00	78.07	76.32	75.36	73.98	76.01	76.61	75.71	75.13	75.63	76.00	76.85
3	80.21	78.15	76.40	74.94	72.47	75.74	75.96	75.59	74.25	75.69	76.06	76.70
4	80.29	77.38	76.28	74.94	---	73.44	76.17	75.54	75.02	75.69	75.94	77.38
5	80.22	77.68	76.19	74.63	73.67	74.90	75.52	74.65	75.02	75.53	75.74	76.76
6	80.11	77.91	76.54	74.44	73.90	76.90	76.73	74.05	74.89	75.80	76.87	77.41
7	79.71	77.92	76.85	73.00	74.07	76.56	75.20	75.84	76.17	75.81	77.08	77.47
8	79.37	77.77	76.81	74.39	74.82	76.56	75.41	75.21	76.40	75.45	76.38	76.87
9	80.14	77.89	76.35	75.58	73.70	76.76	75.20	75.62	76.47	76.44	76.20	76.50
10	80.29	77.98	75.80	75.74	73.58	76.94	75.82	75.75	75.44	76.81	76.15	76.65
11	80.40	77.71	76.01	75.79	74.74	76.92	76.58	76.45	75.41	76.82	76.16	77.70
12	80.37	77.49	76.07	76.00	74.76	76.93	76.90	75.88	75.29	76.62	76.04	77.81
13	80.38	77.65	76.07	74.39	75.02	75.89	75.76	75.23	75.26	75.82	76.10	77.53
14	79.86	77.68	76.18	73.74	75.09	76.19	75.07	76.06	75.26	75.23	76.15	76.66
15	79.76	77.49	76.13	75.38	74.50	76.57	76.09	76.16	75.23	75.08	76.20	76.48
16	79.94	76.57	75.54	74.95	74.25	76.50	75.12	76.07	76.18	76.22	76.23	76.31
17	80.24	76.39	75.72	74.63	74.83	75.70	76.07	76.50	76.37	76.30	76.29	76.78
18	79.25	76.20	75.68	75.50	74.45	75.54	76.26	76.81	75.12	76.30	76.23	77.34
19	79.20	75.50	75.74	76.22	75.64	76.35	75.45	76.56	76.29	76.07	76.21	77.35
20	79.46	75.65	75.80	73.19	76.06	77.02	75.45	75.32	76.38	76.89	76.94	77.32
21	78.33	76.83	76.17	74.50	75.68	77.15	75.40	75.61	76.45	75.08	76.15	77.66
22	77.12	76.86	76.29	74.46	75.55	77.20	73.92	75.74	75.59	75.08	77.16	77.53
23	77.88	76.68	76.30	75.31	75.33	77.64	74.83	75.78	75.32	75.52	77.51	77.04
24	77.88	76.39	76.00	75.11	75.50	77.17	74.94	75.78	75.46	75.68	76.56	78.07
25	77.70	76.45	75.22	73.72	74.68	76.54	74.69	75.82	75.62	75.88	76.57	78.08
26	77.73	76.79	75.67	73.13	75.81	77.33	74.87	75.70	75.63	75.83	76.46	78.09
27	78.42	76.13	75.70	73.00	75.96	77.55	74.94	75.46	75.75	76.47	77.38	78.38
28	78.19	77.09	75.96	---	76.33	76.50	73.86	74.94	75.85	75.50	77.40	78.45
29	78.42	77.10	75.88	73.74	---	76.39	73.83	75.37	75.85	76.30	76.47	77.08
30	78.05	77.01	74.96	73.48	---	75.76	74.67	76.03	75.71	75.63	76.68	76.60
31	78.06	---	75.05	74.31	---	75.49	---	75.48	---	75.82	76.71	---
MAX	80.40	78.15	76.85	76.22	76.33	77.64	76.90	76.81	76.47	76.89	77.51	78.45

CAL YR 1989 LOW 81.50  
WTR YR 1990 LOW 80.40402833084375200 MR-2  
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

## GROUND-WATER RECORDS

## 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. 24, 1989	11.28	Apr. 25, 1990	10.12



## 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 1989 TO SEPTEMBER 1990

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	CALCIUM DIS- SOLVED (MG/L) AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L) AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L) AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L) AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)
NOV 08...	1030	810	7.7	4.5	12.0	<10	90	35	15	1.9	395
JAN 23...	1015	755	7.8	6.0	12.5	<10	84	33	19	2.1	361
APR 24...	0915	800	7.7	19.0	13.0	37	--	--	--	--	381
AUG 22...	0930	720	7.8	21.0	15.0	<10	90	35	16	1.9	384

DATE	ALKA- LITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	SULFATE DIS- SOLVED (MG/L) AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L) AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L) AS F) (00950)	SILICA, DIS- SOLVED (MG/L) AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	NITRO- GEN, NITRITE TOTAL (MG/L) AS N) (00615)	NITRO- GEN, NO2+NO3 TOTAL (MG/L) AS N) (00630)	ARSENIC TOTAL (UG/L) AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L) AS AS) (01000)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L) AS CR) (01034)
NOV 08...	324	63	24	0.9	15	432	<0.01	<0.10	<1	1	<1
JAN 23...	296	65	29	0.9	14	441	<0.01	<0.10	--	--	--
APR 24...	313	--	--	--	--	--	0.02	<0.10	--	--	--
AUG 22...	315	68	26	1.3	14	459	<0.01	<0.10	1	1	<1

DATE	CHRO- MIUM, DIS- SOLVED (UG/L) AS CR) (01030)	COPPER, TOTAL RECOV- ERABLE (UG/L) AS CU) (01042)	COPPER, DIS- SOLVED (UG/L) AS CU) (01040)	IRON, DIS- SOLVED (UG/L) AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L) AS PB) (01051)	LEAD, DIS- SOLVED (UG/L) AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L) AS MN) (01056)	ZINC, TOTAL RECOV- ERABLE (UG/L) AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L) AS ZN) (01090)	CARBON, ORGANIC TOTAL (MG/L) AS C) (00680)
NOV 08...	<1	1	<1	610	<1	<1	69	20	16	1.0
JAN 23...	--	--	--	20	--	--	46	--	--	0.9
APR 24...	--	--	--	--	--	--	--	--	--	0.9
AUG 22...	<1	3	1	1200	<1	1	58	<10	25	0.6

## GROUND-WATER RECORDS

269

## 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 1989 TO SEPTEMBER 1990

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD HCO3 (00453)
NOV 08...	1145	800	7.6	5.0	11.0	<10	100	33	43	3.7	384
JAN 23...	1145	830	7.6	11.0	15.5	<10	93	31	42	3.7	353
APR 24...	1130	845	7.6	27.5	15.5	26	--	--	--	--	332
AUG 22...	1200	850	7.6	23.5	16.0	<10	97	32	41	3.3	387

DATE	ALKA- LINEITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)
NOV 08...	316	64	71	0.3	10	511	0.02	1.7	<1	<1	<1
JAN 23...	290	67	65	0.3	9.6	513	0.01	2.2	--	--	--
APR 24...	272	--	--	--	--	--	0.02	2.9	--	--	--
AUG 22...	317	66	75	1.1	9.1	545	0.01	3.0	1	1	<1

DATE	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
NOV 08...	<1	1	2	15	2	<1	180	10	14	1.3
JAN 23...	--	--	--	18	--	--	170	--	--	1.1
APR 24...	--	--	--	--	--	--	--	--	--	1.1
AUG 22...	<1	8	5	10	2	1	150	<10	15	0.9

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.

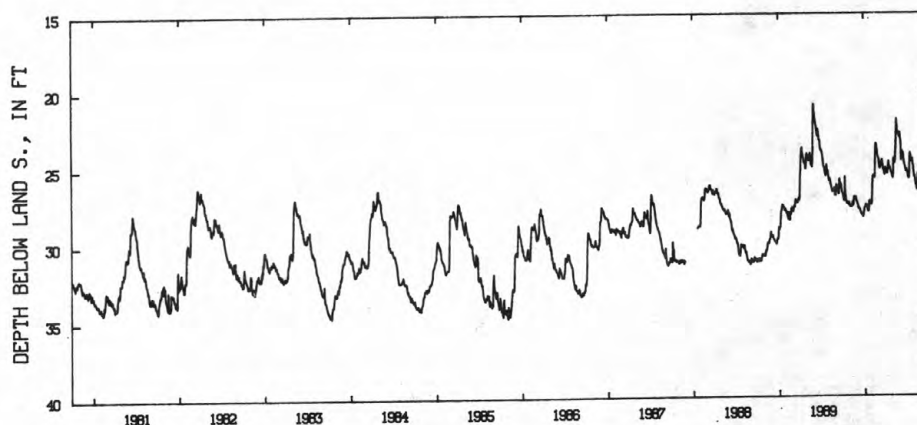
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26.78	27.57	27.38	27.92	27.50	24.46	25.32	25.69	22.84	25.24	25.50	26.64
2	26.88	27.61	27.39	27.74	27.44	24.52	25.14	25.78	22.86	25.31	25.62	26.51
3	26.95	27.66	27.48	27.73	27.35	24.53	25.15	25.82	22.93	25.37	25.76	26.53
4	27.04	27.63	27.48	27.72	26.92	24.60	25.21	25.82	23.13	25.43	25.76	26.70
5	27.10	27.59	27.52	27.70	26.40	24.80	25.33	25.57	23.25	25.51	25.71	26.81
6	27.17	27.61	27.59	27.68	26.04	24.93	25.38	25.00	23.39	25.60	25.86	26.87
7	27.27	27.65	27.77	27.62	25.75	25.04	25.38	24.53	23.47	25.69	25.91	26.95
8	27.28	27.64	27.80	27.54	25.69	25.12	25.32	24.53	24.63	25.78	26.06	27.03
9	27.26	27.61	27.72	27.58	25.65	25.17	25.50	24.55	24.65	25.84	26.21	27.07
10	27.28	27.65	27.72	27.65	25.66	25.19	25.53	24.71	24.53	25.84	26.32	26.75
11	25.73	27.57	27.80	27.65	25.66	25.13	25.47	24.83	24.14	25.86	26.36	26.74
12	26.59	27.39	27.78	27.68	25.65	24.88	25.29	24.84	24.04	25.85	26.33	26.72
13	26.90	27.46	27.82	27.68	25.67	24.77	25.02	24.70	24.17	25.35	26.49	26.78
14	26.94	27.54	27.89	27.58	25.80	24.74	24.89	24.48	24.31	24.83	26.60	26.79
15	26.95	27.59	27.93	27.77	25.80	24.87	24.72	24.17	24.27	24.38	26.60	26.67
16	27.18	27.55	28.00	27.89	25.55	24.88	24.89	23.85	24.19	24.18	26.55	26.58
17	27.32	27.40	28.03	27.91	24.84	24.85	25.06	23.50	24.33	24.23	26.54	26.59
18	27.39	27.21	28.08	27.96	24.13	24.64	25.16	22.89	24.52	24.40	25.57	26.73
19	27.44	27.06	28.14	27.98	23.60	24.80	25.26	22.23	24.67	24.54	25.58	26.75
20	27.46	27.01	28.14	27.93	23.56	24.82	25.26	21.98	24.81	24.74	25.48	26.80
21	27.42	27.11	28.19	27.68	23.57	24.95	25.19	22.28	24.86	24.72	25.48	26.83
22	27.38	27.18	28.18	27.44	23.66	25.08	25.13	22.50	24.90	24.55	25.97	26.85
23	27.44	27.08	28.19	27.29	23.81	25.27	25.17	22.73	24.98	24.57	25.86	26.90
24	27.48	27.05	28.14	27.30	23.95	25.28	25.29	22.89	25.02	24.53	25.78	26.93
25	27.47	27.02	28.14	27.34	23.97	25.21	25.38	22.93	25.13	24.55	25.24	26.99
26	27.50	27.04	28.24	27.40	24.10	25.36	25.45	22.89	25.21	24.73	25.16	27.04
27	27.54	27.08	28.28	27.43	24.27	25.48	25.48	22.85	25.28	24.96	25.33	27.06
28	27.56	27.22	28.33	27.44	24.38	25.57	25.48	22.91	25.37	24.98	26.44	27.06
29	27.38	27.32	28.25	27.47	---	25.57	25.46	23.04	25.40	24.96	26.62	27.01
30	27.45	27.34	28.21	27.52	---	25.60	25.60	23.11	25.31	25.19	26.67	26.98
31	27.57	---	28.03	27.55	---	25.47	---	22.97	---	25.40	26.66	---
MAX	27.57	27.66	28.33	27.98	27.50	25.60	25.60	25.82	25.40	25.86	26.67	27.07
CAL YR 1989	LOW 29.10											
WTR YR 1990	LOW 28.33											



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.

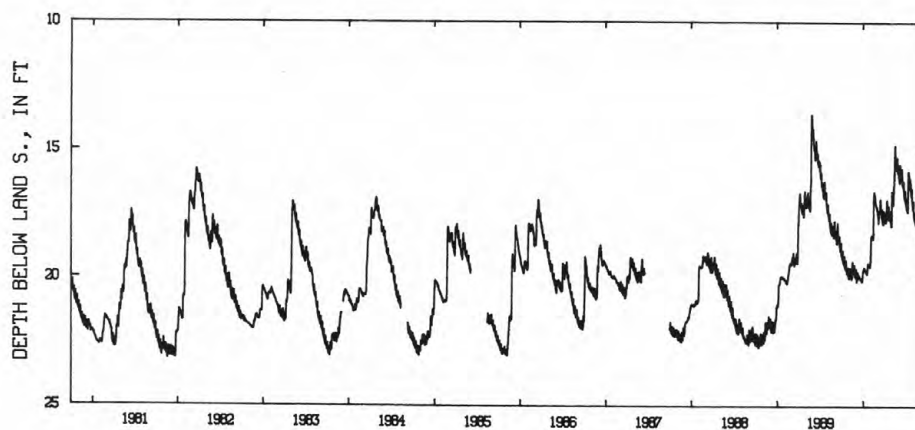
DATUM.--Elevation of land-surface datum is 714.61 ft above National Geodetic Vertical Datum of 1929. (Levels by Miami Conservancy District.) Measuring point: Floor of shelter 2.50 ft above land-surface datum.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.64	19.96	19.97	19.82	19.52	17.22	17.39	17.57	15.90	16.58	17.19	18.02
2	19.06	19.97	19.73	19.73	19.45	17.23	17.54	17.91	15.64	16.99	17.28	17.94
3	19.14	20.02	19.67	19.69	19.29	17.30	17.54	17.99	15.59	17.09	17.34	17.96
4	19.14	19.75	19.66	19.71	19.03	17.34	17.59	17.94	16.03	16.85	17.08	18.39
5	19.16	19.61	19.93	19.70	18.64	17.41	17.69	17.16	16.09	17.18	16.99	18.47
6	19.26	19.97	20.15	19.60	18.42	17.51	17.71	16.62	16.19	17.30	17.40	18.54
7	19.02	20.00	20.02	19.60	18.40	17.55	17.48	16.84	16.24	17.05	17.50	18.64
8	18.94	19.89	19.82	19.63	18.37	17.56	17.46	16.91	16.29	16.99	17.59	18.40
9	19.31	19.83	19.78	19.67	18.34	17.86	17.82	16.94	15.90	17.37	17.68	18.28
10	19.39	20.00	19.78	19.72	18.35	17.64	17.84	17.05	15.57	17.33	17.75	18.41
11	19.43	19.73	20.05	19.67	18.37	17.61	17.66	17.15	15.83	17.41	17.50	18.45
12	19.46	19.63	19.87	19.74	18.40	17.43	17.38	16.87	15.99	17.23	17.42	18.53
13	19.49	19.97	19.86	19.75	18.42	17.36	17.35	16.65	16.09	16.49	17.80	18.58
14	19.23	20.05	19.88	19.73	18.48	17.38	17.08	16.43	16.18	16.12	17.89	18.59
15	19.15	20.04	19.90	19.76	18.40	17.45	16.98	16.34	15.99	15.83	17.87	18.20
16	19.51	19.96	19.92	19.79	17.80	17.41	17.37	16.15	15.74	16.09	17.93	18.02
17	19.60	19.64	19.94	19.78	17.09	17.10	17.55	15.70	15.73	15.98	17.97	18.46
18	19.63	19.41	19.98	19.84	16.75	16.93	17.63	15.24	16.13	16.33	17.73	18.50
19	19.62	19.38	19.99	19.84	16.66	17.29	17.69	14.89	16.30	16.44	17.63	18.57
20	19.66	19.72	20.00	19.75	16.69	17.35	17.69	14.82	16.37	16.51	17.95	18.63
21	19.37	19.83	20.05	19.58	16.76	17.43	17.39	15.27	16.36	16.24	17.94	18.66
22	19.32	19.75	20.05	19.45	16.79	17.55	17.20	15.41	16.44	16.12	17.88	18.39
23	19.68	19.54	20.05	19.43	16.88	17.68	17.50	15.54	16.20	16.32	17.92	18.29
24	19.73	19.76	20.03	19.45	17.01	17.40	17.63	15.67	16.24	16.43	17.95	18.65
25	19.78	19.55	20.01	19.48	17.09	17.32	17.69	15.77	16.61	16.56	17.71	18.70
26	19.81	19.50	20.10	19.51	17.09	17.74	17.72	15.49	16.71	16.72	17.65	18.81
27	19.85	19.78	20.09	19.52	17.16	17.83	17.66	15.31	16.78	16.80	18.08	18.86
28	19.58	19.94	20.14	19.54	17.20	17.89	17.40	15.29	16.84	16.53	18.11	18.90
29	19.59	19.67	20.12	19.51	---	17.91	17.40	15.62	16.93	16.51	18.16	18.64
30	19.81	19.92	20.11	19.54	---	17.89	17.81	15.72	16.65	16.95	18.24	18.54
31	19.91	---	20.00	19.58	---	17.60	---	15.82	---	17.09	18.29	---
MAX	19.91	20.05	20.15	19.84	19.52	17.91	17.84	17.99	16.93	17.41	18.29	18.90
CAL YR 1989	LOW 21.12											
WTR YR 1990	LOW 20.15											



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.

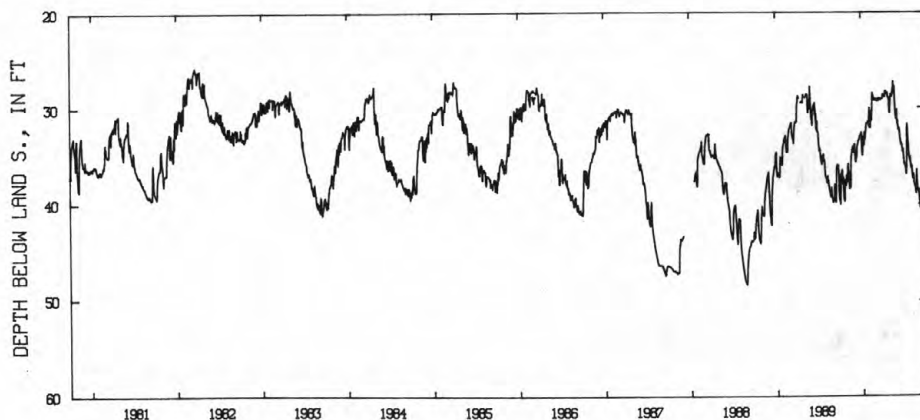
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36.96	37.44	33.94	32.58	31.43	29.11	29.05	30.45	30.20	35.72	36.10	39.03
2	40.10	37.10	33.87	32.94	31.98	29.06	28.81	30.56	31.21	35.96	36.04	39.47
3	39.38	36.34	33.81	33.87	31.20	29.10	28.73	29.84	31.64	35.98	36.50	39.69
4	38.36	36.12	34.38	34.78	30.60	29.10	28.63	29.56	31.71	35.85	36.93	39.90
5	37.67	35.88	35.00	34.99	30.06	29.27	28.76	29.13	31.38	35.93	37.26	40.39
6	37.27	37.01	35.48	34.60	31.65	29.29	28.80	28.62	31.94	36.08	37.37	40.39
7	37.12	36.65	35.69	33.02	32.10	29.27	28.80	28.58	32.25	36.25	37.15	40.24
8	36.90	36.95	35.71	33.28	31.35	29.22	28.82	28.73	32.33	36.58	37.20	39.06
9	36.76	37.90	35.10	33.65	32.13	29.29	28.87	28.73	32.11	36.89	36.90	38.31
10	36.61	38.43	34.51	33.82	30.92	29.34	28.87	28.70	32.11	36.89	37.25	38.16
11	36.53	37.91	35.23	33.88	30.47	29.22	28.84	28.83	32.10	36.35	37.67	38.26
12	37.60	36.68	34.86	33.96	30.43	29.04	28.46	28.83	32.38	35.34	37.92	38.27
13	38.04	37.23	34.24	33.33	31.39	29.11	28.32	28.63	32.82	33.03	38.03	37.97
14	37.84	38.07	34.04	32.76	30.80	29.22	28.29	28.25	33.19	32.08	38.12	37.97
15	37.32	38.36	33.93	32.57	30.27	29.27	28.33	28.05	33.24	31.71	38.20	37.52
16	38.39	37.67	33.89	33.21	30.39	29.13	28.35	27.96	33.32	32.40	38.37	37.23
17	39.22	36.08	33.71	33.31	28.88	29.01	28.54	27.47	33.72	33.10	38.51	37.62
18	39.55	35.39	33.52	32.91	28.46	29.04	28.57	27.30	33.88	33.55	38.77	38.82
19	39.66	35.01	33.51	32.64	28.66	29.08	28.60	28.49	33.73	33.91	38.90	39.49
20	39.79	34.71	33.42	32.38	28.72	29.07	28.63	28.02	33.70	34.15	38.30	39.77
21	39.49	34.71	33.38	32.08	28.79	29.01	28.63	27.71	33.99	34.79	37.17	39.41
22	38.25	34.56	33.38	31.74	28.93	29.12	28.45	27.79	33.87	35.14	37.00	38.28
23	37.52	34.41	33.29	31.67	29.00	29.19	28.50	28.46	34.17	35.27	36.46	37.66
24	38.03	34.27	33.15	31.67	29.21	29.11	28.76	29.36	34.51	35.42	37.54	37.24
25	38.10	34.09	32.97	31.63	29.24	29.07	28.93	29.79	34.57	35.48	38.10	37.97
26	38.04	34.13	32.96	31.63	29.19	29.07	29.00	30.42	34.33	35.12	38.47	39.03
27	38.13	34.10	32.95	31.64	29.18	29.09	29.01	30.83	34.34	35.55	38.56	39.58
28	37.83	34.70	32.96	31.67	29.18	29.08	29.04	31.08	34.86	35.90	38.56	39.86
29	37.09	34.31	32.86	31.45	---	29.07	29.06	31.16	35.01	36.17	38.71	39.49
30	37.40	33.99	32.83	31.45	---	29.05	30.19	30.75	35.34	36.29	38.69	38.48
31	37.76	---	32.72	31.48	---	29.07	---	30.79	---	36.21	38.50	---
MAX	40.10	38.43	35.71	34.99	32.13	29.34	30.19	31.16	35.34	36.89	38.90	40.39
CAL YR 1989	LOW 40.10											
WTR YR 1990	LOW 40.39											



