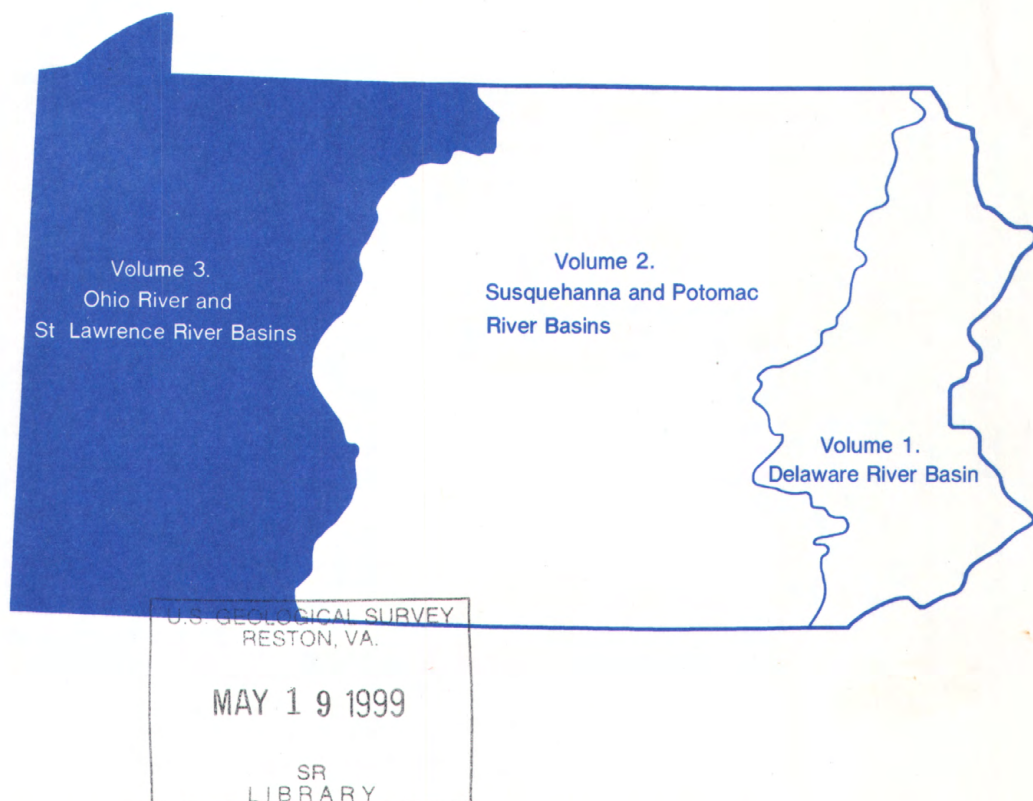


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Water Resources Data Pennsylvania Water Year 1996

Volume 3. Ohio River and St. Lawrence River Basins



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT PA-96-3
Prepared in cooperation with the Pennsylvania Department of
Environmental Protection, the Pittsburgh District of the U.S. Army Corps
of Engineers, and with other State, municipal, and Federal agencies

CALENDAR FOR WATER YEAR 1996

1995

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

1996

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

U.S. DEPARTMENT OF THE INTERIOR

BRUCE BABBITT, Secretary

U.S. GEOLOGICAL SURVEY

Gordon P. Eaton, Director

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Lemoyne, Pennsylvania 17043-1586

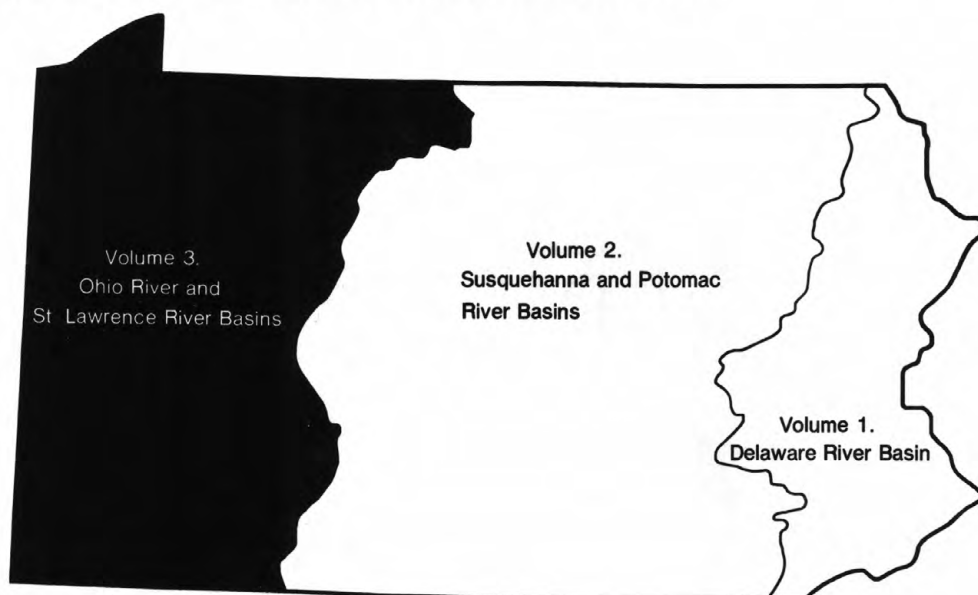
1997



Water Resources Data Pennsylvania Water Year 1996

Volume 3. Ohio River and St. Lawrence River Basins

by Martin B. Coll, Jr. and Raymond W. Siwicki



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT PA-96-3
Prepared in cooperation with the Pennsylvania Department of
Environmental Protection, the Pittsburgh District of the U.S. Army Corps
of Engineers, and with other State, municipal, and Federal agencies

PREFACE

This volume of the annual water resources report of Pennsylvania 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 provide the hydrologic information needed by State, municipal, and Federal agencies, and the private sector for developing and managing our Nation's land and water resources. Hydrologic data for Pennsylvania are contained in 3 volumes:

- Volume 1. Delaware River Basin
- Volume 2. Susquehanna River and Potomac River Basins
- Volume 3. Ohio River and St. Lawrence River Basins

Volume 3 was prepared in cooperation with the Commonwealth of Pennsylvania and other agencies under the general supervision of Gary N. Paulachok, District Chief, Pennsylvania District; Martin B. Coll Jr., Chief of the Hydrologic Surveillance Section, Pittsburgh, and Steven McAuley, Chief, Pittsburgh Project Office. It 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:

B. Anderson	J. Hawkins	J. Sams
K. Beer	M. Janiszewski	W. Schachner
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13. ABSTRACT (Maximum 200 words) Water resources data for the 1996 water year for Pennsylvania consists of records of discharge and water quality of streams; contents and elevations of lakes and reservoirs; and water levels of ground-water wells. This report, Volume 3, includes records from the Ohio and St. Lawrence River Basins. Specifically, it contains: (1) discharge records for 66 continuous record streamflow-gaging stations and 10 partial-record and miscellaneous streamflow stations; (2) elevation and contents records for 3 lakes and reservoirs; (3) water-quality records for 2 streamflow-gaging stations and 18 partial-record stations; and (4) water-level records for 15 network observation wells. 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, together with the data in Volume 1 and 2, represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State, Municipal, Local, and Federal agencies in Pennsylvania.				
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SURFACE-WATER STATIONS, IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

(Letters after station name designates type of data: (d) discharge, (c) chemical, (b) biological, (t) water temperature, (s) sediment)

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WATER RESOURCES DATA - PENNSYLVANIA, 1996

DISCONTINUED CONTINUOUS-RECORD SURFACE-WATER DISCHARGE STATIONS

The following continuous-record surface-water discharge stations (listed in downstream order) have been discontinued. Daily streamflow records were collected and published for the period of record shown for each station. Those stations with an asterisk (*) after the station number are currently operated as partial-record stations. Discontinued stations with less than 3 years of record have not been included. Information regarding these stations may be obtained from the District Office at the address given on the back of the title page of this report.

Station name	Station number	Drainage area (mi ²)	Period of record (Water years)
OHIO RIVER AND ST. LAWRENCE RIVER BASINS			
Newell Creek near Port Allegany	03008000	7.79	1965-78
Allegheny River at Larabee	03010000	530	1920-21 1925-39
Kinzua Creek at Dewdrop	03012000	171	1909-16
Allegheny River at Kinzua Dam	03012550	2,180	1935-91
Jackson Run near North Warren	03015280	12.8	1962-78
Allegheny River at Warren	03015310*	3,131	1988-94
Tionesta Creek at Sheffield	03016500	128	1941-46
South Branch Tionesta Creek at Barnes	03017000	85.3	1941-46
Tionesta Creek at Lynch	03017500*	233	1939-79
Tionesta Creek at Mayburg	03018000	307	1941-46
Tionesta Creek at Butler Bridge (near Nebraska)	03018500	420	1919-23
Tionesta Creek at Nebraska	03019000	469	1909-11 1923-40
Tionesta Creek at Tionesta Dam	03020000	479	1940-91
Oil Creek near Rouseville	03021000	315	1909-32
West Branch French Creek near Lowville	03021410	52.3	1975-93
French Creek near Union City	03021520	221	1909-91
Little Conneauttee Creek near McKean	03021700	3.60	1960-78
French Creek at Venango	03022000*	597	1938-46
French Creek at Saegerstown	03022500	629	1921-39
Woodcock Creek at Blooming Valley	03022540	31.1	1974-95
Woodcock Creek at Woodcock Creek Dam	03022554	45.6	1974-91
Cussewago Creek near Meadville	03023000	90.2	1910-38
French Creek at Carlton	03023500	998	1908-25
Sugar Creek at Wyattville	03024500	153	1910-16
Sugar Creek at Sugarcreek	03025000*	166	1932-79
Patchel Run near Franklin	03025200	5.69	1967-78
East Branch Clarion River at East Branch Clarion River Dam	03027500	73.2	1948-91
Clarion River at Johnsonburg	03028500	204	1945-95
Clarion River at Ridgway	03029000*	303	1940-53
Toms Run at Cooksburg	03029400	12.6	1959-78

WATER RESOURCES DATA - PENNSYLVANIA, 1996

DISCONTINUED CONTINUOUS-RECORD SURFACE-WATER DISCHARGE STATIONS--Continued

Station name	Station number	Drainage area (mi ²)	Period of record (Water years)
OHIO RIVER AND ST. LAWRENCE RIVER BASINS			
Clarion River near Clarion	03030000	930	1919-23
Clarion River at St. Petersburg	03031000	1,246	1941-53 1973-75
Big Run near Sprankle Mills	03031950	7.38	1963-81
Allegheny River near Rimer	03033000	8,389	1938-45
Stump Creek at Cramer	03033500	22.1	1942-46
Mahoning Creek at Dayton	03035000	321	1920-40
Mahoning Creek at Mahoning Creek Dam	03036000	344	1938-91
Crooked Creek at Creekside	03037000	67.6	1942-46
South Branch Plum Creek at Willet	03037500	30.0	1941-46
Crooked Creek at Crooked Creek Dam	03039000	278	1909-91
Clear Run near Buckstown	03039200	3.68	1964-78
Stony Creek at Hollsopple	03039500	244	1937-40
Little Conemaugh River at East Conemaugh	03041000	183	1939-95
Little Yellow Creek near Strongstown	03042200	7.36	1960-78 1986-88
Yellow Creek near Penn Run	03042250	50.4	1963-67
Blacklick Creek at Blacklick	03043000	390	1908-51
Conemaugh River at Tunnelton	03044000	1,358	1939-91
Loyalhanna Creek at New Alexandria	03045500	265	1919-23 1925-40
Loyalhanna Creek at Loyalhanna Dam	03047000	292	1939-91
Kiskiminetas River at Avonmore	03047500	1,723	1908-37
Monongahela River at Point Marion	03063000	2,720	1936-55
Stony Fork Tributary near Gibbon Glade	03070420	0.93	1977-94
Stony Fork near Elliottsville	03070455	7.44	1977-85
Monongahela River at Greensboro	03072500	4,367 ^a	1938-95
Georges Creek at Smithfield	03072590	16.3	1963-78
Tenmile Creek near Clarksville	03072840	133	1968-79
South Fork Tenmile Creek at Jefferson	03073000	180	1931-95
Dunlap Creek at Allison	03074000	33.1	1942-51
Lick Run at Hopwood	03074300	3.80	1966-78
Youghiogheny River at Youghiogheny River Dam	03077500	436	1939-91

^a Formerly published as 4,407.

WATER RESOURCES DATA - PENNSYLVANIA, 1996

DISCONTINUED CONTINUOUS-RECORD SURFACE-WATER DISCHARGE STATIONS--Continued

Station name	Station number	Drainage area (mi ²)	Period of record (Water years)
OHIO RIVER AND ST. LAWRENCE RIVER BASINS			
Big Piney Run near Salisbury	03078500	24.5	1932-70
Youghiogheny River at Ohiopyle	03081500	1,062	1927-50
Poplar Run near Normalville	03082200	9.27	1961-78
Green Lick Run at Green Lick Reservoir	03083000	3.07	1941-79
Abers Creek near Murrys ville	03084000	4.39	1949-93
Turtle Creek at Trafford	03084500	55.9	1920-52
Big Sewickley Creek near Ambridge	03086100	15.6	1967-78
Shenango River near Turnersville	03100000	152	1912-22
Sugar Run at Pymatuning Dam	03101000	9.34	1934-55
Shenango River near Jamestown	03102000	181	1919-34
Pymatuning Creek near Orangeville	03103000	169	1914-23 1925-63
Shenango River at Sharpsville	03103500	584	1938-91
Shenango River at Sharon	03104000	608	1910-38
Shenango River at New Castle	03104500*	792	1910-11 1912-34
Cool Spring Creek near Jackson Center	03104580	13.0	1961-68
Harthegig Run near Greenfield	03104760	2.26	1968-81
Neshannock Creek at Eastbrook	03105000	228	1918-23
Wolf Creek near Slippery Rock	03106140	86.6	1976-82
Ohio River at Montgomery Island Dam	03108500	22,960 ^b	1941-51
Brush Run near Buffalo	03111150	10.3	1960-78 1982-85
Enlow Fork near West Finley	03111585	38.1	1979-85

^b About.

WATER RESOURCES DATA - PENNSYLVANIA, 1996

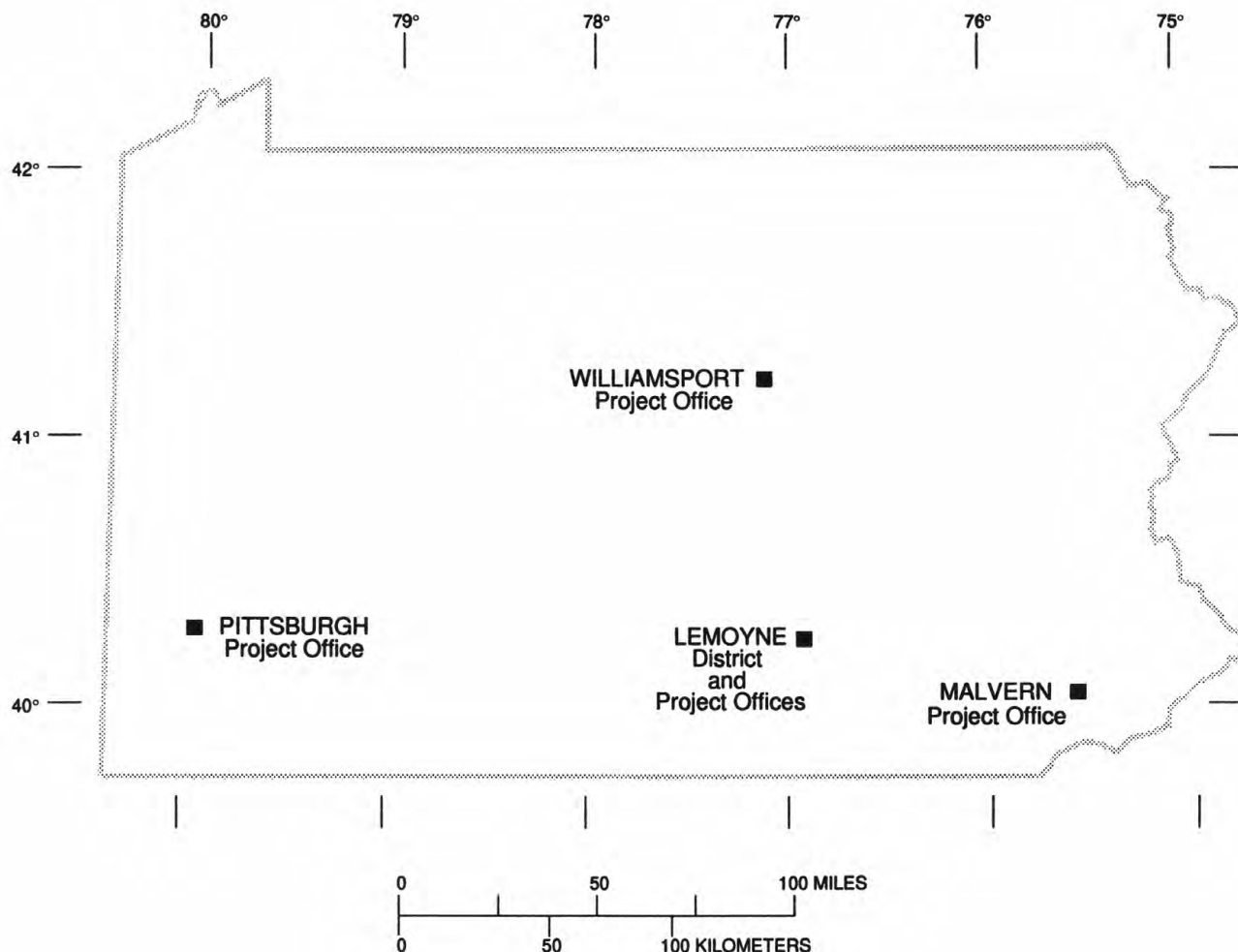
DISCONTINUED CONTINUOUS-RECORD SURFACE-WATER-QUALITY STATIONS

The following stations were discontinued as continuous-record surface-water-quality stations. Daily records of temperature, specific conductance, pH, or sediment were collected and published for the period shown for each station.

Station name	Station number	Drainage area (mi ²)	Type of record	Period of record (Water years)
OHIO RIVER AND ST. LAWRENCE RIVER BASINS				
Brokenstraw Creek at Youngsville	03015500	321	Sed.	1968-70
Oil Creek at Rouseville	03020500	300	Sed.	1970-73
French Creek at Utica	03024000	1,028	Sed.	1971-72
Sugar Creek at Sugarcreek	03025000	166	Sed.	1971-72
Clarion River at Cooksburg	03029500	807	Sed.	1971-73
Redbank Creek at St. Charles	03032500	528	Sed.	1968-70 1976-79
Beaver Run near Troutville	03033222	2.21	Sed.	1979-81
East Br. Mahoning Creek near Big Run	03033225	29.6	Sed.	1979-81
Stonycreek River at Ferndale	03040000	451	Sed., Temp.	1978-79
Loyalhanna Creek at Kingston	03045000	172	Sed.	1970-77
Allegheny River at New Kensington	03049625	11,500	Sed.	1976-79
Stony Fork near Farmington	03070415	2.50	Sed.	1980-81
Stony Fork Trib. near Gibbon Glade	03070420	0.93	Sed., Temp., S.C., pH	1977-88
Stony Fork near Elliottsville	03070455	7.44	Sed., Temp., S.C., pH	1977-85
Whiteley Creek near Kirby	03072670	5.95	Sed.	1979-82
South Fork Tenmile Creek at Jefferson	03073000	180	Sed.	1968-69
Castle Run at Clarksville	03073030	6.21	Sed.	1979-81
Big Meadow Run at Ohiopyle	03081600	35.9	Temp., S.C., pH	1988
Indian Creek at Jones Mills	03082020	17.4	Sed., Temp., S.C., pH	1986-87
Champion Run at Melcroft	03082120	13.8	Sed.	1985-87
Poplar Run near Normalville	03082190	8.83	Sed., Temp., S.C., pH	1986-89
Indian Creek at White Bridge	03082237	91.2	Temp., S.C., pH	1985-87
Monongahela River at Braddock	03085000	7,337	Sed.	1973-79
Enlow Fork near West Finley	03111585	38.1	Sed.	1979-85

Type of record: Sed. (Sediment), Temp. (Temperature), S.C. (Specific Conductance), pH (pH)

PENNSYLVANIA DISTRICT OFFICE LOCATIONS AND ADDRESSES



District and Project Offices:
U.S. Geological Survey
Water Resources Division
 840 Market Street
 Lemoyne, PA 17043-1586
 (717) 730-6900
 FAX (717) 730-6997

Williamsport Project Office:
U.S. Geological Survey
Water Resources Division
 P.O. Box 1805
 Room 301 Federal Building
 240 W. Third Street
 Williamsport, PA 17703
 (717) 323-7736 or 323-9571

Pittsburgh Project Office:
U.S. Geological Survey
Water Resources Division
 Room 2204 Federal Building
 1000 Liberty Avenue
 Pittsburgh, PA 15222
 (412) 644-2863
 FAX (412) 355-2548

Malvern Project Office:
U.S. Geological Survey
Water Resources Division
 Great Valley Corporate Center
 111 Great Valley Parkway
 Malvern, PA 19355
 (610) 647-9008
 FAX (610) 647-4594

INTRODUCTION

The Water Resources Division of the U.S. Geological Survey, in cooperation with State, municipal, and Federal agencies, collects a large amount of data pertaining to the water resources of Pennsylvania each water year. These data, accumulated during many water 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 Geological Survey, the data are published annually in this report series entitled "Water Resources Data - Pennsylvania, Volumes 1, 2, and 3." Volume 1 contains data for the Delaware River Basin; Volume 2, the Susquehanna River and Potomac River Basins; and Volume 3, the Ohio River and St. Lawrence River Basins.

This report, Volume 3, specifically contains (1) discharge records for 65 continuous record streamflow-gaging stations, 10 partial-record and miscellaneous streamflow sites; (2) elevation and contents records for 3 lakes and reservoirs; (3) water-quality records for 8 streamflow-gaging stations, and 18 partial-record stations; and (4) water-level records for 15 ground-water observation wells.

Publications similar to this report are published annually by the Geological Survey for all States. For the purpose of archiving, these official reports have an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report PA-96-3." These water-data reports, beginning with the 1971 water year, are for sale as paper copy or microfiche by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

The annual series of Water Data Reports for Pennsylvania began with the 1961 water-year report and contained only data relating to quantities of surface water. Starting with the 1964 water year, a companion report (part 2) was introduced that contained only data relating to water quality. Beginning with the 1975 water year, the report was changed to its present format of three volumes, with each volume containing data on quantities of surface water, quality of surface and ground water, and ground-water levels.

Prior to the introduction of this series and for several years concurrent with it, water-resources data for Pennsylvania were published in 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," which was released in numbered parts as determined by natural drainage basins. For the 1961-70 water years, the data were published in two 5-year reports. Data prior to 1961 are included in two reports: "Compilation of Records of Surface Waters of the United States through 1950," and "Compilation of Records of Surface Waters of the United States, October 1950 to September 1960." Data for Pennsylvania are published in Parts 1, 3, and 4. Data on chemical quality, temperature, and suspended sediment for the 1941-70 water years were published annually under the title "Quality of Surface Waters of the United States," and ground-water levels for the 1935-74 water years were published under the title "Ground-Water Levels in the United States." The above mentioned Water-Supply Papers may be consulted in the libraries of the principal cities of the United States and may be purchased from U.S. Geological Survey at USGS Information Services, Box 25286, Denver, CO 80225.

Information for ordering specific reports may be obtained from the Pennsylvania District Office at the address on page xiii or by phoning the Scientific Publications and Technical Products Section at (717) 730-6940. Data may be requested from the District Hydrologic Surveillance Section at (717) 730-6916, or FAX (717) 730-6997.

COOPERATION

The U.S. Geological Survey and organizations of the Commonwealth of Pennsylvania have had cooperative agreements for the systematic collection of surface-water records during the periods 1919-21 and 1931 to date, water-quality records from 1944 to date, and ground-water records from 1925 to date. Organizations that supplied data are also acknowledged in station descriptions. Organizations that assisted in collecting data for this report through cooperative agreement with the Survey are listed below.

The Commonwealth of Pennsylvania Department of Environmental Protection, James M. Seif, Secretary through the following:

- Office of Water Management, Hugh V. Archer, PhD, Deputy Secretary;
- Bureau of Water Supply and Community Health, Glenn E. Maurer, Director;
- Bureau of Water Quality Management, Daniel B. Drawbaugh, Director;
- Bureau of Land and Water Conservation, Michael Krempasky, Director;
- Office of Mineral Resources, Robert C. Dolence, Deputy Secretary;
- Office of Field Operations, Terry R. Fabian, Deputy Secretary;
- Office of Management and Technical Services, Kenwood E. Giffhorn, Deputy Secretary;
- Bureau of Laboratories, Floyd D. Kefford, Director.

Roaring Spring Municipal Authority, Barbra Elliott, Borough Manager.

Indiana County Municipal Authority, Michael Duffalo, Executive Director.

Harmony Water Authority, Thomas Grech, Chairman.

New York State Department of Environmental Conservation, Michael D. Zagata, commissioner.

Assistance in the form of funds or services was given by: Corps of Engineers, U.S. Army, in collecting records for 50 gaging stations. Assistance was also furnished by the National Weather Service, NOAA, U.S. Department of Commerce.

The following organizations aided in collecting records:

Allegheny Power Service Corp.; Latrobe Municipal Authority; and Pennsylvania Electric Co.

WATER RESOURCES DATA - PENNSYLVANIA, 1996

SUMMARY OF HYDROLOGIC CONDITIONS

Streamflow

Streamflows in the Upper Ohio and St. Lawrence River Basins during water year 1996 were above normal¹. The 1996 annual mean discharge was 110 percent of the median of 1961-90 annual mean discharges at the Ohio River index gaging station-Oil Creek at Rouseville, PA, 03020500. Although monthly mean discharges during December and March were below normal and normal during October, November, February, April, July, and August, the streamflows during the other months were all above normal. The above normal discharges during January resulted from above normal rainfall and high temperatures that coincided with runoff from a thick snowpack and caused major flooding, death, and destruction throughout Pennsylvania. Although the comparison of mean to median discharges at the index gage (fig 1) does not show an abnormally large monthly mean discharge during July, record and near-record peak discharges and associated flooding occurred in Armstrong, Cambria, Clarion, Greene, Indiana, Jefferson, and Venango Counties.

A comparison of the monthly and yearly mean discharge during the 1996 water year with that of the 1961-90 reference period for Oil Creek at Rouseville, Pa., is shown in figure 1.

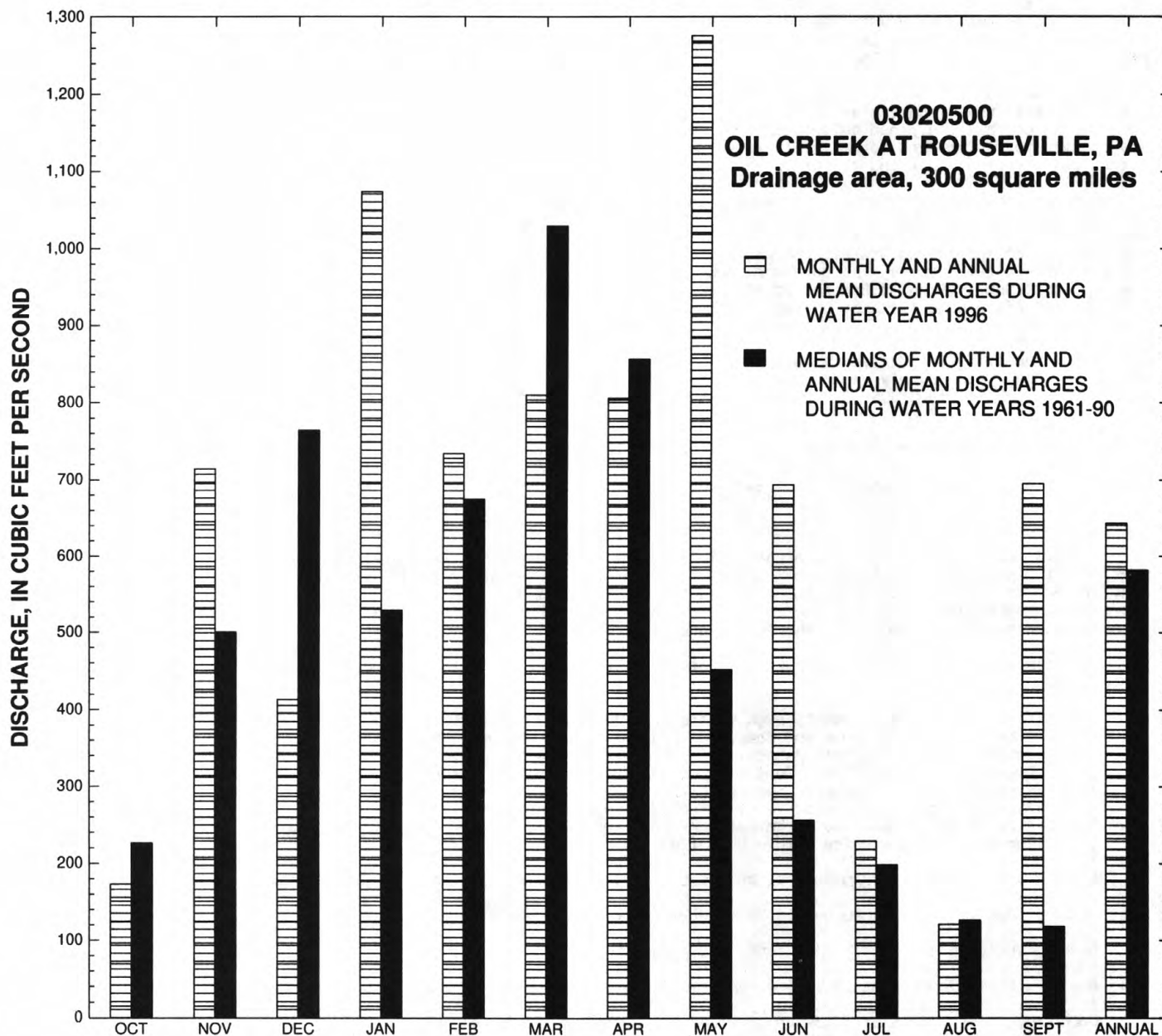


FIGURE 1.--COMPARISON OF MONTHLY AND ANNUAL MEAN DISCHARGES DURING WATER 1996 WITH THE MEDIAN OF MONTHLY AND ANNUAL MEAN DISCHARGES DURING WATER YEARS 1961-90.

¹. Above normal--greater than 75 percent quartile discharge; Normal--between 75 percent quartile and 25 percent quartile discharge; and below normal--below 25 percent quartile discharge.

WATER RESOURCES DATA - PENNSYLVANIA, 1996Ground Water

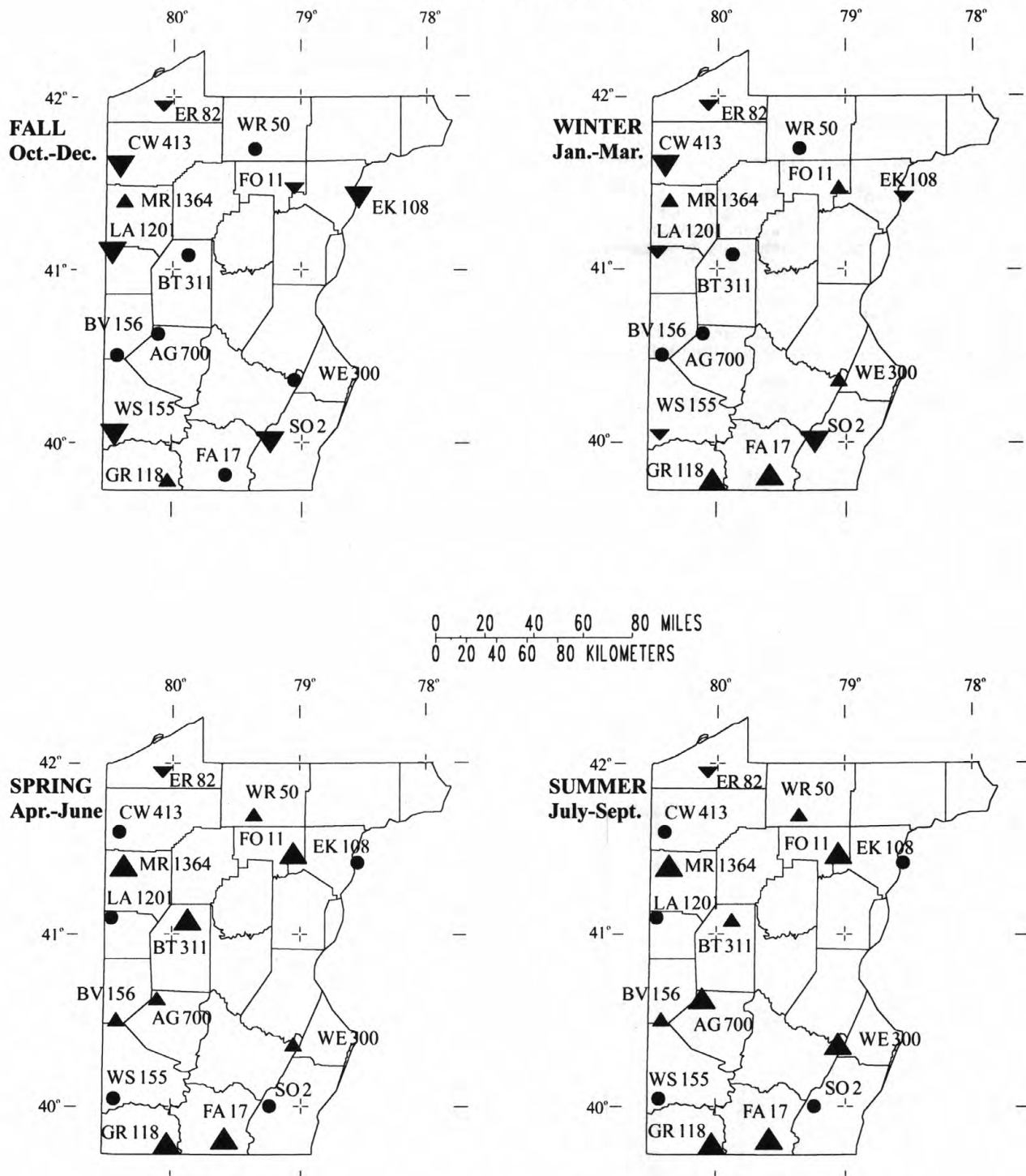
During the 1996 water year, ground-water levels reached annual highs in most observation wells during the late winter or spring. Ground-water levels in most observation wells during the 1996 water year reached annual lows during the fall of 1995.

The seasonal distribution of water levels for 15 network observation wells during the 1996 water year is shown in figure 2. Water levels during the 1996 water year were averaged by season and compared to the long-term mean water levels for these seasons. Long-term mean water levels were calculated from records ranging from 15 to 59 years in length.

In the fall of 1995, seasonal water levels were above-normal in two wells, normal in six wells, below-normal in two wells, and much below-normal in five of the wells (fig. 2). The below-normal precipitation in the summer of 1995 caused some of the water levels in the fall of 1995 to remain below normal and much below normal. Water levels generally rose to normal or above normal during the winter and spring compared to long-term winter and spring means.

The excessive precipitation of the summer of 1996 caused water levels to generally be normal or above long-term summer ground-water levels. Water levels at six wells were much-above normal in comparison to long-term summer means. Water levels at three wells were above normal. Water levels rose at the Allegheny County well (AG 700) and the Westmoreland County well (WE 300) from above-normal in the spring to much above normal for the summer.

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EXPLANATION

GROUND-WATER LEVELS

- ▲ MUCH ABOVE NORMAL--More than one standard deviation above long-term mean water level
- ▲ ABOVE NORMAL--One-half to one standard deviation above long-term mean water level
- NORMAL--Within one-half standard deviation of long-term mean water level
- ▼ BELOW NORMAL--One-half to one standard deviation below long-term mean water level
- ▼ MUCH BELOW NORMAL--More than one standard deviation below long-term mean water level

Figure 2.--Relation between mean 1996 seasonal water levels and long-term water levels.

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SPECIAL NETWORKS AND PROGRAMS

Hydrologic Bench-Mark Network is a network of 57 sites in small drainage basins throughout the country that provides consistent data on hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide. This network also provides analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by human activities. There are no stations in the Ohio and St. Lawrence Basins in Pennsylvania participating in this program.

The **National Trends Network (NTN)** is a 150-station network for sampling atmospheric deposition in the United States. The purpose of the network is to determine the variability, both in location and in time, of the composition of atmospheric deposition, which includes snow, rain, dust particles, aerosols, and gases. The core from which the NTN was built was the already-existing deposition-monitoring network of the National Atmospheric Deposition Program (NADP). There are no stations in Pennsylvania participating in this program.

The **National Water-Quality Assessment Program (NAWQA)** of the U.S. Geological Survey is a long-term program with goals to describe the status and trends of water-quality conditions for a large, diverse, and geographically distributed part of the Nation's ground- and surface-water resources, and to identify, describe, and explain the major natural and human factors that affect these observed conditions and trends. There are a number of streamflow, stream water quality, and ground water quality sites published as part of this volume that are operated as part of the Allegheny and Monongahela River Basins NAWQA program.

Assessment activities have begun in about two thirds of the study units and ultimately will be conducted in 60 study units (major watersheds and aquifer systems) that represent a wide range of environmental settings nationwide and that account for a large percentage of the Nation's water use. A wide array of chemical constituents will be measured in ground water, surface water, streambed sediments, and fish tissues. The coordinated application of comparative hydrologic studies at a wide range of spatial and temporal scales will provide information for decision making by water-resources managers and a foundation for aggregation and comparison of findings to address water-quality issues of regional and national interest.

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. There are no stations in the Ohio and St. Lawrence River Basins in Pennsylvania participating in this program.

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. There are no stations in the Ohio and St. Lawrence River Basins in Pennsylvania participating in this program.

EXPLANATION OF RECORDS

The surface-water and ground-water records in this report are for the 1996 water year that began October 1, 1995, and ended September 30, 1996. 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 location of these stations and wells are shown in figures 4-5. 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 in this report, whether streamsite or well, 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 location. The "downstream order" system is used for regular surface-water stations and the "latitude-longitude" system is used for wells and, in Pennsylvania, for some miscellaneous surface-water sites where only random water-quality samples or discharge measurements are made.

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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 on which a station is situated 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 system of indentation shows 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 in downstream order. In assigning station numbers, no distinction is made between partial-record stations and continuous-record 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. A station number can be from 8 to 15 digits in length and normally appears to the left of the station name. For example, an 8-digit number for a station such as 03020500, includes a 2-digit part number "03" plus a 6-digit downstream-order number "020500." The part number designates major river basins; for example, part "03" is the Ohio River and St. Lawrence River Basins.

Latitude and Longitude System

The identification numbers for wells and miscellaneous surface-water sites are assigned based on the grid system of latitude and longitude. The system provides the geographic location of the well or miscellaneous site and a unique number for each site. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude, the next seven digits denote the degrees, minutes, and seconds of longitude, and the last two digits (assigned sequentially) identify the wells or other sites within a 1-second grid. See figure 3 below.

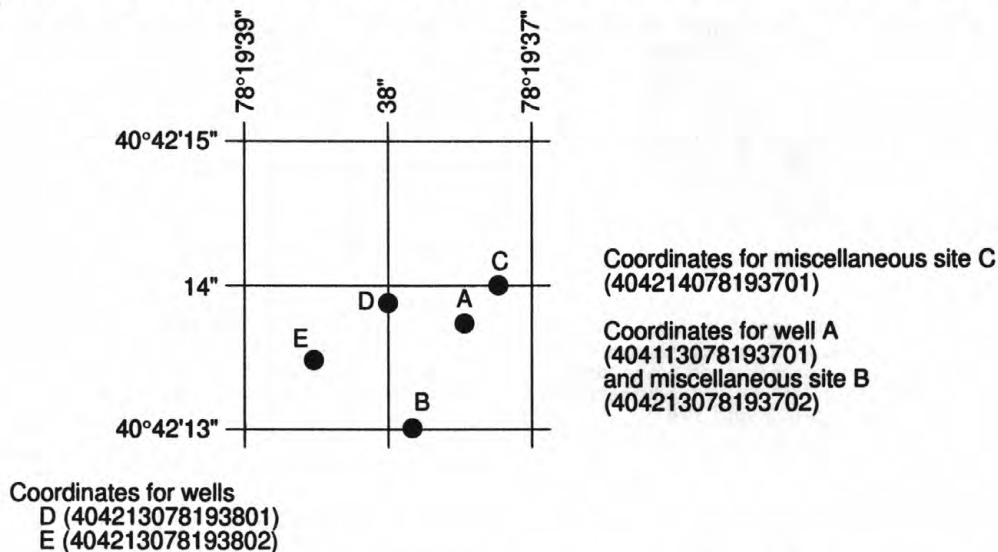


Figure 3.--System for numbering wells and miscellaneous sites (latitude and longitude).

A local well number is also assigned to the wells and consists of a 2-letter abbreviation of the county in which the well is located and a sequential number assigned at the time the well was scheduled.

Records of Stage and Water Discharge

Records of stage and water discharge may be continuous or partial. Continuous records of discharge are those obtained using a continuous stage-recording device through which either instantaneous water discharges may be computed for any time, or mean discharges may be computed for any period of time, during the period of record. Because daily mean discharges or end-of-day contents for reservoirs commonly are published for such stations, they are referred to as "daily stations" or "continuous-record 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 the partial record is indicated by table titles such as "Crest-stage partial-record stations," or "Low-flow partial-record stations." 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 continuous-record and partial-record stations for which data are given in this report are shown in figures 4-5.

Data Collection and Computation

The data obtained at a continuous-record gaging station on a stream consist of a continuous record of stage, individual measurements of discharge throughout a range of stages, and notations regarding factors that may affect the relation between stage and discharge. These data, together with supplemental information, such as weather records, are used to compute daily discharges.

Continuous records of stage are obtained with analog recorders that trace continuous graphs of stage, with digital recorders that punch stage values on paper tapes at selected time intervals, with solid-state electronic data loggers, or with Data Collection Platforms (DCP's) that electronically record and then transmit the data via satellite to ground receiving stations. Measurements of discharge are made with current meters using methods adopted 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-back-water techniques.

Daily mean discharges are computed by applying each recorded stage value (gage height) 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 curves 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 relations 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 to compute discharge.

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

For some gaging stations, there are periods when no gage-height data are collected or when the recorded gage height is so imprecise or incorrect that it cannot be used to compute daily mean discharge or end-of-day 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. Information explaining how estimated daily-discharge values are identified in station records is included in the next two sections, "Data Presentation" (REMARKS paragraph) and "Identifying Estimated Daily Discharge."

Data Presentation

Streamflow data in this report are presented in a format that is considerably different from the format in data reports prior to the 1991 water year. The major changes are that statistical characteristics of discharge now appear in tabular summaries following the water-year data table and less information is provided in the text or station manuscript above the table. These changes represent the results of a program to format the annual water-data report to meet user needs and data preferences.

The records published for each continuous-record surface-water discharge station (gaging station) now consist of four parts; (1) the manuscript or station description; (2) the data table of daily mean discharge values for the current water year with summary data; (3) a tabular statistical summary of monthly mean flow data for a designated period; and (4) a summary statistics table for a designated period that includes statistical data of annual, daily, and instantaneous flows as well as data pertaining to annual runoff, 7-day low-flow minimums, and flow duration.

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Station manuscript

For each continuous-record station, the manuscript provides, under various headings, descriptive information such as station location, period of record, historical extremes outside the period of record, record accuracy, and other remarks pertinent to station operation and regulation. The following comments, as appropriate, 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 gaging station 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, listed 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 of maps available varies from one drainage basin to another, the accuracy of drainage areas likewise varies. Drainage areas are updated as better maps become available.

PERIOD OF RECORD.--This indicates the period for which records have been published 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 its streamflow can reasonably be considered equivalent to the streamflow at the present station.

REVISED RECORDS.--Because of new information, published records 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 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 Sea Level (see definition of terms), and a condensed history of the types, locations, and datums of previous gages are given under this heading.

REMARKS.--This paragraph is used to present information relative to the accuracy of the records, to special methods of computation, and to conditions that affect natural flow at the station. 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 U.S. Geological Survey by a cooperating organization are identified here.

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 the U.S. Geological Survey.

PEAK DISCHARGES FOR CURRENT YEAR.--Peaks given here are similar to those found in the summary statistics table, except the peak discharge listing may include secondary peaks. For stations meeting certain criteria, all peak discharges and stages occurring during the water year are greater than a selected base discharge (see Definition of terms) are presented under this heading. The peaks greater than the base discharge, excluding the highest one, are referred to as secondary peaks. Peak discharges are not published for 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.

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

Although rare, occasionally the records of a discontinued 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 record from previously published data reports may wish to contact the District Office (address given on the back of the title page of this report) to determine if the published records were ever revised after the station was discontinued. Of course, if the data for a discontinued station were obtained by computer retrieval, the data would be current and accurate because published revisions of data are always accompanied by revisions of the data in computer storage.

Headings for AVERAGE DISCHARGE, EXTREMES FOR PERIOD OF RECORD, and EXTREMES FOR CURRENT YEAR have been deleted and the information contained in these paragraphs, except for the listing of secondary instantaneous peak discharges in the EXTREMES FOR CURRENT YEAR paragraph, is now presented in the tabular summaries following the discharge table or in the REMARKS paragraph, as appropriate. No changes have been made to the data presentations of lake contents.

Data table of daily mean values

The daily table of discharge records for stream-gaging stations gives mean discharge for each day of the water year. In the monthly summary for the table, the line headed "TOTAL" gives the sum of the daily figures for each month; the line headed "MEAN" gives the average flow in cubic feet per second for the month; and the lines headed "MAX" and "MIN" give the maximum and minimum daily mean discharges, respectively, for each month. Discharge for the month also is usually expressed in cubic feet per second per square mile (line headed "CFSM"); or in inches (line headed "IN."). Figures for cubic feet per second per square mile and runoff in inches may be omitted if there is extensive regulation or diversion or if the drainage area includes large noncontributing areas. At some stations both monthly and yearly observed discharges are adjusted for reservoir storage or diversion, or diversion data or reservoir contents are given. These figures are identified by a symbol and corresponding footnote.

Statistics of monthly mean data

A tabular summary of the mean (line headed "MEAN"), maximum (line headed "MAX"), and minimum (line headed "MIN") of monthly mean flows for each month for a designated period is provided below the daily values table. The water years of the first occurrence of the maximum and minimum monthly flows are provided immediately below those figures. The designated period will be expressed as "FOR WATER YEARS ____-____, BY WATER YEAR (WY)," and will list the first and last water years of the range of years selected from the PERIOD OF RECORD paragraph in the station manuscript. It will consist of all of the station record within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be consecutive, unless a break in the station record is indicated in the manuscript.

Summary statistics

A table titled "SUMMARY STATISTICS" follows the statistics of monthly mean data tabulation. This table consists of four columns, with the first column containing the line headings of the statistics being reported. The table provides a statistical summary of yearly, daily, and instantaneous flows, not only for the current water year but also for the previous calendar year and for a designated period, as appropriate. The designated period selected, "WATER YEARS ____-____," will consist of all of the station record within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be consecutive, unless a break in the station record is indicated in the manuscript. All of the calculations for the statistical characteristics designated ANNUAL (See line headings below.), except for the "ANNUAL 7-DAY MINIMUM" statistic, are calculated for the designated period using complete water years. The other statistical characteristics may be calculated using partial water years.