394425084113200 MT-3  
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

## GROUND-WATER RECORDS

## 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.

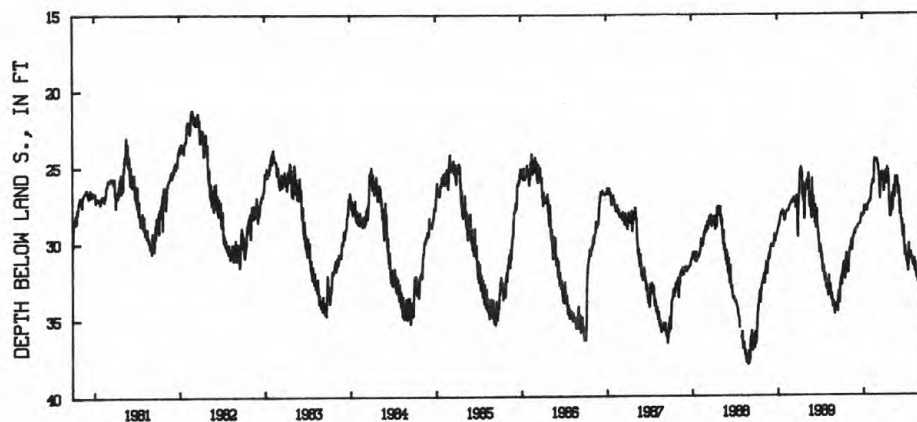
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32.10	31.01	29.14	28.23	27.21	24.54	26.60	27.92	26.83	30.28	31.44	32.90
2	32.78	30.82	29.09	28.17	27.31	24.67	26.53	27.64	26.69	30.67	31.52	32.57
3	32.36	30.67	29.07	28.09	27.16	24.68	25.97	27.54	26.36	30.73	31.46	32.47
4	32.12	30.51	29.02	28.19	26.92	24.67	25.65	27.46	26.45	30.83	31.37	32.70
5	31.85	30.35	29.06	28.15	26.79	24.90	25.67	27.14	26.59	31.21	31.14	32.96
6	31.85	30.40	29.12	27.62	26.51	24.87	25.51	26.80	27.38	31.28	31.27	33.14
7	31.62	30.44	29.10	27.64	26.31	24.93	25.44	27.11	27.60	31.15	31.60	33.34
8	31.39	30.39	29.01	27.68	26.23	25.00	25.34	27.92	28.15	30.92	31.05	33.21
9	31.61	30.26	28.90	27.73	26.28	25.34	25.68	27.59	27.52	31.34	31.77	32.82
10	31.49	30.09	28.87	27.73	26.16	25.40	26.19	27.12	27.25	31.52	31.89	33.22
11	31.25	29.95	28.85	27.66	25.98	25.43	26.03	27.06	28.16	31.89	31.58	33.35
12	32.02	29.81	28.84	27.71	25.93	26.21	25.94	26.73	28.15	31.87	31.32	33.58
13	32.32	30.26	28.83	27.71	26.14	26.53	25.93	26.33	28.45	31.70	31.59	33.47
14	31.64	30.36	28.82	27.62	26.04	26.80	25.24	26.44	28.53	31.34	31.84	33.72
15	31.52	30.50	28.82	27.67	26.08	27.14	25.10	26.80	28.74	30.37	32.00	33.19
16	32.38	30.28	28.82	27.88	26.10	26.70	25.35	27.07	28.89	30.08	32.27	33.07
17	32.23	30.04	28.82	27.94	25.80	26.32	25.48	27.02	28.53	30.55	32.34	33.73
18	31.73	29.82	28.77	27.95	25.24	26.14	25.24	26.77	29.11	30.88	32.24	32.80
19	31.31	29.66	28.70	27.89	24.75	25.83	25.46	26.21	29.34	31.09	32.01	32.97
20	31.01	29.71	28.70	27.67	24.57	25.61	25.82	25.73	29.58	30.88	32.22	32.57
21	30.80	29.66	28.70	27.59	24.50	25.45	26.08	25.76	29.64	31.00	32.40	32.99
22	30.70	29.51	28.53	27.51	24.76	25.89	25.77	25.75	29.57	30.69	32.62	32.39
23	30.94	29.42	28.38	27.45	24.60	25.80	26.98	25.84	29.29	30.78	32.47	32.15
24	31.40	29.37	28.30	27.42	24.62	25.54	27.43	26.03	28.93	30.66	32.49	31.79
25	32.00	29.27	28.14	27.47	24.66	25.39	27.73	26.19	29.76	30.98	32.41	31.83
26	31.77	29.22	28.19	27.44	24.58	25.45	28.06	26.06	30.17	31.03	32.25	31.96
27	31.77	29.47	28.28	27.39	24.60	25.48	28.32	25.71	30.27	31.11	32.50	32.34
28	31.39	29.42	28.33	27.40	24.58	25.53	27.76	25.73	30.49	31.05	32.78	32.74
29	31.15	29.25	28.27	27.24	---	25.73	27.31	26.07	30.87	30.97	32.74	32.64
30	31.95	29.14	28.29	27.22	---	26.30	28.32	26.21	30.52	31.22	32.98	32.56
31	31.21	---	28.21	27.22	---	26.65	---	26.34	---	31.20	32.99	---
MAX	32.78	31.01	29.14	28.23	27.31	27.14	28.32	27.92	30.87	31.89	32.99	33.73
CAL YR 1989	LOW 34.66											
WTR YR 1990	LOW 33.73											



394533084113800 MT-6  
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

## GROUND-WATER RECORDS

## MONTGOMERY COUNTY--Continued

394811084095000. Local number, MT-74.

LOCATION.--Lat 39°48'11", long 84°09'50", Hydrologic Unit 05080002, Miami Well Field in Dayton.

Owner: City of Dayton.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled test water table well, diameter 8 in., depth 100 ft, cased.

INSTRUMENTATION.--Type F continuous recorder.

DATUM.--Elevation of land-surface datum is 750 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 4.0 ft above land-surface datum.

REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

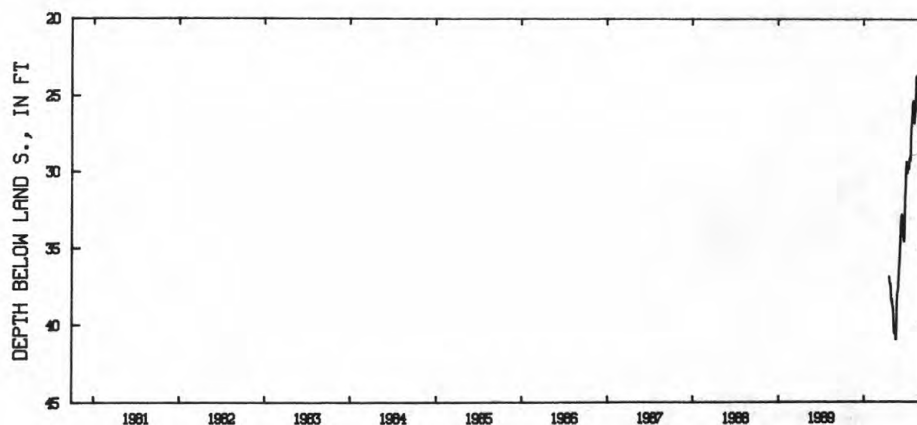
PERIOD OF RECORD.--April 18, 1990 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 40.97 ft below land-surface datum, May 18, 1990; minimum daily low, 23.75 ft below land-surface datum, Aug. 14, 1990.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	38.45	36.21	29.91	25.48	27.82
2	---	---	---	---	---	---	---	38.70	35.99	29.69	25.35	---
3	---	---	---	---	---	---	---	38.83	35.66	29.35	26.35	---
4	---	---	---	---	---	---	---	38.86	35.31	29.79	26.72	---
5	---	---	---	---	---	---	---	38.84	34.89	30.02	26.85	---
6	---	---	---	---	---	---	---	39.06	34.60	30.11	26.54	---
7	---	---	---	---	---	---	---	39.35	34.29	30.11	26.36	---
8	---	---	---	---	---	---	---	39.89	33.86	29.92	26.37	27.35
9	---	---	---	---	---	---	---	40.26	33.54	29.65	25.61	---
10	---	---	---	---	---	---	---	40.44	33.23	29.85	25.90	---
11	---	---	---	---	---	---	---	40.55	32.96	29.87	26.08	27.28
12	---	---	---	---	---	---	---	40.59	32.82	29.85	24.77	27.25
13	---	---	---	---	---	---	---	40.53	32.89	29.82	23.95	26.70
14	---	---	---	---	---	---	---	40.23	32.93	29.51	23.75	27.03
15	---	---	---	---	---	---	---	40.45	32.95	29.30	24.17	27.10
16	---	---	---	---	---	---	---	40.70	33.06	29.11	24.59	27.02
17	---	---	---	---	---	---	---	40.96	33.05	29.14	24.50	26.82
18	---	---	---	---	---	---	36.87	40.97	33.44	29.31	24.56	26.94
19	---	---	---	---	---	---	37.00	40.87	34.10	29.31	24.56	26.97
20	---	---	---	---	---	---	37.13	40.20	34.50	29.11	24.90	26.53
21	---	---	---	---	---	---	37.30	39.44	34.58	28.69	25.27	26.37
22	---	---	---	---	---	---	37.33	38.71	34.58	27.83	25.44	26.37
23	---	---	---	---	---	---	37.33	38.06	34.40	27.25	25.48	26.34
24	---	---	---	---	---	---	37.34	37.90	33.70	27.03	25.52	26.18
25	---	---	---	---	---	---	37.45	37.87	32.90	27.02	25.72	26.04
26	---	---	---	---	---	---	37.75	37.79	32.35	26.46	26.02	26.03
27	---	---	---	---	---	---	38.10	37.64	31.64	26.36	26.50	26.48
28	---	---	---	---	---	---	38.43	37.37	31.33	26.05	26.93	26.80
29	---	---	---	---	---	---	38.42	37.05	31.05	25.70	27.38	26.88
30	---	---	---	---	---	---	38.31	36.70	30.40	25.43	27.38	26.75
31	---	---	---	---	---	---	---	36.46	---	25.45	27.75	---
MAX	---	---	---	---	---	---	38.43	40.97	36.21	30.11	27.75	27.82

WTR YR 1990 LOW 40.97



394811084095000 MT-74  
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.

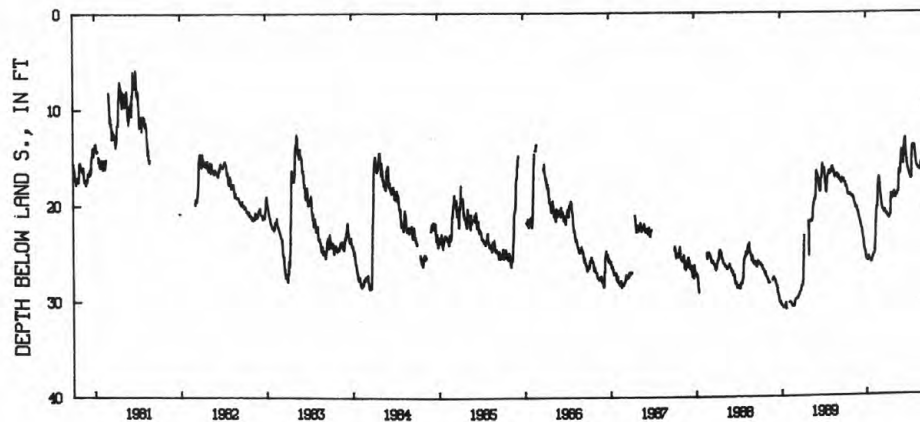
REMARKS.--Water level affected by nearby municipal wells and by stage of the Muskingum River. Prior to water year 1978, well depth reported as 132 ft.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.68	19.12	21.52	25.76	25.15	18.75	21.29	19.02	14.57	16.51	15.40	16.24
2	17.75	19.14	21.72	25.81	25.17	19.07	21.22	19.13	14.34	16.70	15.58	16.22
3	17.94	19.35	21.69	25.81	24.96	19.39	21.30	19.33	14.45	16.85	15.78	16.42
4	18.16	19.26	21.78	25.86	24.68	19.48	21.32	19.38	14.58	16.92	15.97	16.52
5	18.14	19.25	22.01	25.84	24.31	19.80	21.30	19.27	14.87	17.06	16.00	16.83
6	18.15	19.33	22.15	25.74	23.92	20.01	21.46	19.06	15.25	17.13	16.10	16.83
7	18.24	19.52	22.21	25.62	23.30	20.27	21.41	18.97	15.64	17.13	16.16	17.18
8	18.06	19.56	22.37	25.40	22.32	20.39	21.34	18.92	15.82	17.15	16.14	17.20
9	18.30	19.78	22.40	25.46	21.83	20.41	21.11	18.90	15.82	17.17	16.25	17.00
10	18.38	19.85	22.48	25.57	21.44	20.55	21.10	18.90	15.14	17.37	16.26	16.80
11	18.61	19.93	22.64	25.66	20.61	20.58	21.18	19.04	14.25	17.36	16.33	16.66
12	18.79	19.99	22.72	25.70	20.58	20.56	21.03	19.02	14.15	17.33	16.34	16.66
13	18.97	20.04	23.01	25.71	20.29	20.61	20.69	18.75	13.89	17.23	16.29	16.50
14	19.01	20.30	23.20	25.71	20.23	20.69	19.81	18.72	13.68	16.54	16.42	16.54
15	18.82	20.30	23.41	25.70	20.24	20.82	19.35	18.75	13.39	15.15	16.46	16.54
16	19.00	20.40	23.53	25.79	20.26	20.87	18.92	18.72	13.30	14.49	16.43	16.41
17	18.89	20.41	23.58	25.94	19.55	20.70	19.16	18.65	13.11	14.08	16.43	16.45
18	18.99	20.42	23.85	26.01	18.95	20.60	19.29	18.43	13.42	13.92	16.49	16.25
19	18.95	20.24	24.12	26.01	18.08	20.58	19.39	17.92	14.00	14.04	16.49	16.32
20	18.89	20.40	24.39	26.01	18.02	20.66	19.42	17.05	14.49	14.30	16.35	16.47
21	18.86	20.58	24.58	25.92	17.80	20.81	19.45	16.68	14.88	14.35	16.24	16.52
22	18.86	20.71	24.70	25.80	17.24	20.82	19.15	16.47	15.11	13.89	15.87	16.42
23	19.00	20.70	24.79	25.74	17.20	21.04	18.89	16.44	15.39	14.02	15.71	16.25
24	19.04	20.72	24.84	25.59	17.20	20.98	19.03	16.72	15.46	14.07	15.64	16.50
25	19.04	20.75	24.88	25.50	17.24	20.99	18.89	16.89	15.74	13.88	15.68	16.54
26	19.14	20.85	25.06	25.45	17.46	20.90	18.89	16.68	15.99	13.91	15.60	16.69
27	19.04	21.07	25.24	25.31	17.95	20.97	18.89	16.67	16.17	14.03	15.58	16.82
28	19.04	21.25	25.45	25.30	18.40	20.99	18.89	16.15	16.31	14.25	15.75	16.88
29	19.05	21.34	25.58	25.18	---	21.13	18.08	15.65	16.38	14.50	16.02	16.87
30	19.23	21.45	25.74	25.19	---	21.23	18.70	15.48	16.46	14.81	16.28	16.74
31	19.09	---	25.76	25.22	---	21.31	---	15.05	---	15.13	16.34	---
MAX	19.23	21.45	25.76	26.01	25.17	21.31	21.46	19.38	16.46	17.37	16.49	17.20

CAL YR 1989 LOW 30.88  
WTR YR 1990 LOW 26.01395804081593200 MU-1A ZANESV WTR 1 MI N OF ZANESVILLE OH  
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)



## GROUND-WATER RECORDS

## 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.

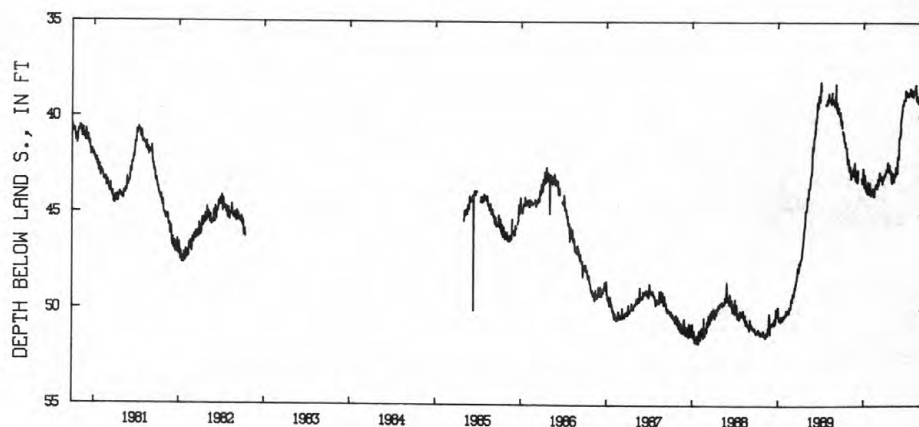
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40.16	42.66	43.30	42.66	43.87	43.69	42.98	43.14	42.08	38.57	38.87	40.03
2	40.24	42.67	43.30	42.87	44.05	43.64	43.08	43.36	41.93	38.62	38.92	39.75
3	40.55	42.81	42.92	43.08	44.06	43.49	43.08	43.41	41.40	38.81	38.87	39.82
4	---	42.82	42.77	43.25	43.75	43.26	43.03	43.41	41.04	38.86	38.82	40.12
5	---	42.57	43.00	43.64	43.87	43.21	42.90	43.20	41.05	38.62	38.63	40.40
6	40.74	42.61	43.23	43.38	43.93	43.47	42.90	42.91	41.00	38.88	38.60	40.58
7	40.88	42.80	43.39	43.05	43.97	43.50	42.91	42.87	41.05	38.88	38.59	40.75
8	40.81	42.83	43.38	43.01	43.97	43.49	42.85	43.10	40.94	38.78	38.60	40.83
9	40.84	43.01	43.27	43.25	43.97	43.33	42.75	43.17	40.75	38.71	38.57	40.73
10	40.96	43.20	42.76	43.51	43.97	43.28	42.70	43.18	40.90	38.87	38.55	40.98
11	41.15	43.20	---	43.55	43.69	42.89	42.74	43.32	40.17	38.86	38.50	41.15
12	41.21	42.80	---	43.75	43.86	42.86	42.77	43.33	40.05	38.87	38.32	41.21
13	41.29	42.75	---	43.83	44.02	43.08	42.77	42.95	40.00	38.90	38.28	41.35
14	41.30	42.88	---	43.56	44.10	43.19	42.65	42.97	39.90	38.90	38.55	41.35
15	41.29	42.88	---	43.60	44.09	43.23	42.43	43.10	39.77	38.69	38.75	41.30
16	41.29	42.88	---	43.88	44.10	43.24	42.35	43.09	39.68	38.76	38.97	40.94
17	41.55	42.98	---	43.88	44.10	43.24	42.71	43.05	39.58	38.81	39.12	41.12
18	---	43.02	---	43.95	43.74	43.03	42.82	43.04	39.33	38.82	39.12	41.36
19	---	42.80	---	43.95	43.65	43.13	42.82	43.00	39.31	38.80	39.00	41.40
20	---	42.65	---	43.86	43.71	43.27	42.77	42.57	39.32	38.75	38.88	---
21	---	42.96	---	43.36	43.70	43.28	42.70	42.59	39.33	38.66	39.01	---
22	41.60	43.02	---	43.50	43.56	43.32	42.50	42.71	39.33	38.47	39.07	---
23	41.87	43.07	---	43.66	43.65	43.45	42.45	42.84	39.20	38.48	39.11	41.40
24	42.07	42.73	---	43.84	43.57	43.44	42.60	42.88	39.07	38.72	39.12	41.44
25	42.13	42.55	---	43.86	43.47	43.06	42.73	42.90	39.06	38.85	39.25	---
26	42.34	42.37	43.18	44.00	43.47	43.20	42.82	42.80	39.09	38.85	39.25	---
27	42.40	42.66	43.36	44.00	43.57	43.24	42.91	42.38	39.09	38.85	39.25	---
28	42.44	43.15	43.45	43.61	43.65	43.25	42.92	42.05	39.10	38.81	---	---
29	42.17	43.27	43.45	43.41	---	43.17	42.77	42.02	39.10	38.68	---	---
30	42.20	43.28	43.35	43.61	---	43.12	42.83	42.15	39.07	38.56	39.87	41.55
31	42.47	---	42.99	43.83	---	43.03	---	42.15	---	38.78	40.03	---
MAX	42.47	43.28	43.45	44.00	44.10	43.69	43.08	43.41	42.08	38.90	40.03	41.55
CAL YR 1989	LOW 50.66											
WTR YR 1990	LOW 44.10											



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.

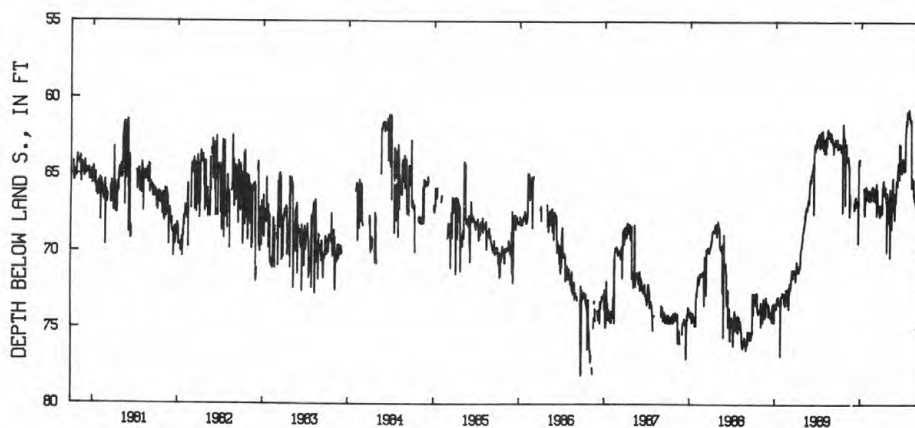
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63.00	64.15	67.00	---	66.25	66.30	67.50	68.15	66.20	64.05	61.45	64.60
2	63.00	63.95	67.20	---	66.60	66.30	67.55	67.40	66.20	64.20	61.50	64.50
3	63.25	64.15	67.30	---	66.55	66.00	67.10	67.25	65.40	64.10	61.50	64.65
4	63.25	64.10	67.30	---	66.60	65.90	65.85	67.00	65.50	64.40	61.50	64.75
5	63.10	63.95	67.00	---	66.70	66.00	66.05	66.60	65.50	64.75	61.40	64.75
6	63.05	64.15	67.20	---	66.20	66.80	66.30	66.20	65.50	64.10	63.90	64.80
7	63.35	63.85	66.90	---	66.05	66.30	65.75	65.95	65.75	64.75	65.85	64.80
8	63.30	63.95	66.95	---	66.25	65.90	65.40	70.40	65.20	64.70	65.50	64.05
9	63.50	64.10	66.55	---	66.50	65.60	66.20	68.70	64.80	64.65	65.20	65.05
10	63.15	64.25	66.50	---	66.35	67.70	65.85	66.45	64.70	64.70	65.50	65.30
11	63.45	64.65	66.80	---	66.40	67.25	66.35	66.90	64.25	64.20	65.45	---
12	63.35	64.45	66.80	---	66.70	66.00	66.20	67.10	64.25	62.30	65.35	---
13	63.55	67.70	67.00	---	66.55	66.75	65.95	67.00	64.25	62.15	65.35	---
14	63.65	67.75	67.05	---	66.70	66.95	66.00	68.55	64.35	61.70	65.60	---
15	67.50	67.40	66.80	65.90	66.30	67.30	65.80	67.40	65.30	61.70	65.35	---
16	62.85	66.70	67.10	67.20	66.15	67.10	65.85	67.00	63.00	61.45	66.05	---
17	61.70	66.60	67.00	67.55	66.00	67.00	66.50	66.60	63.70	61.75	66.45	---
18	62.10	66.90	66.75	67.70	65.85	67.20	66.35	65.60	63.25	61.45	66.30	---
19	62.40	66.60	66.70	67.50	65.80	67.30	66.40	65.45	63.05	60.90	66.25	---
20	62.45	66.35	66.75	66.80	66.15	67.25	66.80	65.25	64.40	61.15	66.70	---
21	63.20	66.85	67.70	66.65	66.00	67.25	66.70	66.30	64.75	61.20	66.60	---
22	63.60	66.60	69.50	65.85	65.80	67.70	66.25	66.75	64.45	61.05	66.40	---
23	63.60	66.95	64.40	65.80	66.10	67.75	70.05	66.25	64.60	61.10	66.55	---
24	62.65	66.95	64.05	65.95	66.15	67.65	66.20	67.00	64.50	60.80	66.90	---
25	64.00	66.75	64.05	65.90	66.70	67.00	66.40	67.40	64.60	60.80	66.75	---
26	67.00	66.75	64.35	66.20	66.70	67.60	66.70	67.30	64.90	60.75	66.90	---
27	63.00	66.85	64.00	66.30	66.35	67.55	68.20	67.95	64.50	60.90	67.10	---
28	63.05	66.95	64.05	66.30	66.35	67.50	67.75	67.35	64.70	61.30	67.20	---
29	63.15	67.30	---	66.20	---	67.50	67.75	66.60	64.00	61.15	67.35	---
30	63.02	67.10	---	66.05	---	67.50	67.80	66.85	63.95	61.35	64.35	---
31	63.50	---	---	66.65	---	67.10	---	66.80	---	61.50	64.15	---
MAX	67.50	67.75	69.50	67.70	66.70	67.75	70.05	70.40	66.20	64.75	67.35	65.30
CAL YR 1989	LOW 76.85											
WTR YR 1990	LOW 70.40											



393402082572500 PK-4  
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

## GROUND-WATER RECORDS

## 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.

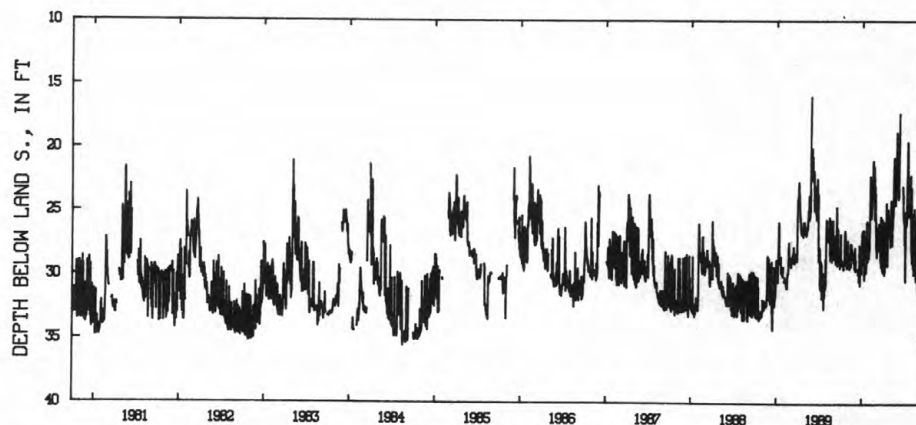
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27.85	29.20	29.45	28.20	28.15	25.45	26.00	27.00	22.40	25.85	23.10	29.85
2	28.20	27.25	29.25	26.75	27.50	25.90	29.00	25.80	22.00	25.10	28.00	29.70
3	26.75	29.20	27.80	26.55	27.90	27.90	29.70	27.70	23.10	27.55	28.95	26.90
4	29.20	29.25	29.25	28.70	26.30	26.70	28.50	26.30	21.95	26.70	26.55	28.40
5	28.85	29.00	29.60	26.50	25.05	28.35	29.45	26.30	23.85	26.70	27.80	29.90
6	28.75	29.30	28.75	27.90	22.20	28.50	25.75	24.10	22.50	30.40	27.80	29.20
7	28.90	29.30	---	29.05	23.95	26.20	29.90	27.40	24.00	27.50	28.25	28.10
8	28.90	29.05	---	26.70	22.50	28.10	28.15	25.90	23.70	24.95	29.35	30.10
9	28.85	29.45	---	26.70	24.50	27.65	29.70	26.45	21.00	26.10	26.20	27.40
10	28.90	29.00	---	26.45	24.65	27.70	27.50	25.90	19.50	26.00	25.10	30.70
11	28.90	28.80	---	26.85	25.50	27.30	28.80	27.60	17.30	25.70	29.90	30.70
12	29.20	28.35	---	30.30	25.00	27.50	26.20	25.00	---	25.80	29.80	26.60
13	29.00	29.00	---	26.95	24.55	27.90	27.90	26.30	---	22.90	26.50	26.20
14	29.30	27.50	29.45	27.40	23.70	27.20	26.55	25.40	---	22.35	24.75	26.70
15	29.50	29.30	29.50	28.15	23.45	25.90	29.15	25.20	---	19.50	29.00	27.00
16	29.15	28.60	29.90	29.30	23.85	26.60	24.30	24.60	---	19.60	26.85	28.15
17	29.10	27.50	---	29.20	21.35	27.80	28.75	22.25	---	20.50	26.95	26.00
18	29.15	27.60	---	29.50	21.00	26.00	24.80	21.60	---	22.05	28.60	28.05
19	29.10	27.90	30.40	29.75	21.65	28.00	28.80	20.75	---	24.60	28.85	26.55
20	27.00	28.00	29.75	29.25	23.50	26.20	25.50	22.80	---	25.35	30.35	26.75
21	26.50	28.15	30.20	28.90	23.70	28.00	29.20	21.65	---	24.15	29.40	28.25
22	28.50	28.55	27.60	25.85	21.40	28.95	24.85	23.35	---	25.15	25.40	26.50
23	26.65	28.15	27.90	26.10	22.85	25.35	26.30	22.20	---	25.15	29.10	29.55
24	28.15	28.50	30.75	25.75	22.30	29.30	24.80	24.10	---	24.85	29.15	30.15
25	27.70	28.70	29.80	28.55	25.60	27.50	26.50	24.45	23.00	24.80	29.15	27.80
26	29.10	28.45	28.60	28.85	23.00	25.50	25.20	22.75	23.55	25.05	29.80	26.70
27	29.00	28.95	---	28.10	24.95	28.10	26.80	23.45	23.65	25.10	28.95	26.75
28	29.10	28.50	28.00	28.20	23.55	25.60	25.30	22.70	25.30	22.10	30.90	25.80
29	29.20	28.65	27.90	28.60	---	29.50	26.75	20.85	25.55	25.50	31.35	29.00
30	29.40	29.00	28.00	27.35	---	25.60	26.20	18.75	25.30	26.00	26.00	26.90
31	29.00	---	29.80	28.60	---	29.70	---	21.70	---	28.15	29.90	---
MAX	29.50	29.45	30.75	30.30	28.15	29.70	29.90	27.70	25.55	30.40	31.35	30.70
CAL YR 1989	LOW 32.60											
WTR YR 1990	LOW 31.35											



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.

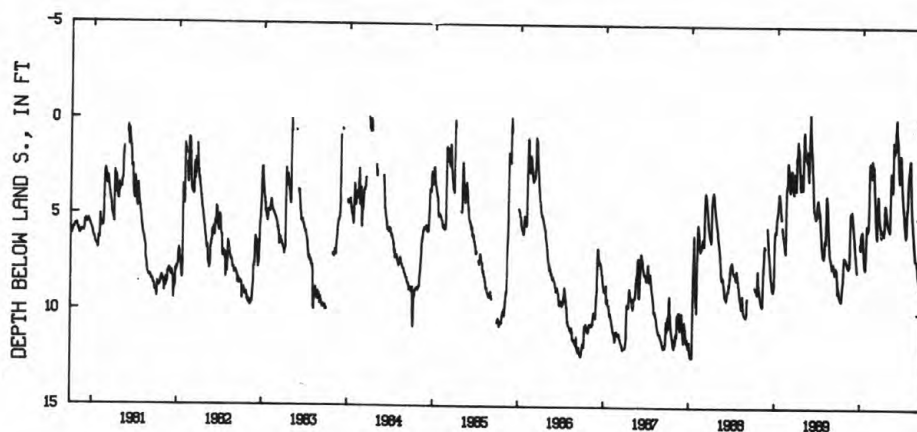
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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, 0.15 ft above land-surface datum, May 30, 1990.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.91	7.32	5.59	6.25	5.58	4.01	5.63	5.53	.61	4.48	3.27	7.94
2	9.00	7.38	5.70	5.91	5.59	4.27	5.72	5.63	.70	4.63	3.66	8.03
3	9.09	7.40	5.85	5.95	5.46	4.52	5.71	5.69	.83	4.79	4.01	8.08
4	9.17	7.40	6.00	5.86	4.95	4.78	5.60	5.70	.95	4.95	4.33	8.15
5	9.21	7.44	6.13	5.83	3.34	5.06	5.61	5.50	1.05	5.11	4.59	8.21
6	9.25	7.53	6.28	5.74	2.44	5.32	5.65	4.65	1.22	5.26	4.83	8.27
7	9.26	7.62	6.42	5.71	2.25	5.54	5.65	3.56	1.54	5.40	5.00	8.30
8	9.30	7.63	6.59	5.81	2.18	5.72	5.76	2.91	1.84	5.56	5.15	8.36
9	9.34	7.65	6.77	5.98	2.13	5.88	5.91	2.63	2.11	5.71	5.31	8.43
10	9.38	7.67	6.93	6.12	2.14	6.04	5.61	2.85	2.46	5.81	5.48	8.51
11	9.39	7.65	7.05	6.34	2.18	6.07	5.65	3.06	2.76	5.98	5.65	8.58
12	9.39	7.58	7.19	6.63	2.36	5.21	4.75	3.26	3.03	5.90	5.82	8.63
13	9.23	7.55	7.35	6.83	2.50	4.55	4.42	3.45	3.12	5.87	6.03	8.68
14	9.00	7.53	7.51	7.02	2.72	4.08	4.32	3.62	3.08	5.55	6.23	8.73
15	8.82	7.52	7.65	7.15	2.88	3.86	4.37	3.63	2.30	4.90	6.39	8.75
16	8.67	6.93	7.79	7.30	2.84	3.92	4.42	3.52	1.69	4.50	6.55	8.74
17	8.59	5.60	7.86	7.42	2.00	4.10	4.56	3.00	1.73	4.54	6.67	8.72
18	8.45	5.00	---	7.53	2.16	4.50	4.66	1.00	1.72	4.54	6.82	8.73
19	8.31	4.76	---	7.66	2.28	4.76	4.75	1.21	1.77	4.20	6.97	8.74
20	7.90	4.75	---	7.70	2.36	5.00	4.91	1.62	2.10	3.62	7.11	8.74
21	7.41	4.81	---	7.66	2.37	5.06	5.00	1.63	2.46	3.15	7.19	8.75
22	7.21	4.82	---	7.33	2.37	5.20	5.05	1.59	2.78	2.77	7.20	8.75
23	7.12	4.84	---	6.86	2.30	5.31	5.24	1.40	2.98	2.66	7.20	8.75
24	7.09	4.67	---	6.25	2.43	5.40	5.24	1.37	3.22	2.56	7.17	8.75
25	7.12	4.78	---	5.75	2.73	5.52	5.36	1.40	3.48	2.41	7.18	8.75
26	7.15	4.93	---	5.42	3.09	5.53	5.44	1.42	3.70	2.19	7.22	8.75
27	7.16	5.09	---	5.40	3.41	5.76	5.47	.58	3.88	2.06	7.26	8.77
28	7.17	5.26	---	5.58	3.74	5.90	5.48	.28	4.09	1.96	7.37	8.79
29	7.18	5.33	6.37	5.69	---	6.00	5.48	.15	4.23	1.97	7.48	8.81
30	7.22	5.46	6.55	5.70	---	5.90	5.52	-.15	4.36	2.37	7.53	8.82
31	7.30	---	6.65	5.64	---	5.78	---	.30	---	2.85	7.63	---
MAX	9.39	7.67	7.86	7.70	5.59	6.07	5.91	5.70	4.36	5.98	7.63	8.82
CAL YR 1989	LOW 9.39											
WTR YR 1990	LOW 9.39											



393438083072200 PK-8 AT WELL FIELD NR WILLIAMSPORT OH  
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)



## GROUND-WATER RECORDS

## PICKAWAY COUNTY--Continued

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.

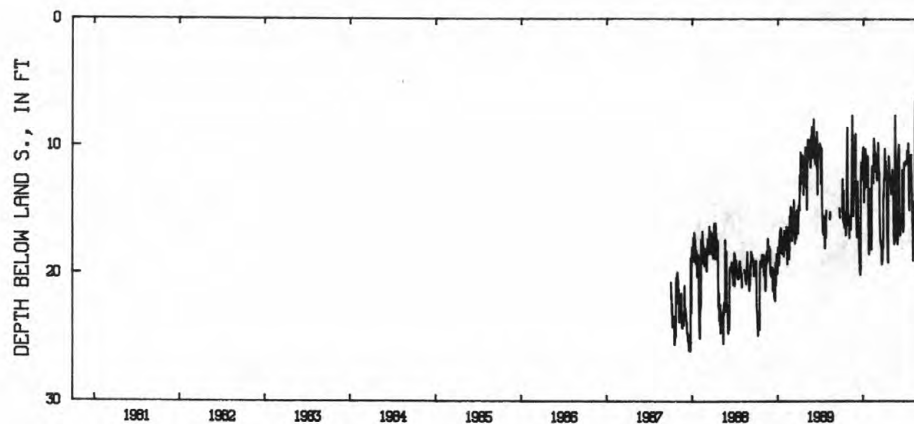
DATUM.--Elevation of land-surface datum is 770 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 4.00 ft above land-surface datum.

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, 5.40 ft below land-surface datum, Sept. 17, 1990.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	15.60	13.20	10.40	13.70	12.55	12.70	13.75	10.20	11.20	18.95	9.80
2	---	16.40	14.20	10.10	13.70	12.70	12.60	12.40	12.55	11.20	17.45	8.40
3	15.15	17.20	15.05	12.25	17.20	12.00	11.95	12.90	9.90	11.20	17.00	9.60
4	15.15	15.95	16.30	11.60	16.40	11.90	10.20	13.50	10.40	11.20	14.35	10.55
5	13.20	15.55	17.15	14.40	18.10	11.10	11.40	13.00	14.20	11.30	15.40	11.95
6	12.60	15.50	16.70	11.40	16.80	9.75	11.70	11.85	16.40	11.40	14.70	13.05
7	15.30	15.95	16.45	10.50	13.15	9.95	11.80	12.60	17.00	11.30	15.55	14.05
8	15.80	16.15	14.60	11.00	12.05	11.35	11.20	12.95	16.90	10.40	14.90	12.30
9	15.95	16.55	12.80	13.35	11.60	12.05	11.60	13.10	16.05	11.05	16.10	9.60
10	13.50	15.45	15.00	11.50	11.80	11.95	12.20	13.10	15.65	11.20	16.30	13.00
11	15.45	15.50	16.10	10.25	11.90	12.15	11.90	17.00	15.35	11.20	8.75	13.75
12	16.00	15.20	16.35	10.60	12.40	15.20	14.90	17.15	15.90	11.00	6.20	13.75
13	16.40	13.90	17.00	10.75	12.95	15.95	17.20	17.65	16.10	9.80	10.30	7.50
14	15.40	13.25	17.75	11.00	12.70	17.15	17.15	17.50	16.10	11.15	13.20	9.00
15	16.30	9.60	18.95	11.05	11.10	17.40	18.95	17.50	15.30	13.10	14.25	13.55
16	15.20	7.60	19.15	11.45	9.40	17.50	18.85	17.00	15.50	14.70	14.60	9.00
17	16.40	9.10	19.85	13.20	9.60	17.70	19.10	10.85	11.85	15.00	15.55	5.40
18	16.10	9.10	19.70	11.40	9.90	17.70	15.30	7.60	15.60	13.20	16.10	8.90
19	17.00	13.80	20.05	10.90	10.10	17.45	12.50	10.10	16.50	13.00	17.30	11.30
20	16.80	15.50	19.65	11.80	11.20	18.80	12.50	10.65	16.70	12.50	18.10	12.15
21	16.20	14.50	19.65	10.80	12.00	19.25	10.80	11.50	16.40	11.90	18.30	13.20
22	16.25	13.85	14.35	11.90	11.80	17.50	11.75	12.15	16.35	12.50	9.30	17.65
23	15.50	13.75	12.65	16.00	11.70	18.95	11.30	12.35	12.70	11.55	6.30	15.85
24	11.70	10.40	11.60	18.15	10.55	18.20	12.35	16.40	11.90	10.70	6.90	11.00
25	9.90	13.75	11.30	18.45	10.60	17.65	12.80	17.40	11.35	12.00	8.50	8.10
26	8.55	13.55	12.70	16.80	10.95	17.95	13.00	17.40	11.40	12.10	9.95	7.60
27	11.75	9.70	12.45	18.20	11.10	17.20	13.15	17.65	11.30	13.40	10.10	13.60
28	14.70	10.65	11.65	15.65	12.50	14.20	13.00	17.20	11.30	13.60	10.55	14.35
29	15.35	9.35	12.40	13.40	---	13.85	12.30	16.90	11.45	15.80	10.35	14.00
30	16.00	9.05	11.40	14.20	---	13.95	13.40	11.30	11.50	16.15	12.10	11.70
31	15.65	---	10.55	13.35	---	12.60	---	11.15	---	17.50	12.70	---
MAX	17.00	17.20	20.05	18.45	18.10	19.25	19.10	17.65	17.00	17.50	18.95	17.65
CAL YR 1989	LOW 20.05											
WTR YR 1990	LOW 20.05											



394742083094800. PK-9 ST OF OH AT PICKAWAY COR INST NR ORIENT OH  
MAXIMUM DAILY DEPTH BELOW LAND S. (FT), DEPTH TO WATER BL. LSD

## 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

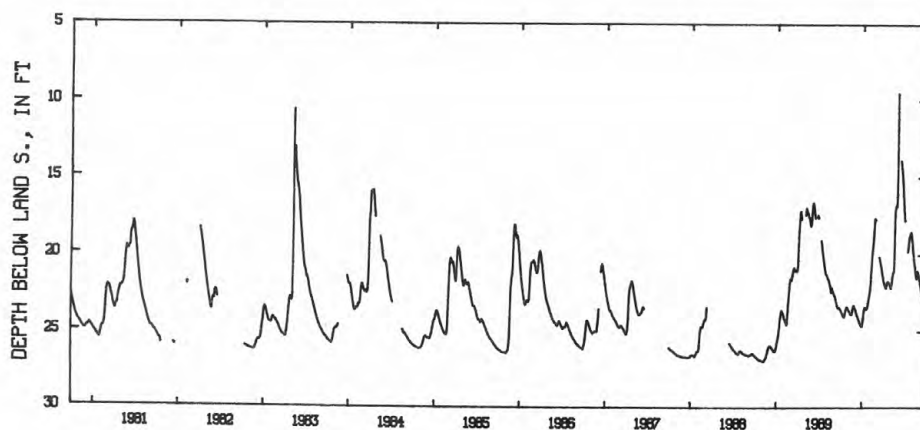
map. Measuring point: Floor of instrument shelter, 3.00 ft above land-surface datum.