The date or water year, as appropriate, of the first occurrence of each statistic reporting extreme values of discharge is provided adjacent to the statistic. Repeated occurrences may be noted in the REMARKS paragraph of the manuscript or in footnotes. Because the designated period for the statistics may not be the same as the period of record published in the manuscript, occasionally the dates of occurrence listed for the daily and instantaneous extremes may not be within the designated period. Selected streamflow duration statistics and runoff data are also given. Runoff data may be omitted if there is extensive regulation or diversion of flow in the drainage basin.

The summary statistics data, as appropriate, are provided with each continuous record of discharge. The following comments clarify information presented under the various line headings of the summary statistics table.

ANNUAL TOTAL.--The sum of the daily mean values of discharge for the year. At some stations the annual total discharge is adjusted for reservoir storage or diversion. The adjusted figures are identified by a symbol and corresponding footnotes.

ANNUAL MEAN.--The arithmetic mean of the individual daily mean discharges for the year noted or for the designated period. At some stations the yearly mean discharge is adjusted for reservoir storage or diversion. The adjusted figures are identified by a symbol and corresponding footnotes.

HIGHEST ANNUAL MEAN.--The maximum annual mean discharge occurring for the designated period.

LOWEST ANNUAL MEAN.--The minimum annual mean discharge occurring for the designated period.

HIGHEST DAILY MEAN.--The maximum daily mean discharge for the year or for the designated period.

LOWEST DAILY MEAN.--The minimum daily mean discharge for the year or for the designated period.

ANNUAL 7-DAY MINIMUM.--The lowest mean discharge for 7 consecutive days for a calendar year or a water year. Note that most low-flow frequency analyses of annual 7-day minimum flows use a climatic year (April 1-March 31). The date shown in the summary statistics table is the initial date of the 7-day period. (This value should not be confused with the 7-day 10-year low-flow statistic.)

INSTANTANEOUS PEAK FLOW.--The maximum instantaneous discharge occurring for the water year or for the designated period. Note that secondary instantaneous peak discharges above a selected base discharge are stored in computer files for stations meeting certain criteria. Those discharge values may be obtained by writing to the District Office. (See address on back of title page of this report.)

INSTANTANEOUS PEAK STAGE.--The maximum instantaneous stage occurring for the water year or for the designated period. If the dates of occurrence for the instantaneous peak flow and instantaneous peak stage differ, the REMARKS paragraph in the manuscript or a footnote may be used to provide further information.

INSTANTANEOUS LOW FLOW.--The minimum instantaneous discharge occurring for the water year or for the designated period.

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ANNUAL RUNOFF (CFSM).--Indicates 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 for the year.

ANNUAL RUNOFF (INCHES).--Indicates the depth to which the drainage area would be covered if all the runoff for the year were uniformly distributed on it.

10 PERCENT EXCEEDS.--The discharge that has been exceeded 10 percent of the time for the designated period.

50 PERCENT EXCEEDS.--The discharge that has been exceeded 50 percent of the time for the designated period.

90 PERCENT EXCEEDS.--The discharge that has been exceeded 90 percent of the time for the designated period.

Data collected at partial-record stations follow the information for continuous-record sites. Data for partial-record discharge stations are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations, and the second is a table of annual maximum stage and discharge at crest-stage 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 times of flood or drought 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

Beginning with the 1987 annual State data report, estimated daily discharge values published in the water-discharge tables are identified by flagging individual daily values with the letter symbol "e" and printing a table footnote, "e Estimated,".

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 their true values; "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 hundredth of a cubic foot per second for values less than 1 ft³/s (cubic foot per second); to the nearest tenth from 1.0 to 10 ft³/s; to whole numbers from 10 to 1,000 ft³/s; and to 3 significant figures when greater than 1,000 ft³/s. The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharges listed for partial-record stations and miscellaneous sites.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to 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

Information of a more detailed nature than that published for most of the gaging stations such as measurements of water temperature, discharge measurements, gage-height records, and rating tables is on file in the District's offices. Also, most gaging-station records are available in computer-usable form and many statistical analyses have been made.

Information on the availability of unpublished data or statistical analyses may be obtained from the Hydrologic Surveillance Section (telephone (717) 730-6916).

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 recordings; however, because of costs, most data are obtained only monthly or less frequently. Locations of stations for which records on the quality of surface water appear in this report are shown in figures 4 and 5.

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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 the 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

During the collection of water-quality data, assurance that the data obtained represent the in-situ quality of the water is a major concern. Certain measurements, such as water temperature, pH, and dissolved oxygen, need to be made onsite when the samples are collected. To assure that measurements made in the laboratory also represent the in-situ water quality, carefully prescribed procedures need to be followed when collecting the samples, when treating the samples to prevent changes in quality pending analysis, and when shipping the samples to the laboratory. Procedures for onsite measurements and for collecting, treating, and shipping samples are given in publications on "Techniques of Water-Resources Investigations," (TWRI's) Book 1, Chapter D2; Book 3, Chapter C2; Book 5, Chapters A1, A3, and A4 and in U.S. Geological Survey Open-File Report 90-140. All of the TWRI references are listed on a following page in this report. Also, detailed information on collecting, treating, and shipping samples may be obtained from the U.S. 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 collected for the National Stream Quality Accounting Network (see Definition of Terms) are obtained from 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 determined from data that are recorded at 15-, 30-, or 60-minute intervals by digital recorders that punch each value on a paper tape, with solid-state electronic data loggers, or with Data Collection Platforms (DCP's). More detailed records (hourly values) may be obtained from the U.S. Geological Survey District Office at the address given on the back of the title page of this report.

Water Temperature

Water temperatures are measured at most of the water-quality stations. At stations where recording instruments are used, maximum, minimum, and mean temperatures for each day are published. In addition, water temperatures are measured at the time of discharge measurements for water-discharge stations and are on file in the District's offices. For stations where water temperature is measured manually once or twice daily, it is usually measured at about the same time each day. Large streams have a small diurnal temperature change; temperatures in 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 heated waste-water discharges.

Sediment

Suspended-sediment concentrations are determined from samples collected by hand or by pump samplers. Hand samples utilize the appropriate sampler (dependent on stream depth and velocity) and are collected using the depth-integrating method at single or multiple verticals in the cross section. Samples collected by pump samplers use an intake set to a fixed location in the cross section. The intake is located at a site that best represents the entire cross section on the basis of simultaneous samples collected at various stages by the pumping sampler and by hand. During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, every 15 minutes). The published sediment discharges 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 value differs from the value computed as the product of discharge, mean concentration, and the constant 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 discharges 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 observations, 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 suspended-sediment discharge, records of the periodic measurements of the particle-size distribution of the suspended sediment and bed material are included for some stations.

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Laboratory Measurements

Samples, for biochemical-oxygen demand (BOD), samples for indicator bacteria, and daily samples for specific conductance are analyzed locally. The remaining samples are analyzed in the U.S. Geological Survey National Water-Quality Laboratory in Arvada, Colorado. If other laboratories are used, they are identified in the "Remarks" or "Cooperation" paragraph of each water-quality station manuscript. Methods used in analyzing sediment samples and computing sediment records are given in "Techniques of Water Resources Investigations", Book 5, Chapter C1. Methods used by the Geological Survey laboratory are given in "Techniques of Water Resources Investigations", Book 1, Chapter D2; Book 3, Chapter C2; Book 5, Chapters A1, A3, and A4. Methods used by other laboratories are approved by the U.S. Geological Survey, Water Resources Division.

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 constituents currently measured daily. Tables of chemical, physical, biological, radiochemical, and other data, 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 streamflow-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 constituents measured daily or continuously and those measured less often than daily. For those measured daily or continuously, periods of record are given for the constituents individually.

INSTRUMENTATION.--Information on instrumentation is given only if a water-quality monitor, temperature recorder, 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 records.

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 constituents measured daily or more frequently. None are given for constituents measured less frequently, because the true maximums or minimums may not have been sampled. Extremes, when given, are provided 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.

The surface-water-quality records for partial-record stations and miscellaneous sampling sites are published in separate tables following the table of discharge measurements at miscellaneous sites. No descriptive statements are given for these records. Each station is published with its own station number and name in the regular downstream-order sequence.

Remark Codes

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

<u>PRINTED OUTPUT</u>	<u>REMARK</u>
E,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 acceptance range (non-ideal colony count)
L	Biological organism count less than 0.5 percent (organism may be observed rather than counted)
D	Biological organism count equal to or greater than 15 percent (dominant)
&	Biological organism estimated as dominant

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Records of Ground-Water Levels

Ground-water level data from an observation well network and from ground-water projects are published herein. Locations of observation wells in the basic network are shown in figure 4. Ground-water data are grouped by counties, arranged in alphabetical order, and are listed on page viii.

Data Collection and Computation

Water levels are measured 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.

The prime identification number for a given well is the 15-digit number that appears above the station description. The secondary identification number is the local well number, an alphanumeric number, derived from the county location of the well.

Water-level records are obtained from direct measurements with a steel tape, from the graph or punched tape of a water-stage recorder, with solid-state electronic data loggers, or with Data Collection Platforms (DCP's). The 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 elevation of the land-surface datum is given in the well description. The height of the measuring point (MP) above or below land-surface datum is given in each well description. Water levels in wells equipped with recording gages are reported for each day.

Water levels are reported to as many significant figures as can be justified by the local conditions. Accordingly, most measurements are reported to a hundredth of a foot, but some may be given to a tenth of a foot.

Data Presentation

Each well record consists of three parts; (1) the station description, (2) the data table of water levels observed during the current water year, and (3) a graph of the water levels for the last 3 years. The description of the well is presented first through use of descriptive headings preceding the tabular data. The comments that follow clarify information presented under the various headings of the station description.

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

AQUIFER.--This entry designates by name (if a name exists) and geologic age the aquifer(s) open to the well.

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

INSTRUMENTATION.--This paragraph provides information on both the frequency of measurement and the collection method, allowing the user to better evaluate the reported water-levels by knowing whether they are based on hourly, daily, or some other frequency of measurement.

DATUM.--This entry describes both the measuring point and the land-surface elevation 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 elevation of the land-surface datum is described in feet above (or below) sea level; it is reported with a precision relative to 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 also are water-quality observation wells, and may be used to acknowledge the assistance of local (non-Survey) observers.

PERIOD OF 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 and the words "to current year" if the records are to be continued into the following year. Periods for which water-level records are available, but are not published by the Geological Survey, may be noted.

EXTREMES FOR PERIOD OF RECORD.--This entry contains the highest and lowest values of one daily water-level statistic (maximum, mean, or instantaneous) reported in the data tables for the period of published record with respect to land-surface datum, (or occasionally sea level), and the dates of their occurrence. For example, if the highest and lowest of these daily maximum values for the period of record. Depending on the statistic reported in the table of water levels, extremes would be determined from daily maximum, mean, or instantaneous values.

Data table of water-levels

A table of water levels follows the station description for each well. These tables usually report water-level data as maximum depth (in feet) above or below land-surface datum, but may report daily mean or instantaneous values depending upon the method used to obtain the record and how the record was published in the past. If water-level record is obtained from punched-tape recorders, electronic data loggers, or DCP's, in addition to data published in the table of water levels, the daily maximum, minimum, and mean water-levels are stored in computer files and available from the District Office as noted in the REMARKS paragraph for that well. The extremes of the water-levels reported in the table for the water year and their dates of occurrence are shown on a line below the table. Missing records are indicated by dashes in place of the water level. A hydrograph showing the last three years of water levels follows each water-level table.

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Records of Ground-Water Quality

Records of ground-water quality are obtained at wells and springs included in ground-water projects. Records of ground-water quality in this report may involve a variety of types of data and measurement frequencies. Those wells with a (c) following the well number in the list of ground-water wells on page viii, have water-quality data published in the report.

Data Collection and Computation

The records of ground-water quality in this report were obtained mostly as a 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 previous years.

Most methods for collecting and analyzing water samples are described in the "Techniques of Water-Resources Investigations" manuals listed on a following page. The values reported 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 collected by trained personnel.

A variety of sampling techniques is used for collecting ground-water samples for chemical analyses. Techniques for sampling springs are the same as those used for sampling surface water. An appropriate well-sampling technique is selected at each site so that the chemical samples are representative of the water in the aquifer. Wells are pumped, when possible, until a constant water temperature, specific conductance, and pH are obtained before collecting water samples. Pumping rate, length of pumping, and sampling depth depend on the characteristics of the well and aquifer being sampled. Samples are collected either by a submersible pump or a bailer.

Data Presentation

Ground-water-quality data are published with ground-water-level data at stations where level data are collected. Data collected at partial-record stations and miscellaneous sites follow the information for continuous ground-water record stations. Data for each section are listed alphabetically by county, and are identified by well number. The prime identification number for wells sampled is the 15-digit number derived from the latitude-longitude locations. No descriptive statements are given for ground-water-quality records; however, the well number, depth of well, date of sampling, and other pertinent data are given in the table containing the chemical analyses of the ground water. The REMARK codes listed for surface-water-quality records are also applicable to ground-water-quality records.

ACCESS TO WATSTORE DATA

The U.S. Geological Survey is the principal Federal water-data agency and, as such, collects and disseminates about 70 percent of the water data currently being used by numerous State, local, private, and other Federal agencies to develop and manage our water resources. As part of the Geological Survey's program of releasing water data to the public, a large-scale computerized system has been developed for the storage and retrieval of water data collected through its activities. The National Water Data Storage and Retrieval System (WATSTORE) was established in 1972 to provide an effective and efficient means for the processing and maintenance of water data collected through the activities of the U.S. Geological Survey and to facilitate release of the data to the public. A variety of useful products, ranging from data tables to complex statistical analyses such as Log Pearson Type III, can be produced using WATSTORE. The system resides on the central computer facilities of the U.S. Geological Survey at its National Center in Reston, Virginia, and consists of related files and data bases.

- * Station Header File - Contains descriptive information on over 1,050,000 sites throughout the United States and its territories where the U.S. Geological Survey collects or has collected data.
- * Daily Values File - Contains over 300 million daily values of stream flows, stages, reservoir contents, water temperatures, specific conductances, sediment concentrations, sediment discharges, and ground-water levels.
- * Peak Flow File - Contains approximately 600,000 maximum (peak) streamflow and gage-height values at surface-water sites.
- * Water Quality File - Contains approximately 4.1 million analyses of water samples that describe the chemical, physical, biological, and radio-chemical characteristics of both surface and ground water.
- * Ground-Water Site Inventory Data Base - Contains inventory data for over 1.4 million wells, springs, and other sources of ground water. The data includes site location, geohydrologic characteristics, well-construction history, and one-time field measurements such as water temperature.

In 1976, the U.S. Geological Survey opened WATSTORE to the public for direct access. The signing of a Memorandum of Agreement with the Survey is required to obtain direct access to WATSTORE. The system can be accessed either synchronously or asynchronously. The requester will be expected to pay all computer costs incurred. Direct access may be obtained by contacting:

U.S. Geological Survey
National Water Data Exchange
MS 421, National Center
Reston, Virginia 22092

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In addition to providing direct access to WATSTORE, data can be provided in various machine-readable formats on magnetic tape or 5-1/4 and 3-1/2 inch floppy disk. Information about the availability of specific types of data or products, and user charges, can be obtained locally from each of the Water Resources Division's District offices (see address on the back of the title page).

For most streamgages, "real time" streamflow conditions are available on the World Wide Web (WWW) Pennsylvania District Home Page at <http://www.pah2o.er.usgs.gov/>. Daily streamflow values for the period of record, annual peak stream discharges, and streamflow conditions for surrounding states may also be obtained at this WWW address.

A wide variety of additional information, such as ordering U.S. Geological Survey maps and publications is available at the U.S. Geological Survey Home Page at <http://www.usgs.gov/>.

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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 (SI) Units on the inside of the back cover.

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 multi-celled plants, containing chlorophyll and lacking roots, stems, and leaves.

Algal growth potential (AGP) is the maximum algal 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.

Annual runoff indicates the total quantity of water in runoff for a drainage area for the year. Data reports may use any of the following units of measurements in presenting annual runoff data:

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

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 the runoff is distributed uniformly in time and area.

Inches (IN) indicates the depth to which the drainage area would be covered if all of the runoff for a given time period were uniformly distributed on it.

Aquifer is a geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant 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.

Fecal coliform bacteria are bacteria that are present in the intestines 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 hour when incubated at $44.5^{\circ}\text{C} \pm 0.2^{\circ}\text{C}$ 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 intestines of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. In the laboratory they are defined as all the organisms which produce red or pink colonies within 48 hours at $35^{\circ}\text{C} \pm 1.0^{\circ}\text{C}$ on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

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 which 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 $35^{\circ}\text{C} \pm 1.0^{\circ}\text{C}$ on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

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

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

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

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

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

Organic mass or volatile mass of the living substance is the difference between the dry mass and ash mass, and represents the actual mass of the living matter. The organic mass is expressed in the same units as for ash mass 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 flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, 1.9835 acre-feet, or about 646,000 gallons.

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 green 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.

Continuous-record station is a station where streamflow and/or water-quality data are collected systematically over a period of years for use in hydrologic analyses. Data may be collected continuously or periodically.

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 (ft^3/s)¹ 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.

Data Collection Platform (DCP) is an electronic instrument which collects, processes, stores, and transmits data from various sensors to an earth-orbiting Geostationary Operational Environmental Satellite (GOES) and/or through landline telemetry.

Data logger is a microprocessor based data acquisition system designed specifically to acquire, process, and store data. Data is usually downloaded from onsite data loggers for entry into office data systems.

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.

Annual 7-day minimum is the lowest mean discharge for 7 consecutive days for a calendar year or a water year. Note that most low-flow frequency analyses of annual 7-day minimum flows use a climatic year (April 1-March 31). The date shown in the summary statistics table is the initial date of the 7-day period. (This value should not be confused with the 7-day 10-year low-flow statistic.)

Base discharge is an arbitrary instantaneous discharge value, determined for stations meeting certain criteria, that will be exceeded about three times per year.

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

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

Dissolved refers to that material in a representative water sample which passes through a 0.45 μm 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 totaling 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 noncontributing 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 streams and bodies of impounded surface water.

¹ Until appropriate changes can be made to the WATSTORE and PRIME computer systems, the unit abbreviations "CFS" and "CFSM" will appear on some computer-generated table headings and summaries.

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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 computed as the sum of equivalents of polyvalent cations and is expressed as the equivalent concentration of calcium carbonate (CaCO_3).

Hydrologic Bench-Mark Network is a network of 55 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including 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 the activities of man.

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.

Land-surface datum (lsd) is a datum plane that is approximately at land surface at each ground-water observation well.

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 development 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 ($\mu\text{g/g}$) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the element per unit mass (gram) of material analyzed.

Micrograms per liter ($\mu\text{g/L}$, $\mu\text{g/L}$) 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 sediment per liter of water-sediment mixture.

Miscellaneous-record site is a site where limited streamflow and/or water-quality data are collected on a random basis for use in hydrologic analyses.

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.

The National Water-Quality Assessment Program (NAWQA) of the U.S. Geological Survey is a long-term program with goals to describe the status and trends of water-quality conditions for a large, diverse, and geographically distributed part of the Nation's ground- and surface-water resources, and to identify, describe, and explain the major natural and human factors that affect these observed conditions and trends.

The National Trends Network (NTN) is a 150-station network for sampling atmospheric deposition in the United States. The purpose of the network is to determine the variability, both in location and in time, of the composition of atmospheric deposition, which includes snow, rain, dust particles, aerosols, and gases. The core from which the NTN was built was the already-existing deposition-monitoring network of the National Atmospheric Deposition Program (NADP).

Organism is any living entity.

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

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Organisms 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 a particle 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	.004 - .062	Sedimentation
Sand	.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, numbers, mass, or volume.

Periphyton is the assemblage of microorganisms attached to and living upon submerged solid surfaces. While primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms.

Pesticides are chemical compounds used to control undesirable organisms. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides.

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

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 algal mats or floating "moss" in lakes. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample.

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

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

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

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

Polychlorinated biphenyls (PCBs) are industrial chemicals that are mixtures of chlorinated biphenyl compounds having various percentages of chlorine. They are similar in structure to organochlorine insecticides.

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 is 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 and 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.

Recurrence interval 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 return period.

Sea level in this report refers to the National Geodetic Vertical Datum of 1929 (NGVD of 1929)--a geodetic datum derived from a general adjustment of the first-order level nets of both the United States and Canada, formerly called Seal Level Datum of 1929.

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).

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

Suspended-sediment discharge (tons/day) is the rate at which dry mass of sediment passes a section of a stream or is the quantity of sediment, as measured by dry mass or volume, that passes a section in a given time. It is calculated in units of tons per day as follows: concentration (mg/L) $\times$ discharge (ft^3/s) $\times$ 0.0027.

Suspended-sediment load is a general term that refers to material in suspension. It is not synonymous with either discharge or concentration.

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 mass or volume, that passes a section during a given time.

Total-sediment load or total load is a term which refers to the total sediment (bed load plus suspended-sediment load) that is in transport. It is not synonymous with total-sediment discharge.

7-day 10-year low flow ($Q_7, 10$) is the discharge at the 10-year recurrence interval taken from a frequency curve of annual values of the lowest mean discharge for 7 consecutive days (the 7-day low flow).

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

Solute is any substance 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 the 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.

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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.

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 substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multi-plate samplers (made of hardboard) for benthic organism collection, and plexiglas strips for periphyton collection.

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

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

Surficial bed material is that 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 undissolved material in a water-sediment mixture. It is associated with the material retained on a 0.45 μm 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 μm 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 μm 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 a 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:

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

Thermograph is an instrument that continuously records variations of temperature on a chart. The more general term "temperature recorder" is used in the table headings and refers to an 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 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 period.

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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 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 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.

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.

Water year as used in Geological Survey reports, 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 a State's annual hydrologic-data reports.

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.

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

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PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

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

The reports listed below are for sale by the U.S. Geological Survey, Branch of Information Services, Box 25286, Federal Center, Denver, Colorado 80225 (authorized agent of the Superintendent of Documents, Government Printing Office). Prepayment is required. Remittance should be sent by check or money order payable to the U.S. Geological Survey. Prices are not included because they are subject to change. Current prices can be obtained by writing to the above address. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations."

- 1-D1. *Water temperature—influential factors, field measurement, and data presentation*, by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: USGS—TWRI Book 1, Chapter D1. 1975. 65 pages.
- 1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W. W. Wood: USGS—TWRI Book 1, Chapter D2. 1976. 24 pages.
- 2-D1. *Application of surface geophysics to ground-water investigations*, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS—TWRI Book 2, Chapter D1. 1974. 116 pages.
- 2-D2. *Application of seismic-refraction techniques to hydrologic studies*, by F. P. Haeni: USGS—TWRI Book 2, Chapter D2. 1988. 86 pages.
- 2-E1. *Application of borehole geophysics to water-resources investigations*, by W. S. Keys and L. M. MacCary: USGS—TWRI Book 2, Chapter E1. 1971. 126 pages.
- 2-E2. *Borehole geophysics applied to ground-water investigations*, by W. S. Keys: USGS—TWRI Book 2, Chapter E2. 1990. 150 pages.
- 2-F1. *Application of drilling, coring, and sampling techniques to test holes and wells*, by Eugene Shuter and W. E. Teasdale: USGS—TWRI Book 2, Chapter F1. 1989. 97 pages.
- 3-A1. *General field and office procedures for indirect discharge measurements*, by M. A. Benson and Tate Dalrymple: USGS—TWRI Book 3, Chapter A1. 1967. 30 pages.
- 3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M. A. Benson: USGS—TWRI Book 3, Chapter A2. 1967. 12 pages.
- 3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G. L. Bodhaine: USGS—TWRI Book 3, Chapter A3. 1968. 60 pages.
- 3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H. F. Matthai: USGS—TWRI Book 3, Chapter A4. 1967. 44 pages.
- 3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS—TWRI Book 3, Chapter A5. 1967. 29 pages.
- 3-A6. *General procedure for gaging streams*, by R. W. Carter and Jacob Davidian: USGS—TWRI Book 3, Chapter A6. 1968. 13 pages.
- 3-A7. *Stage measurement at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS—TWRI Book 3, Chapter A7. 1968. 28 pages.
- 3-A8. *Discharge measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS—TWRI Book 3, Chapter A8. 1969. 65 pages.
- 3-A9. *Measurement of time of travel in streams by dye tracing*, by F. A. Kilpatrick and J. F. Wilson, Jr.: USGS—TWRI Book 3, Chapter A9. 1989. 27 pages.
- 3-A10. *Discharge ratings at gaging stations*, by E. J. Kennedy: USGS—TWRI Book 3, Chapter A10. 1984. 59 pages.
- 3-A11. *Measurement of discharge by the moving-boat method*, by G. F. Smoot and C. E. Novak: USGS—TWRI Book 3, Chapter A11. 1969. 22 pages.

WATER RESOURCES DATA - PENNSYLVANIA, 1996
PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS—Continued

- 3-A12. *Fluorometric procedures for dye tracing*, Revised, by J. F. Wilson, Jr., E. D. Cobb, and F. A. Kilpatrick: USGS—TWRI Book 3, Chapter A12. 1986. 34 pages.
- 3-A13. *Computation of continuous records of streamflow*, by E. J. Kennedy: USGS—TWRI Book 3, Chapter A13. 1983. 53 pages.
- 3-A14. *Use of flumes in measuring discharge*, by F. A. Kilpatrick and V. R. Schneider: USGS—TWRI Book 3, Chapter A14. 1983. 46 pages.
- 3-A15. *Computation of water-surface profiles in open channels*, by Jacob Davidian: USGS—TWRI Book 3, Chapter A15. 1984. 48 pages.
- 3-A16. *Measurement of discharge using tracers*, by F. A. Kilpatrick and E. D. Cobb: USGS—TWRI Book 3, Chapter A16. 1985. 52 pages.
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WATER RESOURCES DATA - PENNSYLVANIA, 1996

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WATER RESOURCES DATA - PENNSYLVANIA, 1996

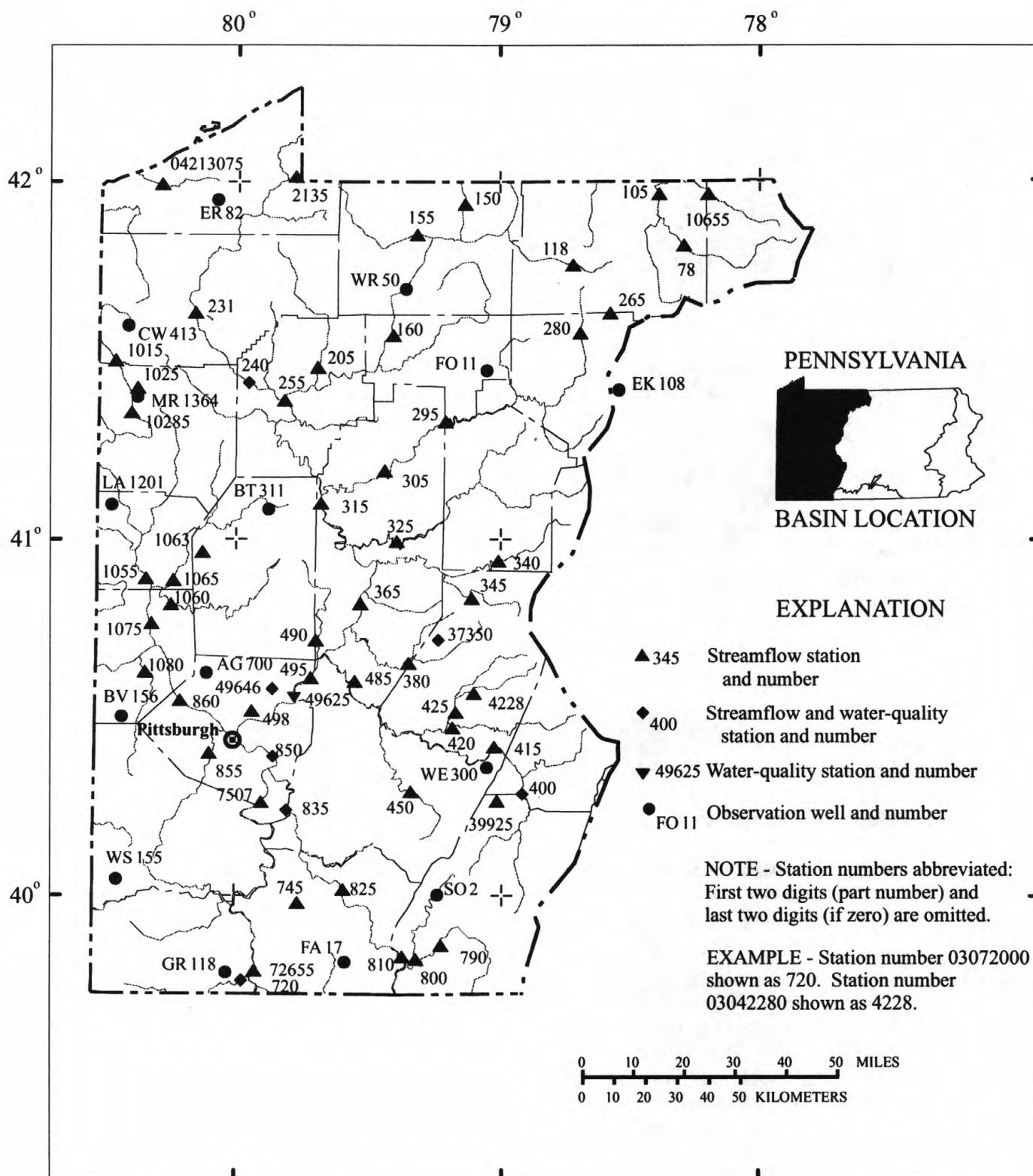


Figure 4. Location of continuous-record data-collection stations and network observation wells.

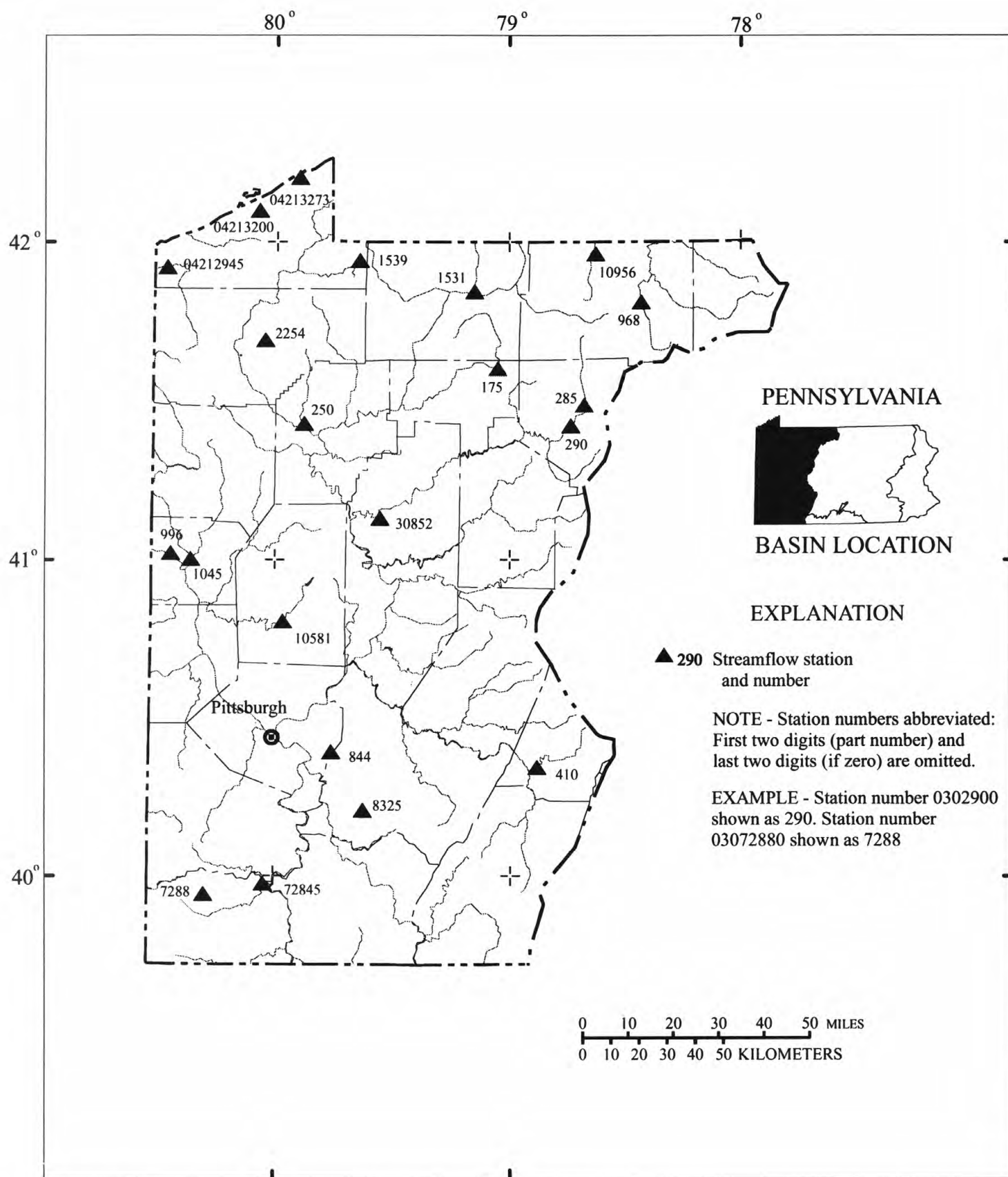


Figure 5. Location of partial-record data-collection stations.

WATER RESOURCES DATA - PENNSYLVANIA, 1996

SPECIAL NOTES, REMARK CODES, AND SELECTED CONSTITUENT DEFINITIONS

Note.--Historical and current dissolved trace-element concentrations are reported herein for water that was collected, processed and analyzed by using either ultraclean or other than ultraclean techniques. If ultraclean techniques were used, then those concentrations are reported in nanograms per liter. If other than ultraclean techniques were used, then those concentrations are reported in micrograms per liter and could reflect contamination introduced during some phase of the procedure.

--In March 1989, a bias was discovered in the turbidimetric method for sulfate analysis for those samples analyzed by the U.S. Geological Survey National Water-Quality Laboratory indicating that concentrations below 75 mg/L have a median positive bias of 2 mg/L above the true concentration for the period between 1982 and 1989.

--Methylene blue active substance (MBAS) determinations made from January 1, 1970 through August 29, 1993, at the National Water Quality Laboratory in Denver (Analyzing Agency Code 80020) are positively biased. These data can be corrected on the basis of the following equation, if concentrations of dissolved nitrate plus nitrite, as nitrogen, and dissolved chloride, determined concurrently with the MBAS data are applied:

$$MBASCOR = M - 0.0088N - 0.00019C$$

where:

MBASCOR = corrected MBAS concentration, in mg/L;

M = reported MBAS concentration, in mg/L;

N = dissolved nitrate plus nitrite, as nitrogen, in mg/L; and

C = dissolved chloride concentration, in mg/L.

The detection limit of the new method is 0.02 mg/L, whereas the detection limit for the old method was 0.01 mg/L. A detection limit of 0.02 mg/L should be used with corrected MBAS data from January 1, 1970 through August 29, 1993.

Remark Codes.--The following remark codes may appear with the water-quality data in this report:

<u>PRINTED OUTPUT</u>	<u>REMARK</u>
E,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
L	Biological organism count less than 0.5 percent (organism may be observed rather than counted)
D	Biological organism count equal to or greater than 15 percent (dominant)
&	Biological organism estimated as dominant
ND	Material specifically analyzed for but not detected

WATER RESOURCES DATA - PENNSYLVANIA, 1996

SPECIAL NOTES, REMARK CODES AND SELECTED CONSTITUENT DEFINITIONS--Continued

Explanation of selected abbreviations used in constituent definitions in water-quality tables:

COL. PER 100 ML	Colonies per 100 milliliters
DIS	Dissolved
FET	Fixed end-point titration
FLD	Field measurement determined at field site
F/S	Feet per second
G/M	Gallons per minute
G/SQ M	Grams per square meter
IT	Incremental titration
µG/L	Micrograms per liter
µS/CM	Microsiemens per centimeter
MG/L	Milligrams per liter
MG/M ²	Milligrams per square meter
PCI/L	Picocuries per liter
REC	Recoverable
TOT	Total
WH IT	Alkalinity, bicarbonate, and carbonate as determined by incremental titration of unfiltered water at the field site
2 SIGMA	Counting statistic that represents error in the reported radon, uranium, or tritium value caused by variations in sample counting, background radiation, volume of sample, and decay since sample was collected
0.7m GF	Water filtered through a glass-fiber membrane filter with openings that are 0.7 microns in size

Agency collection codes (00027):

1028--U.S. Geological Survey

Agency analyzing codes (00028):

1028--U.S. Geological Survey
 80020--U.S. Geological Survey, National Water-Quality Laboratory, Denver, Colorado
 9813--Pennsylvania Department of Environmental Protection

Sample method code (82398) is an included parameter in some water-quality tables. It is intended to indicate the method used to collect the water sample. The definition of these codes is listed below.

10	Equal width increment
20	Equal discharge increment
30	Single vertical
40	Multiple verticals
50	Point sample
70	Grab sample
120	Velocity integrated
8010	Other

CONTINUOUS SURFACE-WATER AND WATER-QUALITY STATION RECORDS

OHIO RIVER MAIN STEM

03007800 ALLEGHENY RIVER AT PORT ALLEGANY, PA

LOCATION.--Lat 41°49'07", long 78°17'35", McKean County, Hydrologic Unit 05010001, on right bank 40 ft upstream from bridge on U.S. Highway 6 at Port Allegany, 1.1 mi upstream from Twomile Creek, 1.4 mi downstream from Allegheny Portage Creek, at mile 285.5.

DRAINAGE AREA.--248 mi².

PERIOD OF RECORD.--October 1974 to current year. Discharge measurements obtained by U.S. Army Corps of Engineers March 1971 to October 1974.

GAGE.--Water-stage recorder. Datum of gage is 1,454.88 ft above sea level.

REMARKS.--Records good except for estimated daily discharges, which are fair. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 23, 1972 reached a stage of at least 17.5 ft, discharge, 21,700 ft³/s, from U.S. Army Corps of Engineers discharge measurement.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 2,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 21	1500	3,390	9.05	Apr. 30	2400	3,500	9.19
Jan. 19	2400	*12,600	*15.37	May 12	0800	4,240	10.04
Jan. 27	--	Unknown	ice jam				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	209	907	e115	e350	1070	519	3360	194	125	72	37
2	19	250	872	e105	e290	900	509	2540	177	102	65	35
3	18	327	736	e100	e250	736	482	1730	163	109	59	33
4	25	339	733	e120	e230	580	469	1410	158	114	55	32
5	48	e310	648	e115	e190	610	501	1100	154	95	51	34
6	273	e280	606	e110	e170	760	469	934	138	83	48	38
7	132	e310	529	e105	e160	555	469	778	128	76	46	107
8	93	349	460	e105	e200	507	442	670	138	108	62	132
9	73	310	415	e110	e250	455	417	590	126	96	124	93
10	64	283	323	e110	e300	427	408	1030	115	77	76	97
11	58	602	e260	e105	334	386	385	2440	125	69	59	79
12	52	2050	e230	e105	281	367	410	4100	128	65	53	105
13	49	1560	e210	e105	239	371	979	3040	107	62	52	1010
14	55	1240	e200	e100	243	451	1700	2010	119	67	48	976
15	153	1110	e275	e100	223	699	1640	1430	99	131	46	685
16	103	866	260	e86	209	750	1410	1090	86	146	60	505
17	84	714	233	e92	201	697	1100	879	79	157	53	678
18	75	638	212	e250	182	642	868	706	258	114	45	1140
19	70	621	216	e4600	165	630	728	573	468	261	41	894
20	69	595	343	8860	428	1810	688	477	330	235	38	695
21	2310	593	278	3660	1460	1670	606	604	267	176	57	532
22	2070	559	212	1930	1240	1320	532	542	235	149	52	432
23	1070	516	e175	1350	1350	1040	532	445	222	129	46	410
24	722	473	e160	1620	2080	823	575	412	206	116	83	309
25	537	426	e145	1370	2050	715	557	366	208	103	60	272
26	418	411	e135	1080	1680	809	558	327	170	97	48	230
27	344	402	e125	e960	1370	728	578	309	146	85	43	199
28	305	845	e120	e700	1400	689	505	304	131	77	54	650
29	267	1050	e115	e580	1240	656	741	283	120	71	53	1460
30	238	943	e105	e470	---	588	2110	245	154	90	44	1160
31	223	---	e120	e400	---	530	---	218	---	93	39	---
TOTAL	10037	19181	10358	29618	18765	22971	21887	34942	5149	3478	1732	13059
MEAN	324	639	334	955	647	741	730	1127	172	112	55.9	435
MAX	2310	2050	907	8860	2080	1810	2110	4100	468	261	124	1460
MIN	18	209	105	86	160	367	385	218	79	62	38	32
CFSM	1.31	2.58	1.35	3.85	2.61	2.99	2.94	4.55	.69	.45	.23	1.76
IN.	1.51	2.88	1.55	4.44	2.81	3.45	3.28	5.24	.77	.52	.26	1.96

e Estimated.

OHIO RIVER MAIN STEM

03007800 ALLEGHENY RIVER AT PORT ALLEGANY, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	292	474	529	437	564	841	912	509	387	199	176	247
MAX	964	999	1082	1088	1572	1730	2006	1127	1484	598	1175	1226
(WY)	1991	1986	1978	1979	1976	1979	1993	1996	1989	1977	1994	1977
MIN	31.2	61.7	171	78.2	98.0	326	359	142	48.5	28.5	27.0	20.7
(WY)	1983	1992	1990	1981	1980	1993	1976	1985	1991	1991	1991	1991

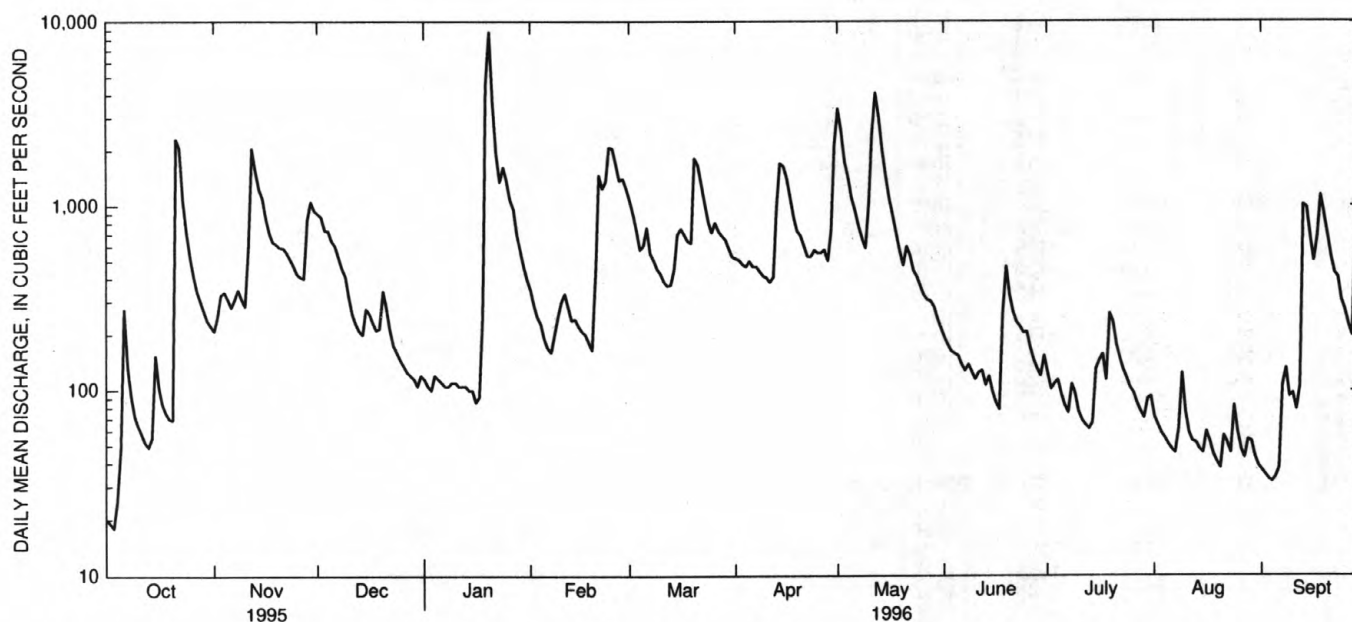
SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1975 - 1996

ANNUAL TOTAL	120770	191177	
ANNUAL MEAN	331	522	463
HIGHEST ANNUAL MEAN			670
LOWEST ANNUAL MEAN			326
HIGHEST DAILY MEAN	3050	8860	8860
LOWEST DAILY MEAN	18	18	12
ANNUAL SEVEN-DAY MINIMUM	21	35	14
INSTANTANEOUS PEAK FLOW		12600	12600
INSTANTANEOUS PEAK STAGE		15.37	15.37
INSTANTANEOUS LOW FLOW		18	11
ANNUAL RUNOFF (CFSM)	1.33	2.11	1.87
ANNUAL RUNOFF (INCHES)	18.12	28.68	25.35
10 PERCENT EXCEEDS	862	1240	1050
50 PERCENT EXCEEDS	190	276	255
90 PERCENT EXCEEDS	31	59	54



OHIO RIVER MAIN STEM

03010500 ALLEGHENY RIVER AT ELDRED, PA

LOCATION.--Lat 41°57'48", long 78°23'11", McKean County, Hydrologic Unit 05010001, on right bank at site of former highway bridge, 600 ft upstream from bridge on State Highway 346, 1,000 ft upstream from Knapp Creek, 0.5 mi north of Eldred, at mile 267.8.

DRAINAGE AREA.--550 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 1,416.53 ft above sea level.