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, 9.52 ft below land-surface datum, June 1, 1990.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.54	23.46	23.45	24.58	22.60	---	21.55	21.99	9.52	17.73	18.85	21.41
2	23.57	23.49	23.48	24.56	22.51	---	21.64	22.07	---	17.77	18.98	21.49
3	23.62	23.53	23.53	24.44	22.41	---	21.71	22.13	---	---	19.13	21.58
4	23.65	23.55	23.54	24.30	22.25	---	21.76	22.14	---	---	19.28	21.67
5	23.67	23.57	23.60	24.17	22.15	---	21.82	22.00	---	---	19.44	21.75
6	23.72	23.61	23.67	24.04	21.99	---	21.87	21.91	---	---	19.60	21.84
7	23.76	23.63	23.73	23.90	21.73	---	21.92	21.89	---	---	19.77	21.93
8	23.80	23.66	23.76	23.76	21.47	---	21.97	21.79	---	---	19.91	22.03
9	23.83	23.71	23.81	23.63	21.15	---	21.99	21.64	---	---	20.05	22.12
10	23.87	23.76	23.87	23.54	20.76	---	22.03	21.46	---	---	20.19	22.22
11	23.90	23.77	23.91	23.47	20.45	---	22.09	21.33	---	---	20.33	22.30
12	23.93	23.81	23.96	23.41	20.15	---	22.12	21.24	---	---	20.46	22.39
13	23.96	23.82	24.00	23.40	19.92	---	22.12	21.14	13.90	---	20.58	22.45
14	23.99	23.83	24.05	23.39	19.74	---	22.07	21.10	13.99	---	20.70	22.50
15	24.01	23.83	24.09	23.38	19.70	20.13	22.00	21.09	14.15	19.77	20.82	22.57
16	24.03	23.85	24.14	23.39	19.38	20.18	21.89	21.07	14.29	19.75	20.94	22.63
17	24.02	23.85	24.18	23.41	19.28	20.26	21.80	20.85	14.42	19.61	21.06	22.70
18	23.99	23.83	24.22	23.47	19.13	20.35	21.76	20.54	14.54	19.43	21.18	22.75
19	23.94	23.77	24.26	23.49	18.83	20.43	21.73	19.84	14.71	19.24	21.28	22.79
20	23.79	23.64	24.30	23.49	18.55	20.51	21.70	18.39	14.90	19.09	21.39	22.85
21	23.72	23.53	24.35	23.43	18.22	20.58	21.69	17.53	15.14	18.96	21.49	22.90
22	23.65	23.46	24.39	23.43	17.90	20.66	21.71	17.13	15.33	18.84	21.49	22.95
23	23.57	23.39	24.42	23.40	17.64	20.77	21.74	16.94	15.59	18.76	21.06	23.01
24	23.50	23.35	24.44	23.32	17.63	20.85	21.76	16.83	15.88	18.73	21.02	23.07
25	23.45	23.30	24.46	23.25	17.69	20.94	21.78	16.82	16.16	18.69	21.03	23.11
26	23.41	23.27	24.50	23.16	17.70	21.04	21.79	16.82	16.42	18.63	21.05	23.16
27	23.37	23.27	24.53	23.08	17.73	21.13	21.80	16.86	16.69	18.56	21.07	23.21
28	23.36	23.34	24.58	22.99	---	21.22	21.83	16.86	16.96	18.53	21.11	23.25
29	23.37	23.38	24.60	22.93	---	21.29	21.89	16.49	17.21	18.55	21.16	23.29
30	23.37	23.41	24.62	22.73	---	21.37	21.94	16.29	17.48	18.60	21.24	23.34
31	23.43	---	24.62	22.68	---	21.46	---	12.00	---	18.71	21.32	---
MAX	24.03	23.85	24.62	24.58	22.60	21.46	22.12	22.14	17.48	19.77	21.49	23.34
CAL YR 1989	LOW 26.01											
WTR YR 1990	LOW 24.62											



390359083015100 PI-2  
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

## GROUND-WATER RECORDS

## 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.

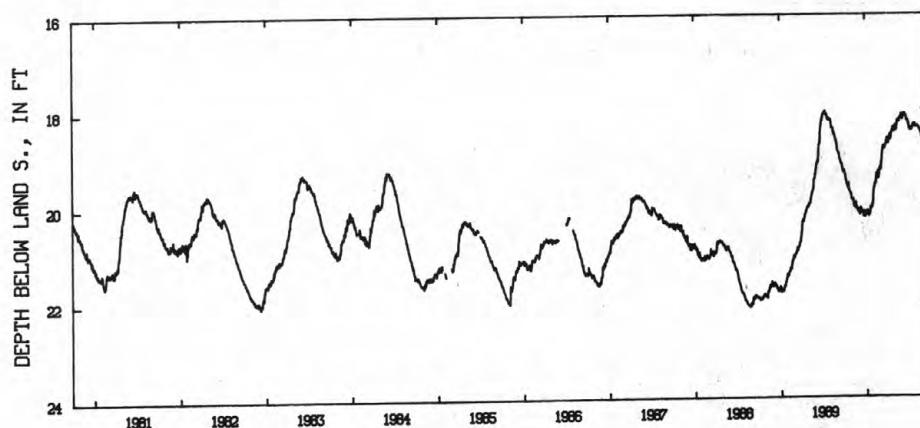
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORDED.--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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.29	19.88	20.16	20.21	19.94	19.30	18.65	18.43	18.19	18.26	18.37	18.65
2	19.28	19.88	20.14	20.22	19.88	19.24	18.63	18.46	18.16	18.30	18.38	18.67
3	19.33	19.89	20.15	20.22	19.75	19.22	18.61	18.47	18.10	18.30	18.37	18.72
4	19.35	19.89	20.15	20.20	19.68	19.24	18.60	18.45	18.19	18.29	18.36	18.73
5	19.35	19.88	20.10	20.20	19.68	19.24	18.66	18.36	18.20	18.33	18.35	18.71
6	19.38	19.90	20.18	20.19	19.65	19.27	18.66	18.37	18.17	18.39	18.36	18.71
7	19.39	19.90	20.21	20.19	19.64	19.27	18.69	18.37	18.22	18.42	18.37	18.68
8	19.46	19.88	20.19	20.13	19.64	19.21	18.72	18.38	18.21	18.40	18.38	18.70
9	19.50	19.88	20.09	20.12	19.56	19.11	18.71	18.37	18.15	18.39	18.37	18.69
10	19.50	19.97	20.07	20.17	19.55	19.10	18.64	18.33	18.15	18.43	18.35	18.67
11	19.54	19.97	20.11	20.15	19.53	19.03	18.59	18.45	18.16	18.45	18.36	18.69
12	19.55	20.04	20.11	20.18	19.57	18.97	18.63	18.45	18.15	18.43	18.38	18.70
13	19.58	20.03	20.10	20.24	19.51	18.92	18.64	18.40	18.12	18.43	18.37	18.72
14	19.57	19.96	20.13	20.23	19.55	18.87	18.59	18.41	18.09	18.42	18.39	18.70
15	19.59	19.96	20.13	20.17	19.46	18.84	18.53	18.35	18.12	18.40	18.39	18.70
16	19.61	19.95	20.16	20.18	19.35	18.83	18.54	18.33	18.13	18.43	18.39	18.78
17	19.64	20.00	20.17	20.17	19.43	18.78	18.60	18.25	18.13	18.44	18.41	18.84
18	19.66	20.07	20.17	20.19	19.42	18.83	18.64	18.27	18.10	18.44	18.41	18.84
19	19.63	20.07	20.17	20.21	19.40	18.84	18.62	18.28	18.16	18.43	18.42	18.81
20	19.55	19.95	20.16	20.15	19.45	18.84	18.55	18.23	18.15	18.39	18.45	18.85
21	19.67	20.05	20.21	20.05	19.42	18.80	18.50	18.27	18.16	18.38	18.44	18.85
22	19.70	20.05	20.24	20.07	19.34	18.77	18.50	18.25	18.16	18.38	18.44	18.82
23	19.70	20.06	20.25	20.08	19.30	18.83	18.49	18.24	18.14	18.32	18.46	18.89
24	19.71	20.09	20.23	20.04	19.40	18.81	18.47	18.26	18.20	18.35	18.50	18.82
25	19.73	20.06	20.13	20.04	19.45	18.76	18.45	18.26	18.24	18.36	18.51	18.82
26	19.74	20.09	20.22	20.06	19.45	18.77	18.44	18.20	18.23	18.37	18.51	18.99
27	19.75	20.09	20.22	20.06	19.37	18.77	18.43	18.20	18.24	18.35	18.53	19.02
28	19.75	20.14	20.26	20.07	19.38	18.75	18.39	18.19	18.24	18.34	18.55	19.03
29	19.77	20.15	20.25	20.02	---	18.73	18.41	18.17	18.23	18.32	18.57	19.05
30	19.76	20.10	20.25	19.98	---	18.69	18.41	18.19	18.24	18.31	18.62	19.06
31	19.80	---	20.15	20.00	---	18.65	---	18.20	---	18.33	18.65	---
MAX	19.80	20.15	20.26	20.24	19.94	19.30	18.72	18.47	18.24	18.45	18.65	19.06

CAL YR 1989 LOW 21.82  
WTR YR 1990 LOW 20.26411401081025000 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.

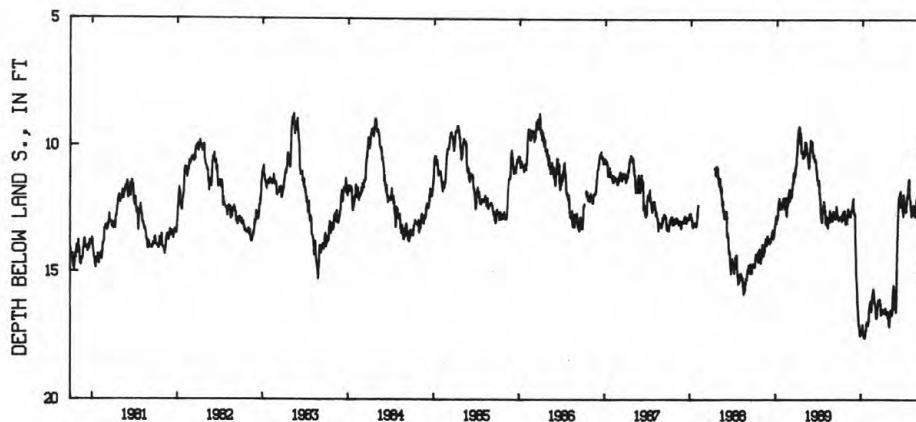
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--May 1972 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 17.58 ft below land-surface datum, Jan. 18, 1990; minimum daily low, 7.94 ft below land-surface datum, May 4, 1975.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.87	13.07	12.69	17.39	17.07	16.22	16.57	17.05	15.97	11.99	12.56	12.30
2	12.82	12.77	12.68	17.45	16.93	16.24	16.43	17.13	15.08	12.20	12.77	12.22
3	12.87	12.91	12.70	17.43	16.94	16.32	16.49	17.00	14.39	12.30	12.78	12.25
4	12.86	12.70	12.66	17.24	16.77	16.35	16.53	16.89	13.73	12.29	12.75	12.17
5	12.79	12.69	12.67	17.21	16.57	16.49	16.51	16.62	13.48	12.41	12.60	12.72
6	12.91	12.48	12.77	17.31	16.36	16.73	16.45	16.55	13.20	12.46	12.65	12.75
7	12.91	12.78	13.30	17.25	16.34	16.79	16.50	16.48	12.76	12.50	12.61	12.78
8	12.90	12.70	13.71	17.13	16.34	16.79	16.55	16.50	12.42	12.53	12.60	12.81
9	12.90	12.67	14.08	17.05	16.23	16.76	16.60	16.54	12.21	12.62	12.47	12.84
10	12.99	12.59	14.54	17.35	16.12	16.75	16.55	16.60	12.00	12.59	12.41	12.93
11	12.88	12.79	14.88	17.35	16.12	16.67	16.53	16.69	12.31	12.55	12.31	12.96
12	12.87	12.69	15.19	17.39	16.21	16.49	16.60	16.69	12.30	12.32	12.37	13.00
13	12.70	12.70	15.29	17.53	16.49	16.38	16.57	16.58	12.10	12.21	12.38	13.08
14	12.87	12.58	15.45	17.53	16.54	16.22	16.49	16.62	11.88	12.06	12.58	13.04
15	12.66	12.72	15.59	17.53	16.45	16.13	16.40	16.51	11.82	11.95	12.69	13.17
16	12.70	12.73	15.82	17.55	16.20	16.13	16.45	16.31	11.80	11.99	12.74	12.98
17	12.59	12.81	16.15	17.55	16.11	16.07	16.62	15.97	11.78	12.02	12.76	13.09
18	12.92	12.68	16.31	17.58	15.94	16.08	16.62	15.76	11.84	11.89	12.77	13.26
19	12.83	12.67	16.40	17.53	15.87	16.17	16.53	15.64	12.40	11.65	12.61	13.29
20	12.70	12.56	16.52	17.46	15.88	16.17	16.59	15.49	12.31	11.55	12.78	13.17
21	12.71	12.60	16.71	17.28	15.88	16.12	16.63	15.55	12.28	11.41	12.77	13.11
22	12.79	12.56	16.87	17.31	15.66	16.04	16.53	15.79	12.21	11.32	12.51	12.99
23	12.56	12.57	17.09	17.26	15.64	16.27	16.57	15.87	12.30	11.31	12.27	13.00
24	12.77	12.36	17.01	17.09	15.67	16.19	16.61	16.28	12.31	11.32	12.09	13.04
25	12.87	12.34	17.03	16.97	15.82	16.23	16.53	16.41	12.43	12.04	12.05	12.98
26	13.05	12.16	17.08	17.07	15.95	16.46	16.79	16.17	12.52	12.07	12.09	12.93
27	13.09	12.26	17.32	17.04	15.96	16.63	16.79	16.10	12.61	12.09	12.13	13.08
28	13.06	12.08	17.43	17.07	16.13	16.66	16.78	15.94	12.53	12.15	12.13	13.03
29	13.01	12.50	17.49	16.93	---	16.64	16.81	16.03	12.77	12.18	12.33	13.10
30	12.99	12.50	17.49	17.01	---	16.61	16.97	16.55	11.92	12.38	12.34	13.12
31	13.01	---	17.43	16.96	---	16.61	---	16.37	---	12.54	12.30	---
MAX	13.09	13.07	17.49	17.58	17.07	16.79	16.97	17.13	15.97	12.62	12.78	13.25

CAL YR 1989 LOW 17.49  
WTR YR 1990 LOW 17.58394438084335900 PR-2  
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)



## GROUND-WATER RECORDS

## 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.

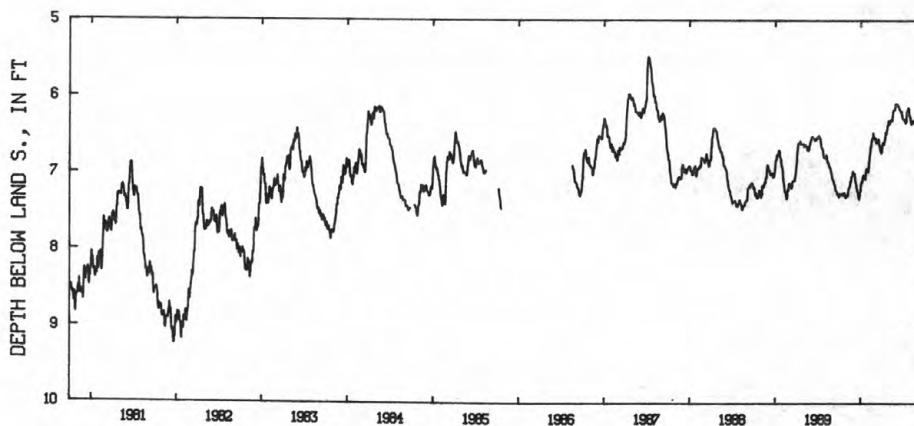
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.28	7.28	7.02	7.16	6.98	6.55	6.70	6.31	6.10	6.29	6.29	6.14
2	7.26	7.28	7.02	7.13	6.97	6.54	6.67	6.32	6.11	6.29	6.31	6.14
3	7.27	7.29	7.02	7.12	6.95	6.53	6.64	6.35	6.11	6.29	6.34	6.16
4	7.27	7.29	7.02	7.12	6.92	6.53	6.62	6.35	6.09	6.29	6.35	6.17
5	7.28	7.29	7.01	7.10	6.88	6.54	6.60	6.35	6.10	6.29	6.35	6.18
6	7.28	7.27	7.00	7.11	6.85	6.56	6.60	6.33	6.10	6.30	6.35	6.19
7	7.27	7.25	7.03	7.11	6.82	6.59	6.61	6.32	6.11	6.31	6.34	6.19
8	7.27	7.23	7.07	7.09	6.80	6.60	6.62	6.32	6.12	6.31	6.33	6.18
9	7.27	7.21	7.10	7.06	6.77	6.60	6.62	6.32	6.12	6.32	6.33	6.19
10	7.27	7.19	7.11	7.04	6.73	6.60	6.62	6.31	6.11	6.32	6.33	6.21
11	7.26	7.18	7.13	7.04	6.70	6.60	6.60	6.30	6.12	6.34	6.32	6.24
12	7.26	7.17	7.15	7.02	6.67	6.59	6.58	6.31	6.13	6.34	6.31	6.26
13	7.27	7.17	7.17	7.03	6.65	6.58	6.57	6.31	6.14	6.33	6.31	6.28
14	7.28	7.17	7.19	7.04	6.64	6.58	6.57	6.30	6.15	6.32	6.31	6.28
15	7.28	7.17	7.20	7.04	6.64	6.57	6.54	6.30	6.16	6.28	6.31	6.27
16	7.27	7.15	7.21	7.04	6.59	6.57	6.51	6.30	6.16	6.24	6.33	6.26
17	7.26	7.12	7.23	7.05	6.57	6.56	6.49	6.27	6.17	6.20	6.34	6.26
18	7.27	7.10	7.24	7.05	6.57	6.55	6.46	6.23	6.17	6.19	6.34	6.28
19	7.27	7.10	7.25	7.07	6.54	6.58	6.48	6.21	6.18	6.18	6.34	6.29
20	7.27	7.10	7.27	7.07	6.54	6.61	6.48	6.19	6.18	6.17	6.33	6.28
21	7.27	7.06	7.28	7.05	6.54	6.62	6.48	6.18	6.19	6.17	6.32	6.28
22	7.25	7.04	7.31	7.01	6.54	6.63	6.45	6.17	6.20	6.16	6.30	6.28
23	7.26	7.04	7.32	6.97	6.51	6.66	6.43	6.17	6.20	6.14	6.29	6.26
24	7.27	7.03	7.33	6.95	6.47	6.67	6.42	6.17	6.19	6.14	6.26	6.25
25	7.29	7.03	7.33	6.94	6.51	6.68	6.40	6.17	6.20	6.16	6.24	6.25
26	7.30	7.02	7.30	6.93	6.53	6.70	6.38	6.17	6.23	6.20	6.22	6.25
27	7.31	6.99	7.27	6.94	6.53	6.71	6.37	6.16	6.25	6.23	6.20	6.24
28	7.31	6.97	7.24	6.95	6.54	6.72	6.36	6.14	6.27	6.25	6.18	6.25
29	7.31	6.98	7.23	6.95	---	6.73	6.34	6.11	6.28	6.25	6.16	6.26
30	7.30	6.99	7.23	6.96	---	6.72	6.32	6.09	6.28	6.26	6.14	6.27
31	7.29	---	7.21	6.97	---	6.72	---	6.10	---	6.27	6.14	---
MAX	7.31	7.29	7.33	7.16	6.98	6.73	6.70	6.35	6.28	6.34	6.35	6.29
CAL YR 1989	LOW 7.33											
WTR YR 1990	LOW 7.33											



404625082305100 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.