REMARKS.--Records good except for estimated daily discharges, which are fair. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 20	1900	*20,600	*21.88	May 12	Unknown	7,400	15.31
May 2	1000	5,360	13.37				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	405	1970	e280	e1100	2420	1030	4240	420	311	207	78
2	34	411	2140	e270	e960	2030	1040	5260	370	241	161	74
3	33	759	1800	e270	e860	1690	963	4730	336	216	142	69
4	41	872	1790	e260	e760	1300	922	3670	320	248	125	65
5	72	728	1640	e320	e700	1360	1010	2670	336	231	114	69
6	388	676	1480	e300	e620	2030	974	2040	306	190	107	73
7	458	652	1330	e280	e560	1550	945	1710	273	167	99	102
8	254	752	1170	e270	e500	1300	916	1460	272	195	97	358
9	166	715	1040	e260	e1400	1120	852	1320	280	217	260	285
10	129	635	920	e240	1210	1090	824	2140	248	165	240	269
11	109	804	e800	e240	e920	1120	802	e3800	239	142	151	247
12	95	2940	e720	e230	e760	974	834	e6200	251	130	122	267
13	85	3240	e640	e220	e640	985	1900	e4500	239	122	114	1350
14	85	2600	e600	e220	e560	1080	3570	e3500	313	122	110	2090
15	190	2250	e700	e210	e480	1490	3480	e2900	317	247	103	1380
16	294	1960	e620	e210	e450	1730	2960	e2200	232	562	137	1040
17	195	1630	e560	e300	e430	1500	2380	1960	191	397	148	1080
18	157	1460	e520	e600	e400	1390	1890	1580	402	308	118	2610
19	137	1460	e480	e3400	e370	1350	1570	1330	1320	469	98	2060
20	127	1490	e600	e16700	e600	2610	1430	1120	1050	730	87	1490
21	1840	1500	844	e15600	e1600	3270	1420	1090	716	446	101	1180
22	3270	1440	e700	e9800	e3000	2810	1220	1460	575	329	130	935
23	2420	1330	e620	e6600	2900	2190	1160	1070	580	272	102	885
24	1350	1240	e540	4290	3180	1780	1310	936	502	248	197	727
25	991	1090	e470	3680	3580	1530	1220	818	554	221	195	604
26	757	1040	e420	3010	3540	1540	1190	712	474	200	128	521
27	622	979	e380	e2500	3030	1420	1230	661	364	182	102	444
28	544	1720	e360	e2000	3110	1320	1110	641	314	163	97	705
29	501	2490	e330	e1700	3000	1280	1210	642	282	147	112	2600
30	464	2160	e320	e1500	---	1220	2950	561	295	153	99	2120
31	422	---	e300	e1250	---	1090	---	479	---	257	86	---
TOTAL	16264	41428	26804	77010	41220	49569	44312	67400	12371	8028	4089	25777
MEAN	525	1381	865	2484	1421	1599	1477	2174	412	259	132	859
MAX	3270	3240	2140	16700	3580	3270	3570	6200	1320	730	260	2610
MIN	33	405	300	210	370	974	802	479	191	122	86	65
CFSM	.95	2.51	1.57	4.52	2.58	2.91	2.69	3.95	.75	.47	.24	1.56
IN.	1.10	2.80	1.81	5.21	2.79	3.35	3.00	4.56	.84	.54	.28	1.74

e Estimated.

OHIO RIVER MAIN STEM

03010500 ALLEGHENY RIVER AT ELDRED, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	445	820	1069	1031	1098	1891	2074	1199	800	427	257	331
MAX	1894	3175	2390	3359	3250	4697	5314	3273	6490	3893	1699	2340
(WY)	1991	1951	1973	1952	1976	1945	1940	1943	1972	1942	1994	1977
MIN	41.6	62.0	55.1	87.3	213	728	385	292	109	57.8	43.4	34.6
(WY)	1965	1965	1961	1961	1980	1993	1946	1985	1991	1966	1957	1959

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

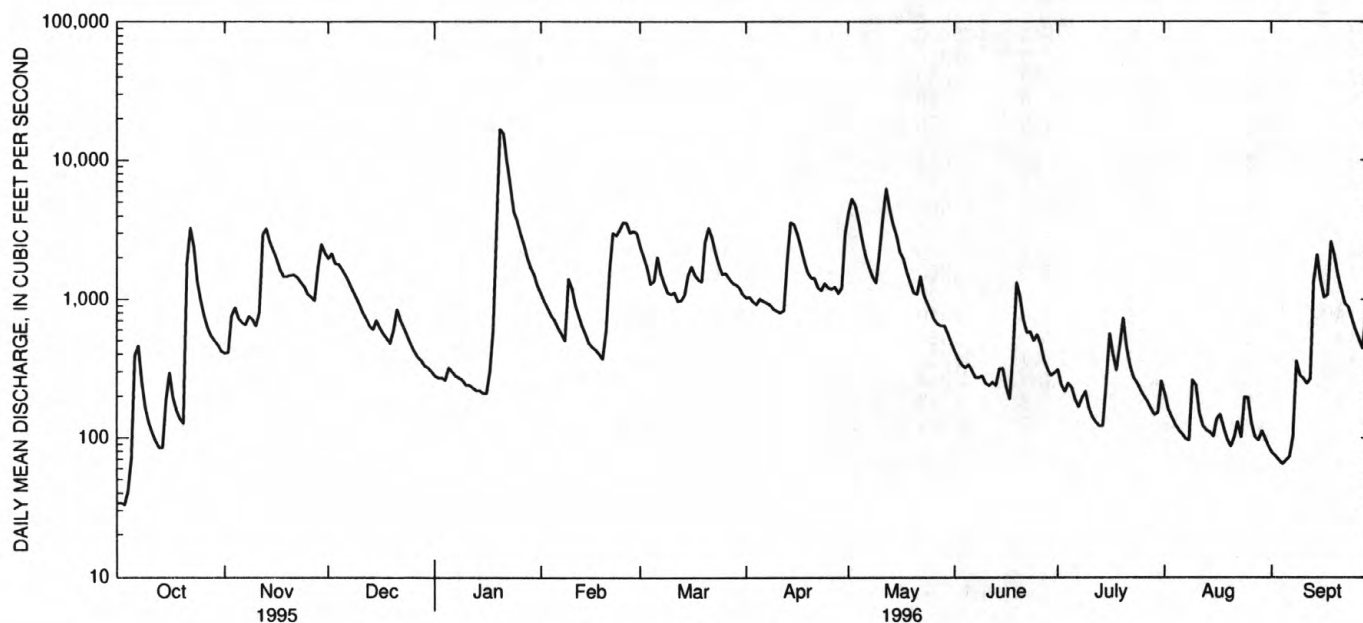
WATER YEARS 1940 - 1996

ANNUAL TOTAL	255494	414272	
ANNUAL MEAN	700	1132	
HIGHEST ANNUAL MEAN			952
LOWEST ANNUAL MEAN			1475
HIGHEST DAILY MEAN	4120	Jan 22	631
LOWEST DAILY MEAN	30	Sep 8,9	55700
ANNUAL SEVEN-DAY MINIMUM	33	Sep 4	19
INSTANTANEOUS PEAK FLOW			22
INSTANTANEOUS PEAK STAGE			a65400
INSTANTANEOUS LOW FLOW			b29.05
ANNUAL RUNOFF (CFSM)	1.27		17
ANNUAL RUNOFF (INCHES)	17.28		1.73
10 PERCENT EXCEEDS	1790		23.51
50 PERCENT EXCEEDS	458		520
90 PERCENT EXCEEDS	54		83

a From rating curve extended above 21,000 ft³/s on basis of slope-area measurement at gage height 27.6 ft.

b From floodmark.

e Estimated.



OSWAYO CREEK BASIN

03010655 OSMAYO CREEK AT SHINGLEHOUSE, PA

LOCATION.--Lat 41°57'42", long 78°11'54", Potter County, Hydrologic Unit 05010001, on right bank 200 ft upstream from bridge on State Highway 44 at Shinglehouse and 0.7 mi upstream from Honeoye Creek.

DRAINAGE AREA.--98.7 mi².

PERIOD OF RECORD.--October 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,460.34 ft above sea level (U.S. Army Corps of Engineers bench mark).

REMARKS.--Records good except for estimated daily discharges, which are fair. Several measurements of water temperature were made during the year. Landline and U.S. Army Corps of Engineers satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 21	1800	1,420	8.29	Feb. 21	--	Unknown	ice jam
Jan. 19	1800	*4,660	*12.74	May 1	1000	1,190	7.95
Jan. 27	--	Unknown	ice jam	May 12	0545	2,940	10.63

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.1	76	417	e42	e160	366	209	1140	72	55	27	13
2	8.1	81	371	e39	e140	319	202	838	66	46	24	13
3	8.1	102	328	e38	e120	267	192	572	63	46	22	12
4	11	99	324	e35	e100	224	186	465	59	45	21	12
5	16	99	299	e37	e88	227	188	369	56	39	19	14
6	80	96	280	e31	e78	250	175	321	51	33	18	13
7	42	101	242	e32	e70	205	176	270	46	30	17	34
8	31	109	205	e33	e86	e180	167	238	52	74	31	30
9	26	101	181	e34	e110	e160	160	213	44	48	69	26
10	22	97	e160	e35	e76	e150	160	487	39	39	37	30
11	20	205	e135	e35	e82	e140	154	1620	50	33	30	26
12	18	834	e125	e34	e96	e135	169	2750	62	29	27	39
13	18	656	e110	e33	e105	e130	445	1610	44	27	25	231
14	20	502	e94	e32	e96	e160	958	867	43	26	24	215
15	43	461	e115	e32	e86	218	798	560	36	64	23	169
16	34	362	e100	e29	e80	237	582	417	31	63	36	132
17	33	305	e80	e40	e74	231	433	329	28	74	25	167
18	29	277	e68	e70	e68	221	338	264	86	60	23	274
19	27	265	e60	e2200	e62	212	285	215	119	95	20	235
20	26	256	e70	2990	e100	568	261	181	124	88	19	192
21	916	262	e88	1330	e170	567	228	214	141	78	23	152
22	638	246	e84	689	e250	452	205	177	123	70	19	129
23	362	228	e76	483	384	365	205	156	111	61	19	132
24	253	208	e70	570	587	296	204	147	104	53	30	103
25	187	187	e66	466	573	265	199	132	97	47	21	93
26	145	178	e62	392	478	299	196	120	82	43	19	82
27	118	175	e56	e340	398	292	202	113	72	37	18	74
28	106	374	e54	e290	445	285	184	105	65	32	18	175
29	96	475	e50	e250	406	273	240	98	59	28	17	322
30	91	429	e47	e210	---	241	636	88	70	33	15	289
31	82	---	e44	e190	---	217	---	79	---	31	14	---
TOTAL	3514.3	7846	4461	11061	5568	8152	8737	15155	2095	1527	750	3428
MEAN	113	262	144	357	192	263	291	489	69.8	49.3	24.2	114
MAX	916	834	417	2990	587	568	958	2750	141	95	69	322
MIN	8.1	76	44	29	62	130	154	79	28	26	14	12
CFSM	1.15	2.65	1.46	3.62	1.95	2.66	2.95	4.95	.71	.50	.25	1.16
IN.	1.32	2.96	1.68	4.17	2.10	3.07	3.29	5.71	.79	.58	.28	1.29

e Estimated.

OSWAYO CREEK BASIN

03010655 OSWAYO CREEK AT SHINGLEHOUSE, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	97.2	161	191	163	201	287	320	182	130	72.8	60.5	73.1
MAX	331	335	318	388	561	517	755	489	612	238	396	452
(WY)	1991	1993	1978	1979	1976	1979	1993	1996	1989	1977	1994	1977
MIN	8.35	23.1	52.6	28.5	41.2	120	131	50.8	6.28	7.69	7.12	6.08
(WY)	1992	1992	1989	1981	1987	1981	1976	1993	1993	1993	1991	1991

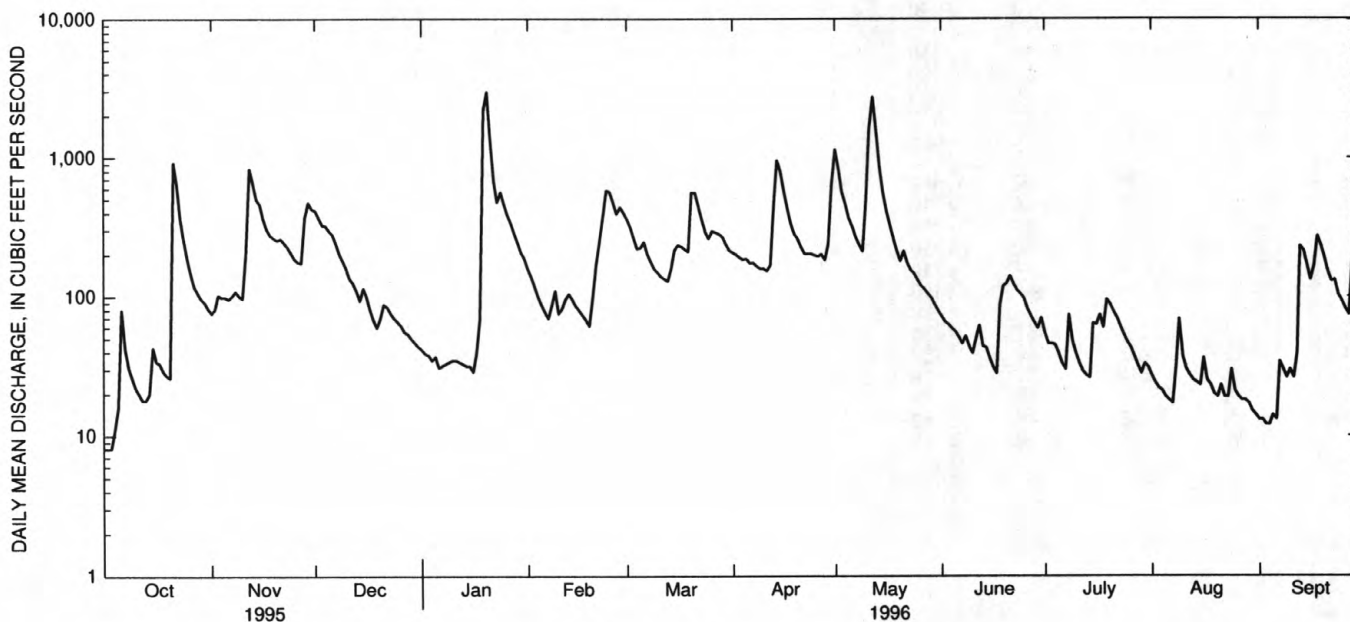
SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1975 - 1996

ANNUAL TOTAL	44011.9	72294.3	
ANNUAL MEAN	121	198	161
HIGHEST ANNUAL MEAN			222
LOWEST ANNUAL MEAN			118
HIGHEST DAILY MEAN	1240	Jan 21	3270
LOWEST DAILY MEAN	5.9	Sep 8	3.2
ANNUAL SEVEN-DAY MINIMUM	6.5	Sep 6	4.2
INSTANTANEOUS PEAK FLOW			4660
INSTANTANEOUS PEAK STAGE			12.74
INSTANTANEOUS LOW FLOW			8.1
ANNUAL RUNOFF (CFSM)	1.22	2.00	1.63
ANNUAL RUNOFF (INCHES)	16.59	27.25	22.19
10 PERCENT EXCEEDS	326	437	371
50 PERCENT EXCEEDS	64	100	90
90 PERCENT EXCEEDS	10	24	16



OHIO RIVER MAIN STEM

03011020 ALLEGHENY RIVER AT SALAMANCA, NY

LOCATION.--Lat 42°09'23", long 78°42'56", Cattaraugus County, Hydrologic Unit 05010001, on left bank 230 ft upstream from Main Street bridge in Salamanca, 1.3 mi downstream from Great Valley Creek, and 1.6 mi upstream from Little Valley Creek.

DRAINAGE AREA.--1,608 mi².

PERIOD OF RECORD.--September 1903 to current year. Monthly discharge only for some periods, published in WSP 1305. Prior to October 1964, published as "at Red House."

REVISED RECORDS.--WSP 1385: 1907, 1909-12, 1913(M), 1914-15, 1916-17(M), 1925, 1927. WSP 1907: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,358.00 ft above sea level (Corps of Engineers bench mark). Prior to Sept. 3, 1917, nonrecording gage and Sept. 4, 1917 to Sept. 30, 1964, water-stage recorder at site 7.5 mi downstream at different datum. Oct. 1, 1964 to Sept. 30, 1967, at present site at datum 0.04 ft lower.

REMARKS.--Records good except those for estimated daily discharges, which are fair. U.S. Army Corps of Engineers telephone gage-height telemeter and satellite gage-height and precipitation telemeter at station. Several measurements of water temperature were made during the year.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 17,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 19	2300	*39,600	*16.41	May 12	1800	24,300	12.24

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	134	1290	5430	1080	e3600	7000	3360	13200	1170	900	661	296
2	125	1310	5880	1050	e3050	5620	3270	11900	1060	787	560	276
3	122	1620	5060	614	e2600	4620	3040	10500	982	678	499	260
4	148	2110	5130	e950	e2300	3560	2840	8950	936	673	436	249
5	196	1890	4690	e1150	e2000	3660	2910	7420	926	681	389	242
6	864	1700	4140	e1120	e1700	6450	2840	5920	912	614	353	248
7	1090	1700	3590	e1100	e1500	5010	2700	5000	880	541	329	353
8	799	2280	e3050	e1100	e1500	e3600	2630	4220	1140	705	327	595
9	523	2320	e2600	e1050	e3500	e3000	2440	3750	1060	737	945	901
10	387	2090	e2100	e1050	e2000	e2600	2350	7940	919	604	1060	1270
11	316	3570	1600	e1050	e2500	e2400	2310	17000	904	505	675	929
12	276	11200	e1500	e1000	e1900	e2300	2480	23900	884	445	501	763
13	249	9610	e1400	e1000	e1700	2570	8950	22000	925	415	432	2640
14	249	7390	e1500	e1000	e1500	3020	16000	17100	922	395	393	4830
15	385	6160	2370	e1000	e1300	4760	13200	11800	916	573	376	3360
16	727	5340	2550	e1000	e1200	5360	9700	8230	818	1280	1010	2450
17	779	4490	e2000	1090	e1100	4490	7610	5860	696	1370	755	2190
18	560	4010	e1700	e2100	e1050	3900	6020	4600	1270	1110	555	5880
19	444	3990	e1500	e25000	e1000	3790	4480	3750	3130	1340	451	5060
20	394	4150	1320	36300	e1800	6610	4430	3120	3060	1950	394	3490
21	5360	4360	1420	32700	e4000	8710	4300	2890	2330	1450	557	2660
22	8520	4200	1580	25500	8890	7310	3730	3440	1920	1050	516	2130
23	5870	3820	1500	15500	9020	5760	3780	2850	1800	849	466	2100
24	3410	3480	1410	11700	10400	4640	4890	2440	1530	733	605	1860
25	2430	3100	1340	11900	10200	4380	4650	2180	1790	660	557	1510
26	1910	2900	1250	8610	9060	6240	4130	1920	1480	596	496	1320
27	1540	2750	1140	8110	7820	5280	4000	1760	1190	550	394	1150
28	1310	5700	1130	10000	9260	4370	3530	1640	998	502	501	2100
29	1390	7730	1120	8740	9090	3980	3330	1590	884	457	400	7190
30	1370	6320	994	7290	---	3810	7280	1470	874	453	358	5610
31	1320	---	1090	5330	---	3480	---	1300	---	589	323	---
TOTAL	43197	122580	73084	226184	116540	142280	147580	219640	38306	24192	16274	63912
MEAN	1393	4086	2358	7296	4019	4590	4919	7085	1277	780	525	2130
MAX	8520	11200	5880	36300	10400	8710	16000	23900	3130	1950	1060	7190
MIN	122	1290	994	614	1000	2300	2310	1300	696	395	323	242
CFSM	.87	2.54	1.47	4.54	2.50	2.85	3.06	4.41	.79	.49	.33	1.32
IN.	1.00	2.84	1.69	5.23	2.70	3.29	3.41	5.08	.89	.56	.38	1.48

e Estimated.

OHIO RIVER MAIN STEM

03011020 ALLEGHENY RIVER AT SALAMANCA, NY--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1904 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1332	2530	3091	3332	3156	6002	5872	3485	2018	1097	725	849
MAX	5801	8605	9147	10200	9683	14850	15540	9574	11520	6074	3882	7477
(WY)	1991	1928	1928	1913	1976	1936	1940	1943	1972	1942	1977	1977
MIN	124	146	189	255	550	1983	970	796	299	150	119	118
(WY)	1931	1931	1961	1961	1905	1937	1946	1985	1934	1934	1930	1932

SUMMARY STATISTICS

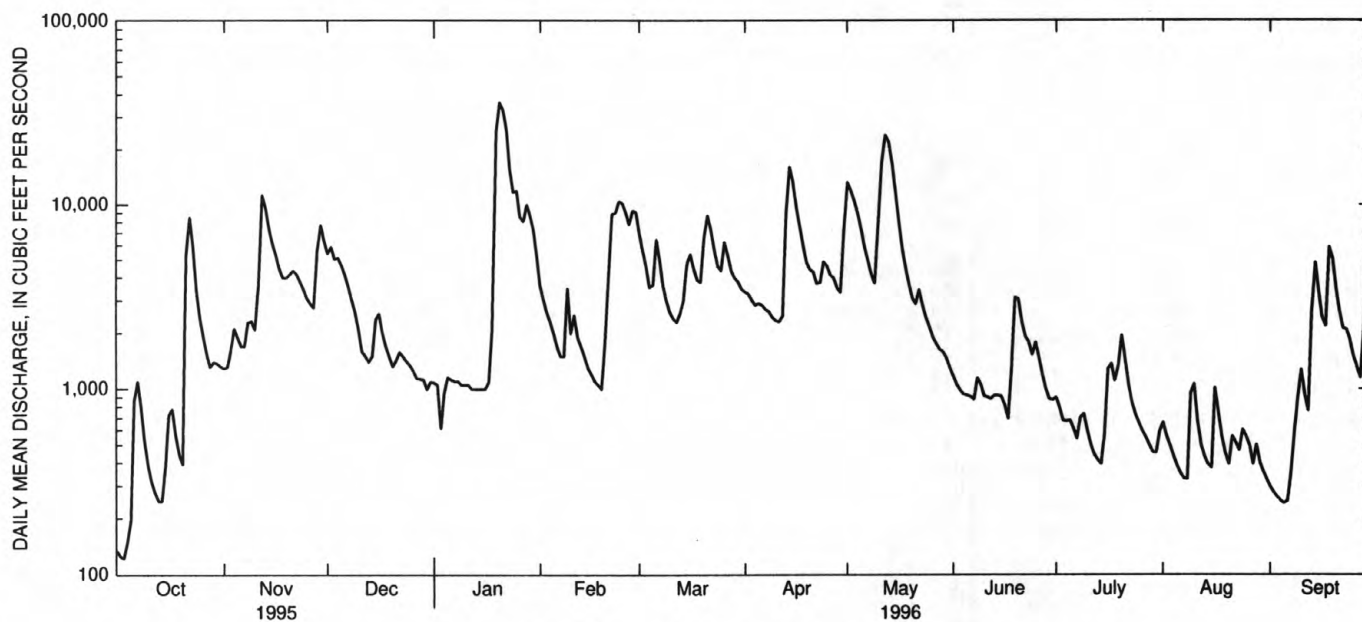
FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1904 - 1996

ANNUAL TOTAL	713942		1233769									
ANNUAL MEAN	1956		3371									
HIGHEST ANNUAL MEAN										2787		
LOWEST ANNUAL MEAN										4174		1916
HIGHEST DAILY MEAN										1784		1931
LOWEST DAILY MEAN										67900		Jun 23 1972
ANNUAL SEVEN-DAY MINIMUM										79		Sep 10, 11 1971
INSTANTANEOUS PEAK FLOW										84		Dec 11 1908
INSTANTANEOUS PEAK STAGE										73000		Jun 23 1972
ANNUAL RUNOFF (CFSM)										a24.01		Jun 23 1972
ANNUAL RUNOFF (INCHES)										1.73		
10 PERCENT EXCEEDS										23.54		
50 PERCENT EXCEEDS										6780		
90 PERCENT EXCEEDS										1510		
										288		

a From floodmarks.



KINZUA CREEK BASIN

03011800 KINZUA CREEK NEAR GUFFEY, PA

LOCATION.--Lat 41°45'59", long 78°43'08", McKean County, Hydrologic Unit 05010001, in Allegheny National Forest, on right bank 130 ft upstream from bridge on U.S. Highway 219, 0.2 mi upstream from Wintergreen Run, 1.0 mi downstream from Pine Run, and 1.5 mi west of Guffey.

DRAINAGE AREA.--46.4 mi².

PERIOD OF RECORD.--Occasional low-flow measurements, published as "at Tallyho," water years 1959-65. October 1965 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,540 ft above sea level, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are fair. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 21	0800	502	4.60	Feb. 21	--	Unknown	ice jam
Nov. 11	2300	566	4.79	Apr. 30	1530	611	4.92
Jan. 19	1300	*2,960	*7.92	May 11	1700	1,170	6.06

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e9.0	e18	133	e23	106	173	66	337	36	38	21	13
2	e15	27	138	e23	e98	143	66	264	33	32	18	12
3	e40	58	125	e22	e86	121	62	203	32	34	16	11
4	e90	44	161	e32	e76	107	60	179	32	37	19	12
5	e50	35	124	e31	e68	125	73	149	34	29	16	13
6	e30	30	110	e29	e62	173	62	127	29	25	15	13
7	e16	33	94	e26	e56	115	58	106	27	23	14	53
8	e9.0	49	83	e25	e80	104	54	94	28	21	18	59
9	e8.0	43	74	e24	e120	92	52	87	27	21	29	51
10	e17	38	e68	e23	e96	89	51	234	25	19	19	60
11	39	182	e60	e22	e80	88	52	805	24	17	15	38
12	31	314	e54	e22	e68	79	56	689	22	16	14	69
13	12	164	e52	e21	e62	75	185	402	43	16	15	190
14	28	134	e49	e20	e56	85	253	269	55	16	14	136
15	41	132	e58	e20	e52	120	169	200	33	76	14	92
16	28	107	e52	e19	e48	105	168	162	26	62	29	79
17	22	93	e48	e30	e45	91	142	138	23	35	20	176
18	18	87	e43	e60	e43	88	119	117	138	27	16	239
19	16	97	e40	e1200	e40	97	106	96	165	62	14	135
20	24	91	e37	646	e90	227	107	82	104	57	13	103
21	331	91	e35	333	e280	173	94	120	78	36	17	84
22	103	85	e33	224	e240	140	82	100	70	29	17	75
23	51	79	e31	172	209	125	94	76	62	26	25	81
24	35	72	e30	295	320	111	100	68	66	25	42	61
25	29	68	e29	231	263	108	92	60	83	24	24	55
26	25	62	e28	174	228	105	86	54	56	23	17	48
27	23	65	e27	284	207	86	88	53	48	21	16	44
28	e21	182	e26	222	285	78	73	57	44	19	16	187
29	e20	146	e25	172	213	76	144	52	40	17	15	197
30	e19	120	e24	145	---	73	406	45	43	24	14	118
31	e18	---	e24	122	---	66	---	40	---	26	14	---
TOTAL	1218.0	2746	1915	4692	3677	3438	3220	5465	1526	933	566	2504
MEAN	39.3	91.5	61.8	151	127	111	107	176	50.9	30.1	18.3	83.5
MAX	331	314	161	1200	320	227	406	805	165	76	42	239
MIN	8.0	18	24	19	40	66	51	40	22	16	13	11
CFSM	.85	1.97	1.33	3.26	2.73	2.39	2.31	3.80	1.10	.65	.39	1.80
IN.	.98	2.20	1.54	3.76	2.95	2.76	2.58	4.38	1.22	.75	.45	2.01

e Estimated.

KINZUA CREEK BASIN

03011800 KINZUA CREEK NEAR GUFFEY, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	48.6	86.1	107	76.8	89.8	139	139	86.6	75.0	35.0	31.3	41.1
MAX	137	166	281	153	251	269	289	182	272	99.0	126	154
(WY)	1991	1971	1984	1993	1976	1979	1994	1989	1989	1992	1980	1977
MIN	6.69	15.3	32.6	19.8	18.4	61.6	67.9	23.8	9.49	6.29	4.96	5.16
(WY)	1992	1992	1990	1981	1987	1970	1976	1985	1991	1991	1991	1991

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

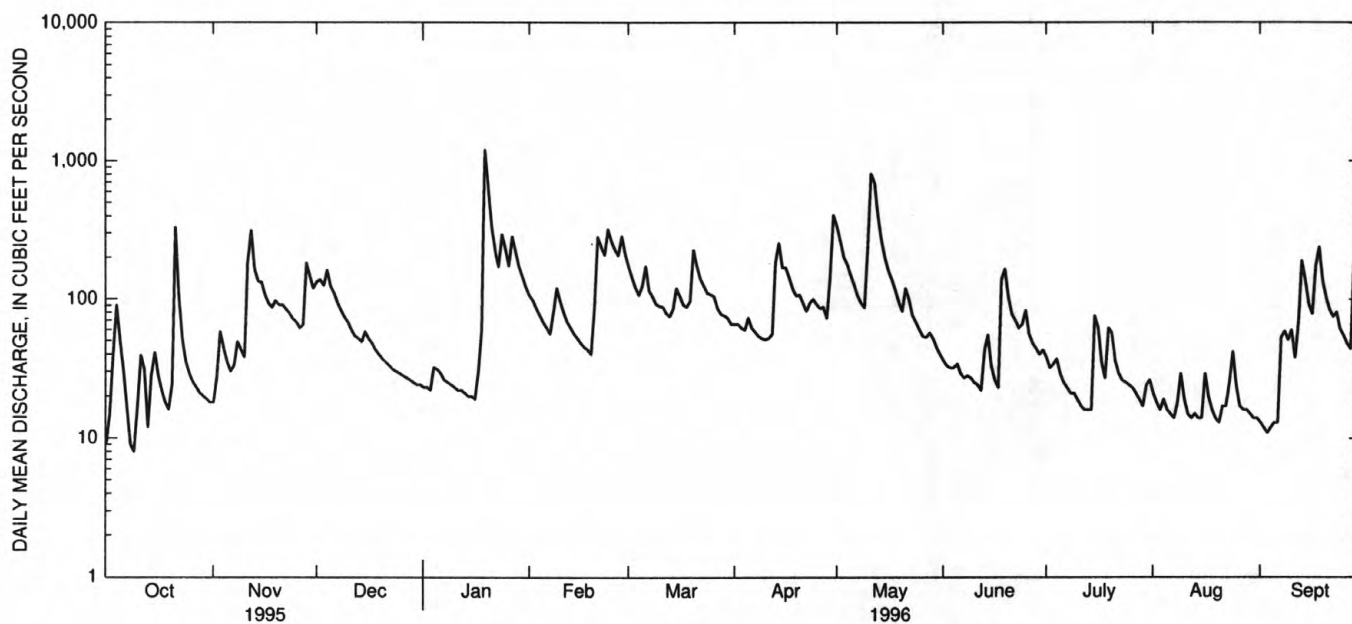
WATER YEARS 1966 - 1996

ANNUAL TOTAL	20509.4	31900.0	79.4
ANNUAL MEAN	56.2	87.2	113
HIGHEST ANNUAL MEAN			58.9
LOWEST ANNUAL MEAN			1984
HIGHEST DAILY MEAN	417	Mar 8	2120
LOWEST DAILY MEAN	e2.2	Sep 30	2.2
ANNUAL SEVEN-DAY MINIMUM	a4.0	Sep 6	3.3
INSTANTANEOUS PEAK FLOW			b5220
INSTANTANEOUS PEAK STAGE			8.99
INSTANTANEOUS LOW FLOW			2.0
ANNUAL RUNOFF (CFSM)	1.21	1.88	1.71
ANNUAL RUNOFF (INCHES)	16.44	25.57	23.25
10 PERCENT EXCEEDS	131	183	173
50 PERCENT EXCEEDS	39	57	50
90 PERCENT EXCEEDS	6.5	17	12

a Computed using estimated daily discharges.

b From rating curve extended above 1,300 ft³/s on basis of slope-area measurement at gage height 8.33 ft.

e Estimated.



October 1, 1995 to September 30, 1996

CONEWANGO CREEK BASIN

03015000 CONEWANGO CREEK AT RUSSELL, PA

LOCATION.---Lat 41°56'17", long 79°08'00", Warren County, Hydrologic Unit 05010002, on left bank at highway bridge at Russell, 0.5 mi upstream from Akeley Run, and 8.0 mi upstream from mouth.

DRAINAGE AREA.--816 mi².

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for October, November 1939, published in WSP 1305.

REVISED RECORD.--WSP 1083: 1936 (M).

GAGE.--Water-stage recorder. Datum of gage is 1,221.77 ft above sea level. Prior to Apr. 10, 1941, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated by Chautauqua Lake. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 1936 reached a stage of 10.9 ft from floodmark, discharge, 14,600 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e81	792	2980	e920	2850	4160	1800	e6000	389	565	3000	174
2	e80	858	3000	e1100	2230	3850	1770	e6000	356	493	2750	165
3	e78	964	2930	962	1780	3250	1580	e5200	346	467	1920	158
4	e86	1040	2940	e880	1530	2580	1390	e4400	380	916	1400	154
5	e90	1010	2940	e800	e1300	2420	1470	e3800	509	1050	1030	153
6	141	982	2830	e760	e1150	3470	1470	e3200	525	637	549	147
7	215	1050	2530	e700	e1000	3240	1200	e2650	631	435	387	150
8	251	1570	2050	e660	e900	2890	1030	2420	2740	831	527	186
9	209	1700	1700	e620	e1800	2520	918	2170	3310	1080	692	322
10	173	1520	1370	e580	2360	2090	837	4540	3050	717	665	684
11	154	2340	1160	e540	2560	1840	784	5490	3650	490	543	678
12	138	3710	e1000	e520	2420	1700	763	6450	3610	384	412	562
13	124	3460	e860	e490	1930	1690	2100	6600	3710	331	350	779
14	118	3260	e740	e460	1780	1990	e5000	6670	3420	307	317	1030
15	145	3060	e1700	e430	1690	2940	e5000	6460	2690	318	333	1410
16	219	2690	2340	e410	1510	3170	e4800	5990	2150	979	429	1330
17	363	2380	2460	e400	1360	3130	e4000	5410	1680	1050	343	1330
18	338	2210	2310	e900	1310	2840	e3200	4860	2140	599	308	2150
19	252	2320	1900	e6300	1240	2500	e2800	4110	4520	1440	280	1950
20	196	2490	1510	8700	1400	2820	e2900	3080	4790	2260	256	1580
21	245	2590	e1300	8990	3350	3030	e3500	2350	4640	1880	255	1240
22	441	2540	e1200	9190	4480	2890	e3100	1950	4440	1500	285	816
23	484	2420	e1100	8350	4550	2600	e7600	1740	4070	1190	317	958
24	363	2230	e1050	8050	4610	2320	e8000	1270	3460	577	344	1070
25	274	2020	e980	7790	4620	2170	e7800	878	2890	362	278	1010
26	227	1870	e920	6910	4550	2570	e5600	730	2340	324	240	1200
27	220	1820	e880	6150	4410	2770	e4000	620	1800	306	218	1200
28	214	2820	e840	5630	4450	2680	e3000	553	1540	286	205	2120
29	215	3180	e800	5110	4350	2360	e4000	513	1080	270	201	3750
30	286	3140	e780	4600	---	2060	e5600	464	663	1300	195	3690
31	475	---	e760	3820	---	1870	---	424	---	2890	186	---
TOTAL	6895	64036	51860	101722	73470	82410	97012	106992	71519	26234	19215	32146
MEAN	222	2135	1673	3281	2533	2658	3234	3451	2384	846	620	1072
MAX	484	3710	3000	9190	4620	4160	8000	6670	4790	2890	3000	3750
MIN	78	792	740	400	900	1690	763	424	346	270	186	147
CFSM	.27	2.62	2.05	4.02	3.10	3.26	3.96	4.23	2.92	1.04	.76	1.31
IN.	.31	2.92	2.36	4.64	3.35	3.76	4.42	4.88	3.26	1.20	.88	1.47

e Estimated.

CONEWANGO CREEK BASIN

03015000 CONEWANGO CREEK AT RUSSELL, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	848	1593	2134	2001	2088	3185	2846	1366	903	480	425	620
MAX	3276	4070	4261	4320	5320	6715	6503	4016	2926	2142	2391	3891
(WY)	1991	1986	1978	1952	1976	1945	1947	1943	1986	1986	1977	1977
MIN	66.1	119	111	215	533	1344	353	296	177	108	82.4	79.9
(WY)	1964	1961	1961	1961	1963	1960	1946	1985	1949	1963	1954	1941

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

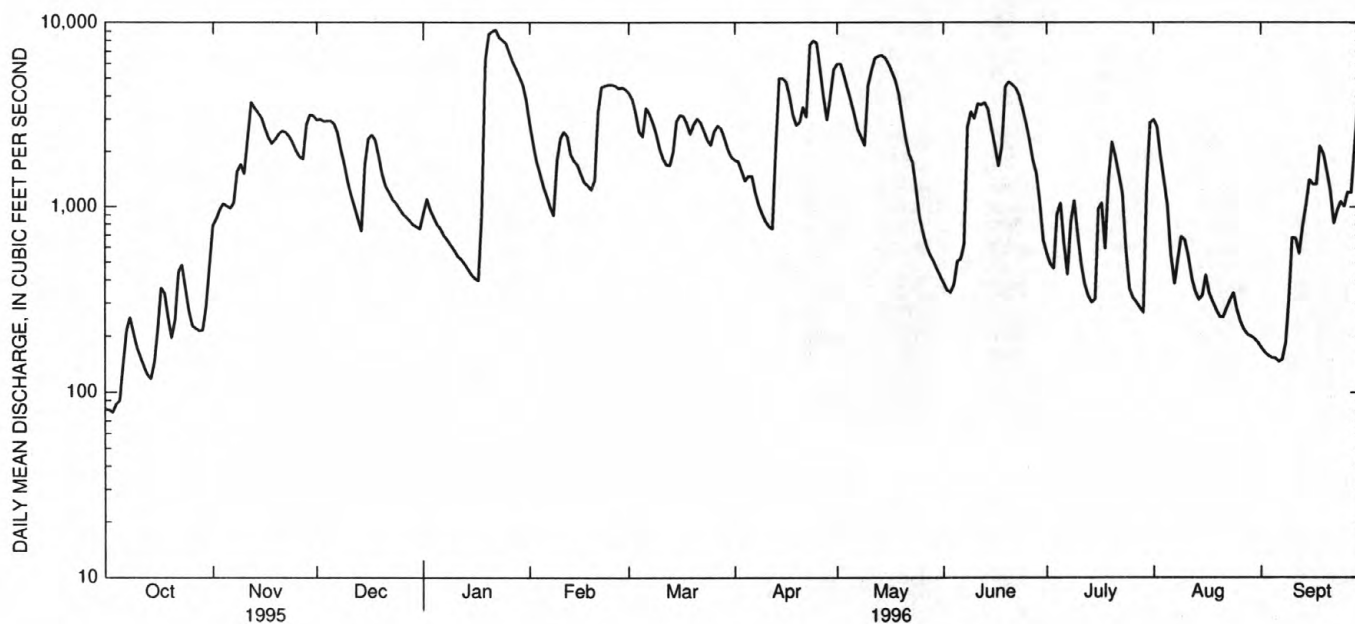
FOR 1996 WATER YEAR

WATER YEARS 1940 - 1996

ANNUAL TOTAL	403549	733511	1537
ANNUAL MEAN	1106	2004	2057
HIGHEST ANNUAL MEAN			974
LOWEST ANNUAL MEAN			14100
HIGHEST DAILY MEAN	4910	Jan 21	9190
LOWEST DAILY MEAN	e78	Oct 3	e78
ANNUAL SEVEN-DAY MINIMUM	a86	Sep 29	a110
INSTANTANEOUS PEAK FLOW			9490
INSTANTANEOUS PEAK STAGE			9.01
ANNUAL RUNOFF (CFSM)	1.35		2.46
ANNUAL RUNOFF (INCHES)	18.40		33.44
10 PERCENT EXCEEDS	2970		4550
50 PERCENT EXCEEDS	660		1450
90 PERCENT EXCEEDS	107		252

a Computed using estimated daily discharges.

e Estimated.



October 1, 1995 to September 30, 1996

BROKENSTRAW CREEK BASIN

03015500 BROKENSTRAW CREEK AT YOUNGSVILLE, PA

LOCATION.--Lat 41°51'09", long 79°19'03", Warren County, Hydrologic Unit 05010001, on right bank 150 ft downstream from bridge on Main Street at Youngsville, 500 ft upstream from Matthews Run, and 3.7 mi upstream from mouth. Records include flow of Matthews Run.

DRAINAGE AREA.--321 mi², including that of Matthews Run.

PERIOD OF RECORD.--October 1909 to current year. Monthly discharge only for some periods, published in WSP 1305. Flow of Matthews Run included in records since October 1938.

REVISED RECORDS.--WSP 743: Drainage area. WSP 1083: 1913 (M). WSP 1275: 1920, 1932, 1936. WSP 1305: 1910-15, 1928-29.

GAGE.--Water-stage recorder. Datum of gage is 1,186.92 ft above sea level. Prior to Sept. 30, 1933, nonrecording gage at site 150 ft upstream at datum 2.00 ft higher. Oct. 1, 1933 to June 15, 1939, nonrecording gage at site 150 ft upstream, and June 16, 1939 to Sept. 30, 1961, water-stage recorder at present site, both at datum 1.00 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are fair. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 4,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 19	1200	*13,900	*12.24	June 19	1200	5,280	7.74
May 11	2400	9,300	10.07	Sept. 28	2100	4,850	7.44

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	243	948	e290	e370	1360	423	2290	195	259	363	67
2	42	304	1000	e250	e320	936	427	2070	177	221	200	66
3	42	415	893	e320	e280	719	392	1400	187	227	157	65
4	57	349	993	e410	e240	596	369	1260	238	243	138	65
5	82	282	923	e340	e230	1030	395	1150	237	216	126	65
6	315	257	717	e300	e220	2350	379	976	208	183	113	65
7	480	344	571	e270	e210	1650	341	786	484	164	104	109
8	312	802	454	e250	e250	1120	311	655	2120	158	170	243
9	184	818	418	e230	e680	731	293	607	1420	159	448	591
10	126	610	306	e220	e560	603	278	2660	747	150	209	674
11	97	1930	e470	e260	e450	553	264	7510	722	136	147	398
12	78	3390	e490	e230	e400	501	265	7840	842	128	127	333
13	68	3350	e410	e210	e370	534	1110	4480	822	126	118	567
14	79	1870	e370	e190	e350	668	1850	2190	564	153	110	483
15	193	1150	e1000	e170	e320	1160	1340	1170	405	211	239	373
16	253	927	1180	e160	e310	1230	1190	867	304	319	358	353
17	227	799	923	e270	e300	868	1290	729	252	244	191	899
18	164	754	657	e1500	e280	652	1050	624	1650	186	146	1740
19	130	1010	529	e10000	e270	585	825	532	4460	816	122	1020
20	107	1240	447	8350	e400	989	843	457	4640	960	109	562
21	236	1200	486	4510	e1300	1170	1100	538	2820	495	128	356
22	258	1030	423	2090	3640	889	921	528	1360	283	118	529
23	216	862	377	1240	3530	707	1610	412	967	201	118	1770
24	164	726	e340	2570	2830	643	3020	355	858	169	122	1290
25	133	626	e310	2560	2060	696	2720	313	822	157	108	765
26	117	573	e290	e1700	1510	939	1530	281	618	152	93	458
27	113	573	e270	e1300	1290	789	1080	263	458	142	84	427
28	107	1540	e260	e940	2810	608	862	263	361	129	78	2510
29	125	1780	e250	e700	2140	541	881	252	310	123	75	3480
30	176	1410	e240	e540	---	492	2040	232	287	154	72	2830
31	261	---	e330	e450	---	446	---	220	---	407	69	---
TOTAL	4984	31164	17275	42820	27920	26755	29399	43910	29535	7671	4760	23153
MEAN	161	1039	557	1381	963	863	980	1416	984	247	154	772
MAX	480	3390	1180	10000	3640	2350	3020	7840	4640	960	448	3480
MIN	42	243	240	160	210	446	264	220	177	123	69	65
CFSM	.50	3.24	1.74	4.30	3.00	2.69	3.05	4.41	3.07	.77	.48	2.40
IN.	.58	3.61	2.00	4.96	3.24	3.10	3.41	5.09	3.42	.89	.55	2.68

e Estimated.

BROKENSTRAW CREEK BASIN

03015500 BROKENSTRAW CREEK AT YOUNGSVILLE, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1910 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	316	623	755	789	764	1259	1027	601	380	232	182	232
MAX	1413	1817	1724	2459	2248	2851	2715	1528	1535	1039	994	1428
(WY)	1991	1986	1978	1913	1976	1936	1947	1943	1928	1986	1956	1977
MIN	31.7	57.3	85.9	124	161	297	251	135	62.0	37.8	32.3	31.6
(WY)	1932	1931	1961	1918	1987	1915	1946	1934	1934	1934	1934	1936

SUMMARY STATISTICS

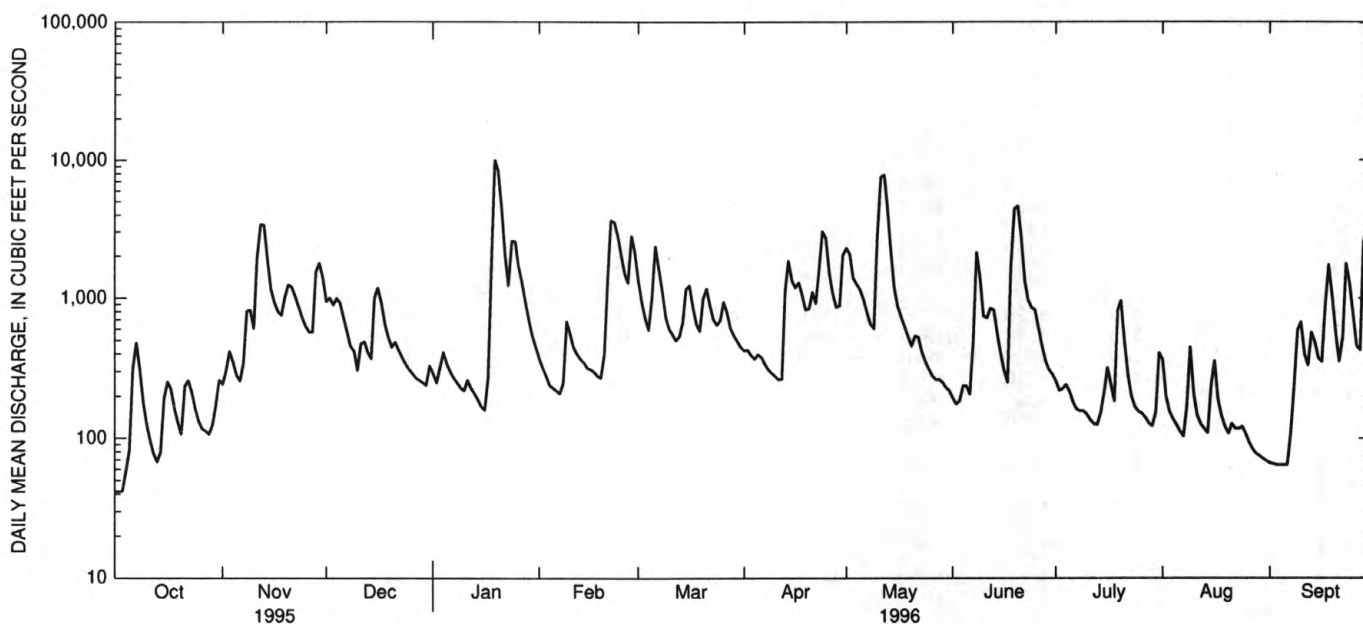
FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1910 - 1996

ANNUAL TOTAL	170562	289346	
ANNUAL MEAN	467	791	596
HIGHEST ANNUAL MEAN			864
LOWEST ANNUAL MEAN			307
HIGHEST DAILY MEAN	4670	Jan 16	14000
LOWEST DAILY MEAN	42	Sep 6-12	19
ANNUAL SEVEN-DAY MINIMUM	42	Sep 6	24
INSTANTANEOUS PEAK FLOW			18000
INSTANTANEOUS PEAK STAGE			14.20
INSTANTANEOUS LOW FLOW			1.86
ANNUAL RUNOFF (CFSM)	1.46	2.46	1.86
ANNUAL RUNOFF (INCHES)	19.77	33.53	25.21
10 PERCENT EXCEEDS	1120	1770	1440
50 PERCENT EXCEEDS	261	411	302
90 PERCENT EXCEEDS	51	123	68

- a About.
b Minimum observed.
e Estimated.



October 1, 1995 to September 30, 1996

OHIO RIVER MAIN STEM

03016000 ALLEGHENY RIVER AT WEST HICKORY, PA

LOCATION.--Lat 41°34'15", long 79°24'29", Forest County, Hydrologic Unit 05010003, on right bank at downstream side of bridge on State Highway 127 at West Hickory, 0.6 mi upstream from Siggins Run, 0.8 mi downstream from East Hickory Creek, at mile 158.9.

DRAINAGE AREA.--3,660 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 1,059.90 ft above sea level. Prior to Dec. 12, 1941, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated by Allegheny Reservoir 39 mi upstream since October 1965 and since 1941 by Chautauqua Lake. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

REVISIONS.--The maximum discharge for the water year 1995 has been revised to 22,800 ft³/s, Dec. 8, 1994, gage height, 8.35 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2760	3710	13000	e2500	19800	23700	4890	14700	2300	3200	5370	2010
2	2770	4060	13000	e2500	e19000	22800	4690	15100	2210	3050	4570	2010
3	2760	4330	12700	e2500	e18500	22800	3910	13500	2180	2960	3950	2000
4	2890	4350	12800	e2500	e18000	22300	3070	12900	1950	2620	3220	2230
5	2880	4200	12700	e2500	e11000	21500	3000	12200	1970	2810	2840	2250
6	3410	4070	12300	e2500	e6000	20000	3060	11600	2040	2720	2490	2220
7	3350	4130	11800	e2500	e3600	18300	2890	11100	2090	2390	1860	1910
8	3300	4960	11200	e2500	e3200	17200	2610	10500	4680	2270	1830	1990
9	3120	5550	10300	e2500	e4500	17600	2420	10200	6160	2800	3350	2210
10	2970	5200	7890	e2500	e8000	16000	2310	16000	5600	2650	2490	3580
11	2630	6610	7410	e2500	9460	12100	2200	26900	6370	2390	2180	3410
12	2540	12300	5790	e2500	9760	10600	2170	28700	6210	2190	1940	3200
13	2210	12700	4690	e2500	10900	9970	4380	25800	6890	2090	1800	3860
14	2200	12400	4470	e2500	10400	6910	11300	26100	6370	2160	1710	3800
15	2410	12600	5370	e2500	6940	7160	13400	29000	5700	2220	1920	4040
16	2510	13100	6500	e2500	6830	7260	13700	24600	4870	2550	2880	5210
17	2230	14000	6540	e2500	8470	6890	15900	27200	4180	2990	2390	7780
18	2220	13600	6090	e10000	7950	6300	18700	27700	5170	2630	2140	11900
19	2080	14000	5760	e33000	8350	5820	17500	26500	13500	3400	2020	10300
20	1970	14200	5040	22400	8070	6750	13400	22400	12500	4880	1960	10700
21	2420	10600	4800	16300	12100	7270	11500	18900	10400	4330	2000	11000
22	2430	10300	4750	15100	16300	6820	10500	18200	10700	4090	1950	10600
23	2510	9940	4720	20600	16300	6620	10700	17600	10500	3600	2080	9560
24	5090	9570	4630	20500	16000	7960	14000	17000	8950	2720	2420	6030
25	6540	9150	4540	19500	14800	7730	14900	15600	8200	2250	2080	5440
26	6480	8890	4430	19000	15900	8330	13800	11500	7810	2120	1950	4930
27	6190	8580	3770	16000	21300	8760	13100	7170	9130	2630	1690	4920
28	4800	10000	e3600	15700	24500	9780	12600	3500	8360	2630	1350	7610
29	4860	11900	e3100	19100	25200	9470	12100	3310	5730	2590	1510	13100
30	4810	13800	e2500	21400	---	8680	13200	2490	3990	2850	1760	11600
31	3510	---	e2500	20400	---	6340	---	2390	---	4830	1980	---
TOTAL	102850	272800	218690	311500	361130	369720	271900	510360	186710	89610	73680	171400
MEAN	3318	9093	7055	10050	12450	11930	9063	16460	6224	2891	2377	5713
MAX	6540	14200	13000	33000	25200	23700	18700	29000	13500	4880	5370	13100
MIN	1970	3710	2500	2500	3200	5820	2170	2390	1950	2090	1350	1910
CFSM	.91	2.48	1.93	2.75	3.40	3.26	2.48	4.50	1.70	.79	.65	1.56
IN.	1.05	2.77	2.22	3.17	3.67	3.76	2.76	5.19	1.90	.91	.75	1.74

e Estimated.

OHIO RIVER MAIN STEM

03016000 ALLEGHENY RIVER AT WEST HICKORY, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4048	6521	8635	8609	8126	12330	11940	7600	4814	3078	2265	2728
MAX	15890	17070	17950	21260	18970	29740	25970	20020	14730	15430	10160	12160
(WY)	1991	1993	1978	1952	1990	1945	1947	1943	1989	1972	1977	1977
MIN	324	659	581	844	1725	3378	2255	1333	1430	597	490	449
(WY)	1964	1961	1961	1961	1963	1969	1946	1985	1949	1955	1954	1955

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

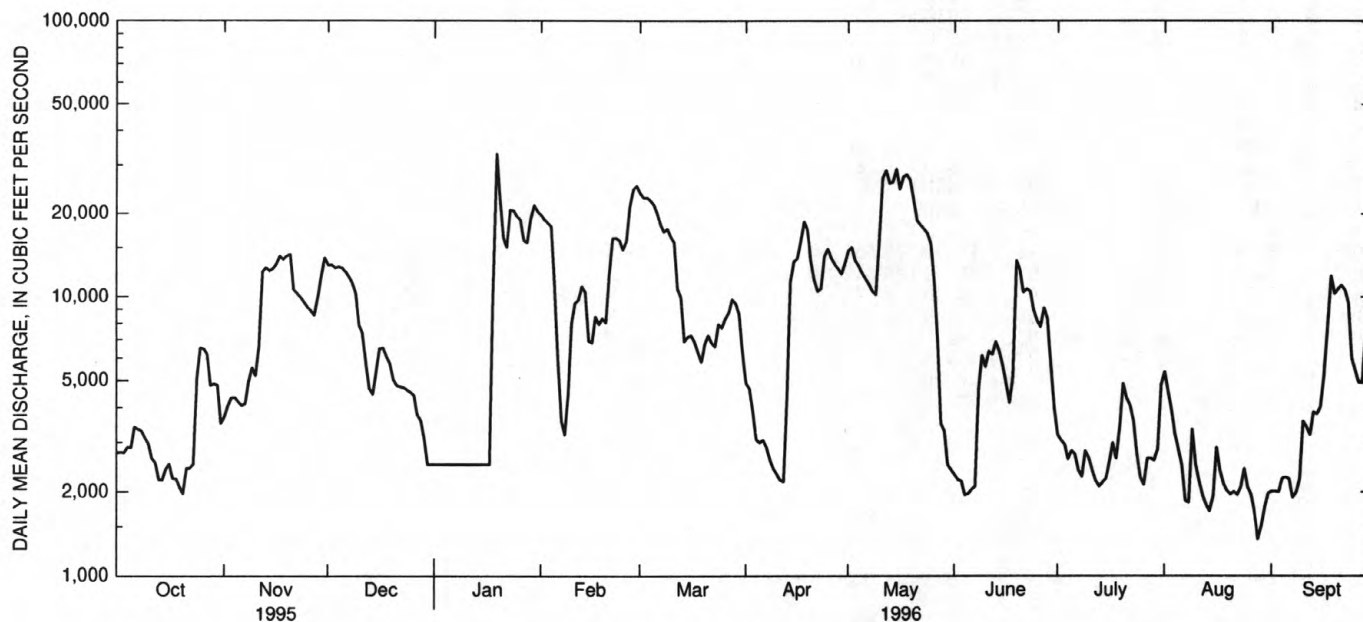
FOR 1996 WATER YEAR

WATER YEARS 1942 - 1996

ANNUAL TOTAL	1804797	2940350	
ANNUAL MEAN	4945	8034	6717
HIGHEST ANNUAL MEAN			9547
LOWEST ANNUAL MEAN			4455
HIGHEST DAILY MEAN	18400	Jan 23	e33000 Jan 19
LOWEST DAILY MEAN	969	Jun 24	1350 Aug 28
ANNUAL SEVEN-DAY MINIMUM	1100	Jun 20	1750 Aug 26
INSTANTANEOUS PEAK FLOW			46500 Jan 19
INSTANTANEOUS PEAK STAGE			11.62 Jan 19
ANNUAL RUNOFF (CFSM)	1.35		2.20
ANNUAL RUNOFF (INCHES)	18.34		29.89
10 PERCENT EXCEEDS	11400		17700
50 PERCENT EXCEEDS	3600		5570
90 PERCENT EXCEEDS	1720		2190

a Maximum gage height, 17.83 ft, Jan. 25, 1964 (backwater from ice).

e Estimated.



ALLEGHENY RIVER BASIN

LAKES AND RESERVOIRS IN ALLEGHENY RIVER BASIN

03013946 CHAUTAUQUA LAKE.--Lat 42°09'23", long 79°23'39", Chautauqua County, N.Y., Hydrologic Unit 05010002 6 ft east of lake shore, 30 ft south of the intersection of Pauline Ave. and Lakeside Ave., 950 ft southeast of the ferry landing, at Bemus Point, N.Y. DRAINAGE AREA, 189 mi². PERIOD OF RECORD, November 1949 to current year. GAGE, water-stage recorder. Datum of gage is sea level. Prior to Dec. 21, 1956, non-recording gage at site near mouth of Big Inlet at datum 1,300.00 ft above sea level. Dec. 21, 1956 to Sept. 30, 1975, water-stage recorder at site at outlet of Muddy Creek at datum 1,300.00 ft above sea level.

Lake is regulated at outlet by Warner Dam. Capacity of lake not determined; area of water surface, 20.98 mi². Figures of change in contents computed from surface area multiplied by change in stage.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 1,311.23 ft, Mar. 5, 1976; minimum, 1,306.29 ft, Nov. 17, 1953.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 1,309.09 ft, May 13; minimum, 1,306.81 ft, Jan. 16, 17.

03012520 ALLEGHENY RESERVOIR.--Lat 41°50'17", long 79°00'15", Warren County, Hydrologic Unit 05010001, in Allegheny National Forest, at control house at Kinzua Dam on Allegheny River, 3 mi upstream from Hemlock Run, and 7 mi east of Warren. DRAINAGE AREA, 2,180 mi². PERIOD OF RECORD, October 1965 to current year. Prior to October 1966 published as Allegheny River Reservoir. GAGE, water-stage recorder. Datum of gage is sea level. Reservoir is formed by a concrete gravity dam with a gated spillway and with an earthfill section, rockfaced, at right side. Storage began during construction and reservoir acted as retention basin from October 1965 to December 1966. Dam became operational in January 1967. Reservoir first reached minimum pool elevation during period of construction. Capacity, 1,180,000 acre-ft between elevations 1,205.0 ft (invert of low level sluices) and 1,365.0 ft (full pool). Dead storage is 128 acre-ft. Minimum pool elevation, 1,240 ft (capacity, 24,240 acre-ft). Winter low-water pool elevation, 1,292 ft (capacity, 239,780 acre-ft). Summer low-water pool elevation, 1,328 ft (capacity, 572,610 acre-ft). Storage to summer pool normally occurs during period April to May. Depletion of low-water storage for augmenting flow in Allegheny River normally occurs during period July to December. Figures given herein represent total contents. Reservoir is used for flood control, low-flow augmentation and water-quality control of Allegheny River and downstream rivers, power generation, and recreation. Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,121,120 acre-ft June 27, 1972 (elevation, 1,362.20 ft); minimum (after first filling), 113,310 acre-ft Jan. 26, 1968 (elevation 1,268.68 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 838,560 acre-ft May 14 (elevation, 1,346.89 ft); minimum, 295,190 acre-ft Dec. 26 (elevation, 1,299.76 ft).

MONTHEND ELEVATION IN FEET ABOVE SEA LEVEL, AND CONTENTS AT 2400 HRS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

Date	Elevation (feet)	Contents (acre- feet)	Change in contents (equivalent in ft ³ /s)	Elevation (feet)	Contents (acre- feet)	Change in contents (equivalent in ft ³ /s)
03013946 Chautauqua Lake				03012520 Allegheny Reservoir		
Sept. 30	1,307.21	-	-	1,310.23	384,440	-
Oct. 31	1,307.55	-	+74	1,304.26	331,620	- 859
Nov. 30	1,307.88	-	+74	1,306.36	349,650	+ 303
Dec. 31	1,307.20	-	-148	1,300.32	299,550	- 815
CAL YR 1995	-	-	+ 2.0	-	-	- 21
Jan. 31	1,308.27	-	+233	1,333.21	638,170	+5,510
Feb. 29	1,308.28	-	+ 2.3	1,323.45	519,620	-2,060
Mar. 31	1,307.71	-	-124	1,319.02	471,430	- 784
Apr. 30	1,308.64	-	+209	1,331.37	614,440	+2,400
May 31	1,308.12	-	-113	1,329.97	596,780	- 287
June 30	1,308.27	-	+ 34	1,330.17	599,290	+ 42
July 31	1,308.52	-	+ 54	1,328.46	578,210	- 343
Aug. 31	1,308.02	-	+109	1,326.16	550,720	- 447
Sept. 30	1,308.54	-	+117	1,325.85	547,090	- 61
WTR YR 1996	-	-	+ 25	-	-	+ 224

OIL CREEK BASIN

03020500 OIL CREEK AT ROUSEVILLE, PA

LOCATION.--Lat 41°28'54", long 79°41'44", Venango County, Hydrologic Unit 05010003, on right bank 100 ft downstream from bridge on State Highway 8, about 300 ft upstream from Cherrytree Run, and 1 mi north of Rouseville. Records include flow of Cherrytree Run.

DRAINAGE AREA.--300 mi², including that of Cherrytree Run.

PERIOD OF RECORD.--June 1932 to current year.

REVISED RECORDS.--WSP 743: Drainage area. WSP 1053: 1936-37(M), 1943(M).

GAGE.--Water-stage recorder. Datum of gage is 1,028.32 ft above sea level. Prior to June 9, 1941, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 19	1600	*13,500	*10.60	June 19	1100	5,160	7.21
May 11	2000	8,620	9.01	Sept. 28	2100	5,280	7.28

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	166	565	e260	e300	1130	376	2570	225	207	201	59
2	38	268	646	e240	e260	900	407	2030	207	182	138	57
3	40	521	516	e220	e220	732	361	1380	232	179	118	57
4	111	377	658	e210	e190	591	339	1180	299	206	110	58
5	118	265	528	e210	e170	986	364	1070	286	166	99	58
6	521	224	485	e200	e200	2870	334	907	234	141	91	59
7	447	246	410	e190	e230	1480	304	732	343	129	86	150
8	262	556	344	e180	e260	974	281	618	1580	141	99	277
9	165	436	324	e170	e640	680	269	582	979	139	340	451
10	122	337	210	e170	e450	669	255	2790	427	115	223	618
11	98	907	331	e200	e520	579	246	6670	359	103	123	272
12	84	3020	341	e230	e400	523	242	6440	659	100	102	234
13	76	1350	327	e210	e330	550	710	2670	506	96	97	448
14	85	862	358	e200	e310	645	1480	1520	360	193	94	430
15	254	872	917	e190	e290	1190	826	1160	270	216	95	328
16	281	741	912	e170	e270	962	1400	923	226	319	231	282
17	258	611	621	e250	e260	693	1390	795	199	187	154	1070
18	174	593	473	e1400	e240	583	1040	672	684	144	104	2980
19	137	979	378	e8500	e260	549	808	552	4290	1380	89	929
20	122	1140	293	6540	e370	1130	783	480	2940	836	82	529
21	310	1010	397	2100	e1200	1040	887	461	1170	347	95	365
22	301	788	359	1190	e1900	770	649	614	689	227	89	441
23	210	634	338	965	e1700	643	1080	425	621	180	170	897
24	169	536	e300	2490	2100	588	2300	363	599	154	169	565
25	138	460	e280	2520	1520	591	1180	326	801	138	107	382
26	121	422	e260	e1200	1210	745	909	291	494	146	86	299
27	114	410	e250	e900	1170	568	884	279	366	126	77	320
28	120	1050	e240	e700	2590	483	673	279	288	113	73	2630
29	129	993	e230	e500	1740	451	886	280	245	105	69	4180
30	151	650	e230	e430	---	418	2520	259	228	143	66	1440
31	155	---	e270	e350	---	384	---	240	---	247	63	---
TOTAL	5352	21424	12791	33285	21300	25097	24183	39558	20806	7105	3740	20865
MEAN	173	714	413	1074	734	810	806	1276	694	229	121	695
MAX	521	3020	917	8500	2590	2870	2520	6670	4290	1380	340	4180
MIN	38	166	210	170	170	384	242	240	199	96	63	57
CFSM	.58	2.38	1.38	3.58	2.45	2.70	2.69	4.25	2.31	.76	.40	2.32
IN.	.66	2.66	1.59	4.13	2.64	3.11	3.00	4.91	2.58	.88	.46	2.59

e Estimated.

OIL CREEK BASIN

03020500 OIL CREEK AT ROUSEVILLE, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1933 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	258	513	687	684	733	1115	939	591	392	232	177	208
MAX	1260	1560	1784	2385	2124	2574	1958	1706	1491	896	786	1304
(WY)	1991	1986	1978	1937	1976	1936	1940	1953	1989	1987	1980	1990
MIN	34.5	65.0	80.9	108	158	407	266	129	75.2	38.3	38.8	34.5
(WY)	1964	1992	1961	1984	1987	1969	1935	1934	1934	1934	1934	1934

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

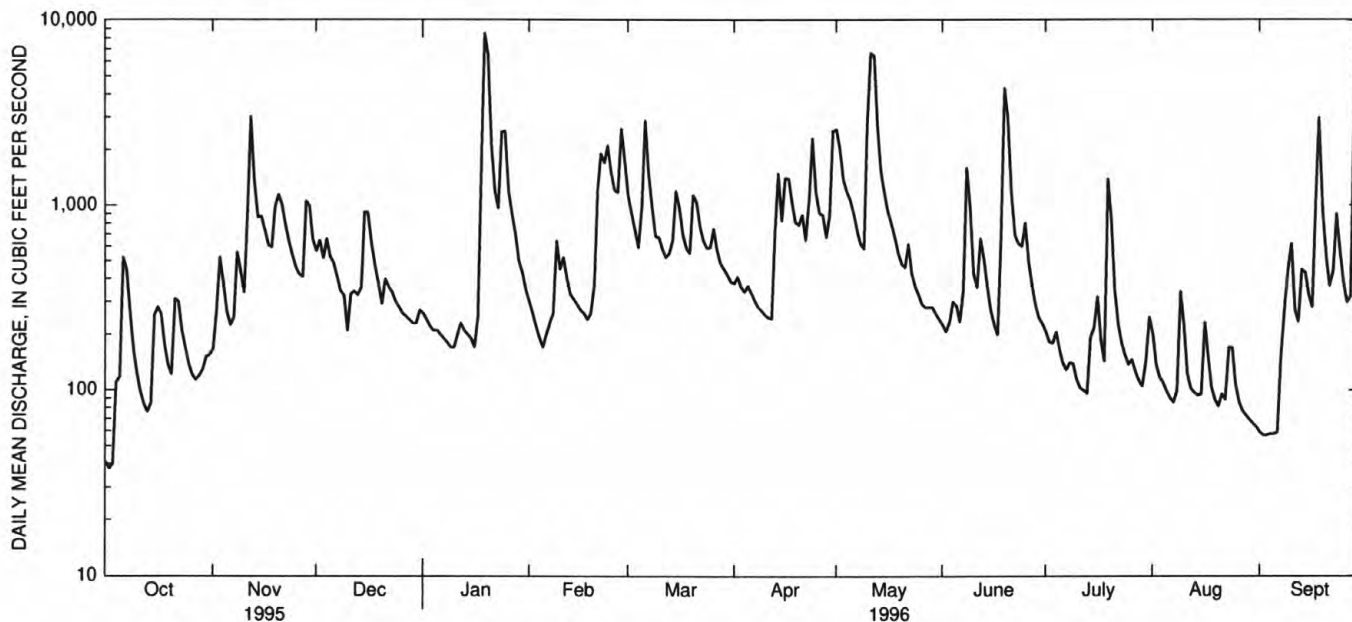
FOR 1996 WATER YEAR

WATER YEARS 1933 - 1996

ANNUAL TOTAL	143675	235506	
ANNUAL MEAN	394	643	
HIGHEST ANNUAL MEAN			543
LOWEST ANNUAL MEAN			746
HIGHEST DAILY MEAN	4700	Jan 16	16300
LOWEST DAILY MEAN	35	Sep 11	23
ANNUAL SEVEN-DAY MINIMUM	37	Sep 6	24
INSTANTANEOUS PEAK FLOW			21000
INSTANTANEOUS PEAK STAGE			11.97
INSTANTANEOUS LOW FLOW			a16
ANNUAL RUNOFF (CFSM)	1.31	2.14	1.81
ANNUAL RUNOFF (INCHES)	17.82	29.20	24.60
10 PERCENT EXCEEDS	909	1360	1250
50 PERCENT EXCEEDS	250	343	293
90 PERCENT EXCEEDS	57	106	63

a Result of abnormal regulation.

e Estimated.



October 1, 1995 to September 30, 1996

FRENCH CREEK BASIN

03021350 FRENCH CREEK NEAR WATTSBURG, PA

LOCATION.--Lat 42°00'55", long 79°46'58", Erie County, Hydrologic Unit 05010004, on right bank at downstream side of bridge on Tanner Road, 1,200 ft east of State Highway 74, 1.1 mi west of Pennsylvania-New York border, 1.5 mi northeast of Wattsburg, and 2.4 mi above confluence with West Branch French Creek.

DRAINAGE AREA.--92.0 mi².

PERIOD OF RECORD.--October 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,304.84 ft above sea level (U.S. Army Corps of Engineers bench mark).

REMARKS.--Records good except for estimated daily discharges, which are fair. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 2,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 12	0300	3,530	9.03	Apr. 24	0100	3,170	8.62
Jan. 19	1300	*6,190	11.79	June 19	1330	4,640	10.24

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.7	112	418	e94	e100	316	144	635	42	68	283	13
2	4.7	136	577	e96	e84	239	143	515	34	56	158	13
3	5.6	175	440	e80	e72	187	126	326	43	69	111	13
4	13	132	712	e98	e64	188	120	338	87	107	84	12
5	20	120	388	e88	e56	244	141	306	81	78	65	12
6	197	113	283	e84	e64	716	121	246	69	56	53	12
7	138	251	198	e78	e70	468	106	188	162	44	46	34
8	78	502	153	e76	e150	413	98	154	428	100	52	149
9	46	275	135	e72	e370	413	89	264	268	52	58	138
10	31	237	94	e70	e300	357	83	1320	135	39	42	122
11	23	2200	111	e66	e220	145	81	1710	530	34	34	106
12	19	2610	133	e62	e170	143	84	1690	445	30	31	93
13	16	644	138	e60	e140	159	508	637	215	27	29	110
14	20	375	202	e60	e115	366	859	349	136	27	27	134
15	62	370	657	e58	e105	836	324	244	90	330	35	e105
16	105	332	526	e56	e94	564	565	192	68	283	78	e84
17	83	304	325	e300	e88	310	430	167	54	116	53	e350
18	62	292	226	e1200	e76	244	329	146	811	75	39	e270
19	48	426	162	e4900	e72	230	234	125	3860	932	31	e170
20	39	479	123	1740	e150	412	336	106	1590	647	27	131
21	60	450	129	830	e590	343	333	99	372	186	25	85
22	73	378	122	366	e1700	227	238	108	344	105	24	235
23	63	320	e115	293	786	190	1760	97	330	76	25	1040
24	52	276	e110	1040	886	188	2010	89	227	59	31	349
25	44	242	e105	842	571	358	668	80	245	62	28	199
26	41	233	e100	409	426	574	405	72	175	63	25	137
27	38	260	e96	503	384	269	350	67	124	51	22	107
28	37	1370	e94	390	1060	203	243	63	98	41	19	1310
29	67	765	e92	284	539	176	229	58	84	137	18	1720
30	195	381	e88	e180	---	156	471	53	79	796	16	398
31	152	---	e98	e130	---	145	---	48	---	870	14	---
TOTAL	1837.0	14760	7150	14605	9502	9779	11628	10492	11226	5616	1583	7651
MEAN	59.3	492	231	471	328	315	388	338	374	181	51.1	255
MAX	197	2610	712	4900	1700	836	2010	1710	3860	932	283	1720
MIN	4.7	112	88	56	56	143	81	48	34	27	14	12
CFSM	.64	5.35	2.51	5.12	3.56	3.43	4.21	3.68	4.07	1.97	.56	2.77
IN.	.74	5.97	2.89	5.91	3.84	3.95	4.70	4.24	4.54	2.27	.64	3.09

m Maximum gage height, 11.80 ft, Jan. 19 (backwater from ice).

e Estimated.

FRENCH CREEK BASIN

03021350 FRENCH CREEK NEAR WATTSBURG, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	165	315	312	241	309	443	327	142	128	71.4	85.9	133
MAX	375	669	547	592	792	779	627	409	477	334	272	563
(WY)	1982	1986	1978	1990	1976	1979	1994	1984	1986	1986	1977	1977
MIN	13.3	31.0	81.2	79.3	75.9	191	157	38.2	14.6	13.1	5.93	4.84
(WY)	1992	1992	1990	1977	1987	1981	1976	1985	1991	1995	1991	1995

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

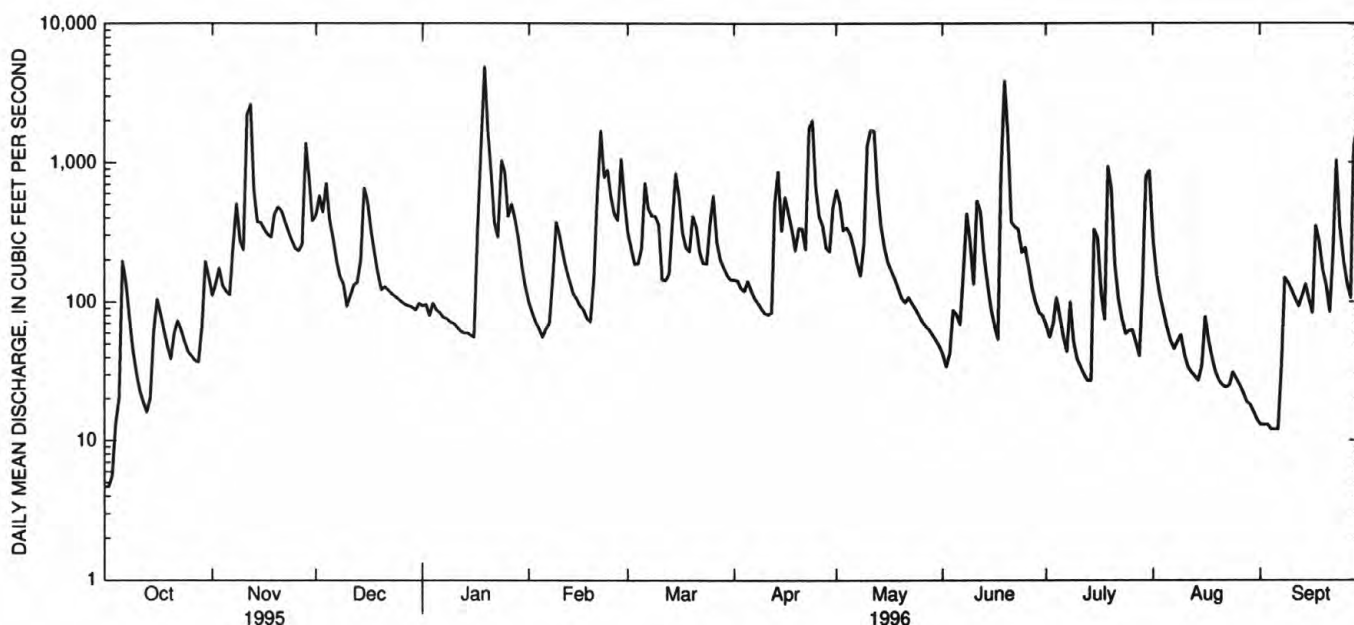
FOR 1996 WATER YEAR

WATER YEARS 1975 - 1996

ANNUAL TOTAL	57391.6		105829.0									
ANNUAL MEAN	157		289									
HIGHEST ANNUAL MEAN										222		
LOWEST ANNUAL MEAN										289		1996
HIGHEST DAILY MEAN										143		1995
LOWEST DAILY MEAN										4900		Jan 19 1996
ANNUAL SEVEN-DAY MINIMUM										2.5		Sep 3 1991
INSTANTANEOUS PEAK FLOW										3.1		Sep 9 1991
INSTANTANEOUS PEAK STAGE										6350		Sep 14 1979
INSTANTANEOUS LOW FLOW										11.95		Sep 14 1979
ANNUAL RUNOFF (CFSM)										2.3		Sep 3 1991
ANNUAL RUNOFF (INCHES)										2.41		
10 PERCENT EXCEEDS										32.80		
50 PERCENT EXCEEDS										534		
90 PERCENT EXCEEDS										105		
										19		

a Maximum gage height, 11.80 ft, Jan. 19 (backwater from ice).

e Estimated.



October 1, 1995 to September 30, 1996

FRENCH CREEK BASIN

03023100 FRENCH CREEK AT MEADVILLE, PA

LOCATION.--Lat 41°37'57", long 80°09'35", Crawford County, Hydrologic Unit 05010004, on left bank 30 ft upstream from bridge on Mercer Street at Meadville, 300 ft downstream from Mill Run, 2,600 ft downstream from Cussewago Creek, at mile 30.5.

DRAINAGE AREA.--788 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 1,058.83 ft above sea level (U.S. Army Corps of Engineers bench mark). Prior to October 27, 1989, water-stage recorder at site 2,300 ft upstream at different datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated beginning October 1971 by Union City Reservoir 43 mi upstream, serving as a retarding basin, and Woodcock Creek Lake 9.0 mi upstream. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge 25,800 ft³/s April 1947, gage height, 17.05 ft; maximum gage height 17.60 ft, January 1959 (backwater from ice), site and datum then in use.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	610	2570	e1300	e1900	3660	1030	4810	379	1240	1680	138
2	53	617	2320	e1250	e1700	2920	978	4460	351	1060	1350	130
3	65	750	2150	e1200	e1500	2420	943	3650	385	861	1080	125
4	78	943	2190	e1150	e1350	2080	880	3070	580	625	818	123
5	110	899	2150	e1100	e1150	2420	864	2900	740	543	557	119
6	215	790	1990	e1050	e1050	4220	874	2660	670	492	432	119
7	480	880	1830	e1000	e1000	3670	806	2340	922	411	369	183
8	559	1500	1660	e1000	e1100	2770	728	2030	3210	511	359	400
9	423	1740	1550	e960	e1600	2300	667	1870	2950	481	1250	711
10	285	1550	1340	e940	e2500	2040	628	3790	2160	389	1210	710
11	208	2430	e1150	e900	e2100	1920	607	8900	1580	318	653	672
12	175	5970	e1500	e880	e1800	1750	592	10200	1560	284	458	509
13	176	5980	e2100	e860	e1600	1720	1130	8880	1640	281	395	486
14	194	4180	e2800	e860	e1400	1830	2580	5720	1350	497	346	659
15	221	3480	4250	e820	e1200	2300	2480	3940	1030	952	334	936
16	420	3060	5520	e800	e1000	2370	3610	2950	741	1680	348	1110
17	575	2700	4620	e1200	e920	2070	3900	2730	521	1560	460	1670
18	476	2570	3760	e5000	e820	1830	3290	2480	1070	1040	369	3460
19	346	2900	3210	e13000	e720	1710	2720	2280	4750	5520	299	3640
20	296	3240	e2800	14300	e1300	2060	2380	1950	6300	6610	258	2640
21	323	3180	e2500	11300	e2500	2250	2740	1770	5920	3570	264	1850
22	486	2980	e2400	7680	e4500	1980	2450	1870	4070	2450	324	1150
23	489	2670	e2200	5040	5730	1760	5180	1630	3040	1810	276	2250
24	402	2360	e2000	5290	5060	1690	8170	1430	2600	1400	234	2870
25	328	2140	e1900	6090	3850	1650	7090	1200	2810	1090	215	2480
26	280	1970	e1800	4960	3080	1790	4550	871	2400	773	201	2050
27	252	1950	e1700	4240	2990	1830	3500	604	2050	586	186	1650
28	239	2750	e1600	e3500	4870	1670	2820	542	1800	488	172	4010
29	256	3440	e1500	e3000	4860	1520	2630	516	1550	429	162	6950
30	329	2900	e1400	e2600	---	1350	3830	478	1390	723	155	6220
31	499	---	e1350	e2300	---	1140	---	427	---	1770	146	---
TOTAL	9294	73129	71810	105570	65150	66690	74647	92948	60519	40444	15360	50020
MEAN	300	2438	2316	3405	2247	2151	2488	2998	2017	1305	495	1667
MAX	575	5980	5520	14300	5730	4220	8170	10200	6300	6610	1680	6950
MIN	53	610	1150	800	720	1140	592	427	351	281	146	119
CFSM	.38	3.09	2.94	4.32	2.85	2.73	3.16	3.80	2.56	1.66	.63	2.12
IN.	.44	3.45	3.39	4.98	3.08	3.15	3.52	4.39	2.86	1.91	.73	2.36

e Estimated.

FRENCH CREEK BASIN

03023100 FRENCH CREEK AT MEADVILLE, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1121	2005	1917	2485	2105	2492	2502	1413	915	557	461	1014
MAX	3181	3194	3039	4211	4190	3850	4023	2998	2659	1337	1291	2786
(WY)	1991	1993	1991	1993	1990	1994	1994	1996	1989	1992	1994	1990
MIN	104	154	786	834	757	1700	1556	451	155	135	97.1	52.6
(WY)	1992	1992	1990	1994	1993	1990	1995	1993	1991	1995	1991	1991

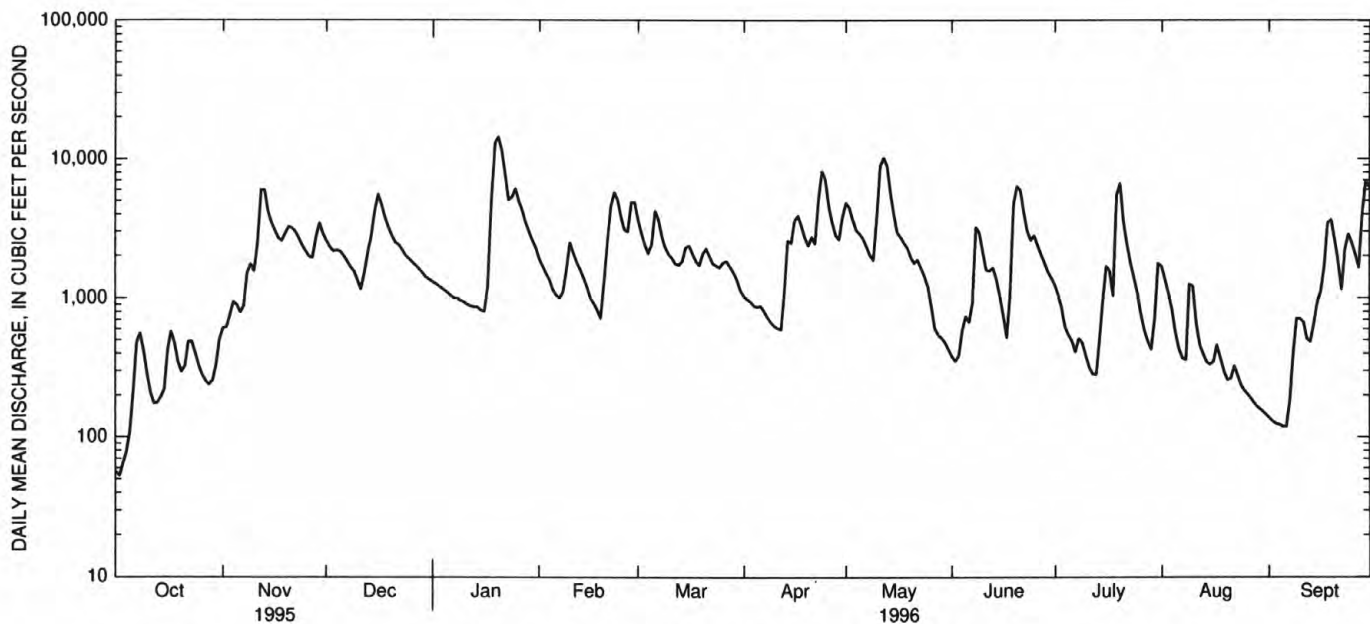
SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1989 - 1996

ANNUAL TOTAL	403498	725581	1578
ANNUAL MEAN	1105	1982	1040
HIGHEST ANNUAL MEAN			1982
LOWEST ANNUAL MEAN			1040
HIGHEST DAILY MEAN	6430	Mar 8	14300
LOWEST DAILY MEAN	53	Sep 11	53
ANNUAL SEVEN-DAY MINIMUM	57	Sep 6	129
INSTANTANEOUS PEAK FLOW			14800
INSTANTANEOUS PEAK STAGE			15.52
INSTANTANEOUS LOW FLOW			53
ANNUAL RUNOFF (CFSM)	1.40	2.52	2.00
ANNUAL RUNOFF (INCHES)	19.05	34.25	27.21
10 PERCENT EXCEEDS	2890	4240	3630
50 PERCENT EXCEEDS	603	1550	1080
90 PERCENT EXCEEDS	70	293	145



FRENCH CREEK BASIN

03024000 FRENCH CREEK AT UTICA, PA
(National water-quality assessment station)

LOCATION.--Lat 41°26'15", Long 79°57'22", Venango County, Hydrologic Unit 05010004, on right bank at upstream side of bridge on SR 3017 at Utica and 2,000 ft upstream from Mill Creek.

DRAINAGE AREA.--1,028 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1932 to current year.

REVISED RECORDS.--WSP 743: Drainage area. WSP 823: 1936 (M). WSP 1275: 1933, 1936.

GAGE.--Water-stage recorder. Datum of gage is 1,019.44 ft above sea level. Prior to Nov. 27, 1933, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated since 1971 by Union City Reservoir 50 mi upstream, serving as a retarding basin, and since January 1974 by Woodcock Creek Lake, 25 mi upstream. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1912, 15.7 ft in March 1913, discharge 35,600 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	605	3150	e1100	e2700	5020	1430	6420	587	1550	2060	248
2	63	663	2810	e1200	e2300	4110	1390	6380	543	1360	1700	235
3	64	703	2600	1100	e2000	3430	1310	5350	577	1160	1420	222
4	90	908	2530	e1000	e1800	2810	1230	4500	803	948	1140	213
5	109	961	2550	e960	e1600	3290	1180	4160	970	752	880	207
6	239	872	2350	e920	e1400	5510	1160	3800	920	691	672	202
7	323	840	2150	e900	e1350	5210	1120	3370	1220	604	580	303
8	560	1280	1910	e860	e1400	3970	1020	2900	3520	597	525	442
9	517	1760	1780	e840	e2100	3460	941	2630	3830	617	924	737
10	389	1680	1360	e820	e3200	2970	889	3590	2870	568	1460	910
11	292	2010	1090	e800	3450	2890	856	9690	2150	471	1010	823
12	230	5650	e880	e780	3230	2450	824	12600	1850	418	669	706
13	202	6220	e760	e760	2620	2340	1070	12100	2140	388	552	666
14	224	5150	e1000	e760	2310	2390	2750	9130	1830	487	496	746
15	282	4240	1970	e760	2060	2980	3100	6150	1490	745	467	966
16	320	3780	3270	e740	1900	3160	4530	4590	1190	1700	532	1100
17	523	3340	3440	e740	1450	2830	5030	3960	893	1780	536	2000
18	567	3130	3210	e3000	1270	2470	4410	3530	1050	1350	537	3990
19	450	3490	2520	e11500	1170	2250	3830	3190	6350	10300	455	4300
20	364	3870	1730	15600	1750	3230	3320	2800	7360	9050	401	3460
21	390	3910	e1500	15000	4260	3230	3490	2310	6950	6380	435	2480
22	426	3690	e1350	11500	5760	2910	3340	2410	5520	4290	427	1620
23	541	3380	e1250	7680	6730	2560	4890	2160	4220	3330	512	2100
24	492	3010	e1200	7280	6460	2380	8850	1870	3540	2520	496	3350
25	413	2690	e1100	7660	5300	2260	9220	1640	3580	1980	395	3020
26	363	2440	e1050	6740	4210	2300	6730	1300	3200	1540	364	2570
27	328	2310	e1000	5740	4030	2400	5050	989	2690	1190	338	2000
28	307	2840	e1000	e4700	5620	2200	4070	833	2320	981	312	4270
29	303	3900	e980	e4000	6120	1990	3880	782	1940	848	289	7720
30	332	3510	e960	e3400	---	1800	5280	719	1730	829	270	7390
31	419	---	e960	e3000	---	1580	---	652	---	1730	259	---
TOTAL	10188	82832	55410	121840	89550	92380	96190	126505	77833	61154	21113	58996
MEAN	329	2761	1787	3930	3088	2980	3206	4081	2594	1973	681	1967
MAX	567	6220	3440	15600	6730	5510	9220	12600	7360	10300	2060	7720
MIN	63	605	760	740	1170	1580	824	652	543	388	259	202
CFSM	.32	2.69	1.74	3.82	3.00	2.90	3.12	3.97	2.52	1.92	.66	1.91
IN.	.37	3.00	2.01	4.41	3.24	3.34	3.48	4.58	2.82	2.21	.76	2.13

e Estimated.

FRENCH CREEK BASIN

03024000 FRENCH CREEK AT UTICA, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 1996, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1262	2375	2907	2536	2859	3864	3050	1724	1390	909	716	991
MAX	3954	6309	6029	5426	6394	6466	5101	4081	4659	2629	3297	3408
(WY)	1991	1986	1978	1993	1976	1972	1994	1996	1986	1987	1980	1990
MIN	121	176	1049	869	629	2085	1655	452	209	192	112	71.7
(WY)	1992	1992	1990	1977	1987	1990	1976	1985	1991	1995	1991	1995

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1972 - 1996

ANNUAL TOTAL	475343	893991	
ANNUAL MEAN	1302	2443	2044
HIGHEST ANNUAL MEAN			2443
LOWEST ANNUAL MEAN			1349
HIGHEST DAILY MEAN	6970	Mar 9	15600
LOWEST DAILY MEAN	63	Oct 2	63
ANNUAL SEVEN-DAY MINIMUM	67	Sep 7	136
INSTANTANEOUS PEAK FLOW			16100
INSTANTANEOUS PEAK STAGE			10.93
ANNUAL RUNOFF (CFSM)	1.27		2.38
ANNUAL RUNOFF (INCHES)	17.20		32.35
10 PERCENT EXCEEDS	3500		5400
50 PERCENT EXCEEDS	801		1730
90 PERCENT EXCEEDS	87		399

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1933 - 1971, BY WATER YEAR (WY) (PRIOR TO REGULATION)

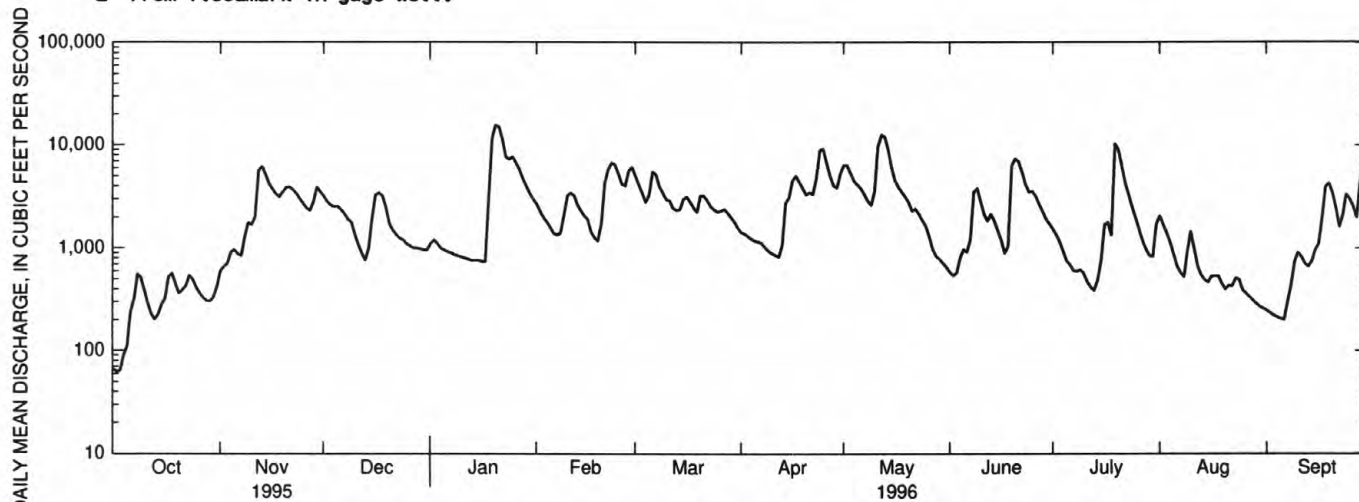
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	695	1506	2238	2590	2713	3915	3147	1684	953	555	408	440
MAX	3744	3983	4471	7284	5894	7359	6688	4160	3717	2015	1907	2148
(WY)	1946	1971	1951	1937	1938	1964	1947	1956	1947	1967	1956	1958
MIN	69.5	183	227	403	523	1768	575	349	124	77.1	77.8	80.4
(WY)	1964	1954	1961	1961	1934	1937	1946	1934	1934	1934	1954	1954

SUMMARY STATISTICS

WATER YEARS 1933 - 1971

ANNUAL MEAN	1732	
HIGHEST ANNUAL MEAN	2539	1956
LOWEST ANNUAL MEAN	1146	1934
HIGHEST DAILY MEAN	23000	Mar 6 1964
LOWEST DAILY MEAN	45	Sep 1 1933
ANNUAL SEVEN-DAY MINIMUM	48	Aug 27 1933
INSTANTANEOUS PEAK FLOW	23800	Mar 7 1964
INSTANTANEOUS PEAK STAGE	a13.2	Mar 7 1964
INSTANTANEOUS LOW FLOW	43	Jul 30 1934
ANNUAL RUNOFF (CFSM)	1.68	
ANNUAL RUNOFF (INCHES)	22.89	
10 PERCENT EXCEEDS	4350	
50 PERCENT EXCEEDS	909	
90 PERCENT EXCEEDS	144	

a From floodmark in gage well.