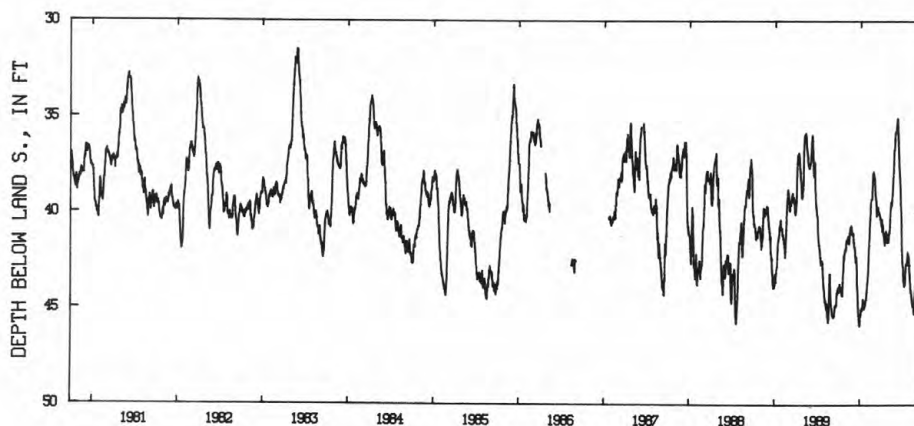
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--February 1971 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 45.88 ft below land-surface datum, Dec. 31, 1989; minimum daily low, 20.93 ft below land-surface datum, Feb. 28, 1971.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43.97	41.89	41.09	45.79	43.72	38.13	40.59	41.50	35.80	42.46	43.16	43.25
2	44.13	41.54	41.09	45.40	43.61	38.17	40.70	41.51	35.73	42.69	43.42	43.48
3	44.13	41.48	41.36	45.31	43.57	38.36	40.32	41.28	35.79	42.78	43.60	43.52
4	44.03	41.42	41.49	45.31	43.29	38.59	40.61	41.16	35.71	42.98	43.73	43.70
5	43.88	41.41	41.54	45.18	43.06	38.99	40.97	40.98	35.48	43.23	44.09	43.74
6	43.72	41.55	41.79	45.03	42.65	39.10	40.99	41.05	35.31	43.58	44.13	43.73
7	43.85	41.52	41.81	45.04	42.45	39.11	40.59	40.91	35.29	43.56	44.01	43.65
8	43.96	41.51	41.77	45.00	41.91	39.28	40.76	40.77	35.06	43.69	44.18	43.72
9	44.05	41.37	41.79	44.95	41.49	39.39	40.95	40.48	35.17	43.80	44.29	43.89
10	44.03	41.22	42.09	45.08	40.96	39.58	41.10	40.08	35.49	43.53	44.40	43.63
11	43.88	41.29	42.30	44.90	40.67	39.78	41.16	39.69	35.87	43.74	44.46	43.75
12	44.02	41.47	42.50	44.97	40.36	40.19	41.16	39.71	36.30	43.73	44.64	43.67
13	44.09	41.58	42.59	44.86	40.11	40.01	41.22	39.51	36.71	43.52	44.78	43.64
14	44.17	41.63	42.36	44.48	39.90	39.97	41.40	39.42	37.01	43.14	44.84	43.63
15	44.26	41.39	42.30	44.58	39.67	39.91	41.53	39.64	37.44	42.85	44.62	43.64
16	44.32	41.30	42.48	44.73	39.29	39.91	41.66	39.52	37.78	42.69	44.75	43.83
17	44.32	41.15	42.80	44.79	39.31	39.69	41.52	39.33	37.88	42.72	44.80	43.64
18	44.32	41.01	42.99	44.93	39.29	39.77	41.03	39.12	38.08	42.63	44.82	44.01
19	43.88	40.83	43.54	44.99	39.29	39.91	41.11	38.93	38.25	42.74	45.16	43.57
20	43.41	40.83	43.86	44.81	39.30	40.08	41.01	38.64	38.54	42.67	45.24	43.27
21	43.07	40.76	43.97	44.82	38.90	39.99	40.94	38.57	38.77	42.52	45.07	43.31
22	42.94	40.71	44.15	44.84	38.50	39.96	41.15	38.20	39.12	42.52	44.91	43.30
23	42.24	40.69	44.52	44.75	38.14	40.10	41.47	37.84	39.47	42.04	44.46	43.40
24	42.55	40.73	44.76	44.65	37.93	40.11	41.30	37.51	39.78	42.33	44.13	43.55
25	42.29	40.88	45.04	44.64	37.93	40.11	41.11	36.97	40.01	42.22	44.00	43.11
26	42.13	41.12	45.32	44.48	37.87	40.22	41.47	36.72	40.33	42.19	43.71	42.52
27	42.15	41.09	45.41	44.45	37.96	40.30	41.54	36.66	40.77	42.29	43.82	42.65
28	41.94	41.17	45.44	44.49	38.12	40.27	41.49	36.47	41.48	42.31	43.47	42.85
29	42.03	41.05	45.66	44.27	---	40.37	41.51	36.26	41.86	42.60	43.53	42.86
30	41.90	41.16	45.83	44.13	---	40.52	41.50	35.90	42.15	42.90	43.28	42.20
31	42.00	---	45.88	43.95	---	40.56	---	35.78	---	43.09	43.34	---
MAX	44.32	41.89	45.88	45.79	43.72	40.56	41.66	41.51	42.15	43.80	45.24	44.01
CAL YR 1989	LOW 45.88											
WTR YR 1990	LOW 45.88											



391341083172200 RO-7  
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

## GROUND-WATER RECORDS

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.

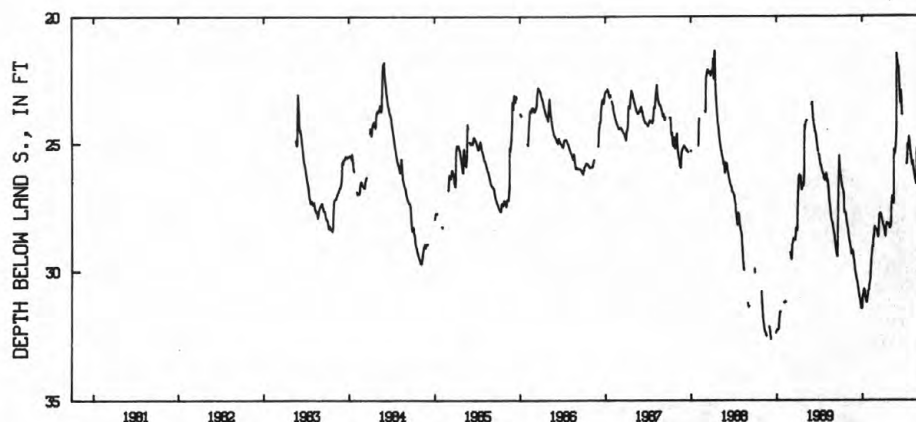
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26.25	28.39	29.95	31.19	30.48	28.38	28.22	28.31	21.72	---	25.69	26.05
2	26.32	28.46	30.02	31.01	30.42	28.37	28.23	28.27	21.73	---	25.76	26.13
3	26.40	28.54	30.07	30.97	30.40	28.40	28.27	28.26	21.80	---	25.81	26.22
4	26.49	28.60	30.10	30.92	30.31	28.43	28.28	28.25	21.90	---	25.85	26.31
5	26.53	28.66	30.14	30.87	30.21	28.46	28.34	28.10	21.95	---	25.85	26.39
6	26.59	28.72	30.21	30.79	30.01	28.51	28.39	27.54	21.98	---	25.71	26.49
7	26.63	28.79	30.27	30.73	29.88	28.53	28.46	27.35	22.00	---	25.81	26.58
8	26.67	28.83	30.31	30.69	29.73	28.60	28.53	27.29	22.03	---	25.89	26.69
9	26.74	28.89	30.36	30.69	29.47	28.66	28.59	27.19	22.18	---	25.96	26.82
10	26.79	28.95	30.38	30.73	29.36	28.66	28.64	27.08	22.49	25.81	25.99	26.90
11	26.81	28.99	30.42	30.78	29.30	28.59	28.64	27.09	22.78	25.81	26.06	27.02
12	26.86	29.04	30.50	30.89	29.15	28.35	28.42	27.19	23.01	25.75	26.15	27.10
13	26.92	29.09	30.57	30.97	29.02	28.13	28.27	27.22	23.25	25.64	26.24	27.15
14	26.95	29.13	30.63	31.03	29.04	27.99	28.18	27.28	23.41	25.46	26.29	27.22
15	27.15	29.27	30.69	31.08	29.05	27.87	28.13	27.32	23.38	25.04	26.32	27.28
16	27.57	29.32	30.77	31.10	29.05	27.76	28.11	27.36	22.99	25.13	26.37	27.36
17	27.64	29.27	30.83	31.13	28.76	27.75	28.11	27.30	22.93	25.23	26.43	27.45
18	27.72	29.22	30.91	31.18	28.63	27.75	28.14	25.25	23.14	25.24	26.48	27.51
19	27.72	29.20	30.97	31.21	28.67	27.74	28.16	25.30	23.34	25.06	26.53	27.61
20	27.70	29.18	31.02	31.21	28.67	27.73	28.17	25.43	23.57	24.85	26.58	27.68
21	27.68	29.23	31.03	31.15	28.51	27.75	28.19	25.43	23.76	24.75	26.59	27.72
22	27.72	29.25	31.08	31.01	28.37	27.78	28.19	25.40	23.89	24.82	26.56	27.80
23	27.77	29.30	31.14	30.93	28.26	27.86	28.19	25.31	---	24.91	25.44	27.87
24	27.84	29.38	31.19	30.90	28.29	27.92	28.17	25.22	---	25.01	25.23	27.90
25	27.93	29.48	31.25	30.80	28.32	27.94	28.19	25.13	---	25.13	25.20	27.79
26	28.00	29.53	31.32	30.76	28.32	27.97	28.18	25.02	---	25.22	25.33	27.10
27	28.07	29.56	31.39	30.76	28.34	28.02	28.14	24.79	---	25.31	25.50	26.40
28	28.12	29.65	31.45	30.72	28.37	28.06	28.25	24.55	---	25.38	25.63	25.84
29	28.19	29.74	31.46	30.71	---	28.08	28.30	24.35	---	25.47	25.73	25.38
30	28.24	29.86	31.46	30.70	---	28.13	28.32	21.47	---	25.55	25.84	25.00
31	28.32	---	31.43	30.56	---	28.21	---	21.55	---	25.62	25.96	---
MAX	28.32	29.86	31.46	31.21	30.48	28.66	28.64	28.31	23.89	25.81	26.59	27.90
CAL YR 1989	LOW 32.30											
WTR YR 1990	LOW 31.46											



— 391913082580500 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.

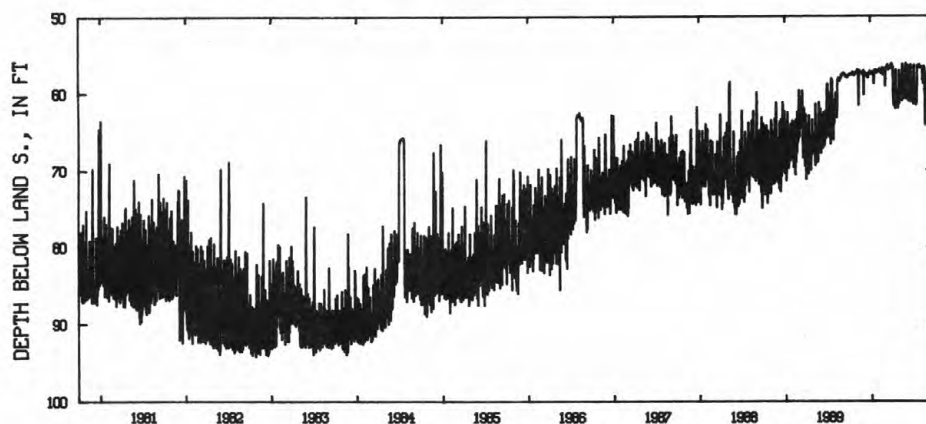
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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, 56.23 ft below land-surface datum, Apr. 2 and June 3, 1990.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57.82	57.53	57.53	57.54	57.32	57.37	56.31	60.94	60.70	59.81	56.78	61.67
2	57.71	57.54	57.49	57.61	57.23	57.08	56.23	61.30	56.81	61.18	56.78	61.76
3	57.76	57.57	57.54	57.58	57.26	56.83	56.32	60.05	56.23	61.32	56.77	61.90
4	57.71	57.58	57.54	57.47	57.26	56.91	56.26	61.39	60.27	59.92	56.65	62.28
5	57.71	57.38	57.13	57.60	57.35	57.03	56.33	61.43	60.81	61.51	56.57	62.22
6	57.59	57.22	60.28	57.59	57.31	57.34	56.47	57.13	60.19	60.90	56.68	62.22
7	57.70	57.22	58.03	57.56	57.30	59.15	56.64	59.15	60.64	56.81	56.78	62.18
8	57.63	57.13	57.88	57.35	57.28	57.44	56.71	60.15	59.93	56.44	56.81	62.20
9	57.77	57.02	57.65	57.28	56.98	56.87	56.72	60.26	56.48	60.16	56.79	62.01
10	57.62	57.34	57.40	57.45	56.89	56.83	60.55	60.37	56.41	61.26	56.73	62.30
11	57.64	57.34	57.49	57.44	56.92	56.78	60.76	60.54	60.42	61.32	56.72	62.39
12	57.63	57.47	57.51	57.39	57.14	56.72	61.66	59.79	60.95	61.20	56.74	62.36
13	57.64	57.52	57.52	57.65	57.06	56.77	59.41	58.39	60.83	60.19	58.39	62.41
14	57.59	61.65	57.48	57.65	57.17	56.63	57.76	60.19	61.09	60.06	56.69	62.35
15	57.47	59.09	57.49	57.48	57.12	56.48	60.43	60.80	61.04	59.76	58.23	62.41
16	57.44	57.12	57.69	57.55	57.01	56.48	60.81	60.16	59.72	61.60	58.82	62.37
17	57.51	57.28	57.71	57.51	57.50	56.35	61.26	61.04	56.59	60.07	57.35	62.76
18	57.69	57.57	57.75	58.85	57.49	56.57	62.03	60.72	60.02	61.40	56.61	62.75
19	57.66	57.59	57.74	57.74	57.40	57.06	62.07	58.46	60.42	60.40	56.71	62.30
20	57.34	57.27	57.73	57.48	57.53	57.00	61.97	56.28	60.75	59.26	56.81	62.36
21	57.48	57.41	57.91	57.06	57.49	56.93	61.41	59.85	61.16	59.02	56.80	62.36
22	57.70	57.40	58.08	57.17	57.19	56.77	57.03	60.85	60.68	56.46	58.55	62.21
23	57.66	57.45	58.08	57.18	56.77	56.89	61.19	60.63	59.26	56.55	64.16	62.19
24	57.78	57.48	58.04	57.09	57.10	56.87	61.56	60.71	56.38	56.64	60.35	62.48
25	57.83	57.42	57.59	57.05	57.67	56.82	61.78	60.76	60.40	56.71	62.20	62.41
26	57.81	57.43	57.49	57.29	57.69	56.84	61.97	60.03	61.02	56.80	58.60	62.37
27	57.71	57.43	57.50	57.30	57.40	56.90	61.38	58.20	61.06	56.75	63.47	62.49
28	57.70	57.63	57.58	57.46	57.41	56.87	60.96	58.40	60.95	56.68	63.21	62.59
29	57.59	57.67	57.54	57.39	---	56.74	59.85	60.62	61.16	56.54	57.42	62.51
30	57.48	57.62	57.35	57.18	---	56.50	62.02	60.78	60.20	56.38	60.66	62.36
31	57.35	---	57.22	57.41	---	56.36	---	60.62	---	56.64	61.32	---
MAX	57.83	61.65	60.28	58.85	57.69	59.15	62.07	61.43	61.16	61.60	64.16	62.76

CAL YR 1989 LOW 71.46  
WTR YR 1990 LOW 64.16401712084103500 SH-4 STOLLE CORP SIDNEY OH  
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)



## GROUND-WATER RECORDS

## 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.

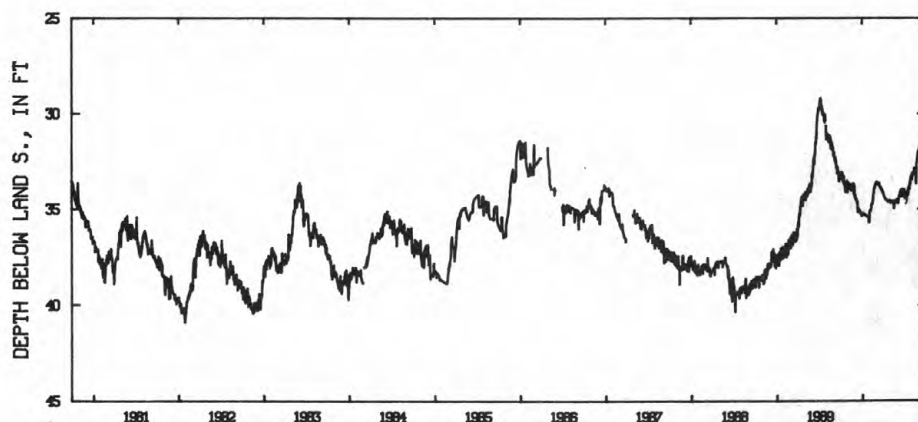
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33.36	34.13	34.31	35.38	35.71	33.69	34.17	34.57	34.54	33.98	33.25	31.95
2	33.36	33.74	34.38	35.33	35.68	33.67	34.21	34.60	34.51	33.98	33.24	31.92
3	33.37	33.66	34.43	35.32	35.14	33.68	34.23	34.60	34.63	34.36	33.47	31.95
4	33.12	33.64	34.29	35.22	35.10	33.59	34.19	34.69	34.53	34.49	33.30	32.17
5	33.08	33.64	34.39	35.27	35.15	33.65	34.27	34.61	34.64	34.26	33.20	31.92
6	33.35	33.63	34.43	35.24	35.09	33.70	34.35	34.60	34.69	34.50	33.30	31.68
7	33.44	33.75	34.54	35.27	35.11	33.71	34.35	34.60	34.48	34.22	33.11	31.70
8	33.11	33.97	34.55	35.25	35.11	33.72	34.38	34.60	34.45	34.16	33.18	31.60
9	33.10	33.70	34.49	35.25	35.00	33.62	34.42	34.60	34.42	34.70	33.14	31.57
10	33.15	33.81	34.57	35.27	34.99	33.66	34.44	34.58	34.36	34.57	33.10	31.45
11	33.46	33.80	34.58	35.26	34.73	33.69	34.47	34.62	34.30	34.49	33.12	31.50
12	33.51	33.79	34.66	35.27	34.78	33.72	34.50	34.62	34.37	34.59	33.10	31.23
13	33.57	33.77	34.64	35.33	34.77	33.75	34.51	34.63	34.22	34.32	32.91	31.25
14	33.60	33.76	35.10	35.34	34.76	33.66	34.50	34.64	34.15	34.19	32.85	31.11
15	33.36	33.78	35.15	35.34	34.75	33.73	34.50	34.66	34.10	34.09	32.96	31.05
16	33.30	33.79	35.00	35.34	34.60	33.65	34.50	34.72	34.05	34.30	33.07	31.02
17	33.63	34.05	35.19	35.35	34.59	33.71	34.55	34.63	34.02	34.04	33.06	30.99
18	33.68	33.79	34.96	35.34	34.49	33.79	34.57	34.62	33.99	34.00	33.16	31.25
19	33.70	33.78	35.00	35.37	34.23	33.85	34.58	34.97	34.12	34.25	33.05	30.79
20	33.77	33.70	35.05	35.37	34.22	33.88	34.58	34.61	34.23	33.94	32.90	30.80
21	33.78	33.73	35.08	35.38	34.17	33.91	34.58	34.57	34.36	33.87	33.60	30.87
22	33.90	33.72	35.10	35.40	33.96	33.85	34.58	34.56	34.07	33.83	33.68	30.68
23	34.06	33.69	35.13	35.41	33.92	33.93	34.56	34.70	33.97	33.78	32.80	30.68
24	34.12	33.70	35.10	35.35	33.91	33.96	34.64	34.66	33.97	33.96	32.59	30.74
25	33.93	33.67	35.16	35.40	33.92	33.99	34.63	34.60	34.25	33.74	32.61	30.65
26	33.63	33.70	35.20	35.39	33.80	34.03	34.58	34.60	34.02	33.61	32.50	30.40
27	33.91	33.69	35.24	35.38	33.76	34.07	34.57	34.57	33.98	33.74	32.23	30.50
28	33.95	34.13	35.22	35.40	33.68	33.99	34.55	34.55	34.15	33.50	32.22	30.31
29	33.86	34.26	35.28	35.39	---	34.08	34.55	34.68	34.25	33.40	32.17	30.47
30	33.53	33.79	35.32	35.45	---	34.09	34.55	34.64	33.99	33.32	32.05	30.54
31	33.56	---	35.35	35.68	---	34.12	---	34.58	---	33.33	31.95	---
MAX	34.12	34.26	35.35	35.68	35.71	34.12	34.64	34.97	34.69	34.70	33.68	32.17
CAL YR 1989	LOW 37.97											
WTR YR 1990	LOW 35.71											



404939081203800 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.