October 1, 1995 to September 30, 1996

FRENCH CREEK BASIN

03024000 FRENCH CREEK AT UTICA, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1996 to current year.

REMARKS.--All water-quality samples collected and analyzed by the U.S. Geological Survey. Additional sites in the fixed-station network are shown in figure 4, page 26.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT- ANCE (μ S/CM) (00095)	PH WATER FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	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)
APR 18...	0915	4490	177	7.2	6.5	732	11.6	59	18	3.5	8.3
MAY 22...	1100	2450	187	7.7	19.5	728	8.8	75	23	4.2	6.3
JUN 18...	1100	783	239	7.8	22.0	728	7.7	94	29	5.2	7.9
JUL 16...	1000	1670	246	7.6	21.5	734	7.0	91	28	5.0	8.2
AUG 06...	1000	677	235	7.8	22.5	737	6.9	94	29	5.2	7.0
SEP 05...	0930	208	333	8.1	22.0	732	6.7	130	40	7.4	11

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	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 DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
APR 18...	1.2	39	14	15	<0.10	3.2	100	0.010	0.590	0.020	0.40
MAY 22...	1.3	62	12	11	<0.10	2.9	104	<0.010	0.450	<0.015	0.40
JUN 18...	1.3	78	12	13	<0.10	2.6	138	0.010	0.430	0.020	0.30
JUL 16...	1.8	77	13	15	<0.10	2.5	135	0.010	0.540	0.050	0.50
AUG 06...	1.6	76	12	12	<0.10	4.7	133	0.010	0.470	0.020	0.30
SEP 05...	2.0	108	16	19	0.10	2.3	175	0.010	0.450	0.020	0.30

DATE	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	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)	IRON, DIS- SOLVED (μG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (μG/L AS MN) (01056)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C) (00689)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
APR 18...	0.60	0.050	0.010	<0.010	74	14	4.3	0.20	37	95
MAY 22...	0.30	0.040	0.010	<0.010	110	8.0	4.1	0.70	16	79
JUN 18...	0.20	0.040	<0.010	0.010	86	15	4.9	0.60	13	95
JUL 16...	0.20	0.050	<0.010	0.010	130	4.0	4.2	--	30	83
AUG 06...	0.30	0.020	<0.010	0.020	140	24	4.5	0.40	11	94
SEP 05...	0.30	0.030	0.020	0.020	49	24	3.4	0.30	6	50

FRENCH CREEK BASIN

03024000 FRENCH CREEK AT UTICA, PA--Continued

REMARKS.--Samples are filtered through a glass-fiber membrane filter with openings that are 0.7 microns in size to remove sediment and microorganisms. Therefore, this schedule is suitable for compounds dissolved in water. Each sample was analyzed for all of the compounds in this schedule. The MDL provides an index to indicate where measurement uncertainty is increased. When an analyte is detected and all criteria for a positive result are met, the concentration is reported. If the Concentration is less than the MDL, an 'E' code will be reported with the value. If the analyte is qualitatively identified as present, but the quantitative determination is substantially more uncertain, the NWQL will identify the result with an 'E' code even though the measured value is greater than the MDL. A value reported with an 'E' code should be used with caution. When no analyte is detected in a sample, the default reporting value is the MDL preceded by a less than sign (<).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	ACETO- CHLOR, WATER FLTRD REC (μ G/L) (49260)	ALA- CHLOR, WATER, DISS, REC (μ G/L) (46342)	DEETHYL ATRA- ZINE, WATER, DISS, REC (μ G/L) (04040)	ATRA- ZINE, WATER, DISS, REC (μ G/L) (39632)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (μ G/L) (82686)	BEN- FLUR- ALIN WAT FLT 0.7 U GF, REC (μ G/L) (82673)	BUTYL- ATE, WATER, DISS, REC (μ G/L) (04028)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (μ G/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (μ G/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (μ G/L) (38933)	CYANA- ZINE, WATER, DISS, REC (μ G/L) (04041)	DCPA WATER FLTRD 0.7U GF, REC (μ G/L) (82682)
JUN 19...	0.014	0.031	E0.017	1.40	<0.001	<0.002	<0.002	E0.006	<0.003	<0.004	0.010	<0.002
DATE	P,P' DDE DISSOLV (μ G/L) (34653)	DI- AZINON, DIS- SOLVED (μ G/L) (39572)	DI- ELDRIN DIS- SOLVED (μ G/L) (39381)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (μ G/L) (82660)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (μ G/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (μ G/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (μ G/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (μ G/L) (82672)	FONOFOS WATER DISS REC (μ G/L) (04095)	ALPHA BHC DIS- SOLVED (μ G/L) (34253)	LINDANE DIS- SOLVE (μ G/L) (39341)	LIN- URON WATER FLTRD 0.7 U GF, REC (μ G/L) (82666)
JUN 19...	<0.006	<0.002	<0.001	<0.003	<0.017	<0.002	<0.004	<0.003	<0.003	<0.002	<0.004	0.013
DATE	MALA- THION, DIS- SOLVED (μ G/L) (39532)	METO- LACHLOR WATER DISSOLV (μ G/L) (39415)	METRI- BUZIN WATER DISSOLV (μ G/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (μ G/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (μ G/L) (82684)	PARA- THION, DIS- SOLVED (μ G/L) (39542)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (μ G/L) (82667)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (μ G/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (μ G/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (μ G/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (μ G/L) (82664)	PRO- METON, WATER, DISS, REC (μ G/L) (04037)
JUN 19...	<0.005	0.770	0.011	<0.004	<0.003	<0.004	<0.006	<0.004	<0.004	<0.005	<0.002	E0.005
DATE	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (μ G/L) (82676)	PROP- CHLOR, WATER, DISS, REC (μ G/L) (04024)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (μ G/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (μ G/L) (82685)	SI- MAZINE, WATER, DISS, REC (μ G/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (μ G/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (μ G/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (μ G/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (μ G/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (μ G/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (μ G/L) (82661)	
JUN 19...	<0.003	<0.007	<0.004	<0.013	0.150	<0.010	<0.007	<0.013	<0.002	<0.001	<0.002	

FRENCH CREEK BASIN

LAKES AND RESERVOIRS IN FRENCH CREEK BASIN

03021518 UNION CITY RESERVOIR.--Lat 41°55'13", long 79°53'59", Erie County, Hydrologic Unit 05010004, in tower at left center of Union City Dam on French Creek, 1.4 mi upstream from South Branch French Creek, and 3.2 mi northwest of Union City. DRAINAGE AREA, 220 mi². PERIOD OF RECORD, July 1970 to current year. GAGE, water-stage recorder. Datum of gage is sea level (levels by U.S. Army Corps of Engineers).

Reservoir is formed by earthfill dam with sidehill, concrete-lined spillway completed September 1971. Dam became operational in July 1970. Usable capacity 47,650 acre-ft between elevation 1,210.00 ft (invert of inlet of conduit) and 1,278.00 ft (crest of spillway). No dead storage. Figures given herein represent usable contents. Reservoir is used for flood control only. Records furnished by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 34,840 acre-ft, Feb. 21, 1981 (elevation, 1,271.80 ft); minimum, 0.0 acre-ft, Aug. 31, 1995 (elevation, 1,211.08 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 25,210 acre-ft, Jan. 20 (elevation, 1,266.27 ft); minimum, 1.0 acre-ft, Oct. 1 (elevation, 1,211.05 ft).

03022550 WOODCOCK CREEK LAKE.--Lat 41°41'50", long 80°06'06", Crawford County, Hydrologic Unit 05010004 in tower on right center and 200 ft upstream from center line of Woodcock Creek Dam on Woodcock Creek, 2.8 mi southeast of Saegerstown and 3.5 mi upstream from mouth. DRAINAGE AREA, 45.6 mi². PERIOD OF RECORD, January 1974 to current year. GAGE, water-stage recorder. Datum of gage is sea level (U.S. Army Corps of Engineers bench mark).

Lake is formed by a rolled earth embankment with an impervious core. Storage began in January 1974. Total storage 20,000 acre-ft between elevation 1,138 ft inlet invert and 1,209 ft crest of spillway. Figures given herein represent usable contents. Lake is used for flood control and recreation. Records furnished by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 12,690 acre-ft, June 13, 1986 (elevation, 1,198.18 ft); minimum (after first filling) 676 acre-ft, Nov. 1, 1984 (elevation, 1,159.82 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 10,190 acre-ft, May. 13 (elevation, 1,193.55); minimum, 1,120 acre-ft, Jan. 16 (elevation, 1,163.80 ft)

MONTHEND ELEVATION IN FEET ABOVE SEA LEVEL, AND CONTENTS AT 2400 HRS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

Date	Elevation (feet)	Contents (acre- feet)	Change in contents (equivalent in ft ³ /s)	Elevation (feet)	Contents (acre- feet)	Change in contents (equivalent in ft ³ /s)
<u>03021518 Union City Reservoir</u>			<u>03022550 Woodcock Creek Lake</u>			
Sept. 30	1,211.08	0	-	1,176.19	3,490	-
Oct. 31	1,219.27	159	+ 2.6	1,168.76	1,870	-26
Nov. 30	1,248.18	7,390	+122	1,166.28	1,470	- 6.7
Dec. 31	1,218.53	124	-118	1,164.11	1,160	- 5.0
CAL YR 1995	-	-	+ .1	-	-	- .40
Jan. 31	1,253.22	10,420	+168	1,180.36	4,720	+58
Feb. 29	1,256.81	13,270	+ 50	1,170.75	2,240	-43
Mar. 31	1,221.84	329	-210	1,174.37	3,030	+13
Apr. 30	1,252.87	10,180	+166	1,184.44	6,160	+53
May 31	1,214.45	20	-165	1,181.55	5,120	-17
June 30	1,235.59	2,560	+ 43	1,181.76	5,190	+ 1.2
July 31	1,234.81	2,350	- 3.4	1,181.25	5,020	- 2.8
Aug. 31	1,213.66	12	- 38	1,180.55	4,790	- 3.7
Sept. 30	1,252.60	10,000	+168	1,184.64	6,230	+24
WTR YR 1996	-	-	+ 14	-	-	+ 3.8

OHIO RIVER MAIN STEM

03025500 ALLEGHENY RIVER AT FRANKLIN, PA

LOCATION.--Lat 41°23'22", long 79°49'14", Venango County, Hydrologic Unit 05010003, on right bank at upstream side of Eighth Street bridge on U.S. Highway 322 at Franklin, 1,000 ft downstream from French Creek, at mile 124.4.

DRAINAGE AREA.--5,982 mi².

PERIOD OF RECORD.--October 1914 to current year. Monthly discharge only for some periods, published in WSP 1305. Gage-height records collected at same site since April 1905 are contained in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 743: Drainage area. WSP 783: 1913 (M). WSP 1003: 1920 (M). WSP 1305: 1926 (M), 1928-29 (M). WSP 1385: 1920, 1932.

GAGE.--Water-stage recorder. Datum of gage is 955.84 ft above sea level. Prior to Sept. 16, 1932, nonrecording gage, and Sept. 16-30, 1932, water-stage recorder, at present site at datum 2.00 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated by Allegheny Reservoir 74 mi upstream since 1965, by Chautauqua Lake since 1941, by Tionesta Lake since 1940, by Union City Reservoir since 1971, and by Woodcock Creek Lake since January 1974. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 17, 1865 reached a stage of 25.0 ft, and that of Mar. 26, 1913 a stage of 24.6 ft, from graph based on gage readings, discharge, 196,000 ft³/s and 191,000 ft³/s, respectively, from rating curve extended above 120,000 ft³/s. Maximum discharge since at least 1864 is that of Mar. 17, 1865.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2630	4440	18800	e4500	28900	36300	8830	30300	3540	5780	8200	2270
2	2620	5030	18300	5300	27700	33600	8000	30800	3370	5220	7270	2240
3	2640	5750	17700	4560	26700	32200	6920	27500	3370	4890	6200	2190
4	2910	5760	17800	4450	25100	30200	5740	25400	3210	4570	5000	2190
5	3010	5890	18000	4510	24300	28500	5180	23400	3130	4230	4190	2390
6	3900	5590	17600	e4500	18800	34800	5110	19600	3070	4230	3600	2390
7	4080	5540	16700	e4500	8870	30500	4980	18300	3440	3810	3000	2900
8	4070	6620	14800	e4500	7050	26900	4530	17500	7790	3540	2520	3000
9	3940	7780	14100	e4500	9140	26300	4200	16700	11900	3610	3870	3510
10	3610	7540	10700	e4500	14200	24900	3940	23300	9680	3670	4840	5650
11	3240	8150	9510	e4500	16700	19500	3750	49300	8890	3180	3620	5100
12	2900	20000	8720	e4500	16200	17000	3650	59400	9510	2890	2960	5100
13	2580	21300	7110	e4500	16800	16300	5010	47300	10200	2720	2600	5670
14	2330	20200	6370	e4500	16100	13300	14600	42900	9660	2910	2400	6390
15	2660	19500	8880	e4500	12100	13300	19500	42200	8330	3320	2440	6340
16	2810	19100	12100	e4500	10300	14300	22600	35900	6880	4620	3340	7210
17	3040	19300	12300	e4500	11300	13700	25200	37800	5610	5220	3510	11600
18	2880	18800	11300	e8000	11400	12400	28200	39300	5010	5000	2970	23500
19	2700	19600	10200	e49000	11500	11500	27600	37300	24800	26700	2800	20500
20	2510	21200	7720	e52000	11800	13900	23100	31800	26700	19100	2460	19100
21	2760	18300	6830	e34000	21000	14900	20500	25900	22400	14600	2650	16900
22	3190	16600	7290	e31000	28300	14400	18700	24900	18800	10900	2620	14800
23	3070	15900	7980	e41000	29600	13200	19400	23900	18100	8740	2800	15200
24	4130	14900	6990	e40000	28800	14100	27900	22800	15900	6680	3600	12800
25	6440	13600	6870	37400	25900	13900	28900	20700	15200	5160	2900	10900
26	6700	12800	6600	33900	24300	14200	25700	16200	12200	4440	2680	9340
27	6700	12200	6020	29300	30500	13900	22900	11000	13000	4110	2510	8410
28	5690	13500	e5600	28500	37900	14500	20900	6610	12500	4130	2120	15400
29	5380	17900	e5200	29300	40000	14200	20900	5010	9960	3900	1820	29800
30	5430	19400	e4900	31900	---	13500	25400	4400	7170	3930	1950	23800
31	4570	---	e4700	30500	---	10700	---	3740	---	5910	2100	---
TOTAL	115120	402190	327690	553120	591260	600900	461840	821160	313320	191710	105540	296590
MEAN	3714	13410	10570	17840	20390	19380	15390	26490	10440	6184	3405	9886
MAX	6700	21300	18800	52000	40000	36300	28900	59400	26700	26700	8200	29800
MIN	2330	4440	4700	4450	7050	10700	3650	3740	3070	2720	1820	2190
CFSM	.62	2.24	1.77	2.98	3.41	3.24	2.57	4.43	1.75	1.03	.57	1.65
IN.	.72	2.50	2.04	3.44	3.68	3.74	2.87	5.11	1.95	1.19	.66	1.84

e Estimated.

OHIO RIVER MAIN STEM

03025500 ALLEGHENY RIVER AT FRANKLIN, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5494	9975	13310	13880	13590	21230	19440	12130	7411	4482	3200	3577
MAX	22900	26030	33270	41420	32340	49850	49920	30070	24820	21440	13830	17730
(WY)	1991	1986	1928	1937	1976	1936	1940	1943	1989	1972	1977	1977
MIN	515	771	1125	1732	2929	6383	4203	2554	1106	555	414	435
(WY)	1931	1931	1961	1961	1963	1969	1946	1985	1934	1934	1930	1930

SUMMARY STATISTICS

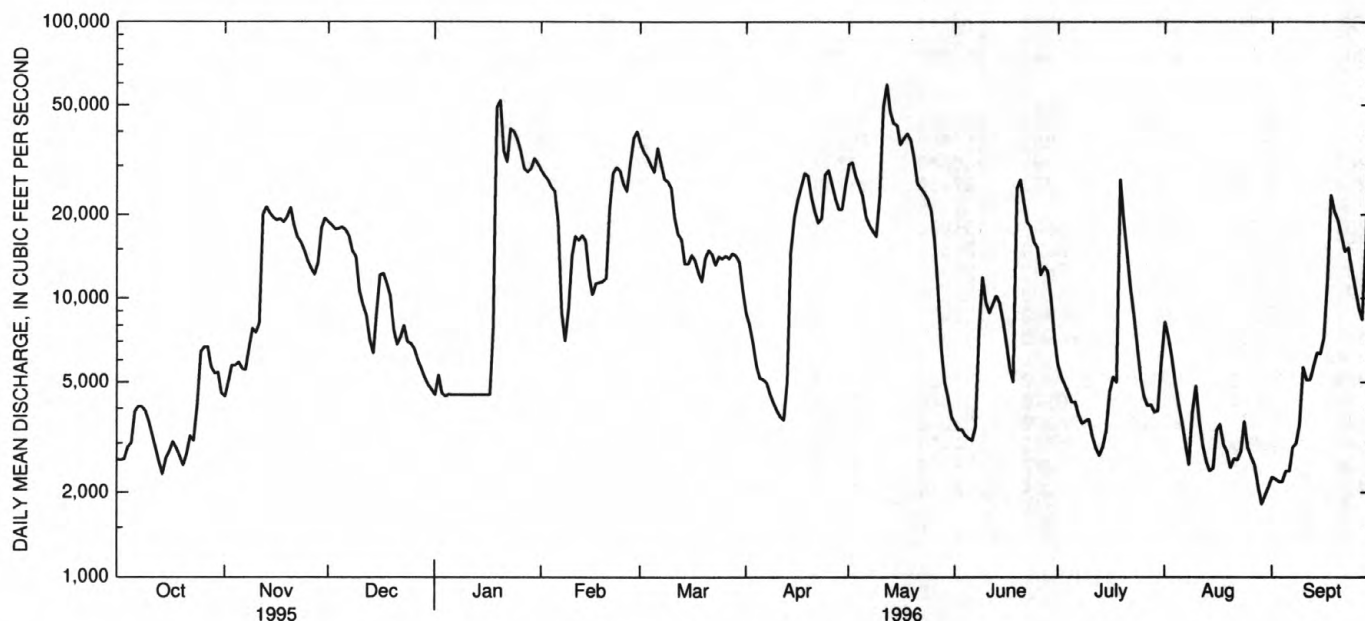
FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1915 - 1996

ANNUAL TOTAL	2824830		4780440									
ANNUAL MEAN	7739		13060									
HIGHEST ANNUAL MEAN										10630		
LOWEST ANNUAL MEAN										15560		1956
HIGHEST DAILY MEAN										6482		1931
LOWEST DAILY MEAN										130000		Mar 13 1920
ANNUAL SEVEN-DAY MINIMUM										335		Aug 21 1930
INSTANTANEOUS PEAK FLOW										351		Aug 17 1930
INSTANTANEOUS PEAK STAGE										138000		Mar 13 1920
ANNUAL RUNOFF (CFSM)										20.65		Mar 13 1920
ANNUAL RUNOFF (INCHES)										1.78		
10 PERCENT EXCEEDS										24.14		
50 PERCENT EXCEEDS										25400		
90 PERCENT EXCEEDS										6620		
										1350		

a Maximum gage height observed, 26.0 ft, Feb. 27, 1917 (backwater from ice), also Feb. 26, 1926 (backwater from ice).



October 1, 1995 to september 30, 1996

CLARION RIVER BASIN

03026500 SEVENMILE RUN NEAR RASSELAS, PA

LOCATION.--Lat 41°37'52", long 78°34'37", McKean County, Hydrologic Unit 05010005, on right bank 300 ft upstream from highway bridge, 600 ft upstream from Fivemile Run, and 3.2 mi northeast of Rasselas.

DRAINAGE AREA.--7.84 mi².

PERIOD OF RECORD.--October 1951 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,690.73 ft above sea level.

REMARKS.--Records good except for estimated daily discharges, which are fair. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 19	0945	*859	a5.02	Apr. 30	1400	232	3.93

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.90	3.4	23	e3.7	e18	e27	13	88	5.3	4.8	2.2	4.2
2	e.80	10	25	e3.6	e15	e23	12	61	4.7	4.0	1.9	3.9
3	e.72	18	23	e3.5	e12	e20	11	45	4.3	4.3	1.7	3.7
4	e.90	14	27	e4.4	e10	e17	12	39	4.3	4.6	1.6	4.1
5	e2.5	11	23	e4.3	e8.6	e23	11	31	4.6	3.5	1.5	6.1
6	21	8.7	20	e4.1	e7.0	33	e10	26	4.0	3.0	1.4	6.1
7	18	8.7	17	e4.0	e5.6	23	e10	22	3.6	2.7	1.3	22
8	12	10	15	e3.8	e6.2	22	e9.6	19	3.8	2.5	2.1	23
9	9.0	8.6	13	e3.6	e7.6	23	e9.2	17	3.5	2.4	4.0	16
10	e7.0	8.1	e12	e3.4	e9.0	25	e9.0	23	3.2	2.2	2.0	20
11	e5.2	25	e10	e3.3	e11	17	e8.8	69	3.0	2.0	1.6	11
12	e4.3	45	e8.6	e3.2	e10	17	e8.6	83	3.0	1.9	1.6	14
13	e5.0	29	e7.6	e3.0	e9.8	17	e15	54	2.8	1.9	1.8	44
14	e8.0	24	e9.6	e2.9	e8.6	19	23	40	5.9	2.0	1.6	33
15	19	22	e9.0	e2.8	e7.8	34	25	32	6.4	18	1.5	22
16	15	18	e8.0	e2.9	e7.2	30	23	26	3.5	11	3.2	18
17	e10	17	e7.6	e2.9	e6.4	27	22	22	2.9	5.0	2.0	40
18	e8.0	16	e7.0	e3.0	e5.8	25	25	19	13	3.8	1.6	52
19	e5.4	19	e6.6	e2.6	e5.4	24	19	16	24	10	1.3	31
20	e10	19	e6.2	e150	e7.6	63	e17	14	16	8.2	1.1	22
21	71	18	e5.8	e80	e14	47	e16	18	11	5.1	1.2	17
22	23	17	e5.6	e45	e22	29	e15	16	12	4.0	1.1	15
23	13	16	e5.4	e35	e40	18	18	13	12	3.6	3.8	16
24	8.6	14	e5.2	e62	72	17	19	11	11	3.4	6.6	13
25	6.1	15	e4.8	e47	58	16	19	9.6	12	3.2	4.1	11
26	4.7	13	e4.6	36	e45	15	18	8.4	9.0	3.1	7.0	9.0
27	4.0	13	e4.4	49	e38	15	17	7.9	7.0	2.7	5.7	7.8
28	3.6	31	e4.2	41	e35	14	16	8.3	6.1	2.4	5.5	40
29	3.4	27	e4.0	32	e31	14	29	8.5	5.6	2.2	5.3	45
30	3.1	22	e3.9	e26	---	15	123	6.9	5.8	2.9	4.8	29
31	3.2	---	e3.8	e21	---	14	---	5.9	---	3.0	4.5	---
TOTAL	306.42	520.5	329.9	689.0	533.6	723	583.2	859.5	213.3	133.4	86.6	598.9
MEAN	9.88	17.3	10.6	22.2	18.4	23.3	19.4	27.7	7.11	4.30	2.79	20.0
MAX	71	45	27	150	72	63	123	88	24	18	7.0	52
MIN	.72	3.4	3.8	2.6	5.4	14	8.6	5.9	2.8	1.9	1.1	3.7
CFSM	1.26	2.21	1.36	2.83	2.35	2.97	2.48	3.54	.91	.55	.36	2.55
IN.	1.45	2.47	1.57	3.27	2.53	3.43	2.77	4.08	1.01	.63	.41	2.84

a Maximum gage height, 5.05 ft, Jan. 19 (backwater from ice).

e Estimated.

CLARION RIVER BASIN

03026500 SEVENMILE RUN NEAR RASSELAS, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	8.01	14.5	17.3	14.4	16.6	28.8	29.4	17.4	12.1	5.65	5.22	6.53
MAX	29.7	49.5	35.9	56.4	49.9	70.8	70.6	47.8	74.0	26.0	32.8	39.7
(WY)	1971	1986	1978	1952	1976	1964	1970	1953	1989	1992	1956	1987
MIN	.32	.66	.94	1.55	2.22	9.85	11.2	4.05	1.14	.50	.52	.28
(WY)	1965	1965	1961	1961	1987	1993	1976	1985	1991	1991	1966	1964

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1952 - 1996

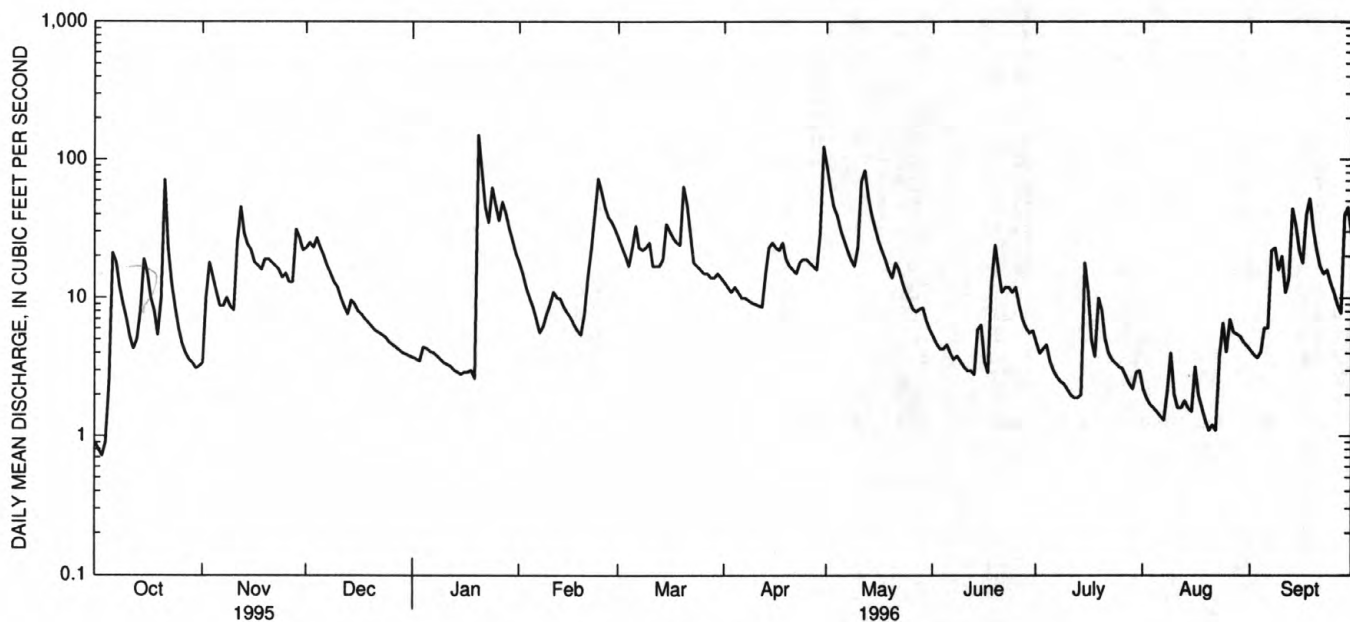
ANNUAL TOTAL	3744.14	5577.32	
ANNUAL MEAN	10.3	15.2	14.6
HIGHEST ANNUAL MEAN			21.1
LOWEST ANNUAL MEAN			10.4
HIGHEST DAILY MEAN	73	Mar 8	465
LOWEST DAILY MEAN	.17	Sep 17	.07
ANNUAL SEVEN-DAY MINIMUM	a.24	Aug 30	.14
INSTANTANEOUS PEAK FLOW			b2300
INSTANTANEOUS PEAK STAGE			5.30
INSTANTANEOUS LOW FLOW			.07
ANNUAL RUNOFF (CFSM)	1.31	1.94	1.86
ANNUAL RUNOFF (INCHES)	17.77	26.46	25.28
10 PERCENT EXCEEDS	23	32	32
50 PERCENT EXCEEDS	7.0	10	8.1
90 PERCENT EXCEEDS	.84	2.7	.98

a Computed using estimated daily discharges.

b From rating curve extended above 600 ft³/s on basis of slope-area measurement at gage height 4.60 ft.

c Maximum gage height, 5.05 ft, Jan. 19 (backwater from ice).

e Estimated.



October 1, 1995 to September 30, 1996

CLARION RIVER BASIN

LAKE IN CLARION RIVER BASIN

03027000 EAST BRANCH CLARION RIVER LAKE.--Lat 41°33'35", Long 78°35'40", Elk County, Hydrologic Unit 05010005, at control tower at East Branch Clarion River Dam on East Branch Clarion River, 1.7 mi northeast of Glen Hazel, and 7.5 mi upstream from confluence with West Branch Clarion River. DRAINAGE AREA, 72.4 mi² (figure from U.S. Army Corps of Engineers). PERIOD OF RECORD, June 1952 to current year. Prior to October 1970 published as "East Branch Clarion River Reservoir", GAGE, water-stage recorder. Datum of gage is sea level (U.S. Army Corps of Engineers bench mark).

Lake is formed by an earthfill dam rock-faced. Dam completed in 1952. Controlled storage began in June 1952. Capacity, 83,300 acre-ft between elevations 1,555 ft (sill of outlet gates) and 1,685 ft (full pool). Minimum pool elevation, 1,555 ft (capacity, 1,000 acre-ft). Winter low-water pool elevation, 1,651 ft (capacity, 45,600 acre-ft). Summer low-water pool elevation, 1,670 ft (capacity, 65,300 acre-ft). Storage to summer pool normally occurs during period Mar. 1 to Apr. 30. Depletion of low-water storage for augmenting flow in Clarion River occurs normally during period June to October. Figures given herein represent total contents. Lake is used for flood control, for low-flow augmentation of Clarion River and downstream rivers, and for recreation. Records furnished by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 85,010 acre-ft, June 24, 1972 (elevation, 1,685.55 ft; minimum, 160 acre-ft, Nov. 9, 1952 (elevation, 1,541.07 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 70,150 acre-ft, May 13 (elevation, 1,674.08 ft); minimum 31,800 acre-ft, Oct. 20 (elevation 1,634.33 ft).

MONTHEND ELEVATION IN FEET ABOVE SEA LEVEL, AND CONTENTS AT 2400 HRS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

Date	Elevation (feet)	Contents (acre- feet)	Change in contents (equivalent in ft ³ /s)
Sept. 30	1,637.86	34,450	-
Oct. 31	1,636.49	33,410	- 17
Nov. 30	1,647.36	42,280	+149
Dec. 31	1,650.56	45,160	+ 47
CAL YR 1995			+ 2.2
Jan. 31	1,656.62	50,930	+ 94
Feb. 29	1,659.41	53,750	+ 49
Mar. 31	1,662.05	56,500	+ 45
Apr. 30	1,670.26	65,610	+153
May 31	1,671.86	67,490	+ 31
June 30	1,669.13	64,300	- 54
July 31	1,664.71	59,360	- 80
Aug. 31	1,654.74	49,090	-167
Sept. 30	1,651.71	46,220	- 48
WTR YR 1996	-	-	+ 16

CLARION RIVER BASIN

03028000 WEST BRANCH CLARION RIVER AT WILCOX, PA

LOCATION.--Lat 41°34'31", long 78°41'33", Elk County, Hydrologic Unit 05010005, on right bank 20 ft downstream from highway bridge at Wilcox, 100 ft downstream from Wilson Run, and 0.1 mi upstream from Penn Central Railroad bridge.

DRAINAGE AREA.--63.0 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 1,502.02 ft above sea level. Prior to Nov. 18, 1953, nonrecording gage at site 20 ft upstream at same datum. Nov. 18 to Dec. 8, 1953, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 19	1300	*5,590	*10.23	Apr. 30	1600	1,000	4.39

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e16	e25	209	e29	e110	279	97	613	48	53	31	22
2	e13	72	208	e28	e94	227	91	495	45	47	29	20
3	e12	133	184	e30	e80	176	84	370	43	52	27	19
4	e25	93	211	e33	e70	149	84	313	46	49	26	20
5	47	75	184	e32	e62	193	95	246	50	40	24	23
6	113	65	171	e30	e54	248	83	200	41	36	22	21
7	45	70	146	e29	e47	168	81	162	39	34	22	68
8	30	77	121	e28	e60	156	77	145	43	32	32	61
9	e27	65	106	e26	e84	161	75	130	39	31	61	47
10	e25	60	82	e25	e60	134	73	191	35	29	30	65
11	e27	153	87	e31	e76	133	72	546	40	27	27	43
12	e26	284	84	e41	e66	116	72	669	34	26	25	86
13	e25	189	73	e38	e60	117	148	499	38	26	26	217
14	89	172	77	e35	e86	117	221	366	56	29	23	176
15	85	171	107	e32	e76	181	170	281	39	149	25	139
16	47	141	85	e29	e70	153	205	223	33	71	49	114
17	e30	122	70	e33	e64	144	176	176	31	46	30	325
18	e24	122	62	e45	e60	139	156	148	109	39	26	454
19	e21	156	56	e2600	e56	149	148	125	150	106	23	283
20	32	151	64	1110	e90	385	160	107	105	73	22	197
21	363	149	65	579	e200	289	141	142	88	58	22	146
22	101	140	57	396	340	246	127	113	125	52	20	129
23	62	128	52	294	351	207	142	92	114	48	56	127
24	48	115	e45	511	517	170	143	84	114	44	63	94
25	39	106	e41	402	454	159	130	76	106	40	37	84
26	32	100	e38	323	398	149	130	70	86	40	32	73
27	29	98	e36	425	364	124	127	69	75	37	32	67
28	e27	227	e34	331	427	115	110	75	68	33	31	317
29	e27	217	e33	274	341	111	244	68	61	31	29	333
30	e26	193	e31	230	---	103	633	58	63	44	26	236
31	e25	---	e30	e150	---	97	---	53	---	37	24	---
TOTAL	1538	3869	2849	8199	4817	5295	4295	6905	1964	1459	952	4006
MEAN	49.6	129	91.9	264	166	171	143	223	65.5	47.1	30.7	134
MAX	363	284	211	2600	517	385	633	669	150	149	63	454
MIN	12	25	30	25	47	97	72	53	31	26	20	19
CFSM	.79	2.05	1.46	4.20	2.64	2.71	2.27	3.54	1.04	.75	.49	2.12
IN.	.91	2.28	1.68	4.84	2.84	3.13	2.54	4.08	1.16	.86	.56	2.37

e Estimated.

CLARION RIVER BASIN

03028000 WEST BRANCH CLARION RIVER AT WILCOX, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	71.4	128	154	123	143	245	252	143	97.8	59.8	50.8	58.8
MAX	236	390	311	264	448	494	483	363	417	252	249	231
(WY)	1982	1986	1978	1996	1976	1964	1970	1984	1972	1992	1956	1987
MIN	7.60	12.9	12.4	18.5	27.6	96.4	109	40.9	20.4	12.3	8.30	7.68
(WY)	1964	1965	1961	1961	1987	1969	1976	1985	1991	1955	1991	1955

SUMMARY STATISTICS

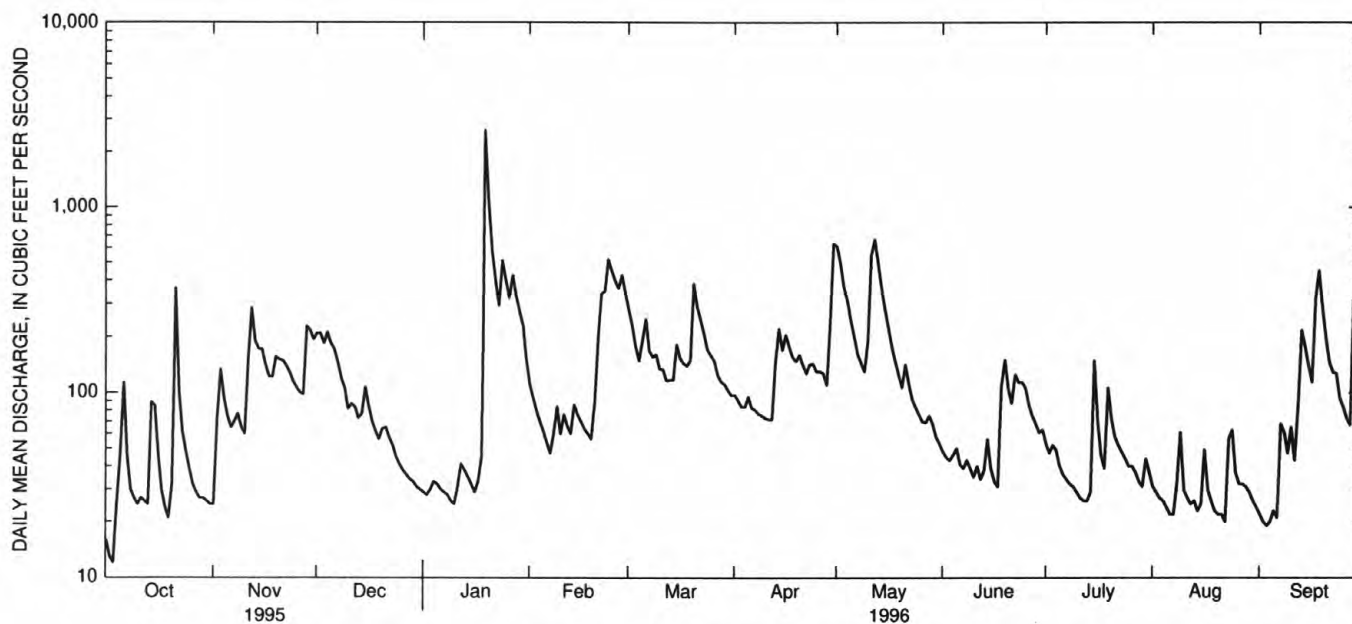
FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1954 - 1996

ANNUAL TOTAL	31378.2	46148	
ANNUAL MEAN	86.0	126	
HIGHEST ANNUAL MEAN			127
LOWEST ANNUAL MEAN			184
HIGHEST DAILY MEAN			91.6
LOWEST DAILY MEAN	505	Mar 8	2870
ANNUAL SEVEN-DAY MINIMUM	e5.0	Sep 6	4.5
INSTANTANEOUS PEAK FLOW	a6.9	Aug 27	5.2
INSTANTANEOUS LOW FLOW			b5590
INSTANTANEOUS PEAK STAGE			10.23
INSTANTANEOUS LOW STAGE			4.2
ANNUAL RUNOFF (CFSM)	1.36	2.00	2.02
ANNUAL RUNOFF (INCHES)	18.53	27.25	27.40
10 PERCENT EXCEEDS	191	282	291
50 PERCENT EXCEEDS	58	75	75
90 PERCENT EXCEEDS	12	26	15

- a Computed using estimated daily discharges.
b From rating curve extended above 3,000 ft³/s.
e Estimated.



October 1, 1995 to September 30, 1996

CLARION RIVER BASIN

03029500 CLARION RIVER AT COOKSBURG, PA

LOCATION.--Lat 41°19'50", long 79°12'33", Jefferson County, Hydrologic Unit 05010005, on left bank at downstream side of bridge on State Highway 36 at Cooksburg, 300 ft downstream from Toms Run, and 2.7 mi upstream from Cathers Run.

DRAINAGE AREA.--807 mi².

PERIOD OF RECORD.--October 1938 to current year. Monthly discharge only for October, November 1938, published in WSP 1305.

REVISED RECORDS.--WSP 1305: 1939 (M). WDR PA-85-3: 1979 (M).

GAGE.--Water-stage recorder. Datum of gage is 1,147.00 ft above sea level. Prior to May 17, 1939, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated by East Branch Clarion River Lake since June 1952 and at low flow by industrial plants above station. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1935, 19 ft, Mar. 17, 1936, from floodmarks, discharge, about 56,000 ft³/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 10,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 19	2300	*41,500	*16.44	May 12	0500	11,400	9.41
May 1	0100	12,700	9.82	Sept. 18	0900	10,200	8.91

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	261	279	2030	e440	e2000	3690	1120	9750	e620	e600	e430	e300
2	259	327	2570	e420	e1500	3180	1200	6700	e600	e540	e400	e280
3	230	979	2200	e400	e1200	2780	1110	5030	e580	e600	e360	e250
4	259	1690	2210	e380	e960	2300	1020	3810	e620	e540	e330	e280
5	390	980	2110	e370	e800	2300	1070	3110	e680	e480	e310	e310
6	458	756	1910	e350	e700	4240	1210	2610	e580	e450	e290	e280
7	616	655	1670	e340	e600	3450	1070	2320	e500	e420	e350	e860
8	377	715	1420	e330	e840	2770	1020	2330	e540	e400	e560	e720
9	282	733	1240	e320	e1150	2370	961	2220	e470	e380	e980	e800
10	241	620	1090	e310	e920	2140	922	2750	e450	e370	e500	995
11	210	597	966	e300	e800	2060	888	6560	e500	e350	e380	971
12	192	1760	908	e300	e720	1720	860	10100	e430	e340	e340	736
13	196	1800	e840	e290	e660	1600	971	6640	e580	e360	e320	2670
14	209	1370	e800	e280	e1100	1590	1720	4920	e720	e600	e300	5010
15	356	1350	e1000	e280	e960	1820	1640	3950	e500	e1600	e480	3020
16	589	1300	e1500	e270	e860	2080	1630	e2800	e420	e1000	e800	2390
17	352	1140	e1300	e260	e800	1760	1830	e2300	e400	e540	e560	2280
18	279	1090	e1150	e1000	e760	1620	1620	e1900	e1000	e700	e350	8000
19	233	1320	e1000	e20000	e700	1560	1480	e1500	e2000	e1200	e300	4710
20	209	1710	e900	22700	e1900	3110	1520	e1300	e1300	e900	e290	3310
21	1350	1660	e800	7720	e4000	3520	1870	e1700	e1200	e720	e280	2580
22	2130	1560	e760	4930	4370	2850	1550	e1400	e1800	e620	e270	1910
23	891	1390	e700	4050	4180	2460	1460	e1200	e1500	e560	e560	1690
24	602	1270	e660	5010	4880	2160	1870	e1100	e1200	e520	e1000	1370
25	463	1140	e600	6460	4830	1920	1720	e980	e1100	e490	e580	1160
26	390	1040	e580	4420	4040	1860	1560	e900	e900	e450	e500	1040
27	340	994	e540	4400	3670	1640	1710	e840	e820	e430	e440	905
28	314	1570	e520	5050	4890	1410	1580	e940	e740	e420	e400	1330
29	301	2830	e500	3940	4550	1320	1720	e800	e680	e400	e380	5310
30	291	2270	e470	3470	---	1260	6320	e720	e700	e760	e350	3190
31	282	---	e450	3010	---	1170	---	e680	---	e560	e320	---
TOTAL	13552	36895	35394	101800	59340	69710	46222	93860	24130	18300	13710	58657
MEAN	437	1230	1142	3284	2046	2249	1541	3028	804	590	442	1955
MAX	2130	2830	2570	22700	4890	4240	6320	10100	2000	1600	1000	8000
MIN	192	279	450	260	600	1170	860	680	400	340	270	250
CFSM	.54	1.52	1.41	4.07	2.54	2.79	1.91	3.75	1.00	.73	.55	2.42
IN.	.62	1.70	1.63	4.69	2.74	3.21	2.13	4.33	1.11	.84	.63	2.70

e Estimated.

CLARION RIVER BASIN

03029500 CLARION RIVER AT COOKSBURG, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 1996, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	778	1314	1793	1589	1730	2774	2582	1865	1226	804	647	657
MAX	2357	3906	3821	5654	4138	6185	4721	4086	5307	2565	2732	1995
(WY)	1991	1986	1978	1952	1976	1979	1994	1984	1972	1992	1994	1992
MIN	86.6	204	150	211	369	764	1217	566	365	139	117	109
(WY)	1952	1961	1961	1961	1987	1969	1976	1985	1991	1952	1952	1952

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1952 - 1996

ANNUAL TOTAL	385903	571570	
ANNUAL MEAN	1057	1562	1478
HIGHEST ANNUAL MEAN			2066
LOWEST ANNUAL MEAN			1077
HIGHEST DAILY MEAN	5220	Jan 21	43200
LOWEST DAILY MEAN	192	Oct 12	59
ANNUAL SEVEN-DAY MINIMUM	240	Sep 15	67
INSTANTANEOUS PEAK FLOW			53300
INSTANTANEOUS PEAK STAGE			18.84
INSTANTANEOUS LOW FLOW			57
ANNUAL RUNOFF (CFSM)	1.31	1.94	1.83
ANNUAL RUNOFF (INCHES)	17.79	26.35	24.89
10 PERCENT EXCEEDS	2330	3560	3220
50 PERCENT EXCEEDS	736	963	900
90 PERCENT EXCEEDS	259	310	300

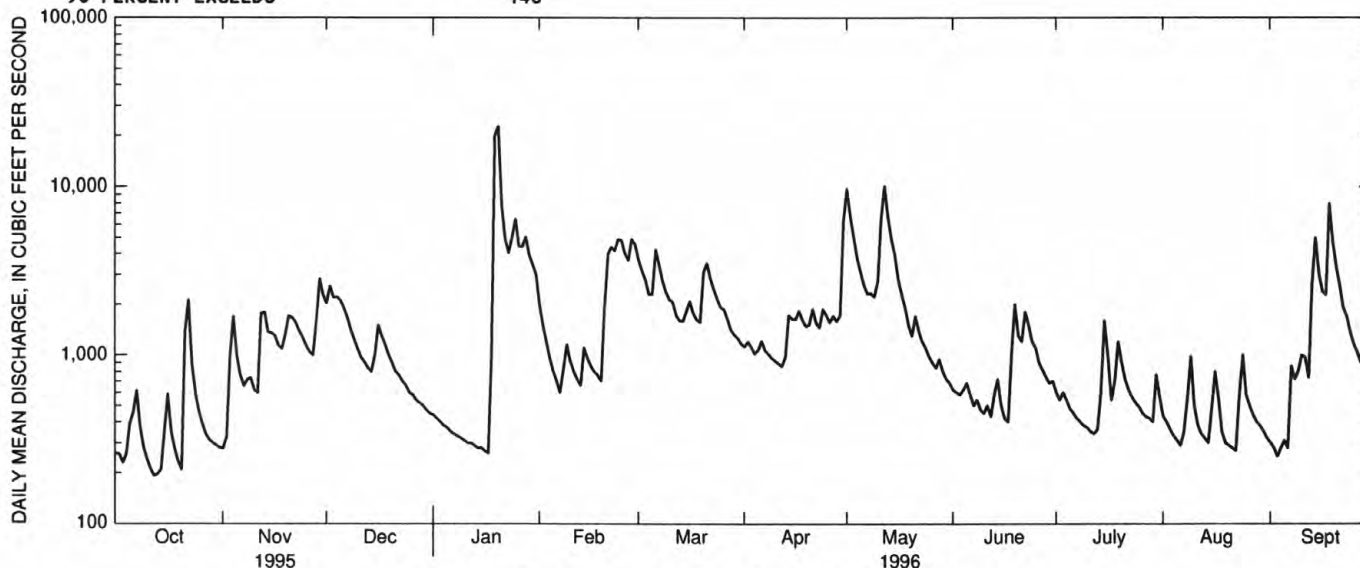
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1951, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	590	1085	1475	1891	1961	3055	2969	1971	1154	579	288	348
MAX	2134	4241	3050	3962	3881	6815	6288	3965	2789	1765	580	1078
(WY)	1946	1951	1941	1950	1951	1945	1940	1943	1946	1942	1950	1945
MIN	113	170	337	417	764	1610	725	606	261	158	94.2	82.8
(WY)	1950	1950	1944	1944	1941	1949	1946	1941	1939	1949	1944	1943

SUMMARY STATISTICS

WATER YEARS 1939 - 1951

ANNUAL MEAN	1444
HIGHEST ANNUAL MEAN	2023
LOWEST ANNUAL MEAN	953
HIGHEST DAILY MEAN	24600
LOWEST DAILY MEAN	43
ANNUAL SEVEN-DAY MINIMUM	50
INSTANTANEOUS PEAK FLOW	32700
INSTANTANEOUS PEAK STAGE	14.96
INSTANTANEOUS LOW FLOW	41
ANNUAL RUNOFF (CFSM)	1.79
ANNUAL RUNOFF (INCHES)	24.31
10 PERCENT EXCEEDS	3350
50 PERCENT EXCEEDS	793
90 PERCENT EXCEEDS	140



October 1, 1995 to September 30, 1996

CLARION RIVER BASIN

03030500 CLARION RIVER NEAR PINEY, PA

LOCATION.--Lat 41°11'33", long 79°26'25", Clarion County, Hydrologic Unit 05010005, on left bank 0.2 mi downstream from hydroelectric plant of Pennsylvania Electric Co., 2.3 mi northeast of Piney, 2.4 mi upstream from Piney Creek, and 3 mi southwest of Clarion.

DRAINAGE AREA.--951 mi².

PERIOD OF RECORD.--October 1944 to current year (monthly discharge only October 1944 to September 1947).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,002.06 ft above sea level (Pennsylvania Electric Co. bench mark). Prior to Dec. 23, 1947, records from hydroelectric plant 0.2 mi upstream.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated by East Branch Clarion River Lake since June 1952 and by hydroelectric plant at Piney Dam 0.2 mi upstream since 1924, combined capacity of reservoirs, 113,200 acre-ft. Several measurements of water temperature were made during the year. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of Mar. 18, 1936 reached a discharge of 50,000 ft³/s, as determined by Pennsylvania Electric Co., elevation, 1,028.5 ft, at lower pool of dam.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e170	417	2320	529	3610	4970	2180	10100	740	1320	819	465
2	456	509	3280	1810	1720	2690	1700	7750	495	e797	1030	145
3	605	1160	2410	1200	1560	2900	2060	5620	1370	722	240	552
4	221	1780	2220	670	582	2260	997	5200	942	e140	829	704
5	415	1270	2480	611	1190	2850	1410	3710	639	e1200	957	448
6	405	1560	e2030	716	1580	3830	501	2490	518	e430	573	481
7	593	767	e2770	998	596	4380	629	3110	931	e140	665	451
8	413	719	e1740	609	1370	3530	1080	2410	874	e860	334	2140
9	450	891	e590	702	1650	3510	2100	2670	416	e1270	1520	977
10	115	879	e520	566	486	1310	1580	2580	763	419	958	1720
11	465	434	e1850	646	1410	2200	1100	6990	919	474	88	1680
12	113	1990	e760	547	2410	1720	1090	11300	863	401	1160	869
13	111	2170	e1000	467	2190	2180	491	7810	1120	99	573	2680
14	113	1230	e1080	542	881	2490	992	5830	962	539	599	5520
15	244	2000	e1070	475	1450	2550	2430	4900	485	441	454	4000
16	1060	2850	e770	1130	1140	1230	1920	3850	434	1020	883	2980
17	255	1610	e1900	521	365	1590	2400	3380	1270	2130	86	3040
18	489	372	e1350	1740	446	2080	2770	3320	e1050	770	499	7170
19	637	440	e1040	21600	580	2430	1200	2200	3280	19800	634	5780
20	113	2340	e1390	26700	2080	3260	1660	2240	4230	5490	422	4290
21	248	2060	e460	8190	3670	3760	1190	1640	2410	2740	1870	2960
22	3390	1760	1160	5360	5050	3720	1950	1760	e1740	1840	593	2250
23	537	1660	1250	4540	5070	3980	1800	1610	1020	1400	737	2040
24	671	2040	555	4810	5080	2410	1900	1390	e1820	1070	1030	1750
25	665	1250	e546	7160	5120	2320	2330	e760	1590	1090	84	1500
26	609	754	e546	5170	4500	2120	2160	e1070	2060	1250	1290	1560
27	716	1120	e1030	5100	4430	2060	2450	926	805	627	577	1130
28	236	2670	e530	5100	5090	2090	960	904	e1200	493	421	1900
29	105	3380	519	4310	5120	998	2830	973	e550	743	561	5440
30	528	2320	539	3890	---	385	6200	1230	e750	1380	327	4010
31	106	---	516	3800	---	1090	---	922	---	984	392	---
TOTAL	15254	44402	40221	120209	70426	78893	54060	110645	36246	52079	21205	70632
MEAN	492	1480	1297	3878	2428	2545	1802	3569	1208	1680	684	2354
MAX	3390	3380	3280	26700	5120	4970	6200	11300	4230	19800	1870	7170
MIN	105	372	460	467	365	385	491	760	416	99	84	145
†	-16	+131	+59	+80	+36	+80	+135	+31	-28	-103	-162	-33

† Change in contents, equivalent in cubic feet per second, in East Branch Clarion River Lake and Piney Reservoir. Records of contents in Piney Reservoir furnished by Pennsylvania Electric Co. Records of contents in East Branch Clarion River Lake furnished by U.S. Army Corps of Engineers.

e Estimated.

CLARION RIVER BASIN

03030500 CLARION RIVER NEAR PINEY, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	887	1583	2176	2068	2313	3333	3130	2219	1477	955	732	745
MAX	2743	5013	4611	6884	5775	6703	5186	4644	6354	3220	3096	2469
(WY)	1991	1986	1978	1952	1976	1964	1970	1984	1972	1992	1994	1992
MIN	40.2	82.5	184	244	527	881	1517	700	345	167	135	120
(WY)	1950	1950	1961	1961	1987	1969	1968	1985	1991	1952	1952	1951

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

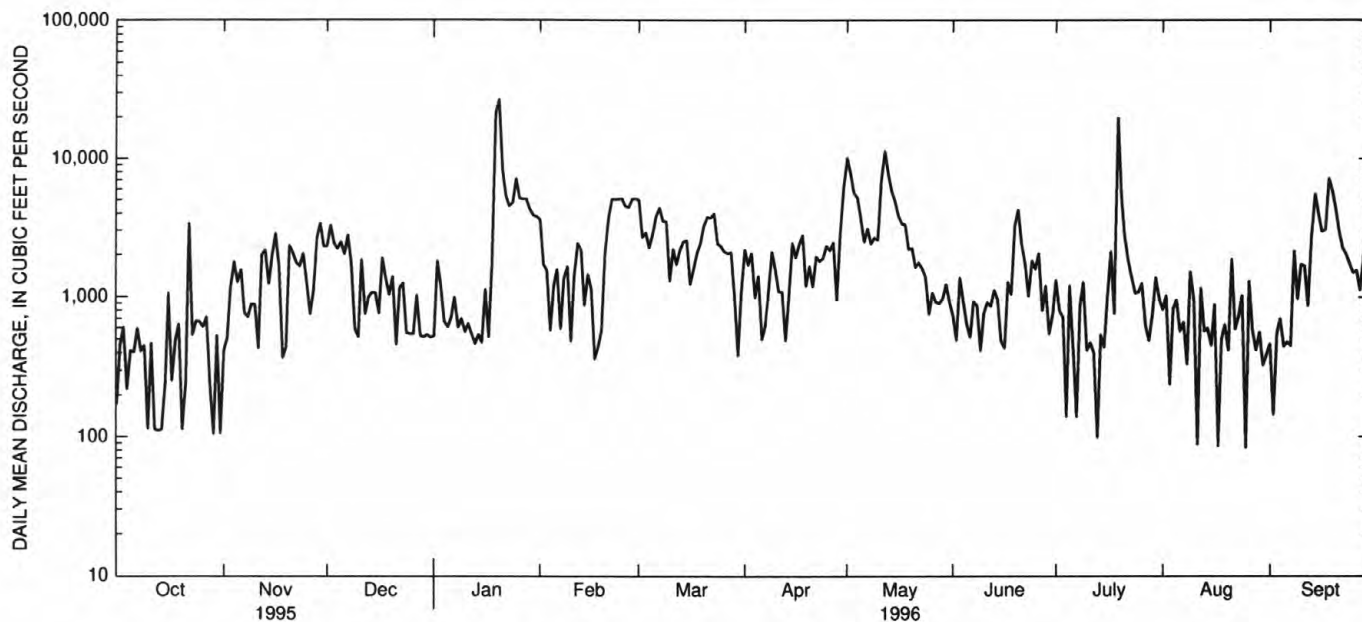
FOR 1996 WATER YEAR

WATER YEARS 1948 - 1996

ANNUAL TOTAL	455859		714272		1798	
ANNUAL MEAN	1249	†+5.8	1952	†+17	2443	1994
HIGHEST ANNUAL MEAN					1223	1963
LOWEST ANNUAL MEAN					51600	Jun 23 1972
HIGHEST DAILY MEAN	5650	Jun 12	26700	Jan 20	11	Oct 1 1966
LOWEST DAILY MEAN	68	Feb 18	84	Aug 25	26	Oct 16 1949
ANNUAL SEVEN-DAY MINIMUM	230	Oct 9	230	Oct 9	74500	Jun 23 1972
INSTANTANEOUS PEAK FLOW			62400	Jul 19	28.24	Jun 23 1972
INSTANTANEOUS PEAK STAGE			25.22	Jul 19	1.89	
ANNUAL RUNOFF (CFSM)	1.31		2.05		25.69	
ANNUAL RUNOFF (INCHES)	17.83		27.94			
10 PERCENT EXCEEDS	2890		4330		4100	
50 PERCENT EXCEEDS	803		1200		1130	
90 PERCENT EXCEEDS	169		428		123	

† Change in contents, equivalent in cubic feet per second, in East Branch Clarion River Lake and Piney Reservoir. Records of contents in Piney Reservoir furnished by Pennsylvania Electric Co. Records of contents in East Branch Clarion River Lake furnished by U.S. Army Corps of Engineers.

■ From floodmark.



October 1, 1995 to September 30, 1996

OHIO RIVER MAIN STEM

03031500 ALLEGHENY RIVER AT PARKER, PA

LOCATION.--Lat 41°06'02", long 79°40'53", Armstrong County, Hydrologic Unit 05010006, on right bank 500 ft downstream from bridge on State Highway 368 at Parker, 1.1 mi downstream from Clarion River, at mile 83.4.

DRAINAGE AREA.--7,671 mi².

PERIOD OF RECORD.--October 1932 to current year. Prior to October 1963, published as "at Parkers Landing." Gage-height records collected at same site since 1885 are contained in reports of U.S. Weather Bureau.

GAGE.--Water-stage recorder. Datum of gage is 845.14 ft above sea level. Prior to Oct. 1, 1932, U.S. Weather Bureau gages at different datums. Oct. 1-28, 1932, nonrecording gage at datum 27.00 ft lower.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated since 1965 by Allegheny Reservoir, since 1949 by Chautauqua Lake, since 1941 by Tionesta Lake, since 1971 by Union City Reservoir, since 1974 by Woodcock Creek Lake, since 1952 by East Branch Clarion River Lake, and since 1924 by Piney Reservoir. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 17, 1865 reached a stage of 29.4 ft, present datum, discharge, 250,000 ft³/s, from rating curve extended above 137,000 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3110	4900	23000	e6200	34300	44700	12900	47000	5090	8620	9710	3070
2	3220	5840	22700	e7200	30900	39000	11500	43300	5060	6840	9300	3250
3	3390	7580	21500	e7600	28600	37600	11100	38000	5100	6360	8290	3010
4	3830	8790	21200	e5400	26800	34400	8660	33900	5750	6040	6640	3300
5	3680	8290	21500	e4700	25800	33300	7740	30600	5080	5590	6400	3360
6	4680	7780	21100	e4700	24100	42600	7030	25200	4460	5330	5200	3400
7	5260	7350	20600	e5200	12100	39900	6520	23400	4670	4920	4400	5260
8	5370	7380	19000	e5000	8920	34500	6490	21800	6940	4450	4000	6450
9	4750	9330	16100	e4600	11000	30900	7250	21200	13500	4460	5150	5650
10	4610	9090	13300	e4700	14200	28600	6450	24300	12000	4530	7370	9270
11	4110	9290	12200	e4900	18300	25200	6240	52800	10700	4290	5510	7820
12	3810	20500	10400	e5200	19600	20900	5540	80600	12400	4010	4130	7970
13	3300	25800	8530	e5400	19600	20300	5100	63300	12500	3590	4520	9330
14	3010	23900	8410	e5600	18800	18700	11300	53900	12500	3560	3700	16100
15	3180	22500	10100	e6000	16000	17300	21500	50200	11200	4380	3500	12900
16	3710	23500	14100	e5600	12300	17900	25600	44000	9280	5660	4320	11800
17	4250	22900	15100	e7400	12100	16700	29000	41400	8430	9320	4880	14800
18	3870	21200	14600	e10000	12700	16200	31300	44400	7130	7480	3930	34100
19	3890	21600	12600	e82000	11700	16100	30400	41500	24800	56100	4060	30700
20	3290	24800	11100	102000	14700	22100	27300	37500	38100	36600	3710	26900
21	3220	23400	9410	56500	27900	23300	24200	29900	29500	23100	4550	22000
22	6180	20700	8790	43600	36800	21500	22200	28400	23400	16500	5190	19800
23	4740	19800	10400	40600	38800	20000	21500	27400	22000	13200	3810	19800
24	4210	18100	9230	45100	37800	18700	29200	25700	20100	10100	5020	17500
25	6580	16900	e8400	51400	35000	18100	32500	23900	20200	8060	4530	14900
26	7910	14400	e7600	43200	31200	17700	30400	19500	17700	7070	3520	12600
27	7930	14500	e7200	39400	34900	17600	27400	15700	15800	6130	4430	11700
28	7210	16700	e6800	37800	44600	18100	24200	10600	14700	5380	3530	16600
29	6070	21800	e6600	36300	48800	16900	25400	7480	12800	5290	2900	41300
30	6190	22700	e6200	38700	---	15500	34700	6670	10100	6540	3060	33400
31	6140	---	e6000	37500	---	13800	---	6380	---	6770	2760	---
TOTAL	144700	481320	403770	759500	708320	758100	550620	1019930	400990	300270	152020	428040
MEAN	4668	16040	13020	24500	24420	24450	18350	32900	13370	9686	4904	14270
MAX	7930	25800	23000	102000	48800	44700	34700	80600	38100	56100	9710	41300
MIN	3010	4900	6000	4600	8920	13800	5100	6380	4460	3560	2760	3010
CFSM	.61	2.09	1.70	3.19	3.18	3.19	2.39	4.29	1.74	1.26	.64	1.86
IN.	.70	2.33	1.96	3.68	3.43	3.68	2.67	4.95	1.94	1.46	.74	2.08

e Estimated.

OHIO RIVER MAIN STEM

03031500 ALLEGHENY RIVER AT PARKER, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1933 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6903	12350	17070	17680	17800	26980	25030	15550	9965	6191	4518	5052
MAX	28650	33760	38040	53560	40460	63020	58110	36220	35340	26090	16890	21370
(WY)	1991	1986	1978	1937	1976	1936	1940	1943	1989	1972	1994	1977
MIN	802	1655	1332	2111	3787	7746	5651	3610	1508	1069	1034	950
(WY)	1964	1961	1961	1961	1934	1969	1946	1934	1934	1934	1934	1936

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

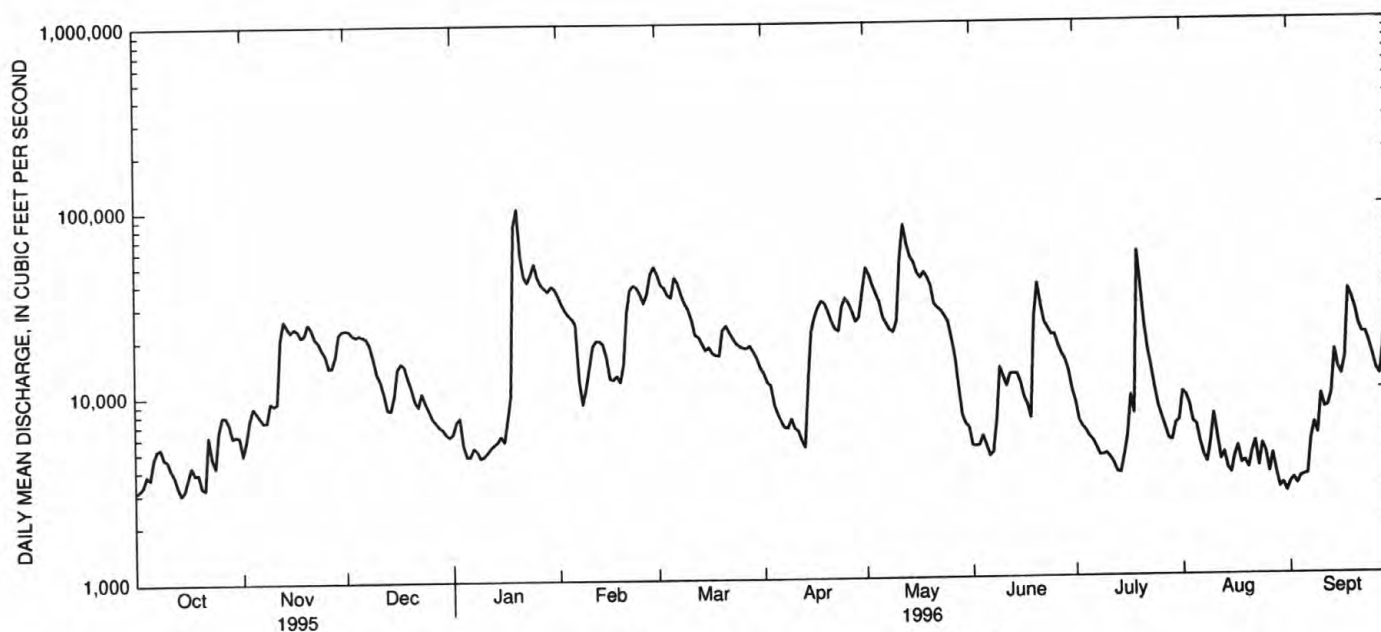
FOR 1996 WATER YEAR

WATER YEARS 1933 - 1996

ANNUAL TOTAL	3711130	6107580	
ANNUAL MEAN	10170	16690	
HIGHEST ANNUAL MEAN			13740
LOWEST ANNUAL MEAN			19640
HIGHEST DAILY MEAN			8175
LOWEST DAILY MEAN			1956
ANNUAL SEVEN-DAY MINIMUM			8175
INSTANTANEOUS PEAK FLOW	35900	Jan 16	160000
INSTANTANEOUS PEAK STAGE	2200	Aug 24	454
ANNUAL RUNOFF (CFSM)	2430	Aug 19	508
ANNUAL RUNOFF (INCHES)			175000
10 PERCENT EXCEEDS			29.60
50 PERCENT EXCEEDS			409
90 PERCENT EXCEEDS			1.79
			24.33
			32100
			8860
			2030

a About.

b Backwater from ice.



October 1, 1995 to September 30, 1996

REDBANK CREEK BASIN

03032500 REDBANK CREEK AT ST. CHARLES, PA

LOCATION.--Lat 40°59'40", long 79°23'40", Armstrong County, Hydrologic Unit 05010006, on left bank 400 ft downstream from highway bridge on SR 1005 at St. Charles, 0.3 mi downstream from Leatherwood Creek, and 3 mi west of New Bethlehem.

DRAINAGE AREA.--528 mi².

PERIOD OF RECORD.--Annual maximums, water years 1910-18. October 1918 to current year. Monthly discharge only for some periods, published in WSP 1305. Figures of daily discharge for November 1920 to June 1921, published in WSP 523, are unreliable and should not be used.

REVISED RECORDS.--WSP 743: Drainage area. WSP 1385: 1919, 1936-39. WDR PA-72-1: 1923 (M), 1926 (M), 1928 (M), 1936, 1937 (M), 1938 (M), 1943, 1945 (P), 1952 (M), 1953 (M), 1955 (M), 1956 (P), 1958 (M), 1959 (M), 1964, 1966 (M). See also PERIOD OF RECORD.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 973.14 ft above sea level. Prior to July 10, 1940, nonrecording gage at site 500 ft upstream at datum 3.10 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are fair. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 7,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 19	1600	24,600	15.62	June 19	1600	8,320	9.75
Feb. 21	--	Unknown	ice jam	July 19	1600	*66,300	*a23.90
Apr. 30	2200	8,100	9.63	Sept. 13	1900	9,580	10.40

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49	142	1230	e240	924	2660	796	6070	506	364	e600	147
2	49	222	1420	e200	e640	2010	1000	4750	458	292	e500	123
3	50	628	1260	e210	e500	1580	949	3430	434	271	e450	108
4	135	823	1110	e350	e400	1120	802	2670	450	289	e370	108
5	185	536	1040	e450	e350	1300	921	2270	497	259	e320	122
6	247	357	995	e660	e380	3840	1100	1960	458	195	287	130
7	271	309	905	e560	e400	3340	978	1640	326	159	227	1770
8	179	372	736	e470	e500	2370	876	1520	295	139	396	2300
9	115	392	628	e410	e700	1780	796	1440	342	157	2170	1330
10	88	325	396	e350	e1000	1360	728	2450	320	185	1050	2280
11	77	339	373	e340	1000	1270	673	4570	445	162	568	1610
12	70	1000	e350	e330	924	1220	618	6240	489	136	385	1350
13	66	968	e330	e310	614	1220	613	4580	468	127	321	6070
14	111	768	e320	e300	550	1250	692	3320	425	196	267	6720
15	507	818	e540	e290	e430	1380	682	2570	402	526	223	4290
16	420	778	e900	e280	e400	1490	696	2200	333	777	349	2680
17	236	721	869	e270	e360	1280	852	1880	267	1790	309	2610
18	144	724	682	e1000	e330	1140	763	1600	362	936	217	4900
19	113	1110	564	e12000	e300	1130	701	1370	5560	28100	163	3700
20	101	1400	372	9960	e500	5140	850	1200	3970	15400	133	2450
21	359	1360	474	4930	e4000	4250	1320	1130	2170	6220	2270	1720
22	1150	1190	633	2480	4490	3090	1100	1180	1250	3300	2220	1340
23	627	994	e540	1610	3270	2360	1030	998	1110	2320	1060	1410
24	325	850	e460	3400	3100	1840	1600	853	1090	1730	824	1150
25	231	721	e410	4140	2790	1540	1460	757	2210	1300	664	931
26	180	645	e380	2980	2240	1390	1250	685	1510	e1000	460	769
27	154	617	e350	3030	1940	1190	1230	660	949	e800	338	648
28	143	1450	e320	3240	4150	1020	1070	722	675	e600	325	2020
29	148	2020	e300	2500	3640	953	1660	725	524	e500	277	5100
30	142	1520	e280	1930	---	897	5280	662	430	e470	223	2850
31	137	---	e260	1470	---	796	---	571	---	e680	173	---
TOTAL	6809	24099	19427	60690	40822	57206	33086	66673	28725	69380	18139	62736
MEAN	220	803	627	1958	1408	1845	1103	2151	957	2238	585	2091
MAX	1150	2020	1420	12000	4490	5140	5280	6240	5560	28100	2270	6720
MIN	49	142	260	200	300	796	613	571	267	127	133	108
CFSM	.42	1.52	1.19	3.71	2.67	3.49	2.09	4.07	1.81	4.24	1.11	3.96
IN.	.48	1.70	1.37	4.28	2.88	4.03	2.33	4.70	2.02	4.89	1.28	4.42

a From floodmark.
e Estimated.

REDBANK CREEK BASIN

03032500 REDBANK CREEK AT ST. CHARLES, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1919 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	375	736	1076	1137	1208	1817	1488	1077	690	427	285	292
MAX	1385	2806	3151	4616	2707	5016	3337	2603	3887	2238	1498	2091
(WY)	1927	1922	1928	1937	1990	1936	1940	1919	1972	1996	1956	1996
MIN	40.3	50.9	75.9	96.8	179	358	367	180	123	61.1	33.5	29.2
(WY)	1931	1931	1961	1931	1934	1969	1925	1926	1936	1966	1930	1939

SUMMARY STATISTICS

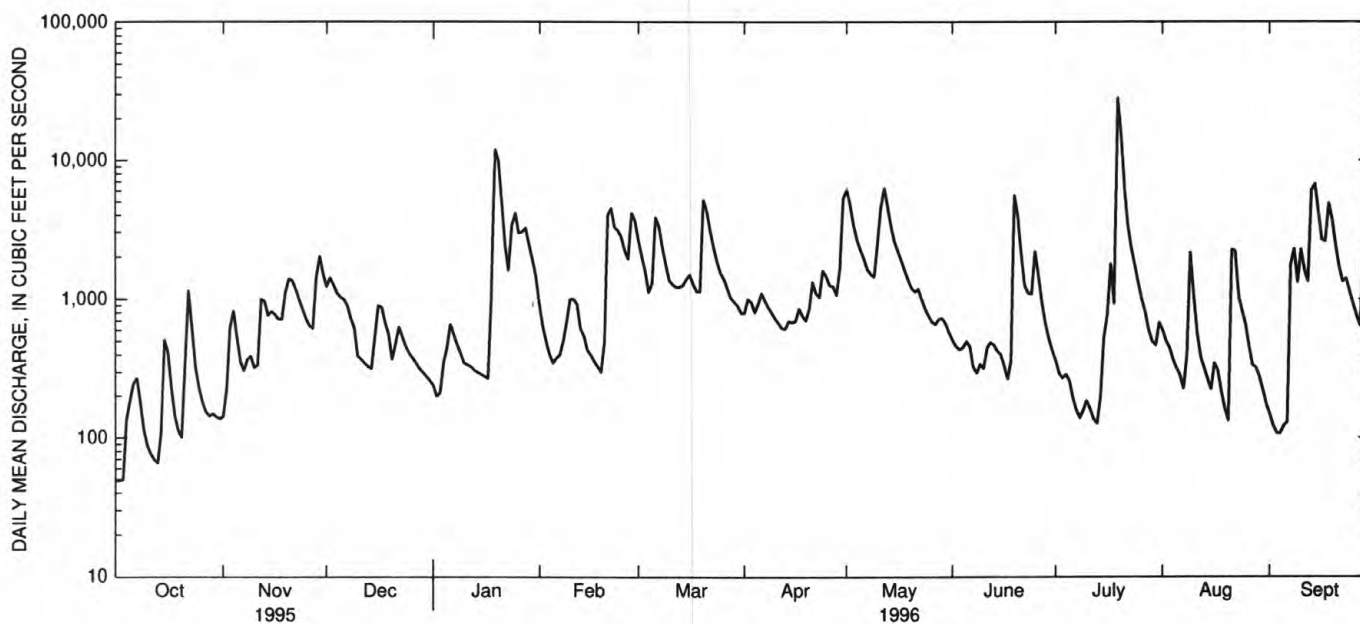
FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1919 - 1996

ANNUAL TOTAL	238983	487792	882
ANNUAL MEAN	655	1333	1333
HIGHEST ANNUAL MEAN			1996
LOWEST ANNUAL MEAN			1934
HIGHEST DAILY MEAN	3230	28100	28100
LOWEST DAILY MEAN	45	49	20
ANNUAL SEVEN-DAY MINIMUM	47	101	24
INSTANTANEOUS PEAK FLOW		66300	66300
INSTANTANEOUS LOW FLOW		a23.90	a23.90
ANNUAL RUNOFF (CFSM)	1.24	46	b19
ANNUAL RUNOFF (INCHES)	16.84	2.52	1.67
10 PERCENT EXCEEDS	1550	3090	2130
50 PERCENT EXCEEDS	419	724	462
90 PERCENT EXCEEDS	66	183	85

a From floodmarks.
b Minimum observed.



MAHONING CREEK BASIN

03034000 MAHONING CREEK AT PUNXSUTAWNEY, PA

LOCATION.--Lat 40°56'21", long 79°00'31", Jefferson County, Hydrologic Unit 05010006, on right bank 75 ft downstream from Williams Run, 1.9 mi downstream from Sawmill Run, and 2 mi west of Punxsutawney.

DRAINAGE AREA.--158 mi².

PERIOD OF RECORD.--October 1938 to current year.

REVISED RECORDS.--WDR PA-87-3: 1977-86 (P).

GAGE.--Water-stage recorder. Datum of gage is 1,206.14 ft above sea level (U.S. Army Corps of Engineers bench mark). Prior to Oct. 1, 1946, at site 2.9 mi upstream at datum 13.30 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are fair. Diurnal fluctuations at low flow by mine pumpage into stream above station. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 18, 1936 reached a stage of 15.6 ft, from floodmark at former site and datum, discharge, 12,500 ft³/s, from rating curve extended above 4,300 ft³/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 2,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 19	1800	12,600	14.10	July 19	1700	*20,400	*a18.38
Mar. 20	0700	3,050	6.50	Sept. 13	1500	3,840	7.35
Apr. 30	1700	2,940	6.38				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	51	431	e90	e320	743	327	1940	130	126	182	99
2	29	79	463	e100	e280	583	469	1280	121	111	164	92
3	29	151	359	e115	e230	470	396	859	115	118	148	87
4	39	139	353	e125	e200	355	366	666	114	116	134	87
5	49	99	301	e135	e180	416	570	548	111	98	124	96
6	82	82	298	e120	e160	984	527	462	103	87	116	100
7	50	84	253	e110	e150	924	476	384	99	80	107	717
8	37	108	221	e130	e190	724	419	354	124	76	119	439
9	34	94	206	e120	e240	558	371	343	118	72	286	302
10	32	81	153	e105	e280	460	326	574	104	66	169	408
11	31	95	e130	e100	e300	409	296	945	114	62	130	294
12	32	296	e120	e98	286	384	270	1550	125	59	119	249
13	31	214	e115	e96	234	384	257	1080	132	58	115	2310
14	58	190	e120	e94	e200	397	241	770	135	146	105	1810
15	136	222	e170	e92	e180	423	218	600	110	137	101	963
16	63	217	242	e90	e170	408	248	535	90	140	126	644
17	43	205	202	e88	e160	363	255	447	81	725	108	987
18	37	227	183	e500	e150	340	231	383	123	262	91	1670
19	35	384	164	e8400	e140	378	224	324	746	11300	83	954
20	38	404	e150	e2600	e350	2250	256	283	453	5540	78	644
21	360	397	e140	e1100	1330	1580	278	276	280	1390	853	483
22	196	343	e135	e360	943	1020	247	265	209	788	490	417
23	103	297	e130	e200	792	762	291	224	175	556	281	393
24	75	264	e120	e320	873	603	473	204	244	423	279	304
25	61	229	e115	e400	733	530	396	187	497	342	218	274
26	55	214	e110	742	603	493	359	172	261	379	178	236
27	52	214	e105	1000	536	405	346	171	202	324	155	214
28	50	756	e100	941	1310	366	292	199	171	249	139	457
29	52	699	e100	708	1040	363	588	187	152	221	128	881
30	51	502	e96	578	---	336	1840	162	141	221	117	540
31	50	---	e94	473	---	306	---	142	---	207	107	---
TOTAL	2019	7337	5879	20130	12560	18717	11853	16516	5580	24479	5550	17151
MEAN	65.1	245	190	649	433	604	395	533	186	790	179	572
MAX	360	756	463	8400	1330	2250	1840	1940	746	11300	853	2310
MIN	29	51	94	88	140	306	218	142	81	58	78	87
CFSM	.41	1.55	1.20	4.11	2.74	3.82	2.50	3.37	1.18	5.00	1.13	3.62
IN.	.48	1.73	1.38	4.74	2.96	4.41	2.79	3.89	1.31	5.76	1.31	4.04

a From floodmark in gage well.

e Estimated.

MAHONING CREEK BASIN

03034000 MAHONING CREEK AT PUNXSUTAWNEY, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	116	213	327	339	410	570	469	338	213	160	108	96.9
MAX	394	715	769	1025	1013	1249	909	722	1209	855	670	572
(WY)	1987	1986	1973	1952	1975	1964	1994	1953	1972	1977	1956	1996
MIN	18.1	27.9	27.2	61.0	96.6	132	112	79.9	48.9	26.4	23.0	16.9
(WY)	1965	1954	1961	1961	1993	1969	1946	1941	1991	1988	1949	1964

SUMMARY STATISTICS

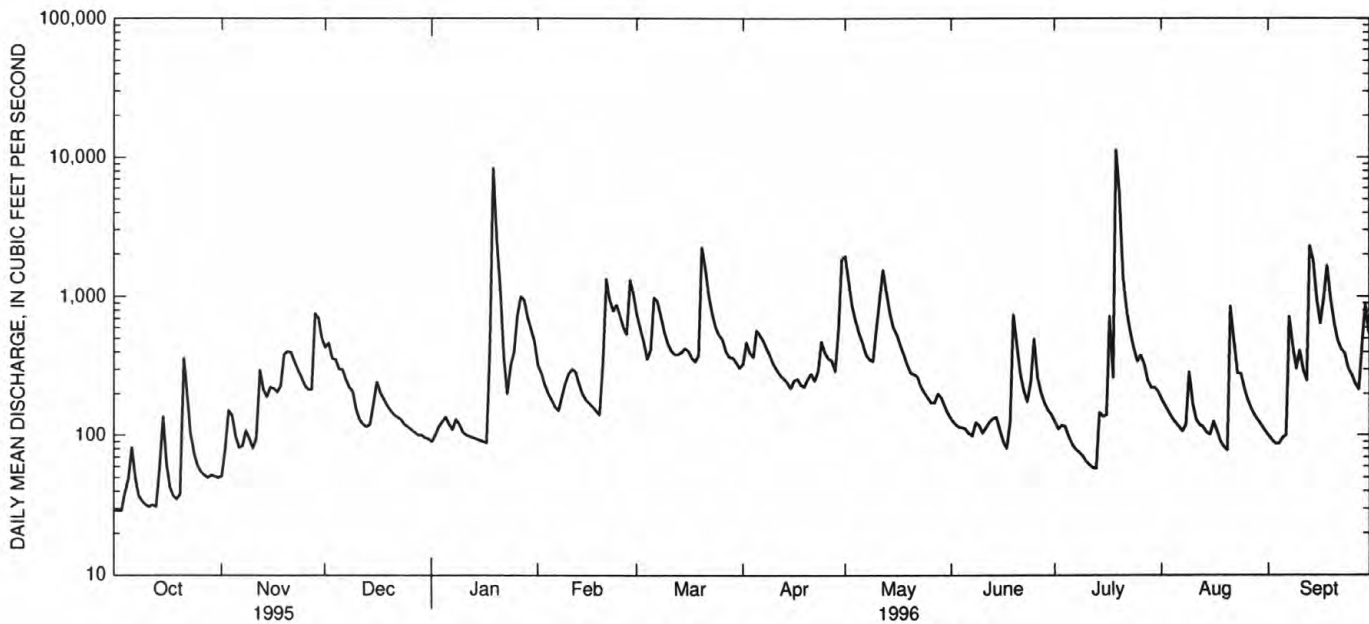
FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1939 - 1996

ANNUAL TOTAL	74726		147771									
ANNUAL MEAN	205		404							279		
HIGHEST ANNUAL MEAN										433		1956
LOWEST ANNUAL MEAN										177		1963
HIGHEST DAILY MEAN				1550	May 19		11300	Jul 19		13200	Jun 23	1972
LOWEST DAILY MEAN				28	Sep 12		29	Oct 1,2,3		12	Oct 19	1939
ANNUAL SEVEN-DAY MINIMUM				29	Sep 6		35	Oct 7		13	Oct 14	1939
INSTANTANEOUS PEAK FLOW							20400	Jul 19		a20400	Jul 19	1996
INSTANTANEOUS PEAK STAGE							18.38	Jul 19		b18.38	Jul 19	1996
INSTANTANEOUS LOW FLOW							28	Oct 3		2.6	Sep 26	1939
ANNUAL RUNOFF (CFSM)				1.30			2.56			1.77		
ANNUAL RUNOFF (INCHES)				17.59			34.79			24.02		
10 PERCENT EXCEEDS				453			764			629		
50 PERCENT EXCEEDS				147			221			153		
90 PERCENT EXCEEDS				31			81			34		

a From rating curve extended above 4,300 ft³/s on basis of slope-area measurement at gage height 13.01 ft.
b From floodmark in gage well.



October 1, 1995 to September 30, 1996

MAHONING CREEK BASIN

03034500 LITTLE MAHONING CREEK AT McCORMICK, PA

LOCATION.--Lat 40°50'10", long 79°06'37", Indiana County, Hydrologic Unit 05010006, on left bank 200 ft upstream from highway bridge at McCormick, 1 mi west of Georgeville, 1.7 mi upstream from Ross Run, and 4 mi southeast of Smicksburg.

DRAINAGE AREA.--87.4 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 1,164.88 ft above sea level (U.S. Army Corps of Engineers bench mark). Prior to May 10, 1940, nonrecording gage at site 200 ft upstream at same datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 19	1700	6,790	13.68	July 19	1600	*10,600	*14.46
Mar. 11	0300	3,140	9.91	Sept. 13	1800	2,630	9.17

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	20	245	e46	e170	306	169	886	33	61	58	47
2	3.7	74	243	e56	e150	243	287	550	28	41	51	53
3	3.6	112	182	e60	e130	195	222	364	26	42	44	42
4	5.7	70	190	e52	e115	139	199	280	26	51	39	40
5	16	45	147	e45	e100	192	327	233	26	35	35	66
6	41	34	156	e40	e94	637	285	200	24	45	32	66
7	21	38	120	e43	e84	542	246	157	23	68	29	541
8	12	67	104	e45	e76	362	209	162	33	66	57	266
9	8.2	54	82	e49	e105	268	180	201	27	60	137	186
10	6.6	44	e74	e46	e140	214	149	605	29	52	82	257
11	6.1	84	e68	e44	e180	315	130	675	52	45	74	173
12	6.1	253	e62	e41	e160	183	109	776	97	39	51	143
13	5.8	141	e56	e40	e140	190	99	505	70	38	60	1550
14	9.0	129	e70	e40	e130	195	87	349	63	285	56	884
15	126	160	e120	e39	e115	207	73	265	75	153	44	411
16	34	148	e220	e38	e105	184	115	245	44	141	59	263
17	18	143	159	e46	e92	161	139	201	33	354	46	434
18	12	174	128	e350	e84	151	109	179	47	193	32	657
19	11	345	e110	e4400	e76	178	100	141	325	4100	23	344
20	9.7	312	e94	1710	e220	1410	116	113	221	1700	19	232
21	198	308	e80	e620	e700	744	118	97	124	484	219	174
22	101	250	e70	e150	507	468	97	91	86	290	114	202
23	45	209	e64	e96	405	345	116	71	93	213	76	249
24	29	178	e58	e160	464	280	181	60	246	162	237	162
25	23	145	e54	e240	356	265	148	51	495	124	113	137
26	19	127	e48	e350	278	273	139	45	207	111	74	114
27	17	171	e44	e450	275	221	135	45	127	102	58	103
28	17	666	e40	410	621	197	106	59	86	75	46	281
29	17	411	e37	297	427	208	329	59	64	67	48	523
30	17	281	e34	249	---	182	1090	47	57	79	47	269
31	17	---	e40	196	---	155	---	38	---	66	46	---
TOTAL	859.2	5193	3199	10448	6499	9610	5809	7750	2887	9342	2106	8869
MEAN	27.7	173	103	337	224	310	194	250	96.2	301	67.9	296
MAX	198	666	245	4400	700	1410	1090	886	495	4100	237	1550
MIN	3.6	20	34	38	76	139	73	38	23	35	19	40
CFSM	.32	1.98	1.18	3.86	2.56	3.55	2.22	2.86	1.10	3.45	.78	3.38
IN.	.37	2.21	1.36	4.45	2.77	4.09	2.47	3.30	1.23	3.98	.90	3.77

e Estimated.

MAHONING CREEK BASIN

03034500 LITTLE MAHONING CREEK AT McCORMICK, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	65.2	130	196	206	239	311	239	170	97.5	77.0	56.5	49.7
MAX	251	378	436	569	715	756	525	358	458	445	294	296
(WY)	1955	1986	1991	1952	1975	1963	1948	1956	1972	1977	1958	1996
MIN	3.39	10.7	21.8	26.2	42.7	59.0	48.7	20.5	9.10	4.71	3.85	2.33
(WY)	1964	1940	1961	1940	1993	1969	1946	1941	1949	1966	1957	1952

SUMMARY STATISTICS

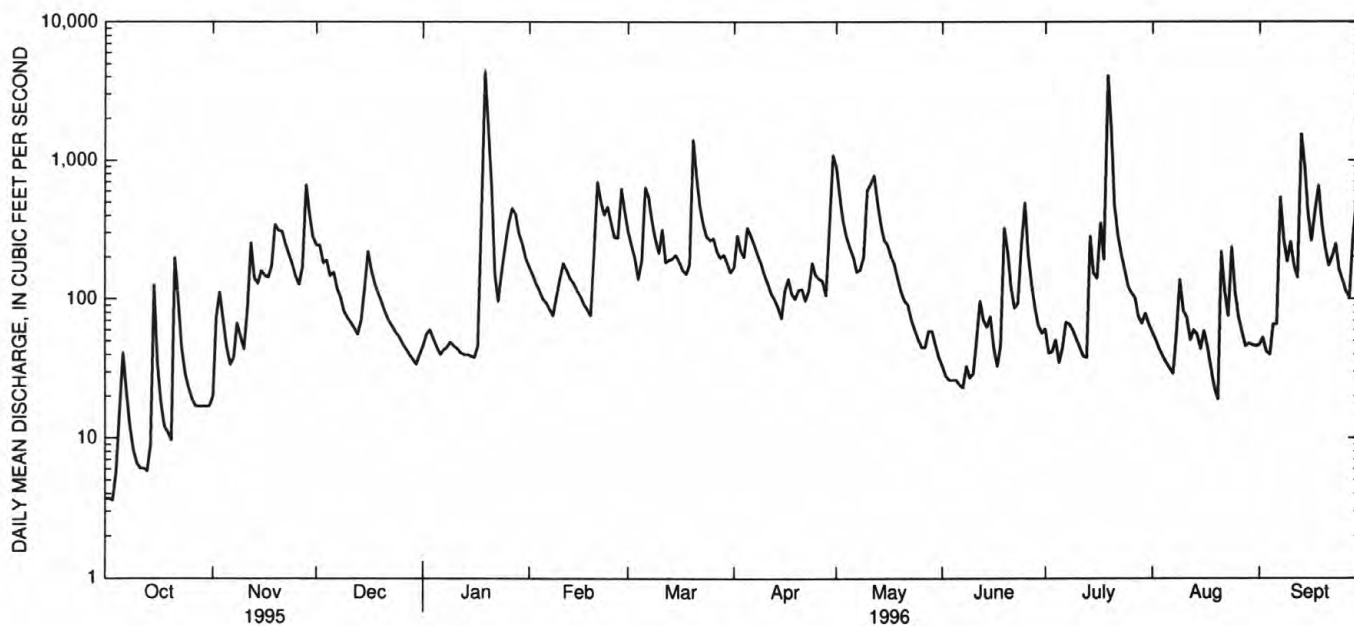
FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1940 - 1996

ANNUAL TOTAL	37132.7	72571.2	153
ANNUAL MEAN	102	198	240
HIGHEST ANNUAL MEAN			98.6
LOWEST ANNUAL MEAN			1956
HIGHEST DAILY MEAN	669	May 19	4620
LOWEST DAILY MEAN	3.2	Sep 9,10,11	3.6
ANNUAL SEVEN-DAY MINIMUM	3.3	Sep 6	7.7
INSTANTANEOUS PEAK FLOW			10600
INSTANTANEOUS PEAK STAGE			14.46
INSTANTANEOUS LOW FLOW			3.4
ANNUAL RUNOFF (CFSM)	1.16		2.27
ANNUAL RUNOFF (INCHES)	15.80		30.89
10 PERCENT EXCEEDS	255		376
50 PERCENT EXCEEDS	58		113
90 PERCENT EXCEEDS	5.8		29

e Estimated.



October 1, 1995 to September 30, 1996

OHIO RIVER MAIN STEM

03036500 ALLEGHENY RIVER AT KITTANNING, PA

LOCATION.--Lat 40°49'13", long 79°31'54", Armstrong County, Hydrologic Unit 05010006, on right bank 600 ft upstream from dam at lock 7 at Kittanning, 5.7 mi upstream from Crooked Creek, 9.7 mi downstream from Mahoning Creek, at mile 45.8.

DRAINAGE AREA.--8,973 mi².

PERIOD OF RECORD.--August 1904 to September 1928, October 1934 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 873: Drainage area. WSP 1305: 1906 (M), 1914, 1925. WSP 1435: 1936-37, 1939.