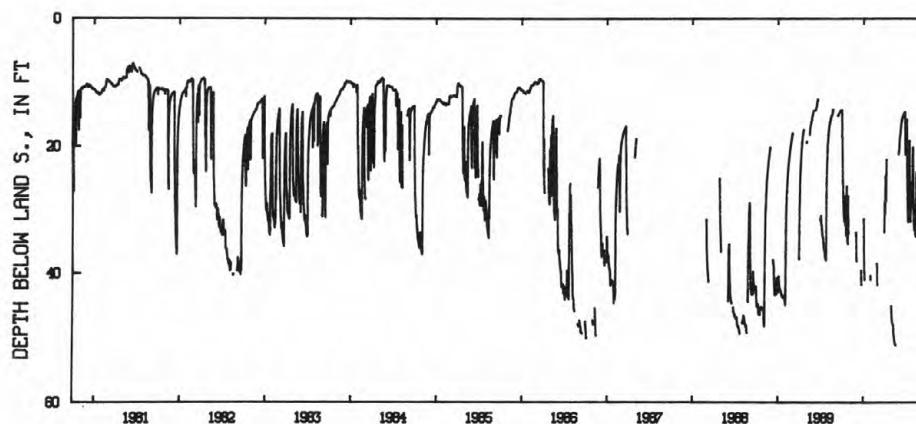
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--April 1975 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 51.10 ft below land-surface datum, May 20, 1990; minimum daily low, 7.10 ft below land-surface datum, June 15, 1981.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.40	---	36.00	---	40.95	40.95	28.80	45.10	21.00	17.40	26.50	32.70
2	17.25	---	37.35	31.50	---	41.80	30.80	46.10	20.40	16.00	29.00	33.25
3	21.10	---	38.10	35.85	---	---	30.70	46.80	19.90	16.15	30.60	33.35
4	23.05	---	---	38.25	---	---	24.90	47.30	19.30	15.85	31.85	26.20
5	25.60	---	---	39.80	---	---	24.80	47.65	18.80	17.35	32.80	30.00
6	27.45	---	---	41.00	---	---	26.60	47.80	18.45	22.95	33.20	31.90
7	28.80	---	---	---	---	---	28.75	---	18.15	26.00	30.00	32.90
8	29.90	---	---	---	---	---	24.40	---	17.85	28.30	29.30	33.45
9	30.75	---	---	---	---	---	22.15	48.00	17.40	30.00	31.75	33.60
10	31.50	---	---	---	---	---	---	48.60	17.00	31.30	33.20	26.65
11	31.90	---	---	---	---	---	---	49.15	16.55	31.95	34.05	27.70
12	27.85	---	---	---	---	---	---	49.60	16.30	29.00	34.25	30.10
13	30.00	---	---	---	---	---	---	49.85	16.00	23.60	33.90	31.25
14	32.35	---	---	---	---	---	---	50.15	15.85	21.70	25.60	31.90
15	32.35	---	---	---	---	---	---	50.40	15.65	20.30	24.10	32.40
16	28.00	---	---	---	---	---	---	50.65	15.50	19.20	29.00	32.40
17	31.50	---	---	---	---	---	---	50.80	15.40	24.00	31.40	25.40
18	33.20	---	---	---	---	---	---	50.85	15.25	27.50	32.90	28.80
19	34.10	---	---	---	---	---	---	50.95	15.15	29.75	33.60	29.90
20	34.15	---	---	---	---	---	---	51.10	15.10	31.20	32.50	26.00
21	26.30	---	---	---	---	---	---	---	15.05	31.90	32.55	21.00
22	30.40	---	39.55	---	---	---	---	---	15.00	28.10	27.50	18.95
23	33.00	---	40.75	---	---	---	---	---	14.90	25.80	27.75	17.60
24	34.30	---	41.80	---	---	---	---	---	14.80	29.05	29.80	16.50
25	35.25	---	---	---	---	---	---	---	14.80	29.75	30.75	22.10
26	35.40	---	32.60	---	---	---	---	---	14.80	26.80	27.60	25.60
27	27.90	---	---	---	---	---	---	---	14.70	28.55	25.70	26.70
28	32.20	---	---	---	38.50	---	---	---	19.00	28.10	28.60	27.70
29	33.80	---	---	---	---	---	---	---	21.36	22.40	30.20	28.65
30	---	33.65	---	---	---	33.55	---	---	19.60	20.40	31.35	26.00
31	---	---	---	40.40	---	33.55	---	21.33	---	20.20	32.10	---
MAX	35.40	33.65	41.80	41.00	40.95	41.80	30.80	51.10	21.36	31.95	34.25	33.60
CAL YR 1989	LOW 44.95											
WTR YR 1990	LOW 51.10											



405211081253500 ST-27  
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

## GROUND-WATER RECORDS

## 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.

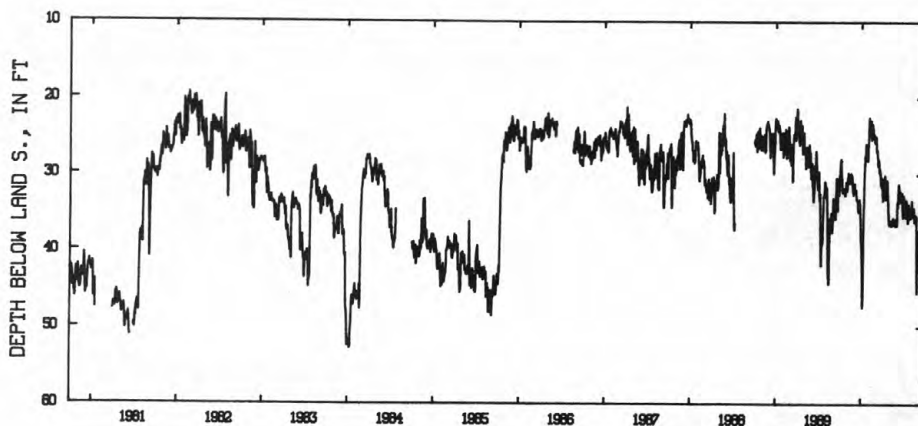
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30.04	32.14	32.30	38.79	26.24	25.75	30.86	36.39	35.90	34.05	34.87	37.99
2	30.37	31.92	31.98	38.30	25.40	25.85	31.32	36.43	35.73	32.75	34.62	37.29
3	30.41	31.25	31.52	40.19	24.46	25.64	32.52	36.57	36.62	33.22	35.17	37.30
4	29.03	30.85	31.18	41.24	22.68	25.38	33.41	36.10	35.66	33.12	35.55	37.82
5	28.44	30.32	31.81	42.22	22.53	25.04	32.96	36.02	33.72	34.11	35.14	37.98
6	28.16	30.61	31.95	47.06	22.87	25.03	32.48	36.28	33.61	34.39	33.42	38.28
7	28.04	29.77	32.21	47.42	23.23	26.08	31.68	36.01	34.28	33.92	35.03	38.38
8	27.99	30.12	32.16	47.02	23.90	27.02	31.19	36.40	33.73	33.44	35.04	42.41
9	29.82	30.91	32.07	44.92	23.78	26.96	30.47	36.43	32.88	34.62	35.21	42.78
10	30.62	30.95	32.03	41.18	23.91	26.75	30.73	36.23	31.84	35.54	35.33	42.82
11	31.11	31.04	32.32	37.02	23.40	26.78	30.49	36.66	31.25	34.89	35.05	42.75
12	31.94	30.52	33.02	34.38	22.93	27.70	30.14	36.56	31.47	34.04	34.36	42.67
13	32.29	30.64	33.13	33.63	23.85	27.75	30.55	36.25	31.91	33.32	34.31	42.24
14	32.01	30.72	33.38	31.84	24.94	28.82	31.29	35.99	32.44	33.49	34.47	41.75
15	31.95	31.08	33.37	29.64	25.39	28.41	32.23	36.41	32.54	33.80	35.10	40.56
16	32.41	30.79	33.42	29.38	24.26	28.75	33.23	36.10	32.38	34.91	35.27	38.45
17	32.24	30.33	33.40	28.60	23.35	28.06	32.33	35.71	32.22	35.05	36.14	37.53
18	32.19	30.05	33.57	27.54	23.50	28.38	31.88	35.74	33.21	35.12	36.08	37.09
19	31.88	29.84	34.24	28.30	23.48	28.82	31.63	35.69	33.55	35.84	35.64	36.47
20	31.83	30.01	34.66	27.92	23.88	29.71	31.32	36.55	33.18	36.27	35.24	37.17
21	31.82	30.41	34.85	26.00	24.21	29.57	30.97	36.46	33.49	35.70	35.81	37.34
22	31.93	30.39	34.89	26.08	24.90	29.29	30.73	35.96	33.29	35.02	35.63	37.43
23	32.06	30.24	34.88	26.58	24.76	29.98	30.94	36.09	33.24	33.88	35.54	39.59
24	32.48	30.23	33.79	26.84	25.18	29.80	32.45	36.14	32.52	35.26	35.84	38.23
25	32.74	31.30	33.28	26.75	24.87	30.37	32.62	36.38	32.39	35.37	35.57	39.10
26	31.97	31.84	33.62	26.21	24.73	31.34	33.23	36.30	33.28	35.34	35.42	39.65
27	31.98	32.29	33.86	26.12	25.33	30.31	33.75	36.65	34.18	35.74	42.83	40.20
28	31.72	32.11	34.80	27.93	25.35	30.37	34.96	36.69	34.68	35.27	45.52	41.09
29	30.97	32.66	35.06	28.19	---	31.50	35.25	36.63	35.54	34.72	44.71	40.43
30	31.77	32.53	35.69	28.08	---	31.63	36.36	35.78	35.21	34.31	42.55	39.07
31	31.44	---	37.40	26.11	---	31.31	---	35.92	---	34.50	39.21	---
MAX	32.74	32.66	37.40	47.42	26.24	31.63	36.36	36.69	36.62	36.27	45.52	42.82

CAL YR 1989 LOW 44.31  
WTR YR 1990 LOW 47.42411604080505600 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, 1989	12.39	Jan. 31, 1990	9.95	Apr. 30, 1990	8.64	July 31, 1990	6.78
Nov. 30, 1989	12.64	Feb. 28, 1990	7.98	May 31, 1990	7.75	Aug. 31, 1990	8.66
Dec. 29, 1989	13.07	Mar. 30, 1990	9.56	June 30, 1990	8.07	Oct. 1, 1990	9.51



## GROUND-WATER RECORDS

## 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.

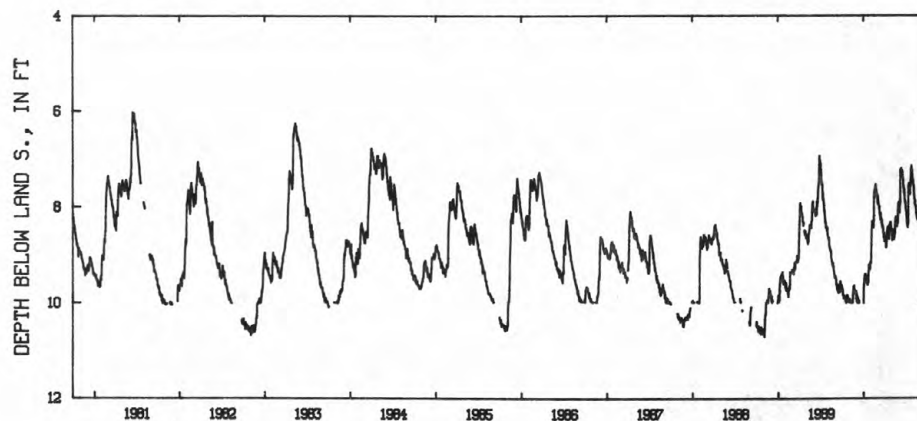
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.70	9.99	9.80	9.68	9.18	7.79	8.68	8.47	7.91	7.95	7.46	8.44
2	9.75	9.93	9.98	9.63	9.15	7.76	8.70	8.58	7.94	8.08	7.53	8.42
3	9.74	9.99	9.84	9.51	9.05	7.93	8.67	8.52	7.92	8.10	7.55	8.45
4	9.84	9.95	9.97	9.50	8.81	7.79	8.65	8.70	7.91	8.13	7.56	8.48
5	9.83	9.99	9.88	9.44	8.63	7.95	8.70	8.48	8.13	8.22	7.64	8.52
6	9.84	9.99	10.00	9.40	8.48	7.90	8.69	8.47	7.98	8.32	7.77	8.57
7	9.91	10.00	9.90	9.57	8.44	7.97	8.85	8.47	7.95	8.35	7.84	8.54
8	9.88	10.00	9.92	9.57	8.30	7.97	8.70	8.51	7.91	8.41	7.84	8.55
9	9.90	10.00	9.94	9.40	8.37	7.99	8.83	8.58	7.23	8.43	7.94	8.44
10	9.89	9.99	9.95	9.43	8.37	8.00	8.72	8.53	7.24	8.35	7.88	8.36
11	---	10.00	9.95	9.48	8.37	8.13	8.63	8.68	7.30	8.36	7.97	8.39
12	---	9.99	10.00	9.48	8.36	8.16	8.55	8.59	7.20	8.31	7.98	8.28
13	9.87	10.00	---	9.53	8.44	8.17	8.50	8.64	7.25	7.55	8.00	8.31
14	9.96	9.99	---	9.52	8.30	8.20	8.47	8.53	7.24	7.55	8.08	8.35
15	9.97	9.99	---	9.59	8.30	8.27	8.42	8.57	7.25	7.52	8.15	8.43
16	9.87	9.90	---	9.60	7.81	8.13	8.43	8.53	7.26	7.51	8.19	8.42
17	10.00	9.80	---	9.62	7.70	8.26	8.64	8.39	7.26	7.55	8.22	8.37
18	9.89	9.72	---	9.52	7.82	8.25	8.59	8.30	7.33	7.56	8.26	8.40
19	9.91	9.65	---	9.61	7.66	8.29	8.62	8.24	7.43	7.75	8.15	8.36
20	9.87	9.75	---	9.56	7.66	8.35	8.67	8.22	7.42	7.58	8.17	8.27
21	9.85	9.64	---	9.42	7.62	8.28	8.53	8.21	7.60	7.56	8.16	8.28
22	9.84	9.77	---	9.35	7.55	8.43	8.38	8.22	7.56	7.57	8.13	8.30
23	9.94	9.76	---	9.23	7.54	8.38	8.38	8.33	7.62	7.47	8.16	8.30
24	9.85	9.81	---	9.20	7.63	8.40	8.39	8.35	7.72	7.22	8.15	8.30
25	9.98	9.74	---	9.27	7.75	8.43	8.41	8.41	7.64	7.22	8.29	8.35
26	9.89	9.76	---	9.23	7.66	8.46	8.43	8.31	7.74	7.15	8.30	8.37
27	9.92	9.77	---	9.30	7.72	8.55	8.32	8.35	7.85	7.25	8.34	8.69
28	9.98	9.82	---	9.30	7.74	8.55	8.37	8.34	7.90	7.25	8.31	8.51
29	9.95	9.76	---	9.28	---	8.65	8.41	8.16	7.93	7.35	8.38	8.50
30	9.95	9.93	---	9.15	---	8.55	8.44	8.01	7.89	7.41	---	8.60
31	9.92	---	10.00	9.17	---	8.72	---	7.97	---	7.42	8.36	---
MAX	10.00	10.00	10.00	9.68	9.18	8.72	8.85	8.70	8.13	8.43	8.38	8.69
CAL YR 1989	LOW 10.00											
WTR YR 1990	LOW 10.00											



403557081313600 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.

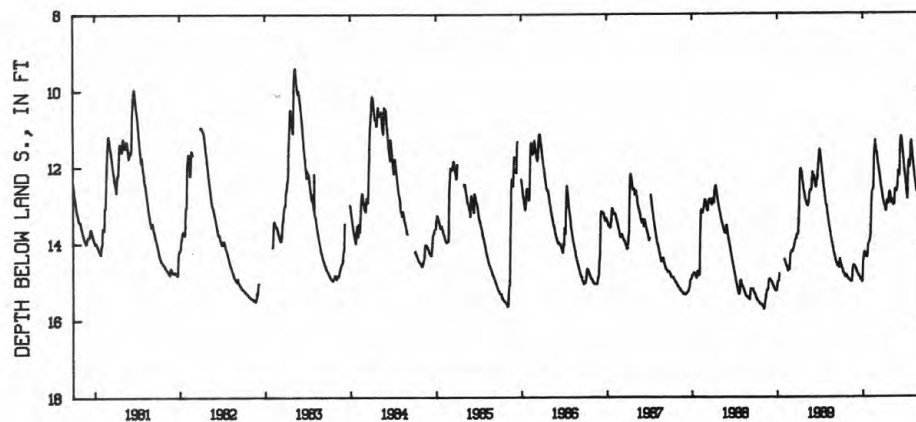
PERIOD OF RECORD.--July 1946 to current year.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.60	14.93	14.65	14.73	13.89	11.63	12.98	12.85	12.17	12.25	11.66	13.01
2	14.62	14.94	14.65	14.48	13.85	11.66	12.99	12.90	12.12	12.32	11.73	13.05
3	14.64	14.94	14.67	14.45	13.75	11.73	12.99	12.95	12.11	12.38	11.79	13.10
4	14.65	14.95	14.68	14.38	13.55	11.80	13.01	12.95	12.16	12.45	11.85	13.13
5	14.66	14.96	14.70	14.31	13.37	11.85	13.04	12.89	12.19	12.52	11.93	13.16
6	14.69	14.97	14.74	14.25	13.10	11.92	13.08	12.89	12.24	12.60	11.98	13.20
7	14.70	14.98	14.76	14.24	12.88	11.95	13.11	12.87	12.17	12.65	12.04	13.17
8	14.75	14.98	14.76	14.22	12.78	11.98	13.15	12.88	12.11	12.70	12.11	13.07
9	14.76	14.98	14.77	14.23	12.67	12.04	13.16	12.90	11.63	12.76	12.17	13.06
10	14.77	14.98	14.79	14.25	12.64	12.07	13.16	12.94	11.43	12.83	12.23	13.00
11	14.78	14.98	14.80	14.24	12.61	12.12	13.11	13.00	11.35	12.83	12.31	12.96
12	14.78	14.99	14.82	14.27	12.59	12.16	13.01	13.00	11.29	12.71	12.35	12.98
13	14.80	14.99	14.83	14.29	12.59	12.20	12.96	13.00	11.22	12.22	12.38	12.99
14	14.82	15.00	14.84	14.30	12.59	12.25	12.89	13.00	11.23	12.06	12.42	13.00
15	14.84	15.00	14.84	14.33	12.49	12.29	12.89	12.98	11.25	11.97	12.47	13.03
16	14.85	14.95	14.84	14.35	12.07	12.33	12.90	12.98	11.27	11.91	12.53	13.03
17	14.87	14.84	14.86	14.35	11.85	12.38	12.96	12.85	11.33	11.85	12.58	13.00
18	14.88	14.75	14.87	14.36	11.71	12.44	12.96	12.71	11.39	11.88	12.63	12.98
19	14.88	14.66	14.89	14.36	11.60	12.50	12.97	12.64	11.48	11.96	12.65	12.98
20	14.86	14.59	14.90	14.34	11.54	12.53	12.97	12.59	11.53	12.02	12.65	13.00
21	14.83	14.57	14.92	14.26	11.46	12.55	12.93	12.59	11.62	12.00	12.65	13.00
22	14.83	14.57	14.93	14.15	11.35	12.62	12.83	12.59	11.66	11.88	12.60	12.98
23	14.83	14.57	14.94	14.08	11.32	12.66	12.74	12.60	11.75	11.75	12.58	12.99
24	14.85	14.57	14.95	14.03	11.45	12.70	12.69	12.63	11.82	11.50	12.64	13.01
25	14.86	14.57	14.95	14.00	11.50	12.73	12.67	12.65	11.90	11.40	12.68	13.03
26	14.87	14.59	14.96	13.98	11.51	12.78	12.66	12.62	11.96	11.35	12.73	13.10
27	14.88	14.59	14.97	13.97	11.59	12.83	12.66	12.59	12.04	11.33	12.77	13.14
28	14.90	14.62	14.99	13.97	11.62	12.86	12.71	12.58	12.10	11.38	12.82	13.16
29	14.91	14.62	14.99	13.95	---	12.89	12.75	12.52	12.14	11.46	12.87	13.19
30	14.92	14.64	15.00	13.93	---	12.92	12.81	12.41	12.18	11.52	12.92	13.21
31	14.92	---	14.91	13.90	---	12.96	---	12.28	---	11.60	12.98	---
MAX	14.92	15.00	15.00	14.73	13.89	12.96	13.16	13.00	12.24	12.83	12.98	13.21

CAL YR 1989 LOW 15.04  
WTR YR 1990 LOW 15.00



403653081321800 TU-1  
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER RECORDS  
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.

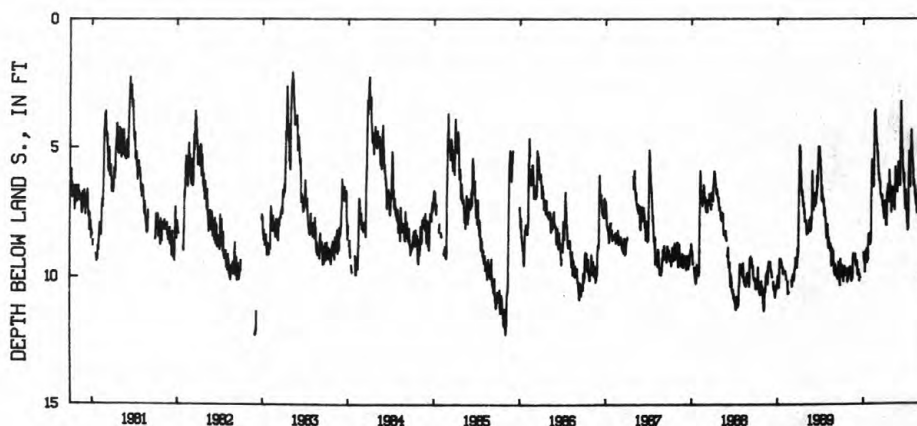
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.91	9.85	9.50	---	8.73	4.88	7.38	7.53	6.09	7.08	5.67	7.60
2	9.58	9.67	9.43	9.10	8.58	5.15	7.37	6.78	5.73	6.68	5.89	7.57
3	9.88	9.66	9.55	9.43	8.32	5.37	7.10	7.25	6.08	7.40	6.50	7.68
4	10.00	9.85	9.40	9.45	6.87	5.22	7.58	7.28	6.04	7.32	6.50	7.87
5	9.91	9.77	9.47	9.45	6.89	5.58	7.22	7.33	6.16	7.43	6.29	7.98
6	10.00	9.65	9.78	9.25	6.22	5.78	7.68	7.23	6.50	7.78	6.30	7.90
7	9.95	9.72	9.85	9.84	5.83	5.90	8.02	6.56	6.48	7.95	6.50	7.90
8	10.20	9.92	9.95	9.60	5.50	6.10	7.80	6.81	5.94	7.77	6.51	7.65
9	9.81	9.85	9.95	9.48	5.79	6.05	7.43	7.12	5.25	8.23	6.69	7.86
10	10.00	10.13	9.81	9.03	5.90	6.33	8.03	7.03	4.46	8.07	6.92	7.76
11	10.00	10.18	9.75	9.16	6.00	6.21	7.60	7.22	4.10	8.15	6.88	7.64
12	9.62	9.87	9.96	9.21	5.80	6.25	6.83	7.11	3.22	7.75	7.06	7.98
13	9.77	9.78	---	9.25	6.22	6.43	6.77	7.08	3.96	7.17	7.24	8.03
14	9.71	10.12	10.17	9.04	6.55	6.41	6.85	6.83	4.44	6.02	7.22	8.28
15	9.78	10.07	9.90	8.94	6.51	6.77	6.62	7.43	4.72	5.85	7.23	8.31
16	9.92	9.93	9.97	9.47	5.53	6.85	6.55	6.92	5.06	5.16	7.18	7.68
17	9.75	9.42	10.06	9.24	5.06	6.85	6.45	6.74	5.14	5.44	7.56	8.02
18	9.88	9.17	---	9.05	4.15	6.89	6.80	6.30	5.13	5.87	7.25	8.08
19	9.97	9.15	---	9.12	3.65	6.96	7.08	5.78	5.73	6.32	7.09	7.86
20	9.93	9.33	---	9.38	3.90	6.99	7.05	6.08	5.84	6.55	6.78	7.85
21	9.70	9.14	---	8.73	3.73	6.86	7.13	5.93	5.93	6.47	6.78	7.75
22	9.77	9.43	---	8.43	3.56	6.93	6.68	5.97	6.17	5.30	6.52	7.68
23	9.95	---	---	8.37	3.87	7.29	5.90	6.55	6.37	5.01	6.88	7.58
24	9.78	---	---	8.46	4.15	7.28	6.32	6.20	6.26	4.87	7.00	7.75
25	10.23	9.27	---	8.68	4.25	7.28	6.37	6.51	6.03	4.36	7.15	7.75
26	9.81	9.14	---	8.63	4.53	7.17	6.75	6.75	6.73	4.34	6.85	7.73
27	9.73	9.16	---	8.48	4.76	7.53	6.53	6.56	6.83	4.81	7.44	7.78
28	10.12	9.50	---	8.71	4.92	7.57	6.76	6.27	7.15	4.88	7.35	7.93
29	10.03	9.52	---	8.78	---	7.26	7.01	6.33	7.41	5.27	7.66	7.64
30	9.94	9.59	---	8.33	---	7.77	7.02	5.90	7.23	5.47	7.52	7.43
31	9.90	---	---	8.68	---	7.77	---	5.57	---	5.57	7.73	---
MAX	10.23	10.18	10.17	9.84	8.73	7.77	8.03	7.53	7.41	8.23	7.73	8.31
CAL YR 1989	LOW 10.76											
WTR YR 1990	LOW 10.23											



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.