GAGE.--Water-stage recorder and concrete dam control. Datum of gage is 773.40 ft above sea level (U.S. Army Corps of Engineers bench mark). Prior to Sept. 30, 1928, nonrecording gage at site 4,000 ft downstream at different datum. Oct. 1, 1934 to Apr. 19, 1939, nonrecording gage, Apr. 20, 1939 to Sept. 27, 1990, water-stage recorder at present site at different datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since 1924 by Piney Reservoir, since 1941 by Mahoning Creek Lake, and Tionesta Lake, since 1949 by Chautauqua Lake, since 1965 by Allegheny Reservoir, since 1971 by Union City Reservoir, and since 1974 by Woodcock Creek Lake. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3130	5150	25800	7200	36900	51500	15100	57200	6120	9980	10800	3190
2	3120	6610	25300	8780	32900	45300	14200	53300	5880	8790	10900	3450
3	3600	8280	24800	8880	29200	42200	13700	47800	5620	7610	9960	3100
4	4150	9530	23600	5680	26200	38600	11900	41400	6450	6990	7890	3440
5	4150	10200	23200	5530	24200	37100	10400	37000	5990	6060	6970	3640
6	5050	8790	23200	5590	24400	48700	10000	30300	5170	6250	6310	3690
7	5870	8780	21900	6070	16500	48000	9090	26900	5020	5470	5120	7180
8	5690	8420	21900	5900	10900	41200	8830	24900	6810	4800	4910	9520
9	5290	9930	18700	5380	12400	36200	8780	24100	13600	5020	7660	8200
10	5020	10500	15300	5760	15600	32200	9120	26500	13600	4670	9170	12700
11	4290	10400	11100	5760	19900	28000	8330	51500	12300	4610	7780	11800
12	4220	17200	10200	6070	21900	25200	7380	89000	13000	4250	5330	11200
13	3390	27300	7400	6230	20100	23100	7000	74200	13500	3920	5370	15300
14	3520	25900	9520	6530	20700	22300	10300	62300	14200	3520	4290	24600
15	3790	24700	11000	7100	18600	20100	21000	57100	13000	5150	4090	21700
16	4060	24800	14800	6540	14800	21100	25300	52100	10800	6050	4830	18400
17	4760	24600	17000	7760	12300	19600	29600	46800	9230	10000	5730	18300
18	4170	23500	17700	11400	13000	18300	31700	49100	8320	11400	4530	37100
19	4770	22900	14900	80300	11500	18400	33200	46700	23900	61000	4300	39500
20	3710	25700	11200	138000	15200	30800	29800	42400	47900	68900	4240	32400
21	3960	26900	10300	71800	31800	32100	26500	34400	36000	34700	5260	25800
22	6310	23900	8970	52300	43800	28200	23700	30300	27500	25900	8570	23200
23	6720	22600	10200	47600	45700	25900	23300	29300	24700	21800	5640	21700
24	4670	20800	10800	51400	43300	23300	28600	27500	22900	18700	6430	21100
25	6420	19500	9430	61000	40900	22300	34700	25900	24800	15000	6600	17500
26	8780	17000	8900	51000	36400	21700	34400	22600	22600	12500	4850	14500
27	8510	16300	8040	46900	38800	21200	30300	18500	18900	9960	5550	13300
28	8610	17400	8350	45700	51000	20800	27500	12900	17000	8070	4240	15700
29	6540	23100	7720	42900	56400	21000	26400	9080	15400	6800	3500	43600
30	6220	26000	8030	43800	---	18800	40000	8180	11700	7090	3340	40200
31	7030	---	6910	42900	---	16900	---	7590	---	8410	3100	---
TOTAL	159520	526690	446170	897760	785300	900100	610130	1166850	461910	413370	187260	525010
MEAN	5146	17560	14390	28960	27080	29040	20340	37640	15400	13330	6041	17500
MAX	8780	27300	25800	138000	56400	51500	40000	89000	47900	68900	10900	43600
MIN	3120	5150	6910	5380	10900	16900	7000	7590	5020	3520	3100	3100
CFSM	.57	1.96	1.60	3.23	3.02	3.24	2.27	4.19	1.72	1.49	.67	1.95
IN.	.66	2.18	1.85	3.72	3.26	3.73	2.53	4.84	1.91	1.71	.78	2.18

OHIO RIVER MAIN STEM

03036500 ALLEGHENY RIVER AT KITTANNING, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1904 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	8365	14080	18860	21010	20920	32820	27780	18470	11450	7081	5128	5662
MAX	31750	37830	55850	62840	45020	74110	66140	43650	40230	28200	19250	23500
(WY)	1991	1986	1928	1937	1990	1936	1940	1919	1989	1972	1977	1926
MIN	848	1155	1636	2752	4688	10550	6585	4860	2893	1511	1274	930
(WY)	1924	1909	1961	1961	1963	1915	1946	1941	1936	1966	1910	1909

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

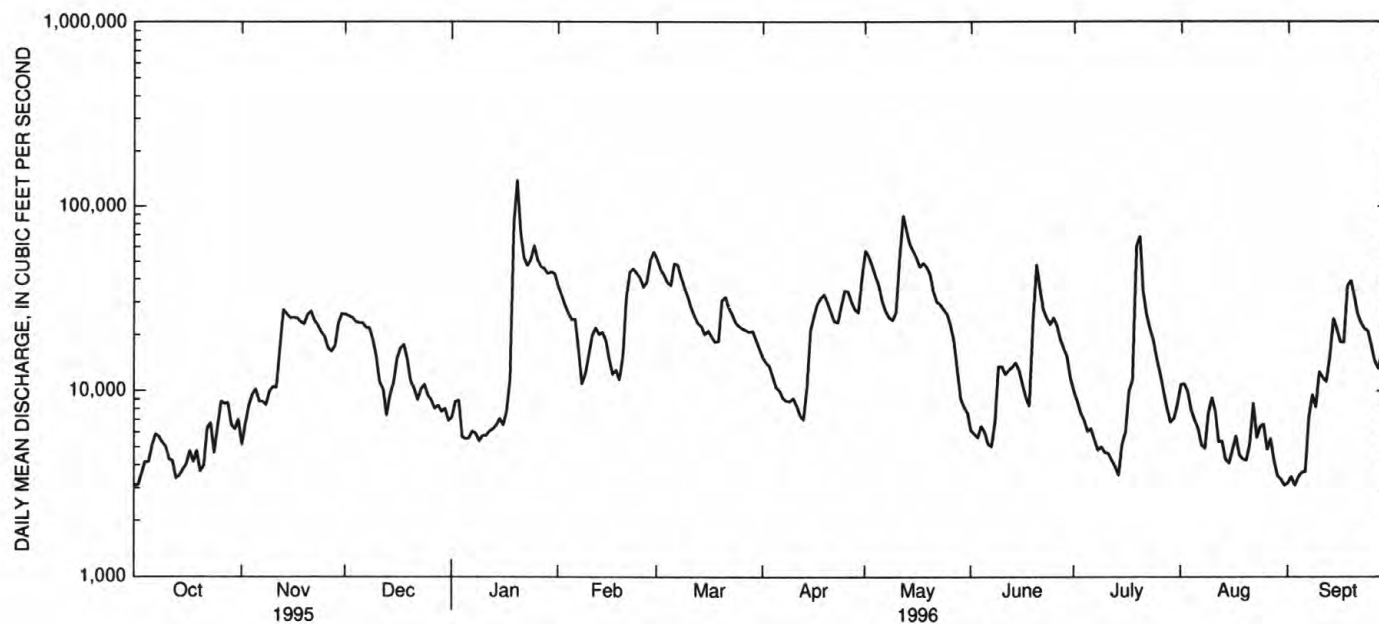
FOR 1996 WATER YEAR

WATER YEARS 1904 - 1996

ANNUAL TOTAL	4229120	7080070	15950	
ANNUAL MEAN	11590	19340	22400	1928
HIGHEST ANNUAL MEAN			10450	1963
LOWEST ANNUAL MEAN			253000	Mar 26 1913
HIGHEST DAILY MEAN	39800	Jan 17	570	Sep 15-17 1913
LOWEST DAILY MEAN	2150	Aug 25	610	Sep 11 1913
ANNUAL SEVEN-DAY MINIMUM	2450	Aug 23	269000	Mar 26 1913
INSTANTANEOUS PEAK FLOW			22.56	Jan 20
INSTANTANEOUS PEAK STAGE			2.16	Jan 20
ANNUAL RUNOFF (CFSM)	1.29		1.78	
ANNUAL RUNOFF (INCHES)	17.53		24.15	
10 PERCENT EXCEEDS	25400		43000	37400
50 PERCENT EXCEEDS	8780		13600	10000
90 PERCENT EXCEEDS	3000		4770	2150

a Also Sept. 3.

b From Floodmark, site and datum then in use.



CROOKED CREEK BASIN

03037350 SOUTH BRANCH PLUM CREEK AT FIVE POINTS, PA
(National water-quality assessment station)

LOCATION.--Lat 40°43'08", long 79°14'12", Indiana County, Hydrologic Unit 05010006, on left bank, about 0.6 mi downstream of Mudlick Run and about 2 mi upstream of the Indiana-Armstrong County boundry.

DRAINAGE AREA.--33.3 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1996 to current year.

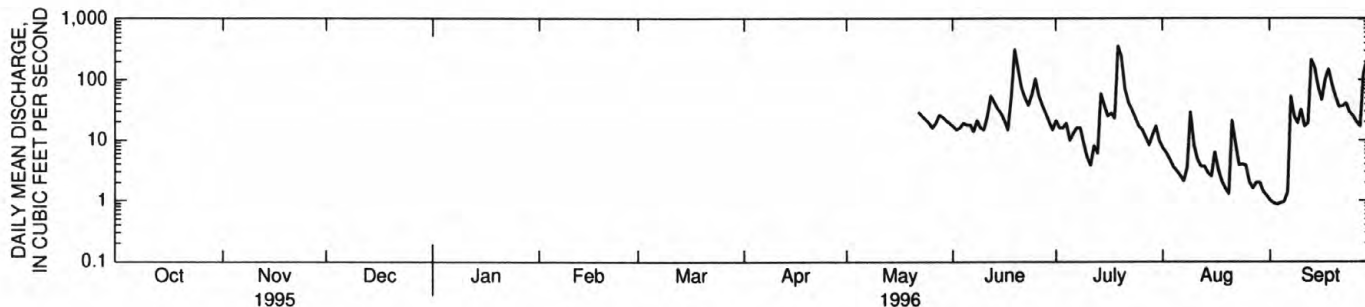
GAGE.--Water-stage recorder. Elevation of gage is 1,060 ft above sea level.

REMARKS.--Records good, except for estimated daily discharges, which are fair. Several measurements of water temperature were made during the year. Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	17	e21	7.4	1.0
2	---	---	---	---	---	---	---	---	15	e16	6.1	.91
3	---	---	---	---	---	---	---	---	16	e16	4.8	.86
4	---	---	---	---	---	---	---	---	19	e19	3.6	.92
5	---	---	---	---	---	---	---	---	18	e10	3.1	.95
6	---	---	---	---	---	---	---	---	18	e13	2.6	1.4
7	---	---	---	---	---	---	---	---	14	e16	2.1	53
8	---	---	---	---	---	---	---	---	21	e16	3.5	24
9	---	---	---	---	---	---	---	---	16	e9.0	29	19
10	---	---	---	---	---	---	---	---	15	5.3	8.2	32
11	---	---	---	---	---	---	---	---	25	3.8	4.8	17
12	---	---	---	---	---	---	---	---	54	8.1	3.7	19
13	---	---	---	---	---	---	---	---	42	6.1	3.7	215
14	---	---	---	---	---	---	---	---	33	59	2.9	157
15	---	---	---	---	---	---	---	---	28	38	2.5	75
16	---	---	---	---	---	---	---	---	21	25	6.3	47
17	---	---	---	---	---	---	---	---	15	28	3.3	103
18	---	---	---	---	---	---	---	---	52	23	2.1	149
19	---	---	---	---	---	---	---	---	316	358	1.6	81
20	---	---	---	---	---	---	---	---	150	239	1.3	51
21	---	---	---	---	---	---	---	---	74	71	21	36
22	---	---	---	---	---	---	---	29	50	42	8.9	37
23	---	---	---	---	---	---	---	25	38	32	3.9	41
24	---	---	---	---	---	---	---	22	57	23	4.0	29
25	---	---	---	---	---	---	---	19	105	17	3.8	25
26	---	---	---	---	---	---	---	16	55	15	2.0	20
27	---	---	---	---	---	---	---	19	e38	11	1.6	17
28	---	---	---	---	---	---	---	26	e28	8.3	2.0	124
29	---	---	---	---	---	---	---	24	e20	12	2.0	204
30	---	---	---	---	---	---	---	21	e15	17	1.4	95
31	---	---	---	---	---	---	---	19	---	9.6	1.2	---
TOTAL	---	---	---	---	---	---	---	220	1385	1187.2	154.4	1676.04
MEAN	---	---	---	---	---	---	---	22.0	46.2	38.3	4.98	55.9
MAX	---	---	---	---	---	---	---	29	316	358	29	215
MIN	---	---	---	---	---	---	---	16	14	3.8	1.2	.86

e Estimated.



October 1, 1995 to September 30, 1996

CROOKED CREEK BASIN

03037350 SOUTH BRANCH PLUM CREEK AT FIVE POINTS, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1996 to current year.

REMARKS.--All water-quality samples collected and analyzed by the U.S. Geological Survey. Additional sites in the fixed-station network are shown in figure 4, page 26.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	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)
APR 17...	1030	42	140	6.7	5.5	731	12.7	44	11	4.0	5.4
MAY 21...	1630	35	143	7.3	20.5	724	9.4	51	13	4.4	5.4
JUN 17...	1200	14	178	7.4	22.0	732	8.2	61	16	5.0	7.1
JUL 15...	1545	43	170	7.6	21.0	728	7.9	57	15	4.7	6.8
AUG 05...	1600	2.8	210	7.7	26.0	737	9.7	69	18	5.8	9.6
SEP 04...	1600	1.1	270	7.7	22.0	730	8.2	88	23	7.5	13

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	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 DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
APR 17...	1.2	21	22	9.2	<0.10	4.3	77	<0.010	0.820	<0.015	<0.20
MAY 21...	1.5	25	23	7.8	<0.10	4.2	80	0.010	0.730	0.020	0.30
JUN 17...	1.9	41	23	11	<0.10	5.5	100	0.010	0.660	0.040	<0.20
JUL 15...	2.9	31	--	--	--	6.3	--	<0.010	0.950	0.050	0.50
AUG 05...	2.4	42	29	13	<0.10	4.2	115	0.010	0.470	0.030	<0.20
SEP 04...	3.2	54	40	17	0.10	2.8	149	<0.010	0.170	0.030	0.30

DATE	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	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)	IRON, DIS- SOLVED (μ G/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (μ G/L AS MN) (01056)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C) (00689)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
APR 17...	<0.20	<0.010	<0.010	<0.010	83	110	1.6	0.10	5	97
MAY 21...	0.20	0.030	<0.010	<0.010	45	110	1.9	0.50	14	94
JUN 17...	<0.20	0.030	<0.010	<0.010	55	160	1.8	0.50	10	98
JUL 15...	<0.20	0.090	<0.010	0.020	16	45	3.4	1.1	67	99
AUG 05...	<0.20	0.020	<0.010	0.010	230	69	2.2	0.30	5	84
SEP 04...	<0.20	0.010	0.020	<0.010	110	120	2.5	0.40	5	93

CROOKED CREEK BASIN

03037350 SOUTH BRANCH PLUM CREEK AT FIVE POINTS, PA--Continued

REMARKS.--Samples are filtered through a glass-fiber membrane filter with openings that are 0.7 microns in size to remove sediment and microorganisms. Therefore, this schedule is suitable for compounds dissolved in water. Each sample was analyzed for all of the compounds in this schedule. The MDL provides an index to indicate where measurement uncertainty is increased. When an analyte is detected and all criteria for a positive result are met, the concentration is reported. If the Concentration is less than the MDL, an 'E' code will be reported with the value. If the analyte is qualitatively identified as present, but the quantitative determination is substantially more uncertain, the NWQL will identify the result with an 'E' code even though the measured value is greater than the MDL. A value reported with an 'E' code should be used with caution. When no analyte is detected in a sample, the default reporting value is the MDL preceded by a less than sign (<).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	ACETO- CHLOR, WATER FLTRD REC (μG/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (μG/L) (46342)	DEETHYL ATRA- ZINE, WATER, DISS, REC (μG/L) (04040)	ATRA- ZINE, WATER, DISS, REC (μG/L) (39632)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (μG/L) (82686)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (μG/L) (82673)	BUTYL- ATE, WATER, DISS, REC (μG/L) (04028)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (μG/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (μG/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (μG/L) (38933)	CYANA- ZINE, WATER, DISS, REC (μG/L) (04041)	DCPA WATER FLTRD 0.7U GF,REC (μG/L) (82682)
JUN 19...	<0.002	0.073	E0.022	2.10	<0.001	<0.002	<0.002	E0.007	E0.580	0.009	0.074	<0.002
DATE	P,P' DDE DISSOLV (μG/L) (34653)	DI- AZINON, DIS- SOLVED (μG/L) (39572)	DI- ELDRIN DIS- SOLVED (μG/L) (39381)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (μG/L) (82660)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (μG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (μG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (μG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (μG/L) (82672)	FONOFOS WATER DISS REC (μG/L) (04095)	ALPHA BHC DIS- SOLVED (μG/L) (34253)	LINDANE DIS- SOLVED (μG/L) (39341)	MALA- THION, DIS- SOLVED (μG/L) (39532)
JUN 19...	<0.006	<0.002	<0.001	<0.003	<0.017	<0.002	<0.004	<0.003	<0.003	<0.002	<0.004	<0.005
DATE	METO- LACHLOR WATER DISSOLV (μG/L) (39415)	METRI- BUZIN SENCOR WATER DISSOLV (μG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (μG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (μG/L) (82684)	PARA- THION, DIS- SOLVED (μG/L) (39542)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (μG/L) (82667)	PEB- ULATE WATER FILTDR 0.7 U GF, REC (μG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (μG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (μG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (μG/L) (82664)	PRO- METON, WATER, DISS, REC (μG/L) (04037)	
JUN 19...	0.910	<0.004	<0.004	0.024	<0.004	<0.006	<0.004	0.019	<0.005	<0.002	<0.018	
DATE	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (μG/L) (82676)	PROP- CHLOR, WATER, DISS, REC (μG/L) (04024)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (μG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (μG/L) (82685)	SI- MAZINE, WATER, DISS, REC (μG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (μG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (μG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (μG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (μG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (μG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (μG/L) (82661)	
JUN 19...	<0.003	<0.007	<0.004	<0.013	0.110	<0.010	<0.007	<0.013	<0.002	<0.001	<0.002	

CROOKED CREEK BASIN

03038000 CROOKED CREEK AT IDAHO, PA

LOCATION.--Lat 40°39'17", long 79°20'56", Armstrong County, Hydrologic Unit 05010006, on right bank at downstream end of old bridge abutment at Idaho, 0.4 mi downstream from Keystone Generation Station, 1.5 mi downstream from Plum Creek, and 2.4 mi west of Shelocta.

DRAINAGE AREA.--191 mi².

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

REVISED RECORDS.--WSP 1385: 1938, 1945.

GAGE.--Water-stage recorder and concrete weir control. Datum of gage is 961.04 ft above sea level (Baltimore and Ohio Railroad bench mark).

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated to some extent since March 1968 by Keystone Lake 7 mi upstream, usable capacity, 22,010 acre-ft. Evaporation from operation of steam-electric plant 0.4 mi upstream, which began during July 1967, can amount to as much as 30 ft³/s. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 1936 reached a stage of 18.6 ft, from floodmark, discharge, 19,400 ft³/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 2,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 19	1930	*11,600	*15.15	June 19	1100	3,080	7.16
Mar. 20	1500	3,340	7.51	Sept. 13	2100	2,570	6.50
Apr. 30	2100	3,070	7.15				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	37	225	e80	247	649	284	1970	68	87	39	41
2	41	83	189	e130	253	522	475	1220	58	110	35	35
3	41	129	151	334	182	426	393	756	54	184	35	38
4	46	93	148	e170	140	291	356	580	73	133	33	34
5	56	65	121	e130	e125	394	700	471	64	79	31	41
6	65	46	144	e110	e110	1360	616	412	53	59	35	45
7	42	49	125	e96	e100	1400	539	322	46	47	45	368
8	39	68	106	e88	e140	980	440	378	80	42	68	183
9	42	58	98	e80	e350	674	374	367	81	39	77	178
10	41	45	60	e76	281	493	308	1490	54	39	39	326
11	42	52	63	e70	309	441	255	1750	64	42	43	139
12	40	261	65	e66	233	448	213	1890	256	38	39	129
13	40	177	64	e60	175	460	194	1170	171	39	36	1720
14	72	189	86	e56	e130	455	182	758	133	94	38	1430
15	213	281	189	e54	e120	461	149	560	187	70	34	569
16	58	242	199	e52	e110	412	295	506	107	77	55	343
17	53	213	158	e100	e100	375	286	404	74	95	44	587
18	46	219	136	e1000	e94	371	229	342	284	77	41	979
19	40	409	e110	e7200	e88	417	219	265	2460	776	40	521
20	41	436	e94	4720	e300	3000	250	209	1310	1010	30	323
21	107	469	e84	1080	e1600	1990	239	204	625	336	476	214
22	92	357	e76	619	1080	1170	205	198	376	193	144	188
23	50	267	e70	476	823	798	251	146	255	138	57	286
24	43	225	e67	1030	784	593	386	123	301	104	76	175
25	40	185	e64	915	617	507	318	104	537	73	52	148
26	40	163	e60	616	516	449	297	99	303	64	41	118
27	38	176	e56	894	506	357	274	106	202	49	49	98
28	40	498	e54	777	1110	321	207	156	148	41	47	528
29	42	414	e52	581	876	344	753	127	119	43	44	1210
30	39	289	e49	470	---	273	2080	105	102	55	42	591
31	36	---	e60	379	---	248	---	80	---	44	43	---
TOTAL	1666	6195	3223	22509	11499	21079	11767	17268	8645	4277	1908	11585
MEAN	53.7	206	104	726	397	680	392	557	288	138	61.5	386
MAX	213	498	225	7200	1600	3000	2080	1970	2460	1010	476	1720
MIN	36	37	49	52	88	248	149	80	46	38	30	34
CFSM	.28	1.08	.54	3.80	2.08	3.56	2.05	2.92	1.51	.72	.32	2.02
IN.	.32	1.21	.63	4.38	2.24	4.11	2.29	3.36	1.68	.83	.37	2.26

e Estimated.

CROOKED CREEK BASIN

03038000 CROOKED CREEK AT IDAHO, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	124	218	362	382	502	603	470	307	201	139	99.6	92.8
MAX	839	820	827	1000	1260	1340	1052	746	1072	987	549	497
(WY)	1955	1986	1991	1952	1956	1994	1940	1989	1972	1956	1984	1945
MIN	7.15	23.8	33.5	59.7	120	83.9	85.1	38.0	25.3	13.9	11.3	6.07
(WY)	1953	1954	1961	1977	1980	1969	1946	1941	1949	1962	1942	1952

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

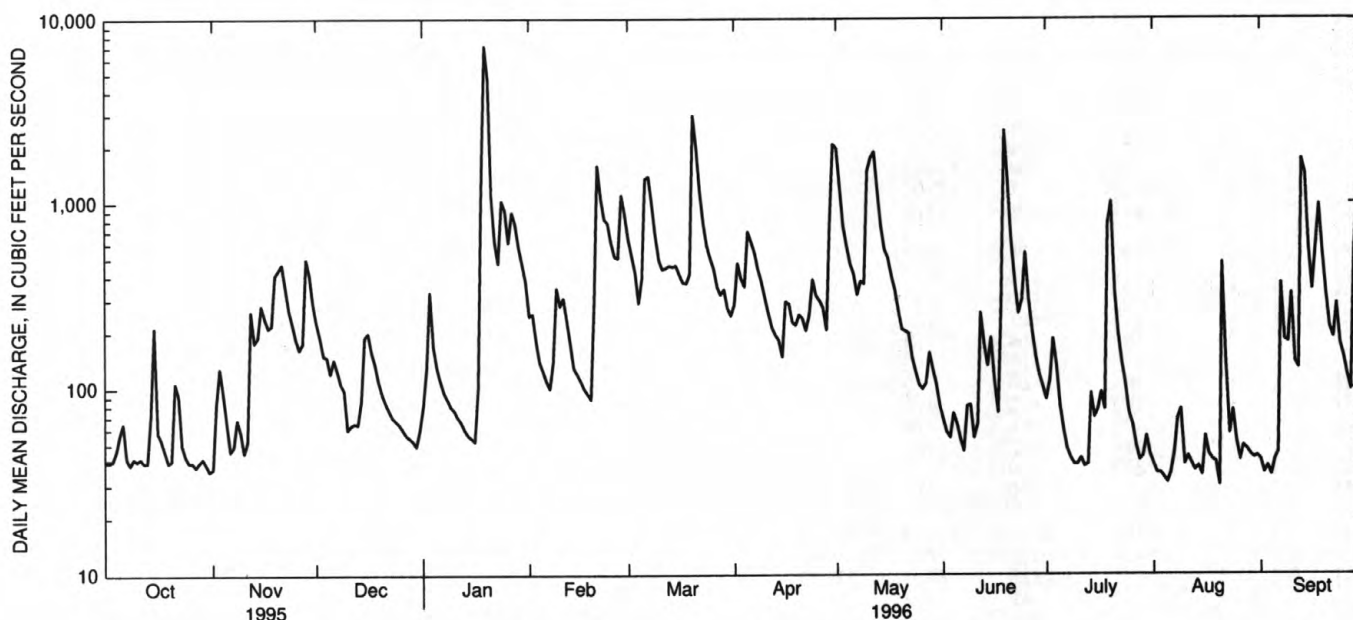
FOR 1996 WATER YEAR

WATER YEARS 1938 - 1996

ANNUAL TOTAL	64300		121621									
ANNUAL MEAN	176		332									
HIGHEST ANNUAL MEAN										291		
LOWEST ANNUAL MEAN										511		1956
HIGHEST DAILY MEAN										148		1992
LOWEST DAILY MEAN										9800		1972
ANNUAL SEVEN-DAY MINIMUM										a1.0		Oct 22 1966
INSTANTANEOUS PEAK FLOW										4.1		Sep 19 1939
INSTANTANEOUS PEAK STAGE										13200		Jun 23 1972
INSTANTANEOUS LOW FLOW										15.93		Jun 23 1972
ANNUAL RUNOFF (CFSM)										4.6		Nov 1 1968
ANNUAL RUNOFF (INCHES)										1.52		
10 PERCENT EXCEEDS										20.68		
50 PERCENT EXCEEDS										700		
90 PERCENT EXCEEDS										130		
										22		

a Result of abnormal regulation.

e Estimated.



October 1, 1995 to September 30, 1996

KISKIMINETAS RIVER BASIN

03039925 NORTH FORK BENS CREEK AT NORTH FORK RESERVOIR, PA

LOCATION.--Lat 40°15'58", long 79°01'01", Somerset County, Hydrologic Unit 05010007, just off of T534 on left bank at upstream side of concrete bridge, 1,800 ft upstream from North Fork Reservoir, and 3.2 mi north of Forwardstown.

DRAINAGE AREA.--3.45 mi².

PERIOD OF RECORD.--October 1984 to September 1985, October 1987 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 1,600 ft above sea level, from topographic map.

REMARKS.--Records fair.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 80 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 16	0945	*204	*5.36	Sept. 7	Unknown	Unknown	Unknown
Feb. 28	0200	91	4.57				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.47	.65	e11	e3.0	e10	29	23	17	7.5	e5.2	e6.0	1.3
2	.44	.70	13	e6.0	e8.2	17	25	15	6.8	e4.8	e4.5	1.2
3	.40	.85	e11	e13	e7.0	13	24	12	6.2	e7.0	e3.5	1.2
4	e.56	.89	19	e12	e6.0	9.6	23	11	5.6	e6.2	e2.8	e2.0
5	e.74	.88	17	e9.0	e5.2	9.5	26	10	4.9	e5.0	2.4	e8.0
6	e.94	.88	14	e7.0	e4.7	16	24	9.6	4.3	e4.1	2.2	e25
7	e.66	.91	11	e5.8	e4.3	17	23	10	3.8	e3.3	2.1	e82
8	e.44	1.0	e8.6	e4.7	e7.6	e22	21	15	3.4	e2.7	2.8	e35
9	e.35	1.0	e7.6	e4.1	e14	e16	19	41	3.2	e2.4	2.6	e17
10	e.27	1.1	e6.2	e3.8	14	15	17	30	3.0	e2.2	2.0	e10
11	e.24	4.1	e5.2	e3.4	25	7.7	16	29	3.4	e2.0	1.9	e7.4
12	e.23	5.2	e4.5	e3.2	22	6.8	14	34	3.1	e1.9	2.1	e6.0
13	e.33	3.3	e3.7	e3.1	18	6.1	13	27	2.6	e1.8	2.2	e23
14	e.47	3.0	e4.5	e3.0	e15	6.4	12	19	2.5	e3.8	2.0	e15
15	e.58	3.0	e7.6	e2.8	e12	16	10	15	2.2	e6.6	1.8	e11
16	.33	2.8	e14	e2.7	e10	19	13	17	1.9	e7.0	1.7	e8.4
17	.30	2.8	e24	e4.2	e8.0	16	14	17	1.7	e5.4	1.7	e20
18	.29	2.8	e16	e14	e6.6	15	16	16	5.8	e14	1.6	e52
19	.25	3.4	e11	e90	e5.6	21	17	14	20	e33	1.6	e31
20	.89	e3.8	e9.4	69	e9.0	47	17	12	21	e27	1.5	e20
21	3.3	e4.3	e7.6	49	e15	42	16	11	15	e16	4.3	e14
22	.86	e3.8	e6.6	e35	e28	32	15	9.7	13	e10	2.3	e11
23	.64	e3.6	e5.8	e26	e25	26	12	8.4	11	e7.2	2.0	e12
24	.56	e3.3	e5.2	e20	e32	22	8.0	7.4	23	e5.6	1.8	e10
25	.55	e3.0	e4.8	e23	e28	24	7.2	6.5	28	e4.6	1.7	e8.2
26	.48	3.7	e4.5	e27	e24	31	7.3	5.7	17	e3.7	1.6	e7.2
27	.47	5.9	e4.2	33	e40	28	7.7	6.2	e11	e3.1	1.6	e7.0
28	.50	25	e4.0	e26	e60	26	6.8	8.0	e7.6	e2.8	1.6	e8.6
29	.74	19	e3.7	e20	45	24	10	8.3	e6.2	e2.7	1.5	e14
30	.79	14	e3.5	e16	---	22	15	8.6	e5.6	e5.0	1.4	e11
31	.71	---	e3.3	e13	---	20	---	8.3	---	e8.0	1.4	---
TOTAL	18.78	128.66	271.5	551.8	509.2	622.1	472.0	458.7	250.3	214.1	70.2	479.5
MEAN	.61	4.29	8.76	17.8	17.6	20.1	15.7	14.8	8.34	6.91	2.26	16.0
MAX	3.3	25	24	90	60	47	26	41	28	33	6.0	82
MIN	.23	.65	3.3	2.7	4.3	6.1	6.8	5.7	1.7	1.8	1.4	1.2
CFSM	.18	1.24	2.54	5.16	5.09	5.82	4.56	4.29	2.42	2.00	.66	4.63
IN.	.20	1.39	2.93	5.95	5.49	6.71	5.09	4.95	2.70	2.31	.76	5.17

e Estimated.

KISKIMINETAS RIVER BASIN

03039925 NORTH FORK BENS CREEK AT NORTH FORK RESERVOIR, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.90	6.28	8.68	8.95	11.3	14.8	12.6	9.30	4.31	3.98	2.52	4.22
MAX	8.31	11.9	11.2	17.8	18.0	23.0	23.7	16.9	10.0	10.5	5.86	16.0
(WY)	1991	1994	1985	1996	1991	1994	1993	1989	1989	1990	1994	1996
MIN	.42	1.26	2.96	5.14	2.20	5.01	5.47	3.45	1.02	.67	.33	.35
(WY)	1992	1992	1990	1985	1993	1990	1995	1991	1991	1991	1991	1991

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

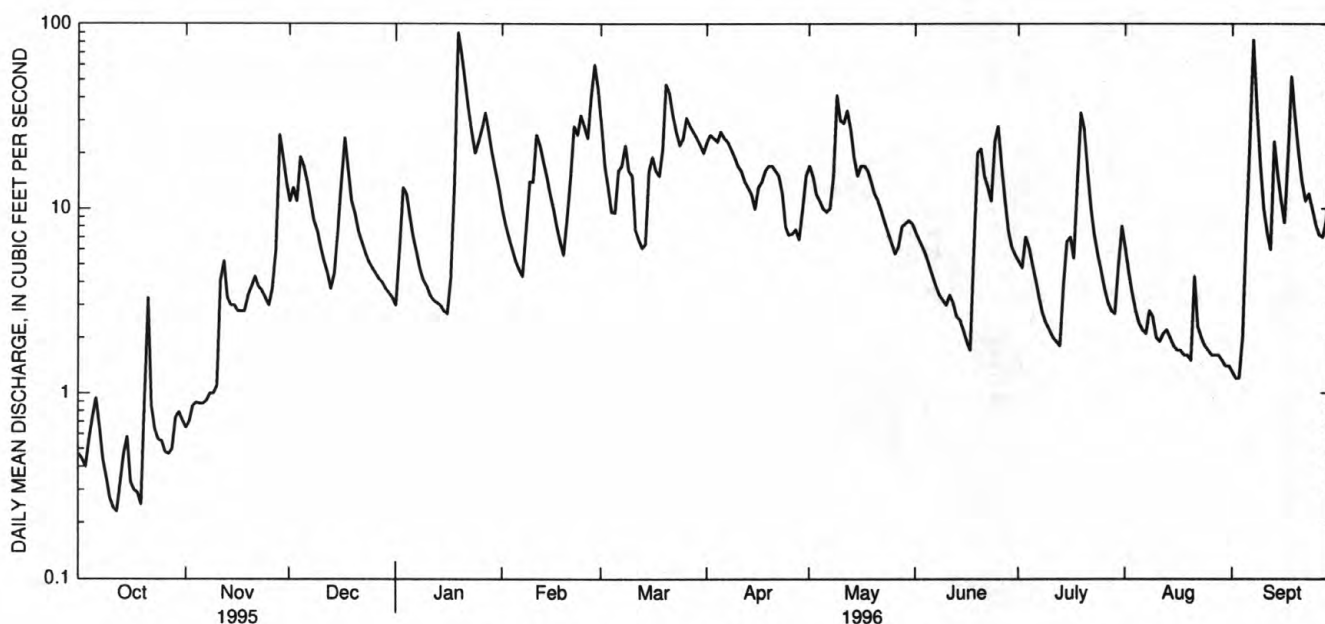
FOR 1996 WATER YEAR

WATER YEARS 1984 - 1996

ANNUAL TOTAL	1810.47	4046.84	7.46
ANNUAL MEAN	4.96	11.1	11.1
HIGHEST ANNUAL MEAN			1996
LOWEST ANNUAL MEAN			5.22
HIGHEST DAILY MEAN	30 Feb 24	90 Jan 19	93 Apr 2 1993
LOWEST DAILY MEAN	e.23 Oct 12	e.23 Oct 12	.18 Aug 16 1991
ANNUAL SEVEN-DAY MINIMUM	a.33 Oct 8	a.33 Oct 8	.22 Aug 12 1991
INSTANTANEOUS PEAK FLOW		204 Jan 19	204 Jan 19 1996
INSTANTANEOUS PEAK STAGE		5.36 Jan 19	5.36 Jan 19 1996
INSTANTANEOUS LOW FLOW			.06 Sep 18 1985
ANNUAL RUNOFF (CFSM)	1.44	3.20	2.16
ANNUAL RUNOFF (INCHES)	19.52	43.64	29.37
10 PERCENT EXCEEDS	12	25	17
50 PERCENT EXCEEDS	3.4	7.2	4.8
90 PERCENT EXCEEDS	.46	.93	1.0

a Computed using estimated daily discharges.

e Estimated.



October 1, 1995 TO September 30, 1996

KISKIMINETAS RIVER BASIN

03040000 STONYPOLY RIVER AT FERNDAL, PA
(National water-quality assessment station)

LOCATION.--Lat 40°17'08", long 78°55'15", Cambria County, Hydrologic unit 05010007, on right bank 50 ft upstream from highway bridge at Ferndale, 0.4 mi downstream from Bens Creek, 1.2 mi upstream from Johnstown city limits, and 5.2 mi upstream from confluence with Little Conemaugh River.

DRAINAGE AREA.--451 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1913 to March 1936, October 1938 to current year. Monthly discharge only for some periods, published in WSP 1305. Monthly figures adjusted for storage and diversion for October 1918 to September 1921, published in WSP 503, 523, have been found in error and should not be used. Published as "at Johnstown" 1914-36, and as "Stony Creek at Ferndale" 1938-79. Gage-height records collected in this vicinity since 1885 are contained in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 743: Drainage area. WSP 1305: 1915, 1918, 1923-26. WSP 1435: 1920-21, 1932, 1941 (M), 1943 (M), 1945-46 (M). WDR PA-78-3: 1977 (M). See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 1,184.06 ft above sea level. Prior to Mar. 19, 1936, nonrecording gage at site 3.5 mi downstream at different datum. Dec. 8, 1938 to Jan. 30, 1940, nonrecording gage at site 50 ft downstream at present datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Regulation by mine pumpage and reservoirs and diversion above station; the four largest reservoirs have a combined capacity of 42,360 acre-ft. Figures of daily discharge do not include diversion from Stonycreek River and Quemahoning Creek Reservoir to plants of Bethlehem Steel Co., and from Mill Creek, Dalton Run, and North Fork Bens Creek Reservoirs for water supply of city of Johnstown. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	132	1130	e270	936	2890	1380	1640	784	498	548	128
2	54	127	1360	e480	e700	2180	2010	1210	673	451	402	124
3	51	140	1070	866	e600	1740	1600	989	593	663	323	120
4	67	173	1180	824	e500	1350	1360	869	558	577	303	147
5	121	148	1030	681	e440	1360	1360	875	530	411	292	168
6	227	135	905	517	e400	2430	1170	1350	447	335	238	525
7	145	131	754	e430	e370	3130	1060	1190	399	e300	206	6890
8	98	161	610	e370	e500	2550	940	1960	349	e280	326	2710
9	75	168	548	e340	2020	1850	858	3690	327	e280	930	1460
10	66	155	411	e330	1700	1510	777	2990	325	225	330	971
11	61	226	373	e310	2340	1350	746	2360	409	209	245	726
12	60	692	347	e300	1920	1300	679	2830	448	196	247	581
13	62	448	337	e290	1340	1270	614	2160	355	193	448	e2100
14	111	375	362	e280	e900	1270	602	1680	429	192	324	1550
15	141	398	604	e270	e700	1690	556	1420	366	322	252	1010
16	116	397	1320	e260	e560	1820	677	1710	276	340	229	847
17	89	378	1550	e300	e450	1560	855	2420	255	246	215	3900
18	76	376	1080	e1400	e390	1450	929	e3300	791	389	192	4560
19	68	465	e800	e15200	e320	1990	904	e2500	3250	2990	178	2670
20	85	516	e640	10300	e500	6220	935	e1800	2540	2330	161	1800
21	965	579	e560	3760	e1000	3770	791	1230	1390	1210	558	1330
22	544	566	e500	e2000	e3100	2670	706	1160	1100	801	492	1170
23	281	498	e460	e1400	3050	e2000	661	904	1030	682	294	1310
24	206	486	e420	e1100	3650	e1700	774	762	1450	530	227	1070
25	174	438	e380	e1400	3130	e1700	697	663	2410	416	192	909
26	153	405	e370	2000	2690	e2000	632	571	1480	354	174	760
27	140	523	e340	2800	3310	1630	639	638	1010	317	162	683
28	133	1630	e330	e3200	8870	1460	564	970	777	290	199	843
29	145	1480	e310	e2100	5000	1460	624	1260	640	282	196	1350
30	153	1210	e300	1520	---	1520	1180	1360	552	611	165	1060
31	144	---	e280	1240	---	1350	---	971	---	754	142	---
TOTAL	4870	13556	20661	56538	51386	62170	27280	49432	25943	17674	9190	43472
MEAN	157	452	666	1824	1772	2005	909	1595	865	570	296	1449
MAX	965	1630	1550	15200	8870	6220	2010	3690	3250	2990	930	6890
MIN	51	127	280	260	320	1270	556	571	255	192	142	120
CFSM	.35	1.00	1.48	4.04	3.93	4.45	2.02	3.54	1.92	1.26	.66	3.21
IN.	.40	1.12	1.70	4.66	4.24	5.13	2.25	4.08	2.14	1.46	.76	3.59

e Estimated.

KISKIMINETAS RIVER BASIN

03040000 STONYCREEK RIVER AT FERNDAL, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	235	397	673	773	1031	1620	1359	825	491	266	179	189
MAX	1514	2099	2162	1929	2575	3581	3426	1792	1773	874	1098	1449
(WY)	1977	1986	1973	1952	1986	1994	1993	1978	1972	1977	1979	1996
MIN	13.6	20.4	48.4	137	262	367	336	186	77.4	28.4	26.3	18.9
(WY)	1964	1954	1954	1977	1963	1990	1946	1941	1965	1965	1957	1943

SUMMARY STATISTICS

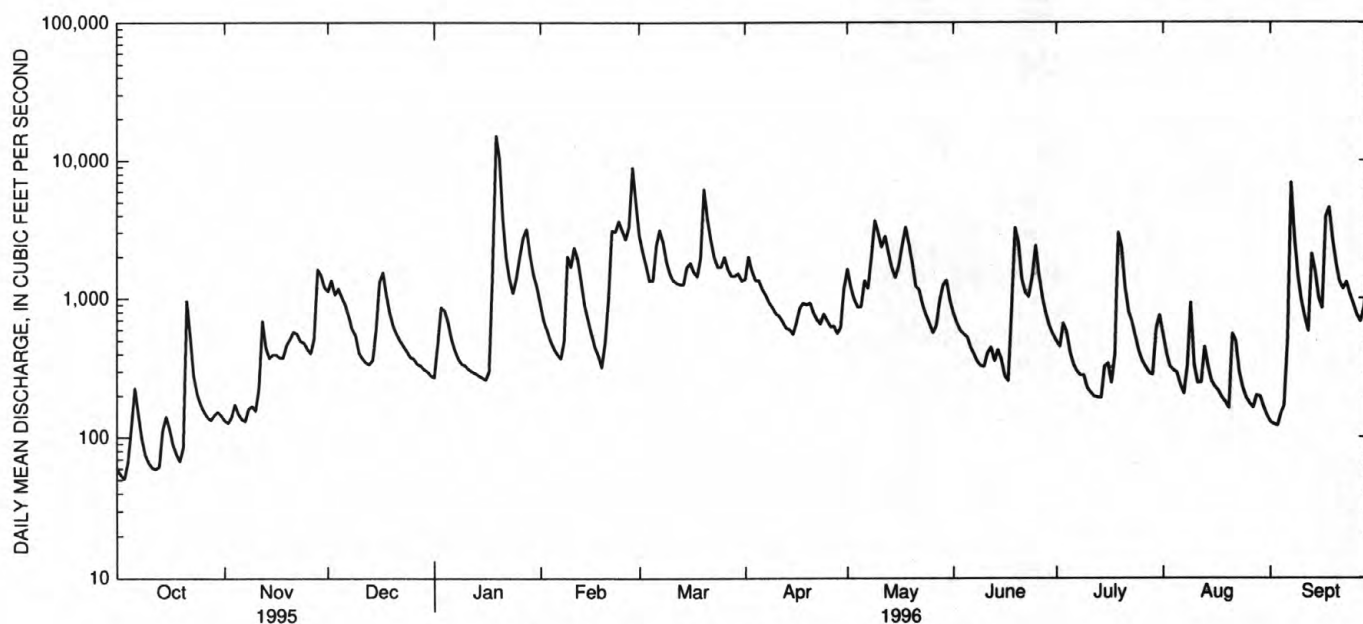
FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1939 - 1996

ANNUAL TOTAL	173648	382172	
ANNUAL MEAN	476	1044	670
HIGHEST ANNUAL MEAN			1044
LOWEST ANNUAL MEAN			280
HIGHEST DAILY MEAN	2270	Mar 1	15900
LOWEST DAILY MEAN	51	Oct 3	11
ANNUAL SEVEN-DAY MINIMUM	56	Sep 6	12
INSTANTANEOUS PEAK FLOW			41600
INSTANTANEOUS PEAK STAGE			17.64
INSTANTANEOUS LOW FLOW			51
ANNUAL RUNOFF (CFSM)	1.05	2.32	1.49
ANNUAL RUNOFF (INCHES)	14.32	31.52	20.20
10 PERCENT EXCEEDS	1100	2350	1600
50 PERCENT EXCEEDS	378	628	325
90 PERCENT EXCEEDS	69	154	56

- a From rating curve extended above 13,000 ft³/s on the basis of slope-area and contracted-opening measurement of peak flow.
 b From highwater mark, site and datum then in use.
 c Minimum observed.
 e Estimated.



October 1, 1995 to September 30, 1996

KISKIMINETAS RIVER BASIN

03040000 STONYCREEK RIVER AT FERNDAL, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1996 to current year.

REMARKS.--All water-quality samples collected and analyzed by the U.S. Geological Survey. Additional sites in the fixed-station network are shown in figure 4, page 26.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	ACIDITY TOTAL HEATED (MG/L AS CACO3) (70508)	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)
APR 23...	1030	640	431	5.7	13.5	721	10.2	170	10	41	16	11
MAY 21...	0930	1150	328	7.0	18.0	719	9.6	120	4.0	30	11	8.9
JUN 12...	1045	440	488	7.0	19.5	725	8.6	200	7.0	51	18	11
JUL 15...	1000	232	700	6.0	20.5	722	8.6	300	15	76	27	17
AUG 14...	1145	319	514	6.6	20.5	729	9.3	200	6.0	50	18	15
SEP 04...	1000	141	700	4.8	20.0	728	8.3	300	18	74	28	11

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	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 DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
APR 23...	1.4	2	160	12	<0.10	6.1	256	0.010	0.710	0.210	0.40
MAY 21...	1.5	6	120	9.2	0.10	5.6	202	<0.010	0.790	0.100	0.30
JUN 12...	1.6	5	200	11	0.20	6.1	330	0.020	0.630	0.230	0.30
JUL 15...	1.8	2	320	9.6	0.10	8.0	499	0.020	0.300	0.230	0.30
AUG 14...	1.9	4	220	11	0.10	6.3	347	0.020	0.550	0.260	0.40
SEP 04...	2.3	2	320	12	0.10	9.1	476	0.020	0.580	0.430	0.50

DATE	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	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 (μ G/L AS AL) (01106)	IRON, DIS- SOLVED (μ G/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (μ G/L AS MN) (01056)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C) (00689)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
APR 23...	0.30	0.020	0.010	<0.010	--	430	1300	1.2	1.0	9	90
MAY 21...	<0.20	0.030	<0.010	<0.010	30	160	690	1.4	0.30	10	72
JUN 12...	0.20	0.060	0.050	<0.010	32	130	1100	1.2	0.50	6	90
JUL 15...	0.30	<0.010	<0.010	<0.010	101	150	1500	0.80	0.40	12	88
AUG 14...	0.30	0.020	<0.010	<0.010	--	190	1300	1.6	0.70	13	77
SEP 04...	0.40	0.030	<0.010	<0.010	1800	260	2500	0.80	0.50	11	89

KISKIMINETAS RIVER BASIN

03041500 CONEMAUGH RIVER AT SEWARD, PA

LOCATION.--Lat 40°25'09", long 79°01'35", Westmoreland County, Hydrologic Unit 05010007, on left bank at upstream side of bridge on State Highway 56 at Seward, 2.0 mi downstream from Findley Run, and 9 mi northwest of Johnstown.

DRAINAGE AREA.--715 mi².

PERIOD OF RECORD.--May 1938 to current year.

REVISED RECORDS.--WDR PA-78-3: 1936 (M), 1977 (M).

GAGE.--Water-stage recorder. Datum of gage is 1,076.01 ft above sea level.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated by steel mills and reservoirs above station; the eight most effective reservoirs have a combined capacity of 51,850 acre-ft. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 18, 1936 reached a stage of 26.4 ft, from floodmarks, discharge, 75,000 ft³/s, by contracted-opening measurement at site 6.7 mi downstream, adjusted for inflow.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	172	283	2000	e560	1690	4780	2300	3240	1260	912	947	284
2	170	297	2380	e700	e1300	3630	3310	2410	1100	828	746	282
3	165	310	1930	1310	e1100	2950	2730	1970	988	1630	631	277
4	211	326	2080	1220	e860	2250	2390	1710	949	1330	575	331
5	289	305	1850	983	e780	2210	2490	1620	907	950	570	390
6	451	278	1640	783	e720	3960	2190	2130	798	764	513	526
7	337	279	1370	e680	e640	5180	2000	1930	731	669	457	11400
8	234	319	1130	e620	e1200	4170	1760	2890	670	729	446	4720
9	195	334	1020	e580	3340	3120	1580	4820	637	632	1700	2640
10	180	300	766	e560	2850	2520	1420	4450	617	550	720	1890
11	174	393	e700	e540	3730	2260	1330	3840	886	492	527	1420
12	172	1250	e660	e520	3220	2130	1230	4910	932	459	490	1120
13	174	878	e640	e500	e2100	2080	1120	3690	732	446	727	3600
14	286	742	e620	e490	e1500	2030	1100	2890	938	437	615	3090
15	420	802	e1100	e480	e1200	2790	1020	2450	959	747	494	2050
16	286	779	2050	e470	e940	3130	1210	2750	648	939	441	1620
17	224	752	2430	e500	e800	2660	1430	3240	566	617	425	6340
18	198	760	1740	e2500	e700	2440	1460	3820	948	679	382	7300
19	187	907	e1300	e26000	e600	2920	1450	2790	6070	8530	365	4260
20	205	1020	e1050	15500	e900	12000	1560	2220	4420	5750	344	2950
21	1950	1100	e900	6150	e3000	6380	1340	1970	2480	2810	1070	2230
22	1040	1100	e800	3990	5850	4420	1200	1950	1690	1880	1030	1930
23	576	977	e740	3120	5070	3520	1140	1510	1750	1520	615	2160
24	413	939	e680	e2000	6160	3000	1330	1270	2350	1190	468	1730
25	354	854	e640	e2600	5370	2990	1190	1120	4750	961	398	1510
26	318	802	e600	e3200	4580	3520	1110	995	2660	829	371	1220
27	306	897	e580	4400	5210	2930	1140	1070	1820	738	352	1090
28	291	3200	e560	4620	12900	2640	1010	1710	1360	653	360	1440
29	312	2990	e540	3290	7730	2560	1290	1850	1110	638	390	2580
30	314	2240	e520	2680	---	2590	2190	2100	964	1080	347	1880
31	306	---	e500	2230	---	2360	---	1550	---	1250	305	---
TOTAL	10910	26413	35516	93776	86040	106120	48020	76865	46690	41639	17821	74260
MEAN	352	880	1146	3025	2967	3423	1601	2480	1556	1343	575	2475
MAX	1950	3200	2430	26000	12900	12000	3310	4910	6070	8530	1700	11400
MIN	165	278	500	470	600	2030	1010	995	566	437	305	277
CFSM	.49	1.23	1.60	4.23	4.15	4.79	2.24	3.47	2.18	1.88	.80	3.46
IN.	.57	1.37	1.85	4.88	4.48	5.52	2.50	4.00	2.43	2.17	.93	3.86

e Estimated.