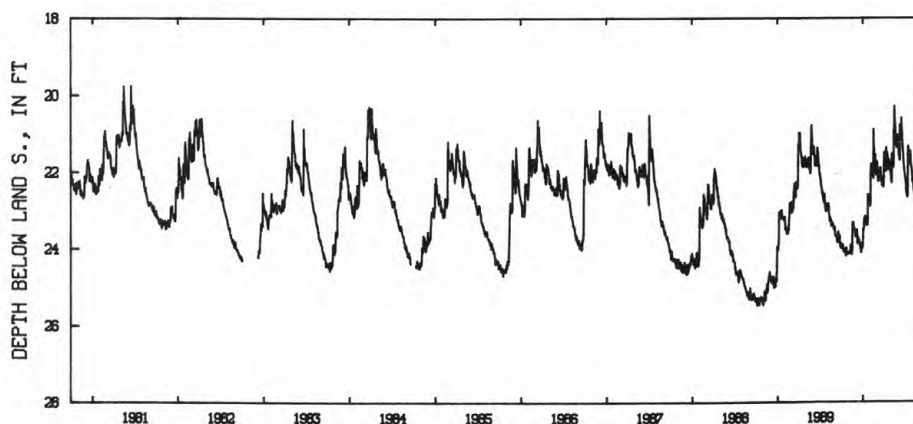
DATUM.--Elevation of land-surface datum is 1,040 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of instrument shelter 3.00 ft above land-surface datum.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.89	24.11	23.66	23.46	22.82	21.85	21.72	22.09	21.35	22.13	22.26	23.16
2	23.89	24.11	23.60	23.50	22.47	21.73	21.50	22.22	21.38	22.21	22.23	23.19
3	23.94	24.08	23.67	23.47	22.04	21.83	21.49	22.28	21.35	22.26	22.28	23.34
4	23.99	24.11	23.68	23.37	21.94	21.94	21.48	22.19	21.52	22.28	22.29	23.32
5	23.96	24.05	23.51	23.20	21.80	22.03	21.64	21.52	21.59	22.49	22.33	23.29
6	23.90	24.06	23.67	23.24	21.79	22.22	21.70	21.52	21.58	22.49	22.41	23.27
7	24.00	24.05	23.86	23.20	21.88	22.24	21.87	21.58	21.68	22.59	22.48	23.27
8	24.03	23.98	23.81	23.18	21.87	22.21	21.97	21.65	21.64	22.59	22.51	23.31
9	24.07	23.89	23.70	23.15	21.79	22.09	21.98	21.67	20.80	22.60	22.59	23.29
10	24.00	24.03	23.71	23.20	21.85	22.13	21.89	21.65	20.77	22.65	22.54	23.34
11	24.08	24.02	23.79	23.16	21.96	22.09	21.36	21.87	20.95	22.60	22.58	23.37
12	24.08	24.15	23.78	23.30	22.12	22.02	21.49	21.88	21.05	22.38	22.65	23.37
13	24.09	24.11	23.76	23.38	22.06	22.03	21.57	21.60	21.11	21.52	22.66	23.39
14	24.08	24.04	23.79	23.38	22.17	22.00	21.49	20.88	21.15	21.47	22.70	23.31
15	24.08	23.98	23.82	23.36	21.74	22.02	21.52	20.94	20.59	21.32	22.71	23.33
16	24.09	23.34	23.88	23.39	20.88	22.02	21.59	20.86	20.81	21.50	22.76	23.41
17	24.13	23.31	23.91	23.35	21.36	21.89	21.80	20.28	20.95	21.63	22.75	23.53
18	24.18	23.46	23.92	23.38	21.37	22.07	21.95	20.58	21.04	21.73	22.74	23.53
19	24.10	23.48	23.87	23.39	21.55	22.22	21.93	20.66	21.20	21.76	22.79	23.42
20	23.97	23.32	23.89	23.24	21.71	22.25	21.87	20.76	21.27	21.80	22.85	23.44
21	24.02	23.44	24.02	22.58	21.72	22.21	21.75	20.99	21.44	21.72	22.81	23.46
22	24.15	23.43	24.09	22.68	21.61	22.15	21.67	21.10	21.45	21.63	22.81	23.39
23	24.14	23.53	24.08	22.71	21.54	22.35	21.69	21.19	21.51	21.45	22.82	23.46
24	24.14	23.55	24.02	22.69	21.79	22.34	21.74	21.30	21.69	21.56	22.87	23.51
25	24.13	23.48	23.85	22.65	22.05	22.32	21.81	21.36	21.82	21.72	22.94	23.48
26	24.13	23.55	23.92	22.79	22.08	22.34	21.83	21.16	21.86	21.80	22.98	23.50
27	24.14	23.55	23.92	22.79	21.91	22.38	21.84	21.06	21.94	21.84	22.99	23.58
28	24.13	23.67	23.98	22.86	21.89	22.38	21.80	21.03	22.01	21.89	23.00	23.63
29	24.11	23.68	23.96	22.81	---	22.37	22.02	21.04	22.05	21.92	22.96	23.63
30	24.09	23.63	23.87	22.80	---	22.22	21.98	21.22	22.08	21.97	23.06	23.65
31	24.08	---	23.73	22.89	---	22.00	---	21.30	---	22.08	23.13	---
MAX	24.18	24.15	24.09	23.50	22.82	22.38	22.02	22.28	22.08	22.65	23.13	23.65
CAL YR 1989	LOW 24.18											
WTR YR 1990	LOW 24.18											



401826083255200 U-4  
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)



## GROUND-WATER RECORDS

## 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.

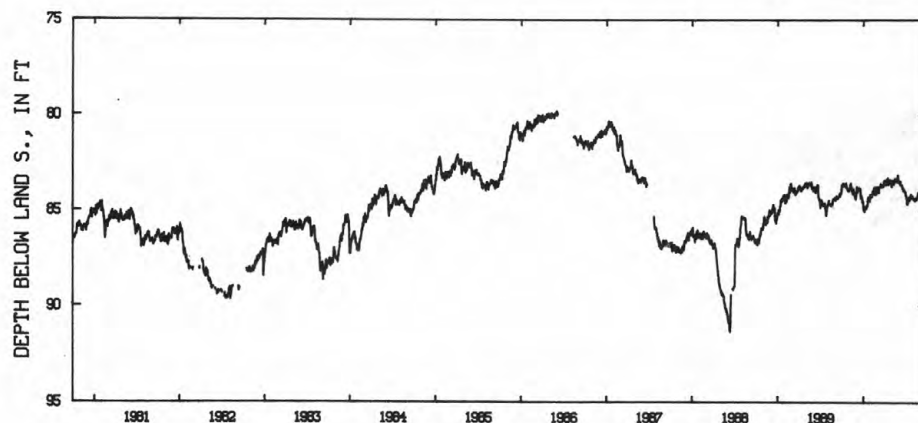
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	83.87	83.96	84.29	84.75	84.20	83.93	83.41	83.62	83.45	84.01	84.37	84.01
2	83.64	83.92	84.13	84.95	84.18	83.78	83.44	83.72	83.50	84.15	84.37	84.01
3	83.69	83.83	84.06	84.98	84.18	83.74	83.43	83.72	83.43	84.22	84.35	84.02
4	83.74	83.88	83.95	84.98	84.17	83.76	83.39	83.65	83.45	84.29	84.36	84.03
5	83.70	83.77	83.73	84.98	84.25	83.85	83.45	83.40	83.52	84.34	84.32	83.98
6	83.56	83.74	83.81	85.00	84.25	84.01	83.47	83.45	83.46	84.39	84.33	83.94
7	83.65	83.74	84.00	85.00	84.20	84.03	83.57	83.45	83.61	84.64	84.38	83.90
8	83.58	83.62	84.00	84.89	84.20	84.01	83.64	83.52	83.51	84.60	84.44	83.95
9	83.63	83.55	83.91	84.84	84.05	83.79	83.61	83.45	83.45	84.57	84.44	83.89
10	83.56	83.75	83.82	84.78	83.94	83.78	83.50	83.39	83.58	84.58	84.37	83.96
11	83.60	83.75	83.85	84.78	83.96	83.75	83.37	83.56	83.64	84.47	84.39	83.98
12	83.66	83.76	83.86	84.76	83.98	83.73	83.50	83.59	83.65	84.37	84.42	83.98
13	83.68	83.77	83.80	84.80	83.96	83.75	83.49	83.44	83.66	84.34	84.29	83.93
14	83.69	83.94	83.78	84.85	83.94	83.70	83.38	83.47	83.64	84.27	84.29	83.81
15	83.70	84.01	83.78	84.70	83.88	83.66	83.32	83.49	83.65	84.25	84.34	83.72
16	83.63	83.85	83.83	84.75	83.77	83.65	83.28	83.43	83.71	84.34	84.39	83.70
17	83.67	83.93	83.90	84.71	84.10	83.56	83.47	83.30	83.81	84.40	84.37	83.77
18	83.75	84.08	83.84	84.73	84.10	83.63	83.62	83.40	83.76	84.41	84.35	83.78
19	83.63	84.12	83.84	84.73	84.06	83.75	83.62	83.42	83.79	84.42	84.31	83.67
20	83.54	83.86	83.97	84.50	84.13	83.75	83.54	83.32	83.81	84.35	84.31	83.59
21	83.65	83.98	84.16	84.28	84.13	83.73	83.43	83.32	83.94	84.33	84.25	83.62
22	83.76	83.98	84.33	84.34	84.02	83.67	83.43	83.39	83.91	84.24	84.14	83.51
23	83.75	84.04	84.33	84.35	83.75	83.73	83.37	83.43	83.82	84.11	84.02	83.74
24	83.79	84.04	84.24	84.32	83.92	83.73	83.48	83.46	83.86	84.14	84.04	83.86
25	83.82	84.03	84.21	84.32	84.11	83.66	83.56	83.47	83.93	84.25	84.05	83.93
26	83.86	84.23	84.29	84.43	84.12	83.67	83.51	83.36	83.94	84.30	84.01	83.87
27	83.93	84.26	84.31	84.44	83.93	83.72	83.44	83.35	83.95	84.25	83.99	83.96
28	83.94	84.36	84.51	84.47	83.94	83.68	83.38	83.29	83.99	84.28	83.98	83.96
29	83.95	84.38	84.55	84.39	---	83.58	83.46	83.12	84.01	84.24	83.94	83.94
30	83.92	84.29	84.51	84.14	---	83.50	83.49	83.29	84.04	84.20	83.94	83.91
31	83.89	---	84.49	84.23	---	83.41	---	83.36	---	84.30	83.99	---
MAX	83.95	84.38	84.55	85.00	84.25	84.03	83.64	83.72	84.04	84.64	84.44	84.03

CAL YR 1989 LOW 85.21  
WTR YR 1990 LOW 85.00391452082282900 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.

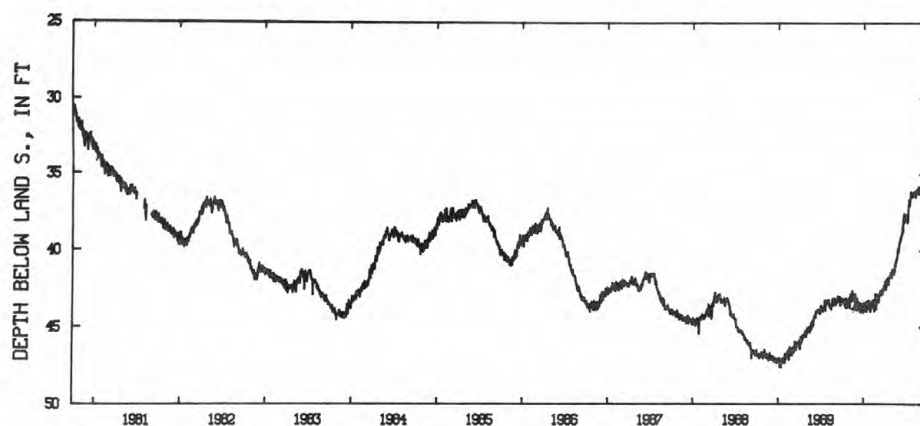
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43.10	43.25	43.45	44.00	43.50	43.15	42.15	41.60	39.90	37.60	36.40	36.10
2	43.20	43.05	43.40	43.85	43.50	42.93	42.20	41.75	39.65	37.80	36.40	36.00
3	43.30	43.65	43.55	43.70	43.45	43.10	42.10	41.60	39.40	37.80	36.40	36.30
4	43.35	43.15	43.10	43.60	43.65	43.15	42.00	41.20	39.55	37.85	36.15	36.30
5	43.15	43.10	43.20	43.75	43.70	43.15	42.20	41.50	39.45	37.80	36.10	36.10
6	43.15	43.10	43.55	43.75	43.50	43.25	42.30	41.30	39.30	38.00	36.10	36.00
7	43.35	42.90	43.70	43.65	43.50	43.35	42.50	41.35	39.35	38.10	36.10	35.95
8	43.30	42.80	43.65	43.55	43.45	43.00	42.45	41.30	39.10	38.15	36.15	36.00
9	43.35	42.80	43.40	43.40	43.25	42.85	42.15	41.20	39.10	38.05	36.10	35.95
10	43.15	43.05	43.50	43.75	43.50	42.85	41.85	41.15	39.10	37.80	36.15	36.10
11	43.30	42.95	43.50	43.50	43.60	42.90	42.05	41.50	39.20	37.35	36.45	36.00
12	43.50	43.25	43.45	43.65	43.65	42.90	42.05	41.25	39.00	37.10	36.35	36.00
13	43.45	43.05	43.40	43.95	43.45	42.90	42.05	41.30	39.00	36.95	36.00	36.00
14	43.60	43.10	43.55	43.70	43.55	42.60	41.90	41.40	38.80	36.65	36.15	35.75
15	43.50	42.60	43.70	43.70	43.20	42.60	41.90	41.20	38.75	36.75	36.10	35.95
16	43.40	42.85	43.85	43.70	43.45	42.70	41.75	40.80	38.50	37.05	36.15	36.05
17	43.10	42.95	43.90	43.50	43.95	42.60	42.00	40.95	38.35	36.90	36.10	36.40
18	43.70	43.15	43.95	43.75	43.60	42.75	42.20	41.00	38.75	36.85	35.95	36.15
19	43.10	42.90	43.65	43.75	43.70	42.90	41.90	40.80	38.25	36.65	36.00	36.00
20	43.15	42.80	43.70	43.25	43.70	42.80	41.70	40.60	37.90	36.60	36.00	36.00
21	43.40	42.90	44.00	43.55	43.55	42.70	41.70	40.75	37.95	36.25	36.20	36.40
22	43.65	42.85	44.00	43.45	42.80	42.50	41.75	40.70	37.70	36.10	36.00	36.30
23	43.50	43.15	44.00	43.40	43.00	42.80	41.70	40.45	37.55	36.20	35.80	36.45
24	43.45	43.05	44.00	43.25	43.60	42.65	41.70	40.50	38.05	36.15	35.80	36.50
25	43.35	42.80	43.55	43.60	43.80	42.60	41.65	40.40	38.10	36.25	35.95	36.35
26	43.35	43.00	44.00	43.65	43.55	42.60	41.65	40.10	37.85	36.25	36.25	36.35
27	43.40	42.90	43.60	43.70	43.20	42.60	41.50	40.15	37.90	36.30	36.25	36.50
28	43.40	43.50	43.90	43.80	43.30	42.55	41.40	39.80	37.90	36.45	36.00	36.55
29	43.30	43.75	43.70	43.40	---	42.30	41.60	39.95	37.70	36.40	36.05	36.50
30	43.20	43.80	43.75	43.90	---	42.50	41.70	40.10	37.90	36.30	35.80	36.65
31	43.10	---	43.70	43.95	---	42.30	---	40.05	---	36.25	35.85	---
MAX	43.70	43.80	44.00	44.00	43.95	43.35	42.50	41.75	39.90	38.15	36.45	36.65

CAL YR 1989 LOW 47.60  
WTR YR 1990 LOW 44.00392712084191700 W-5  
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

## GROUND-WATER RECORDS

## 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.

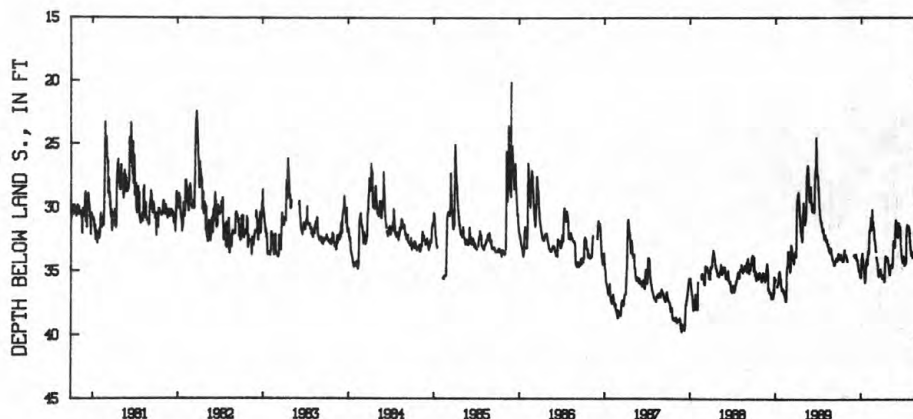
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33.75	34.05	33.80	35.45	33.55	32.50	35.50	34.80	31.05	33.90	33.20	34.00
2	33.90	34.15	33.80	34.60	33.60	32.70	35.55	35.00	31.10	33.80	33.30	33.95
3	33.95	34.25	33.75	34.05	33.65	32.90	35.35	35.15	31.20	34.15	33.45	33.95
4	33.95	---	33.80	34.05	33.40	33.00	35.40	35.25	31.50	34.25	33.70	33.90
5	34.10	---	33.90	33.95	32.75	33.40	35.30	35.25	31.75	34.30	33.70	---
6	33.80	---	33.85	33.75	31.95	33.45	35.30	35.00	31.95	34.50	33.50	34.30
7	34.00	---	33.95	33.60	31.80	---	35.30	34.65	32.25	34.50	33.45	34.25
8	33.75	---	33.90	34.00	31.70	33.90	---	34.50	32.30	34.35	33.50	34.00
9	33.90	---	33.85	34.05	31.65	34.00	35.40	34.60	32.30	34.30	33.80	33.70
10	33.90	---	33.70	34.15	31.70	34.10	35.70	34.70	31.35	34.40	33.90	33.50
11	34.05	---	33.80	34.50	31.25	34.20	35.80	34.70	31.15	34.40	33.90	33.10
12	34.00	---	34.00	34.85	30.75	34.30	35.80	34.75	31.20	34.20	33.85	33.15
13	34.15	---	34.10	34.80	31.15	34.35	34.95	34.70	31.45	34.20	33.85	33.25
14	34.25	---	34.15	34.90	31.20	34.40	34.35	34.65	31.65	32.20	33.85	33.20
15	34.00	---	34.15	35.10	31.75	35.00	34.00	34.70	31.70	32.15	33.80	33.20
16	34.10	---	34.10	35.40	31.40	35.30	33.80	34.60	31.40	31.70	33.70	33.00
17	34.15	---	34.15	35.65	31.00	35.40	33.95	34.40	31.50	31.45	33.65	33.05
18	34.20	---	34.40	35.90	30.15	35.40	33.90	33.85	31.70	31.30	33.85	33.10
19	34.05	---	34.50	35.85	30.60	35.10	33.90	33.15	32.10	31.45	33.80	33.25
20	33.75	---	34.50	35.60	31.10	35.35	34.10	32.85	32.40	31.50	33.60	33.20
21	33.40	---	34.70	35.10	31.15	35.40	34.20	32.60	33.00	31.75	33.50	33.35
22	33.35	---	34.80	34.60	31.10	35.10	34.20	32.65	33.30	31.75	33.60	33.20
23	33.45	---	35.00	34.25	31.60	35.05	33.95	32.70	33.60	31.65	33.40	33.20
24	33.70	---	35.00	34.30	31.50	34.95	33.90	32.80	33.80	31.60	33.30	33.65
25	33.70	---	35.00	34.05	31.65	34.85	34.00	33.00	33.85	31.40	33.30	33.65
26	33.70	---	35.00	34.50	31.75	35.00	34.10	33.10	34.00	31.60	33.35	33.75
27	33.85	---	35.10	34.35	32.10	35.10	34.25	32.75	34.10	31.70	33.35	33.85
28	33.90	---	35.25	34.45	32.55	35.30	34.40	32.00	34.20	31.90	33.55	33.85
29	33.80	---	35.40	34.45	---	35.40	34.45	31.25	34.30	32.70	33.65	34.00
30	33.85	---	35.50	33.85	---	35.30	34.50	30.95	34.00	32.50	33.95	33.95
31	34.00	---	35.50	33.40	---	35.45	---	31.00	---	32.85	33.80	---
MAX	34.25	34.25	35.50	35.90	33.65	35.45	35.80	35.25	34.30	34.50	33.95	34.30

CAL YR 1989 LOW 37.35  
WTR YR 1990 LOW 35.90392553081281600 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.

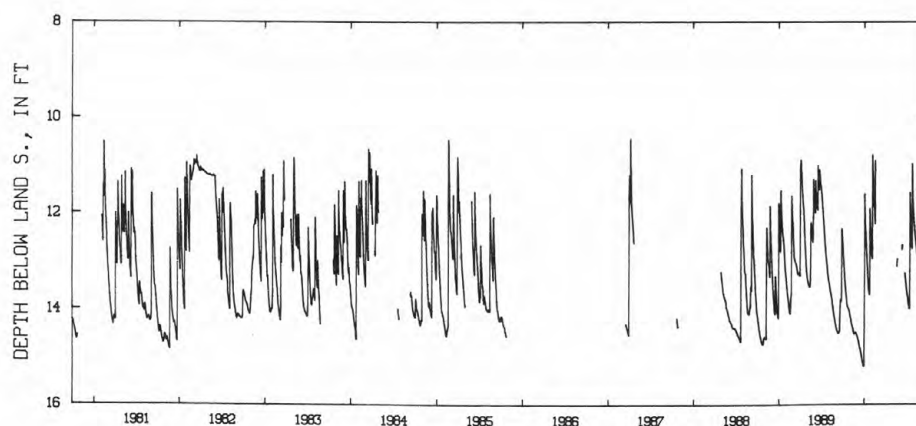
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.87	14.19	14.59	11.84	12.93	---	---	---	---	13.67	12.28	12.07
2	12.95	14.22	14.60	12.07	12.74	---	---	---	---	13.70	12.33	12.14
3	13.03	14.24	14.63	12.24	11.07	---	---	---	---	13.74	12.38	12.22
4	13.10	14.26	14.65	12.33	10.77	---	---	---	---	13.77	12.44	12.30
5	13.19	14.29	14.66	12.41	11.01	---	---	---	---	13.80	12.49	12.38
6	13.25	14.31	14.68	12.52	11.14	---	---	---	---	13.84	12.54	12.45
7	13.33	14.34	14.71	12.65	11.26	---	---	---	---	13.87	12.59	12.50
8	13.39	14.35	14.73	12.76	11.61	---	---	---	12.74	13.91	12.64	12.54
9	13.47	14.37	14.76	12.88	11.85	---	---	---	12.74	13.93	12.69	12.56
10	13.54	14.39	14.78	12.98	11.85	---	---	---	12.65	13.96	12.75	11.06
11	13.60	14.40	14.80	13.07	11.87	---	---	---	12.67	13.99	12.81	11.25
12	13.66	14.43	14.82	13.12	12.02	---	---	---	---	13.99	12.86	11.37
13	13.71	14.45	14.85	13.23	12.12	---	---	---	---	11.55	12.92	11.51
14	13.75	14.47	14.87	13.35	12.20	---	---	---	---	11.86	12.96	11.65
15	13.79	14.50	14.89	13.45	10.89	---	---	---	---	11.96	13.01	11.60
16	13.86	14.51	14.92	13.52	11.11	---	12.58	---	---	12.07	13.06	11.37
17	13.90	14.51	14.94	13.58	---	---	---	---	---	12.21	13.10	11.42
18	13.93	14.50	14.97	13.61	---	---	---	13.09	---	12.36	13.15	11.48
19	13.95	14.49	15.00	13.65	---	---	---	12.98	---	12.52	13.18	11.52
20	13.96	14.48	15.03	13.68	---	---	---	12.94	---	12.65	12.35	11.48
21	13.96	14.47	15.05	13.67	---	---	---	---	13.24	12.71	11.56	11.52
22	13.97	14.47	15.08	11.88	---	---	---	---	13.29	12.72	11.01	11.57
23	13.98	14.48	15.10	12.05	---	---	---	---	13.33	10.96	11.19	11.61
24	13.99	14.49	15.13	12.18	---	---	---	---	13.37	11.16	11.37	11.66
25	14.01	14.50	15.14	12.29	---	---	---	---	13.42	11.58	11.50	11.72
26	14.03	14.52	15.16	12.41	---	---	---	---	13.46	11.79	11.62	11.77
27	14.05	14.53	15.18	12.55	---	---	---	---	13.51	11.90	11.72	11.83
28	14.08	14.54	15.18	12.70	---	---	---	---	13.56	12.00	11.79	11.91
29	14.11	14.56	15.19	12.83	---	---	---	---	13.61	12.09	11.86	11.98
30	14.14	14.57	15.19	12.89	---	---	---	---	13.64	12.18	11.92	12.05
31	14.17	---	11.57	12.90	---	---	---	---	---	12.24	11.99	---
MAX	14.17	14.57	15.19	13.68	12.93	---	12.58	13.09	13.64	13.99	13.18	12.56

CAL YR 1989 LOW 15.19  
WTR YR 1990 LOW 15.19404655081553200 WN-3  
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)



## GROUND-WATER RECORDS

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.

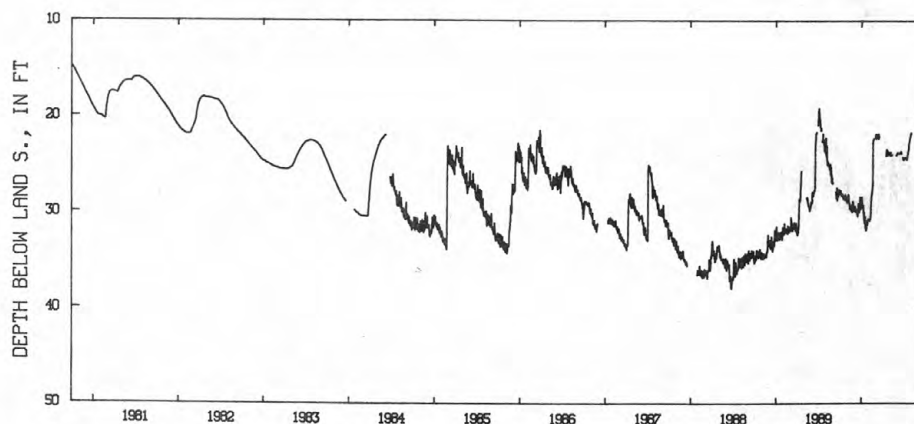
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27.70	28.63	29.42	28.37	30.69	---	---	---	23.95	24.47	21.75	---
2	28.04	28.64	29.34	29.00	30.78	22.24	---	---	23.84	24.38	---	---
3	27.74	28.43	29.52	29.31	30.82	21.93	---	24.05	23.80	24.35	---	---
4	28.04	28.13	29.88	29.43	30.63	22.06	---	23.80	23.80	24.35	---	---
5	27.94	28.19	29.91	29.36	30.59	22.36	---	23.75	23.82	24.29	---	---
6	28.02	28.94	29.89	29.22	30.59	21.90	---	23.74	23.82	24.32	---	---
7	28.26	28.88	29.81	29.26	30.39	---	---	---	23.82	24.32	---	---
8	28.19	28.97	29.60	29.98	29.97	22.30	---	24.06	23.86	24.28	---	---
9	28.25	29.16	29.65	29.90	29.23	---	---	24.03	23.89	24.29	---	---
10	28.09	29.60	29.67	30.57	28.64	22.23	---	24.00	23.88	24.40	---	---
11	28.24	29.61	30.14	30.88	28.17	21.98	---	23.99	23.84	24.46	---	---
12	28.31	29.31	30.20	31.05	28.13	---	---	---	23.81	24.46	---	---
13	28.50	29.55	30.38	30.87	27.97	---	---	---	23.78	24.46	---	---
14	28.58	29.46	30.28	30.36	27.62	22.08	---	---	23.81	24.45	---	---
15	28.24	29.36	30.05	31.11	27.60	21.85	---	---	23.85	24.18	---	---
16	28.58	29.79	29.57	31.58	27.32	22.36	24.11	---	23.85	24.00	---	---
17	28.41	29.76	29.04	31.54	26.98	22.07	23.71	---	23.76	23.95	---	---
18	28.33	29.46	29.39	31.83	25.11	22.13	23.85	---	23.66	23.80	---	---
19	28.27	29.17	29.58	31.80	22.77	---	23.47	---	23.77	23.63	---	---
20	28.34	29.93	29.95	31.64	22.49	---	24.06	---	23.87	23.51	---	---
21	28.30	29.84	29.83	30.85	22.42	---	24.05	---	---	23.42	---	---
22	28.16	29.42	29.67	31.28	22.49	---	23.60	---	---	23.06	---	---
23	28.71	28.83	29.67	31.19	22.35	---	---	---	---	22.74	---	---
24	28.51	28.91	28.85	31.07	22.36	---	---	---	---	22.63	---	---
25	28.71	29.34	28.38	30.73	---	---	23.79	---	---	22.49	---	---
26	28.59	29.43	28.87	30.72	---	---	23.99	---	24.27	22.37	---	---
27	28.75	29.81	29.07	30.75	---	---	23.78	---	24.31	22.24	---	---
28	28.57	29.79	29.43	30.64	---	---	23.76	24.03	24.48	22.15	---	---
29	28.34	29.65	29.60	30.65	---	---	23.83	24.02	24.51	22.01	---	---
30	28.96	29.62	29.52	30.64	---	---	---	24.04	24.51	21.85	---	---
31	28.71	---	28.71	30.67	---	---	---	24.04	---	21.83	---	---
MAX	28.96	29.93	30.38	31.83	30.82	22.36	24.11	24.06	24.51	24.47	21.75	---
CAL YR 1989	LOW 32.93											
WTR YR 1990	LOW 31.83											



404802081583100 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.

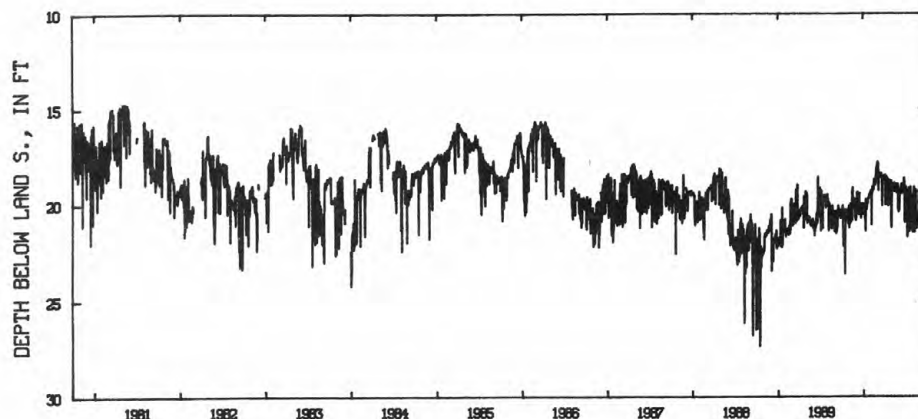
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.30	21.25	20.50	20.50	19.45	18.00	18.50	21.20	20.40	19.10	21.45	21.10
2	20.35	21.00	20.50	20.10	19.30	17.80	18.55	21.20	20.35	19.45	21.40	20.70
3	20.30	20.15	20.50	20.10	19.50	17.85	18.60	19.40	20.30	19.40	19.70	20.80
4	20.10	21.00	19.45	20.00	19.40	17.95	18.50	19.10	20.10	19.50	19.50	21.10
5	20.40	21.00	19.40	20.00	21.10	17.90	20.05	19.00	19.35	19.30	19.30	21.40
6	21.50	20.15	20.50	20.10	19.40	19.30	18.70	19.00	19.35	19.45	19.10	20.65
7	22.20	20.00	20.40	20.75	19.40	18.65	18.75	19.10	19.30	19.60	19.35	20.05
8	20.50	20.95	19.40	20.00	19.35	18.65	18.80	19.05	19.35	21.20	20.95	19.00
9	20.60	20.70	19.55	20.00	19.10	18.40	18.85	19.15	19.25	21.70	21.45	19.00
10	20.45	20.75	19.60	21.40	19.20	18.50	18.60	19.05	19.20	21.50	21.25	19.60
11	20.30	20.75	20.55	19.85	19.10	18.40	18.70	19.05	19.40	21.15	21.15	18.75
12	21.20	20.80	20.55	19.75	19.25	18.55	18.75	19.00	19.45	19.30	20.90	18.70
13	23.65	20.85	20.00	19.95	19.15	18.50	18.75	18.90	18.95	20.95	19.25	18.70
14	21.85	19.35	19.50	19.90	19.00	18.60	18.70	19.35	19.00	20.85	20.95	18.65
15	21.00	19.30	19.45	20.30	18.70	18.55	19.75	19.30	19.05	19.15	21.10	18.35
16	20.80	19.15	---	19.90	18.75	18.45	20.10	19.30	19.10	21.15	21.25	23.25
17	20.60	20.30	---	19.90	18.95	18.55	18.85	19.05	19.20	21.10	21.25	18.95
18	20.60	19.95	---	19.90	18.85	18.40	20.10	19.15	19.30	21.40	20.90	18.90
19	20.50	19.90	20.00	19.95	18.95	18.55	18.90	19.20	19.40	21.30	20.65	19.00
20	20.30	19.95	20.10	19.75	19.00	18.60	18.80	18.95	19.00	19.60	20.80	18.50
21	20.40	19.90	20.20	19.70	18.90	18.55	20.00	19.15	19.20	20.80	20.70	18.50
22	20.50	20.00	20.75	19.70	18.70	20.10	18.75	19.05	18.90	19.10	20.45	18.50
23	20.45	19.95	20.05	19.70	18.50	18.60	18.85	19.40	18.80	21.00	20.65	18.35
24	20.50	19.75	---	19.70	18.50	18.65	18.95	19.40	18.65	21.25	20.60	18.45
25	20.40	19.75	20.25	19.50	18.15	18.60	19.00	19.25	18.90	21.25	20.55	18.40
26	20.35	20.75	---	19.55	18.10	18.65	19.40	19.05	19.05	21.20	20.50	18.40
27	20.35	19.90	20.15	19.60	18.75	18.60	19.00	18.95	20.75	21.30	19.25	18.40
28	21.00	20.75	20.00	19.65	17.95	18.75	18.90	19.05	20.95	21.35	21.10	18.40
29	21.05	20.85	20.45	19.50	---	18.70	18.85	19.10	19.15	19.55	21.05	18.25
30	20.35	20.70	20.55	19.40	---	18.50	18.80	20.20	19.35	21.20	21.30	18.15
31	20.10	---	20.30	19.40	---	18.55	---	20.35	---	21.00	21.10	---
MAX	23.65	21.25	20.75	21.40	21.10	20.10	20.10	21.20	20.95	21.70	21.45	23.25

CAL YR 1989 LOW 23.65  
WTR YR 1990 LOW 23.65405745081510200 WN-7  
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

## GROUND-WATER RECORDS

## 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.

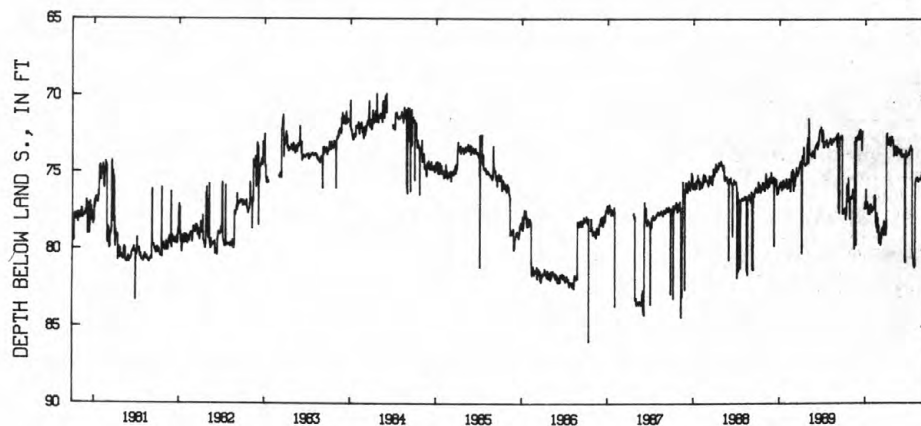
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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 1989 TO SEPTEMBER 1990  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77.33	76.69	72.66	77.31	77.29	79.27	72.64	73.24	73.89	73.81	75.65	75.57
2	77.33	76.67	72.57	77.33	77.29	78.88	72.51	73.41	73.79	73.88	75.60	75.56
3	77.63	76.63	72.74	77.06	77.32	78.97	72.47	73.91	73.49	73.83	75.55	75.70
4	77.62	76.66	72.72	76.07	77.29	79.11	72.42	73.87	73.93	73.67	75.44	75.75
5	77.33	76.48	72.42	77.11	77.39	79.22	72.69	73.28	73.97	73.63	75.35	75.63
6	77.33	76.44	72.31	77.24	77.27	79.57	72.84	73.44	73.75	73.84	75.41	75.55
7	77.28	76.44	72.83	77.24	77.25	79.69	72.97	73.46	73.90	73.85	75.47	75.52
8	77.56	76.32	72.83	77.01	77.25	79.57	73.18	73.49	73.87	73.58	75.48	75.60
9	78.02	76.08	72.49	76.87	76.50	79.21	73.16	73.44	73.87	73.46	75.44	75.53
10	77.77	76.41	72.19	77.10	76.45	79.25	72.83	73.26	73.89	73.47	75.30	75.63
11	77.70	76.41	72.33	77.03	76.48	78.69	72.81	73.80	73.96	73.44	75.34	75.73
12	77.54	76.66	72.33	77.19	76.73	78.63	73.08	73.79	73.98	73.35	75.37	75.86
13	76.93	76.21	72.27	77.65	76.62	78.75	73.16	73.80	73.85	73.35	75.51	75.88
14	75.91	78.37	72.29	77.63	78.24	78.61	72.92	73.86	73.77	73.23	75.59	75.77
15	75.76	79.94	72.30	77.45	78.14	78.57	72.68	73.62	73.79	73.31	75.53	75.59
16	76.54	76.88	72.40	77.53	77.65	78.56	72.72	73.53	73.83	73.44	75.49	75.58
17	76.72	72.95	73.52	77.44	78.54	78.50	73.03	73.31	73.82	73.55	75.46	75.85
18	76.88	73.26	72.94	77.56	77.82	78.76	73.24	73.55	80.46	73.55	75.43	75.90
19	76.26	73.28	72.51	77.68	77.60	78.95	73.18	73.61	80.79	73.44	75.40	75.69
20	76.17	72.69	72.31	77.37	78.11	79.02	72.93	73.40	80.81	79.99	75.46	75.64
21	75.34	72.83	---	77.04	78.86	78.34	72.73	73.63	73.93	80.20	75.42	75.65
22	75.64	79.71	---	77.14	78.01	78.12	72.77	73.67	73.90	80.23	75.35	75.24
23	76.49	73.10	---	77.23	77.89	78.35	72.67	73.73	73.55	80.51	75.34	75.34
24	76.64	72.96	---	77.10	78.34	78.33	72.63	73.72	73.82	80.70	75.37	75.42
25	76.53	72.76	---	77.06	78.87	78.21	72.64	73.70	73.97	80.94	75.44	75.30
26	77.11	72.64	---	77.31	78.88	78.42	72.88	73.47	73.95	81.04	75.37	75.41
27	77.92	72.66	---	77.34	78.43	78.90	72.94	73.52	73.95	81.00	75.28	75.50
28	77.99	72.66	77.31	77.55	79.56	79.01	72.84	73.52	73.97	81.15	75.22	75.55
29	76.67	72.84	77.29	77.34	---	79.01	73.00	73.56	73.87	81.02	75.17	75.45
30	76.59	72.55	77.21	77.21	---	78.70	73.02	73.73	73.77	80.89	75.44	75.55
31	76.57	---	76.86	77.44	---	78.59	---	73.82	---	81.01	75.54	---
MAX	78.02	79.94	77.31	77.68	79.56	79.69	73.24	73.91	80.81	81.15	75.65	75.90
CAL YR 1989	LOW 80.21											
WTR YR 1990	LOW 81.15											



405805081462300 WN-6  
MAXIMUM DAILY DEPTH BELOW LAND S. (FT)

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## 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)	$2.54 \times 10^1$	millimeters (mm)
	$2.54 \times 10^{-2}$	meters (m)
feet (ft)	$3.048 \times 10^{-1}$	meters (m)
miles (mi)	$1.609 \times 10^0$	kilometers (km)
<i>Area</i>		
acres	$4.047 \times 10^3$	square meters (m <sup>2</sup> )
	$4.047 \times 10^{-1}$	square hectometers (hm <sup>2</sup> )
	$4.047 \times 10^{-3}$	square kilometers (km <sup>2</sup> )
square miles (mi <sup>2</sup> )	$2.590 \times 10^0$	square kilometers (km <sup>2</sup> )
<i>Volume</i>		
gallons (gal)	$3.785 \times 10^0$	liters (L)
	$3.785 \times 10^0$	cubic decimeters (dm <sup>3</sup> )
	$3.785 \times 10^{-3}$	cubic meters (m <sup>3</sup> )
million gallons	$3.785 \times 10^3$	cubic meters (m <sup>3</sup> )
	$3.785 \times 10^{-3}$	cubic hectometers (hm <sup>3</sup> )
cubic feet (ft <sup>3</sup> )	$2.832 \times 10^1$	cubic decimeters (dm <sup>3</sup> )
	$2.832 \times 10^{-2}$	cubic meters (m <sup>3</sup> )
cfs-days	$2.447 \times 10^3$	cubic meters (m <sup>3</sup> )
	$2.447 \times 10^{-3}$	cubic hectometers (hm <sup>3</sup> )
acre-feet (acre-ft)	$1.233 \times 10^3$	cubic meters (m <sup>3</sup> )
	$1.233 \times 10^{-3}$	cubic hectometers (hm <sup>3</sup> )
	$1.233 \times 10^{-6}$	cubic kilometers (km <sup>3</sup> )
<i>Flow</i>		
cubic feet per second (ft <sup>3</sup> /s)	$2.832 \times 10^1$	liters per second (L/s)
	$2.832 \times 10^1$	cubic decimeters per second (dm <sup>3</sup> /s)
	$2.832 \times 10^{-2}$	cubic meters per second (m <sup>3</sup> /s)
gallons per minute (gal/min)	$6.309 \times 10^{-2}$	liters per second (L/s)
	$6.309 \times 10^{-2}$	cubic decimeters per second (dm <sup>3</sup> /s)
	$6.309 \times 10^{-5}$	cubic meters per second (m <sup>3</sup> /s)
million gallons per day	$4.381 \times 10^1$	cubic decimeters per second (dm <sup>3</sup> /s)
	$4.381 \times 10^{-2}$	cubic meters per second (m <sup>3</sup> /s)
<i>Mass</i>		
tons (short)	$9.072 \times 10^{-1}$	megagrams (Mg) or metric tons



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