KISKIMINETAS RIVER BASIN

03041500 CONEMAUGH RIVER AT SEWARD, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	562	839	1312	1466	1863	2821	2399	1547	1028	686	493	500
MAX	2746	3076	3620	3625	3816	5524	5288	2871	3594	2527	1690	2475
(WY)	1977	1986	1973	1952	1971	1994	1993	1960	1972	1977	1979	1996
MIN	169	189	245	391	493	779	739	512	338	242	217	169
(WY)	1964	1939	1954	1977	1993	1990	1946	1941	1965	1965	1939	1959

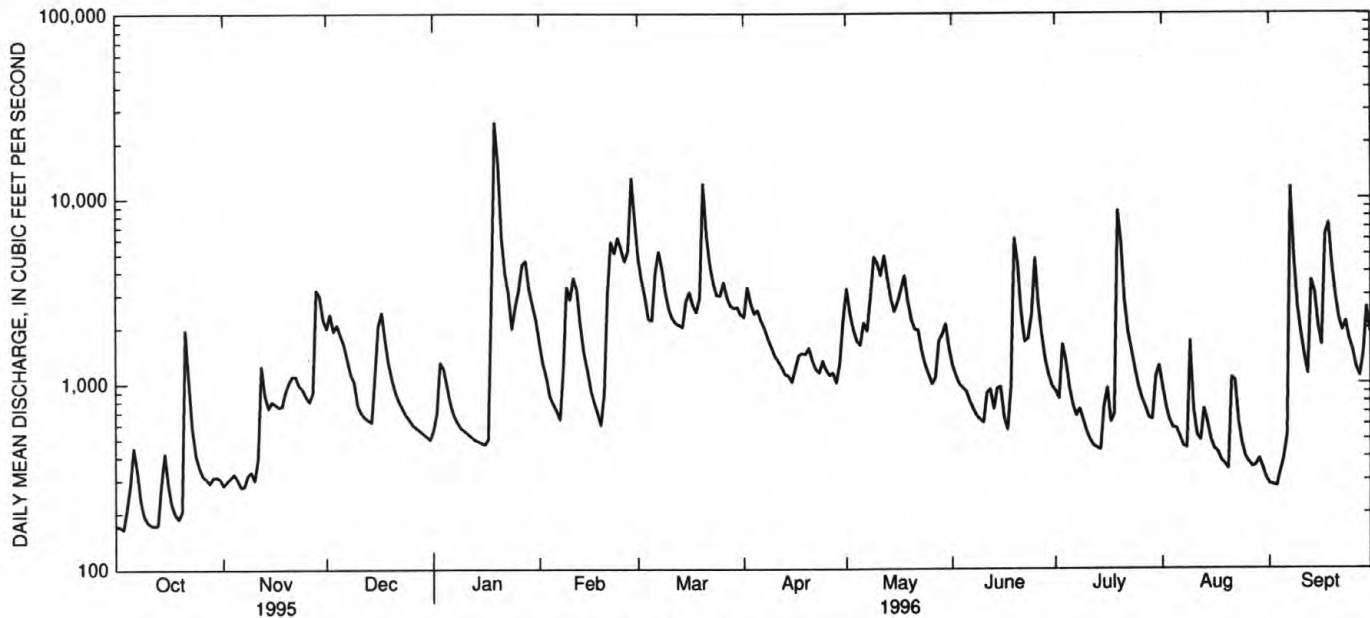
SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1939 - 1996

ANNUAL TOTAL	328777			664070								
ANNUAL MEAN	901			1814						1290		
HIGHEST ANNUAL MEAN										1814		1996
LOWEST ANNUAL MEAN										687		1954
HIGHEST DAILY MEAN	3730	Mar 1		e26000	Jan 19				40900	Jul 20	1977	
LOWEST DAILY MEAN	165	Oct 3		165	Oct 3				105	Dec 28	1938 ^a	
ANNUAL SEVEN-DAY MINIMUM	170	Sep 5		202	Oct 8				111	Dec 26	1938	
INSTANTANEOUS PEAK FLOW				59900	Jan 19				b115000	Jul 20	1977	
INSTANTANEOUS PEAK STAGE				20.68	Jan 19				c27.06	Jul 20	1977	
INSTANTANEOUS LOW FLOW									105	Dec 28	1938	
ANNUAL RUNOFF (CFSM)	1.26			2.54					1.80			
ANNUAL RUNOFF (INCHES)	17.11			34.55					24.51			
10 PERCENT EXCEEDS	1940			3760					2850			
50 PERCENT EXCEEDS	742			1110					735			
90 PERCENT EXCEEDS	194			329					260			

^a Also Dec. 29, 31, 1938.^b From slope-area measurement of peak flow.^c From highwater mark.^e Estimated.

October 1, 1995 to September 30, 1996

KISKIMINETAS RIVER BASIN

03042000 BLACKLICK CREEK AT JOSEPHINE, PA

LOCATION.--Lat 40°28'24", long 79°11'01", Indiana County, Hydrologic Unit 05010007, on right bank on upstream side of old concrete dam at Josephine, 0.9 mi upstream from Two Lick Creek, and 5 mi northeast of Blairsville.

DRAINAGE AREA.--192 mi².

PERIOD OF RECORD.--January 1952 to current year.

REVISED RECORDS.--WSP 1385: 1952-54 (M). WDR PA-78-3: 1977 (M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 975.82 ft above sea level. Prior to Aug. 25, 1953, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Some regulation at low flow by mine pumpage above station. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 2,700 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 19	1630	*17,600	*11.38	June 19	1400	4,590	6.75
Feb. 28	1100	3,010	5.85	July 19	1800	5,080	7.00
Mar. 20	0500	4,740	6.83	Sept. 13	1500	3,070	5.88

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e45	e56	495	e70	445	935	465	1280	205	216	132	e88
2	e43	84	567	e120	e380	698	618	789	182	181	119	e100
3	e60	115	462	e240	e330	579	491	591	181	501	e100	e92
4	79	93	507	e160	e290	456	447	497	185	416	e90	e82
5	98	80	439	e110	e260	489	687	440	164	294	e80	e80
6	130	73	404	e98	e230	1450	616	450	139	214	e72	118
7	98	77	353	e96	e210	1730	538	394	125	165	e66	1420
8	70	109	306	e100	e180	1120	470	473	133	146	e90	688
9	e45	109	268	e110	e220	757	428	523	149	133	139	405
10	e32	92	200	e105	e300	589	388	1090	133	128	e120	459
11	e23	98	147	e100	e420	543	359	1540	140	114	e105	356
12	e16	385	e120	e98	e360	507	330	2060	199	93	e96	294
13	e15	291	e100	e94	e320	506	304	1290	147	92	e135	1790
14	e60	250	e86	e90	e290	512	280	844	138	96	e120	1380
15	145	272	e200	e88	e250	711	253	648	174	126	e100	686
16	96	269	e400	e96	e230	746	355	631	e110	195	e130	510
17	66	243	344	e105	e200	619	387	539	e80	130	e110	1050
18	e42	254	e270	e500	e180	575	337	468	178	150	e80	1870
19	e26	389	e240	e10000	e150	710	322	406	2930	2110	e60	910
20	e25	415	e210	4340	e500	3490	337	355	1370	1820	e48	590
21	391	420	e190	2080	e1900	1850	301	337	655	646	717	462
22	272	396	e170	e800	1860	1190	272	366	465	454	431	425
23	143	356	e150	e350	1400	849	266	293	385	389	229	486
24	102	329	e130	e240	1730	695	307	243	512	322	216	381
25	80	286	e120	e400	1340	681	277	210	835	262	161	334
26	e62	272	e110	e600	1020	972	260	183	456	223	121	275
27	e45	335	e98	e1000	952	693	281	193	360	182	e100	234
28	e39	1090	e90	1380	2340	598	250	416	296	153	e90	434
29	e39	906	e84	862	1490	590	489	377	255	136	e82	1270
30	e39	601	e78	671	---	522	1210	322	225	202	e82	585
31	e39	---	e74	558	---	465	---	255	---	182	e82	---
TOTAL	2465	8745	7412	25661	19777	26827	12325	18503	11506	10471	4303	17854
MEAN	79.5	291	239	828	682	865	411	597	384	338	139	595
MAX	391	1090	567	10000	2340	3490	1210	2060	2930	2110	717	1870
MIN	15	56	74	70	150	456	250	183	80	92	48	80
CFSM	.41	1.52	1.25	4.31	3.55	4.51	2.14	3.11	2.00	1.76	.72	3.10
IN.	.48	1.69	1.44	4.97	3.83	5.20	2.39	3.58	2.23	2.03	.83	3.46

e Estimated.

KISKIMINETAS RIVER BASIN

03042000 BLACKLICK CREEK AT JOSEPHINE, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	172	286	429	424	556	775	605	417	257	211	153	148
MAX	812	964	1025	905	1202	1615	1086	1009	1376	1114	581	595
(WY)	1977	1986	1973	1975	1956	1967	1993	1978	1972	1977	1958	1996
MIN	30.8	33.5	68.4	135	124	219	261	84.8	65.6	43.5	37.1	35.2
(WY)	1953	1954	1961	1956	1987	1969	1968	1986	1965	1965	1962	1969

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1953 - 1996

ANNUAL TOTAL	82640	165849	
ANNUAL MEAN	226	453	368
HIGHEST ANNUAL MEAN			523
LOWEST ANNUAL MEAN			242
HIGHEST DAILY MEAN	1090	Nov 28	e10000
LOWEST DAILY MEAN	e15	Oct 13	e15
ANNUAL SEVEN-DAY MINIMUM	a37	Oct 8	a37
INSTANTANEOUS PEAK FLOW			17600
INSTANTANEOUS PEAK STAGE			11.38
INSTANTANEOUS LOW FLOW			19
ANNUAL RUNOFF (CFSM)	1.18	2.36	1.92
ANNUAL RUNOFF (INCHES)	16.01	32.13	26.08
10 PERCENT EXCEEDS	462	980	800
50 PERCENT EXCEEDS	178	272	211
90 PERCENT EXCEEDS	49	80	53

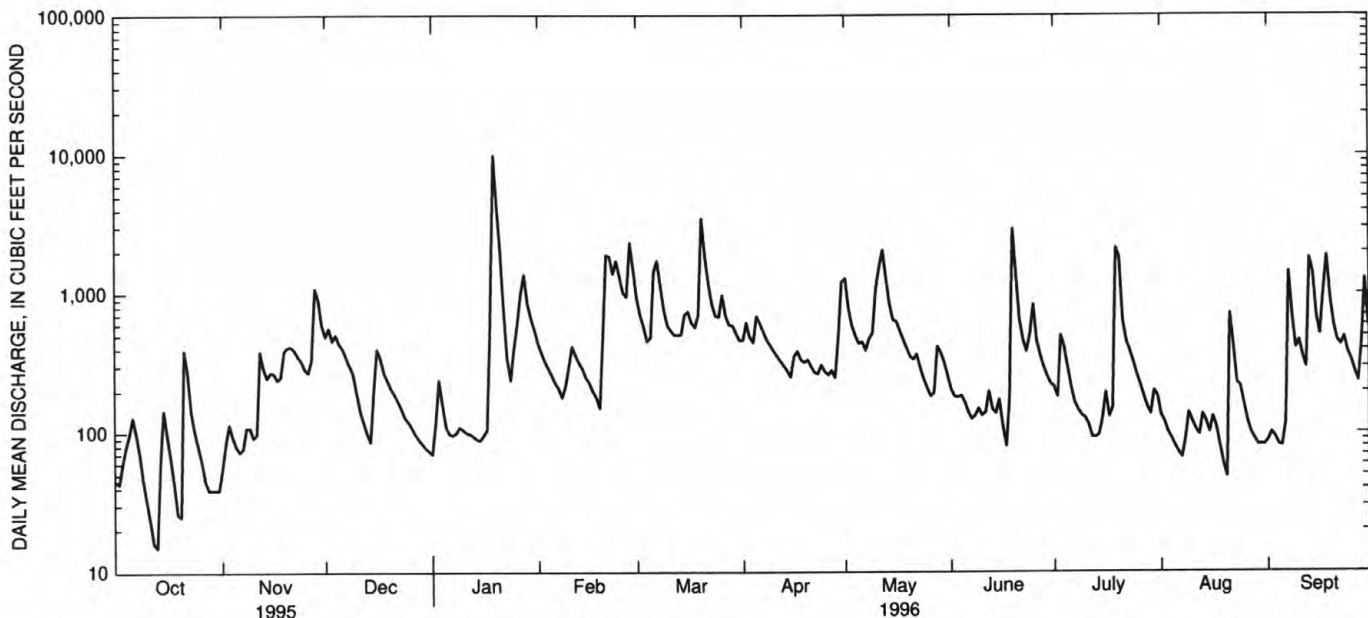
a Computed using estimated daily discharges.

b From rating curve extended above 16,000 ft³/s on basis of contracted-opening measurement at gage height 11.35 ft in gage well, 12.67 ft from outside floodmark and slope-area measurement at gage height 10.93 ft.

c From floodmark in gage well.

d Also Nov. 4, 1953.

e Estimated.



October 1, 1995 to September 30, 1996

KISKIMINETAS RIVER BASIN

LAKE IN KISKIMINETAS RIVER BASIN

03042260 YELLOW CREEK LAKE.--Lat 40°35'27", Long 79°03'11", Indiana County, Hydrologic Unit 05010007, in gatehouse at right end of dam on Yellow Creek, at Yellow Creek State Park, and 3 mi southwest of Penn Run.

DRAINAGE AREA, 52.5 mi². PERIOD OF RECORD, July 1971 to current year. GAGE, Water-stage recorder. Datum of gage is sea level (Pennsylvania Department of Environmental Protection bench mark).

Lake is formed by an earthfill dam with concrete spillway. Storage began July 11, 1971. Usable capacity, 13,800 acre-ft between elevation 1,245.5 ft, sill of 4-foot and 1.5 foot outlet gates, and 1,280.00 ft (spillway crest). No dead storage. Figures given herein represent usable contents. Lake is used for recreation. Dam built by Pennsylvania Department of Forests and Waters and now maintained by Pennsylvania Department of Environmental Protection.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 24,100 acre-ft, July 20, 1977, elevation, 1,290.29 ft; minimum (after first filling), 2,810 acre-ft, Apr. 14, 1975, elevation, 1,261.47 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 18,500 acre-ft, Jan. 19, elevation, 1,284.56 ft; minimum, 12,310 acre-ft, Oct. 20 elevation, 1,278.26 ft.

MONTHEND ELEVATION IN FEET ABOVE SEA LEVEL, AND CONTENTS AT 2400 HRS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

Date	Elevation (feet)	Contents (acre- feet)	Change in contents (equivalent in ft ³ /s)
Sept. 30	1,278.16	12,230	-
Oct. 31	1,279.01	12,910	+11
Nov. 30	1,280.46	14,210	+22
Dec. 31	1,279.50	13,350	-14
CAL YR 1995	-	-	- .07
Jan. 31	1,280.27	14,040	+11
Feb. 29	1,280.79	14,510	+ 8.2
Mar. 31	1,280.08	13,870	-10
Apr. 30	1,280.95	14,660	+13
May 31	1,279.65	13,480	-19
June 30	1,279.55	13,400	- 1.3
July 31	1,279.44	13,300	- 1.6
Aug. 31	1,279.34	13,210	- 1.5
Sept. 30	1,280.35	14,120	+15
WTR YR 1996	-	-	+ 2.6

KISKIMINETAS RIVER BASIN

03042280 YELLOW CREEK NEAR HOMER CITY, PA

LOCATION.--Lat 40°34'18", long 79°06'13", Indiana County, Hydrologic Unit 05010007, on left bank 0.3 mi upstream from Central Indiana County Water Authority dam, 0.4 mi upstream from Ferrier Run, which has been diverted, and 3.5 mi northeast of Homer City.

DRAINAGE AREA.--57.4 mi², excludes that of Ferrier Run.

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

REVISED RECORDS.--WDR PA-76-3: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 1,140 ft above sea level, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated since 1971 by Yellow Creek Lake (station 03042260) 4.2 mi upstream. Several measurements of water temperature were made during the year. Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	11	196	e26	180	296	133	e300	61	46	33	23
2	10	e19	180	e40	135	232	150	e210	54	38	29	20
3	10	15	159	76	114	194	147	e150	48	62	26	18
4	11	e12	147	84	e90	159	141	e180	45	71	23	17
5	11	e11	135	79	e74	153	191	e150	40	66	21	18
6	12	e15	126	e68	e60	252	212	e130	35	56	18	19
7	11	19	115	e62	e50	344	205	e110	31	47	17	85
8	11	23	102	e56	e66	319	186	e130	30	41	16	112
9	9.8	25	92	e50	e100	252	165	e150	29	36	18	112
10	9.5	25	78	e45	125	204	145	e450	27	30	16	118
11	9.9	30	e64	e42	140	180	128	e380	30	25	15	102
12	9.3	53	e56	e39	144	165	112	e500	34	23	13	90
13	9.7	61	e50	e36	129	158	99	e400	32	18	13	309
14	13	66	e45	e35	125	157	89	e312	31	15	12	429
15	13	74	e54	e33	115	172	82	255	29	15	11	326
16	10	75	e66	e37	100	176	87	217	26	18	15	238
17	9.3	73	82	e43	88	171	92	188	23	18	15	287
18	8.9	72	e74	e90	81	162	89	163	28	21	14	449
19	8.9	89	e64	e3050	73	176	87	140	203	83	13	365
20	9.4	113	e56	1970	107	604	86	120	337	192	11	264
21	18	123	e49	669	310	571	83	106	242	166	126	200
22	13	125	e43	376	402	401	78	97	177	131	138	170
23	e11	123	e39	272	362	307	75	85	135	106	110	163
24	e11	114	e36	312	365	246	75	72	112	87	98	146
25	e10	103	e34	375	328	214	71	63	117	70	84	126
26	e9.8	93	e33	312	268	202	e69	54	103	58	68	108
27	e9.8	96	e32	328	240	183	e66	49	85	48	55	90
28	e10	177	e30	347	391	171	e62	66	70	40	45	101
29	e11	248	e29	290	377	164	e150	72	58	35	37	193
30	e10	229	e28	249	---	153	e450	73	51	35	31	205
31	e9.6	---	e27	237	---	140	---	68	---	34	26	---
TOTAL	329.9	2312	2321	9728	5139	7278	3805	5440	2323	1731	1167	4903
MEAN	10.6	77.1	74.9	314	177	235	127	175	77.4	55.8	37.6	163
MAX	18	248	196	3050	402	604	450	500	337	192	138	449
MIN	8.9	11	27	26	50	140	62	49	23	15	11	17
CFSM	.19	1.34	1.30	5.47	3.09	4.09	2.21	3.06	1.35	.97	.66	2.85
IN.	.21	1.50	1.50	6.30	3.33	4.72	2.47	3.53	1.51	1.12	.76	3.18

e Estimated.

52.0 1.05 = SA
CA = 10.5 mi²

KISKIMINETAS RIVER BASIN

03042280 YELLOW CREEK NEAR HOMER CITY, PA.--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1996, BY WATER YEAR (WY) (SINCE REGULATIONS)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	53.1	93.5	139	126	167	209	156	117	78.0	68.8	30.5	41.6
MAX	186	280	254	314	374	447	246	358	324	443	90.3	163
(WY)	1978	1986	1973	1996	1981	1994	1987	1978	1972	1977	1980	1996
MIN	6.10	8.57	32.3	33.9	44.4	70.8	74.0	32.1	12.4	5.95	5.46	8.16
(WY)	1992	1992	1990	1981	1993	1990	1988	1975	1991	1971	1971	1991

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1971 - 1996

ANNUAL TOTAL	23916.8	46476.9	
ANNUAL MEAN	65.5	127	106
HIGHEST ANNUAL MEAN			145
LOWEST ANNUAL MEAN			70.1
HIGHEST DAILY MEAN	249	Mar 1	7630
LOWEST DAILY MEAN	8.4	Aug 31	3.4
ANNUAL SEVEN-DAY MINIMUM	9.9	Sep 3	3.6
INSTANTANEOUS PEAK FLOW			a15000
INSTANTANEOUS PEAK STAGE			12.60
ANNUAL RUNOFF (CFSM)	1.14		1.85
ANNUAL RUNOFF (INCHES)	15.50		25.18
10 PERCENT EXCEEDS	150		239
50 PERCENT EXCEEDS	49		61
90 PERCENT EXCEEDS	10		12

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1970, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	24.6	72.0	119	113	146	136	160	148	51.0	39.6	39.9	26.9
MAX	51.8	105	142	148	210	199	243	212	74.7	75.4	63.0	66.6
(WY)	1968	1968	1969	1969	1970	1970	1970	1968	1970	1969	1969	1970
MIN	7.87	43.9	102	90.8	112	46.4	62.7	103	25.5	7.11	13.0	5.34
(WY)	1969	1970	1968	1970	1969	1969	1968	1969	1969	1968	1968	1969

SUMMARY STATISTICS

WATER YEARS 1968 - 1970

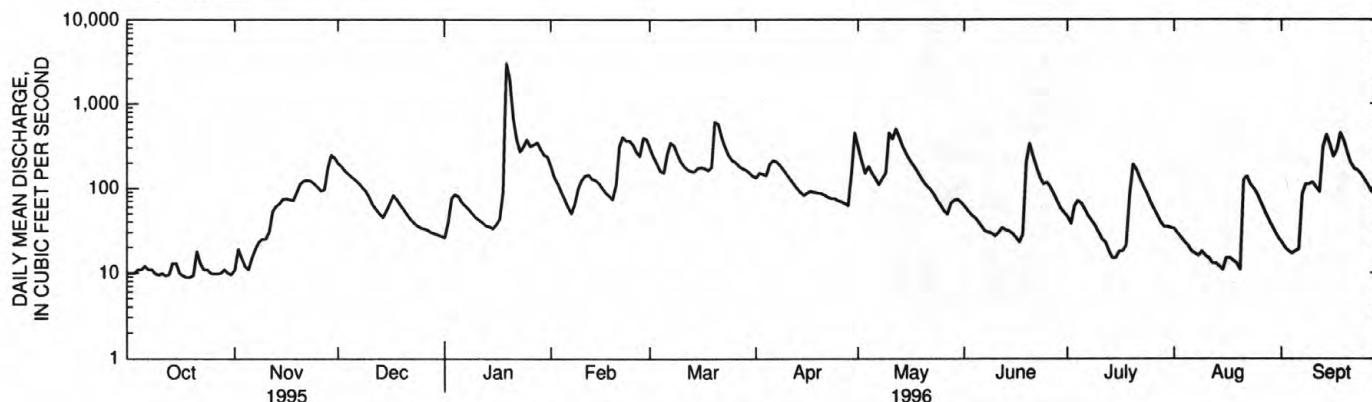
ANNUAL MEAN	89.4
HIGHEST ANNUAL MEAN	104
LOWEST ANNUAL MEAN	80.7
HIGHEST DAILY MEAN	1100
LOWEST DAILY MEAN	3.0
ANNUAL SEVEN-DAY MINIMUM	3.3
INSTANTANEOUS PEAK FLOW	b1300
INSTANTANEOUS PEAK STAGE	c7.83
INSTANTANEOUS LOW FLOW	1.4
ANNUAL RUNOFF (CFSM)	1.56
ANNUAL RUNOFF (INCHES)	21.16
10 PERCENT EXCEEDS	213
50 PERCENT EXCEEDS	50
90 PERCENT EXCEEDS	8.0

a From rating curve extended above 810 ft³/s on basis of computation of peak flow over dam and flow over dam measurement at gage height 7.46 ft.

b About.

c Backwater from ice.

e Estimated.



October 1, 1995 to September 30, 1996

KISKIMINETAS RIVER BASIN

03042500 TWO LICK CREEK AT GRACETON, PA

LOCATION.--Lat 40°31'02", long 79°10'19", Indiana County, Hydrologic Unit 05010007, on right bank 0.8 mi upstream from highway bridge on road leading west from Graceton, 1.1 mi downstream from Tearing Run, 1.5 mi upstream from Cherry Run, and 8 mi northeast of Blairsville.

DRAINAGE AREA.--171 mi².

PERIOD OF RECORD.--September 1951 to current year.

GAGE.--Water-stage recorder. Datum of gage is 981.63 ft above sea level.

REVISED RECORDS.--WDR PA-78-3: 1977 (M).

REMARKS.--Records good except for estimated daily discharges, which are fair. Diurnal fluctuation caused by mine pumpage and by sewage-disposal plant above station. Flow regulated since December 1968 by Two Lick Creek Reservoir 10 mi upstream, capacity, 16,240 acre-ft and since July 1971 by Yellow Creek Lake 11 mi upstream. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	55	437	e84	315	559	306	1290	130	105	96	59
2	38	156	409	e150	275	499	404	827	122	108	79	56
3	39	74	386	e250	e230	430	381	528	136	402	74	53
4	74	62	371	243	e200	383	373	615	125	237	71	61
5	71	60	355	e200	e180	423	670	410	111	177	66	68
6	69	58	352	e170	e160	647	582	380	101	130	64	468
7	46	70	329	e160	e150	743	465	285	84	108	63	471
8	42	77	312	e145	e230	889	429	336	112	101	86	272
9	42	72	300	e130	e340	698	397	422	96	94	100	237
10	40	69	242	e125	352	631	362	1430	96	85	78	254
11	39	103	173	e120	368	603	300	e1300	99	72	61	186
12	40	238	154	e120	355	486	239	e1100	192	67	57	175
13	41	220	145	e115	300	393	267	e860	104	63	58	1950
14	128	247	177	e110	250	359	223	658	139	59	54	1570
15	101	267	193	e105	e220	347	209	600	122	90	52	789
16	55	253	219	e100	e190	329	262	477	93	81	99	488
17	49	245	262	e150	e180	329	269	433	78	73	63	832
18	45	261	220	e700	e160	314	215	394	176	123	58	1360
19	45	328	155	e7400	e150	415	232	309	1240	1230	57	805
20	50	340	e135	4060	e300	2160	230	255	727	1120	57	507
21	153	360	e125	1670	e600	1580	221	278	449	495	822	377
22	72	360	e115	952	e1200	1080	210	241	311	320	345	361
23	58	370	e110	620	992	733	212	219	241	216	208	371
24	53	352	e105	e380	1050	509	204	195	272	185	244	286
25	51	335	e100	e360	892	469	181	156	300	164	186	241
26	50	319	e100	605	689	438	180	125	222	141	120	228
27	50	298	e96	1100	504	409	174	143	190	121	97	211
28	53	396	e94	1010	797	403	164	263	150	89	88	351
29	58	439	e90	755	678	376	415	206	129	86	78	677
30	51	469	e88	578	---	351	1490	171	113	93	70	482
31	51	---	e86	415	---	304	---	139	---	119	64	---
TOTAL	1791	6953	6435	23082	12307	18289	10266	15045	6460	6554	3715	14246
MEAN	57.8	232	208	745	424	590	342	485	215	211	120	475
MAX	153	469	437	7400	1200	2160	1490	1430	1240	1230	822	1950
MIN	37	55	86	84	150	304	164	125	78	59	52	53
†	+2.9	+46	-35	+11.8	+16	+3.0	+13	-20.6	-9.7	-.79	-2.3	+14.2

† Change in contents, equivalent in cubic feet per second, in Yellow Creek Lake and Two Lick Creek Reservoir. Records of contents in Two Lick Creek Reservoir furnished by Pennsylvania Electric Co.
e Estimated.

KISKIMINETAS RIVER BASIN

03042500 TWO LICK CREEK AT GRACETON, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1996, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	149	254	374	350	443	542	419	315	229	195	113	142
MAX	466	606	722	745	925	1230	832	658	1091	1161	310	475
(WY)	1977	1986	1973	1996	1986	1994	1984	1978	1972	1977	1977	1996
MIN	21.0	53.2	99.7	106	116	93.9	167	86.2	53.6	30.2	40.0	29.8
(WY)	1969	1992	1990	1983	1993	1969	1968	1986	1992	1968	1968	1968

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1968 - 1996

ANNUAL TOTAL	67256	125143	
ANNUAL MEAN	184	342	293
HIGHEST ANNUAL MEAN			375
LOWEST ANNUAL MEAN			178
HIGHEST DAILY MEAN	663	Jan 21	21900
LOWEST DAILY MEAN	a34	Sep 20	11
ANNUAL SEVEN-DAY MINIMUM	34	Sep 24	14
INSTANTANEOUS PEAK FLOW		16700	b32000
INSTANTANEOUS PEAK STAGE		13.98	c18.65
10 PERCENT EXCEEDS	395	708	613
50 PERCENT EXCEEDS	134	219	180
90 PERCENT EXCEEDS	47	59	58

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 1967, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	94.7	129	252	373	452	615	491	333	130	105	93.8	63.1
MAX	628	305	635	811	1093	1097	786	634	271	644	377	199
(WY)	1955	1960	1955	1952	1956	1963	1957	1966	1960	1956	1956	1962
MIN	14.2	23.6	50.1	118	176	234	236	99.7	42.3	25.2	16.9	15.9
(WY)	1964	1954	1961	1956	1963	1957	1963	1955	1965	1962	1957	1952

SUMMARY STATISTICS

WATER YEARS 1952 - 1967

ANNUAL MEAN	260	
HIGHEST ANNUAL MEAN	415	1956
LOWEST ANNUAL MEAN	185	1954
HIGHEST DAILY MEAN	6800	Oct 16 1954
LOWEST DAILY MEAN	8.7	Sep 14 1952
ANNUAL SEVEN-DAY MINIMUM	12	Sep 6 1957
INSTANTANEOUS PEAK FLOW	d12900	Oct 16 1954
INSTANTANEOUS PEAK STAGE	12.71	Oct 16 1954
INSTANTANEOUS LOW FLOW	2.0	Sep 14, 15 1952
ANNUAL RUNOFF (CFSM)	1.52	
ANNUAL RUNOFF (INCHES)	20.67	
10 PERCENT EXCEEDS	644	
50 PERCENT EXCEEDS	120	
90 PERCENT EXCEEDS	21	

† Change in contents, equivalent in cubic feet per second, in Yellow Creek Lake and Two Lick Creek Reservoir. Records of contents in Two Lick Creek Reservoir furnished by Pennsylvania Electric Co.

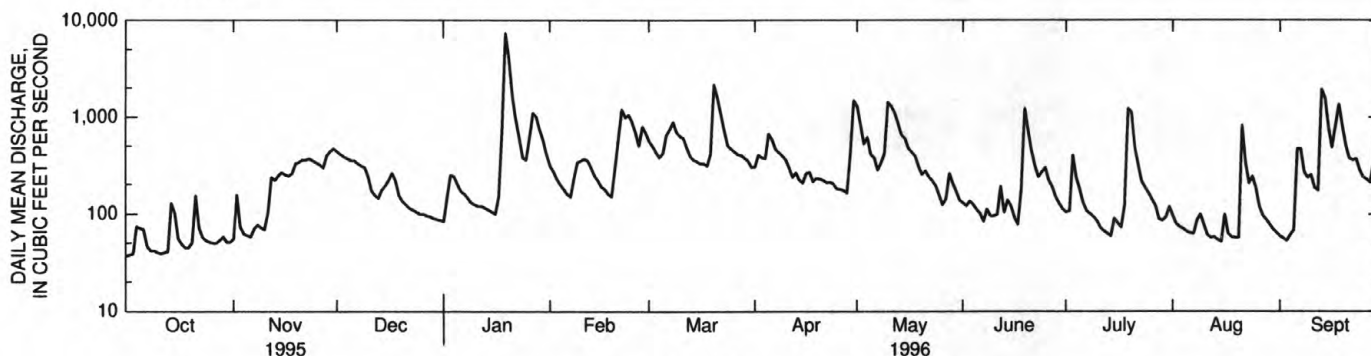
a Also Sept. 24, 25, 28, 29, 30.

b From rating curve extended above 4,500 ft³/s on basis of slope-area measurement of peak flow and contracted-opening measurement at gage height 12.71 ft at site 1.6 mi upstream from gage, adjusted to gage site.

c Backwater, from highwater mark.

d From rating curve extended above 4,500 ft³/s on basis of contracted-opening measurement of peak flow at site 1.6 mi upstream from gage, adjusted to gage site.

e Estimated.



October 1, 1995 to September 30, 1996

KISKIMINETAS RIVER BASIN

03045000 LOYALHANNA CREEK AT KINGSTON, PA

LOCATION.--Lat 40°17'33", long 79°20'27", Westmoreland County, Hydrologic Unit 05010008, on right bank 60 ft downstream from bridge on State Highway 217 at Kingston, 100 ft downstream from Miller Run, 1.9 mi upstream from Ninemile Run, and 3 mi southeast of Latrobe.

DRAINAGE AREA.--172 mi².

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only October to December 1939, published in WSP 1305.

REVISED RECORDS.--WSP 1335: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,013.16 ft above sea level (U.S. Army Corps of Engineers bench mark). Prior to Oct. 1, 1969, at datum 1.00 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated by Latrobe Reservoir, capacity, 3,670 acre-ft, and diversion works at Kingston. Figures of daily discharge do not include diversion from reservoir and at Kingston intake to borough of Latrobe. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1918, 15.8 ft, present datum, Oct. 15, 1954. Flood of Mar. 17 or 18, 1936 reached a stage of about 15.5 ft, present datum, from information by local residents, discharge, 21,000 ft³/s, from rating curve extended above 8,700 ft³/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 3,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 19	1300	*18,200	*13.37	May 9	0600	4,600	7.99
Feb. 28	0730	5,070	8.28				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e12	28	348	e49	e300	874	455	968	177	132	99	e16
2	e11	30	321	e150	e260	632	655	662	154	109	83	e15
3	e10	37	259	e1000	e230	490	518	511	164	186	70	e14
4	e12	54	297	598	e200	369	463	419	208	137	60	e14
5	e20	40	256	364	e180	452	807	392	147	98	53	e13
6	41	33	244	242	e160	1230	657	503	125	78	49	e20
7	29	33	207	189	e140	1230	573	422	112	67	44	397
8	24	56	e160	e140	e300	876	477	906	159	69	43	124
9	e20	60	e130	e120	e700	757	409	2600	147	63	59	75
10	e16	47	e100	e105	500	705	360	1290	110	53	44	60
11	e15	53	e80	e94	e400	445	315	1500	162	48	38	53
12	e13	225	e64	e80	e300	445	273	2010	331	44	38	47
13	e12	121	e62	e70	e250	438	243	1140	178	43	50	619
14	e14	124	e58	e66	e220	431	228	768	164	48	41	330
15	76	181	e160	e60	e190	812	191	610	132	77	35	177
16	37	161	e500	e68	e170	756	623	624	103	108	e31	157
17	e22	148	430	e80	e140	676	736	945	86	55	e28	1110
18	e18	152	312	e940	e125	589	584	810	126	73	e26	946
19	e17	232	e250	e8500	e105	905	525	614	924	1280	e24	549
20	21	237	e180	2490	e300	2050	454	493	478	567	e23	368
21	117	258	e140	1110	1220	1210	381	476	420	293	88	269
22	73	235	e125	704	1010	842	330	419	276	217	73	257
23	41	221	e110	556	777	679	310	321	203	177	40	385
24	31	262	e100	1120	748	592	324	268	351	133	46	241
25	27	209	e90	874	582	646	268	229	585	105	35	200
26	e25	184	e82	627	553	756	261	187	348	99	28	147
27	e23	363	e74	1130	1000	597	312	200	257	87	25	123
28	e22	1010	e68	849	3210	542	248	223	197	73	e22	399
29	e27	611	e62	627	1430	513	423	314	161	66	e20	747
30	36	412	e58	e500	---	422	1100	283	139	181	e18	411
31	32	---	e54	e380	---	375	---	209	---	142	e17	---
TOTAL	894	5817	5381	23882	15700	22336	13503	21316	7124	4908	1350	8283
MEAN	28.8	194	174	770	541	721	450	688	237	158	43.5	276
MAX	117	1010	500	8500	3210	2050	1100	2600	924	1280	99	1110
MIN	10	28	54	49	105	369	191	187	86	43	17	13
†	-1.4	-1.4	+9.0	+25	+16	+22	+6.5	+7.1	+3.3	+5.1	-1.4	+7.7

† Diversion from and change in contents in Latrobe Reservoir and diversion from Kingston intake, equivalent in cubic feet per second, furnished by Latrobe Municipal Authority.

e Estimated.

KISKIMINETAS RIVER BASIN

03045000 LOYALHANNA CREEK AT KINGSTON, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	104	203	356	384	475	619	529	375	230	122	101	91.6
MAX	689	785	834	850	1210	1305	1007	779	997	344	667	635
(WY)	1955	1986	1973	1952	1986	1963	1940	1952	1972	1990	1979	1971
MIN	2.76	5.09	48.1	79.0	137	175	178	115	40.5	7.76	7.04	4.20
(WY)	1954	1954	1961	1940	1978	1969	1946	1963	1991	1966	1957	1957

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1940 - 1996

ANNUAL TOTAL	64250		130494									
ANNUAL MEAN	176	†+5.5	357	†+8.4						298		
HIGHEST ANNUAL MEAN										447		1971
LOWEST ANNUAL MEAN										160		1954
HIGHEST DAILY MEAN										14200		Jun 23 1972
LOWEST DAILY MEAN	1090	Feb 28	e8500	Jan 19						.20	Oct 23,24	1953a
ANNUAL SEVEN-DAY MINIMUM	e10	Oct 3	e10	Oct 3						.63	Oct 19	1953
INSTANTANEOUS PEAK FLOW	a2	Sep 6	15	Aug 30						b29700	Oct 15	1954
INSTANTANEOUS PEAK STAGE			18200	Jan 19						c15.80	Oct 15	1954
INSTANTANEOUS LOW FLOW			13.37	Jan 19						.10	Sep 4	1953
10 PERCENT EXCEEDS	426		821							702		
50 PERCENT EXCEEDS	124		194							160		
90 PERCENT EXCEEDS	17		28							21		

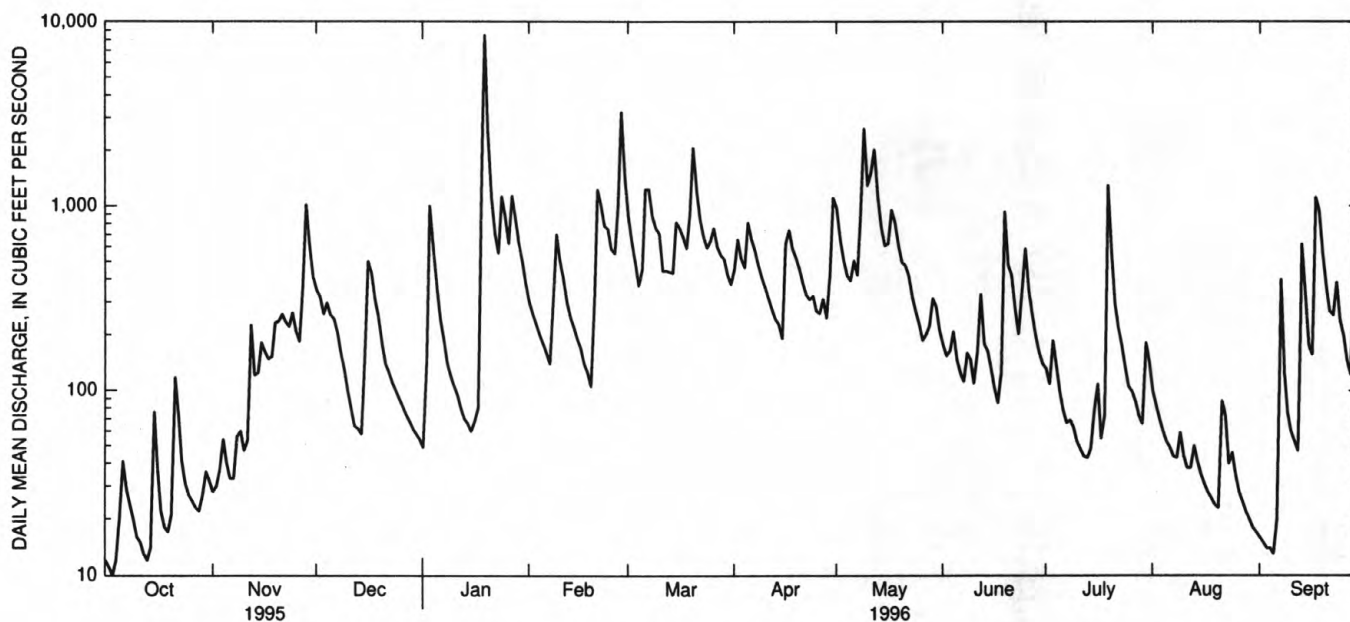
† Diversion from and change in contents in Latrobe Reservoir and diversion from Kingston intake, equivalent in cubic feet per second, furnished by Latrobe Municipal Authority.

a Computed using estimated discharges.

b From rating curve extended above 8,700 ft³/s on basis of slope-area measurement at gage height 13.37 ft.

c Present datum, from floodmarks.

e Estimated.



October 1, 1995 to September 30, 1996

KISKIMINETAS RIVER BASIN

03048500 KISKIMINETAS RIVER AT VANDERGRIFT, PA

LOCATION.--Lat 40°36'16", long 79°33'08", Westmoreland County, Hydrologic Unit 05010008, on left bank 0.5 mi upstream from bridge on State Highway Alternate 66 at Vandergrift, and 2.2 mi upstream from Pine Run.

DRAINAGE AREA.--1,825 mi².

PERIOD OF RECORD.--August 1937 to current year. Monthly discharge only for some periods, published in WSP 1305. October 1920 to September 1932 (gage heights and discharge measurements only) in reports of Pennsylvania Department of Forests and Waters.

GAGE.--Water-stage recorder. Datum of gage is 769.40 ft above sea level (U.S. Army Corps of Engineers bench mark). Oct. 1, 1920 to Sept. 30, 1930, nonrecording gage, Oct. 1, 1930 to Sept. 30, 1932, water-stage recorder, at site 0.6 mi downstream at different datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated since 1971 by Yellow Creek Lake (station 03042260), since 1952 by Conemaugh River Lake, 23 mi upstream, since 1942 by Loyahanna Lake, 20 mi upstream, and by other reservoirs above station; the 11 most effective of which have a combined capacity of 105,700 acre-ft. Figures of daily discharge do not include diversion from Beaver Run Reservoir to plants and communities downstream, nor into the Monongahela River Basin. Evaporation from operation of Homer City and Conemaugh generating stations, which began during 1969 and 1970, respectively, can amount to as much as 45 ft³/s. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 18, 1936 reached a stage of 41.64 ft, from floodmark at present site, discharge, 185,000 ft³/s, by slope-area measurement.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	228	548	5240	1240	16600	16600	6840	5400	3290	2680	1390	657
2	231	580	4580	1490	13100	17900	5790	8580	2320	2680	1390	664
3	460	561	3740	3090	10300	16000	6080	8170	1790	3560	1450	614
4	532	547	3740	5110	8100	10500	5950	7850	1600	3280	1510	671
5	543	542	4090	4920	5800	6290	6340	5960	2230	3890	763	628
6	624	540	4580	2450	3890	6050	6550	5640	1280	3060	879	652
7	574	555	3670	1630	3990	6300	6600	4310	1400	1350	835	938
8	566	556	2500	1200	5090	9040	5920	4540	1450	1320	915	838
9	548	606	1910	1460	5280	13200	4530	3760	1480	1300	1030	1310
10	487	614	1850	2200	5300	12300	4060	4830	1780	1310	1080	4410
11	484	804	1680	2420	4940	10600	3550	5680	1470	1370	1510	4170
12	324	875	1180	1180	5360	6720	2630	5070	1660	1170	1540	3680
13	243	1060	1390	e1350	6070	3400	2860	4800	2100	635	1550	5610
14	299	2060	1910	e1300	6030	2710	2570	6190	2080	623	942	7370
15	387	2700	1910	e1300	5110	4170	2810	9660	1750	660	910	7840
16	511	2790	2070	e1350	e3400	5660	3030	8590	1620	794	970	7490
17	610	2400	3050	e1600	e3300	6910	3280	12100	1500	2160	915	7570
18	607	1980	4060	e2000	e3200	6670	3800	12600	1570	1650	871	8680
19	597	2040	3650	e2300	e3100	5930	4370	12400	4570	1910	824	10700
20	529	2130	3120	e2700	e2500	5260	4570	10100	5660	2580	502	12700
21	533	2490	2510	e6000	e2000	4860	4460	5590	8580	3740	1210	11700
22	529	3090	1850	15800	e3000	8730	3340	5280	9670	6840	956	8370
23	613	3320	1850	20300	e6200	12300	2740	5730	8510	7360	2750	6760
24	1250	2920	1780	14300	e6200	12200	2380	5560	7470	7010	1920	5860
25	1610	2390	1770	10400	e6800	11700	2890	5000	6810	5440	1870	4160
26	1410	2040	1680	12600	9640	11300	2530	4410	8850	2450	1910	3040
27	949	2050	1330	12800	15300	10500	2860	2810	7230	2600	1740	2680
28	890	2270	1250	14800	15800	10300	2840	3280	3200	2570	1110	2360
29	541	3530	1260	18600	15700	9150	3010	3130	2770	2470	554	3120
30	531	5570	1240	18600	---	7500	3930	3230	2370	2550	549	3640
31	543	---	1280	18300	---	7220	---	3910	---	2240	664	---
TOTAL	18783	54158	77720	204790	201100	277970	123110	194160	108060	83252	37009	138882
MEAN	606	1805	2507	6606	6934	8967	4104	6263	3602	2686	1194	4629
MAX	1610	5570	5240	20300	16600	17900	6840	12600	9670	7360	2750	12700
MIN	228	540	1180	1180	2000	2710	2380	2810	1280	623	502	614
CFSM	.33	.99	1.37	3.62	3.80	4.91	2.25	3.43	1.97	1.47	.65	2.54
IN.	.38	1.10	1.58	4.17	4.10	5.67	2.51	3.96	2.20	1.70	.75	2.83

e Estimated.

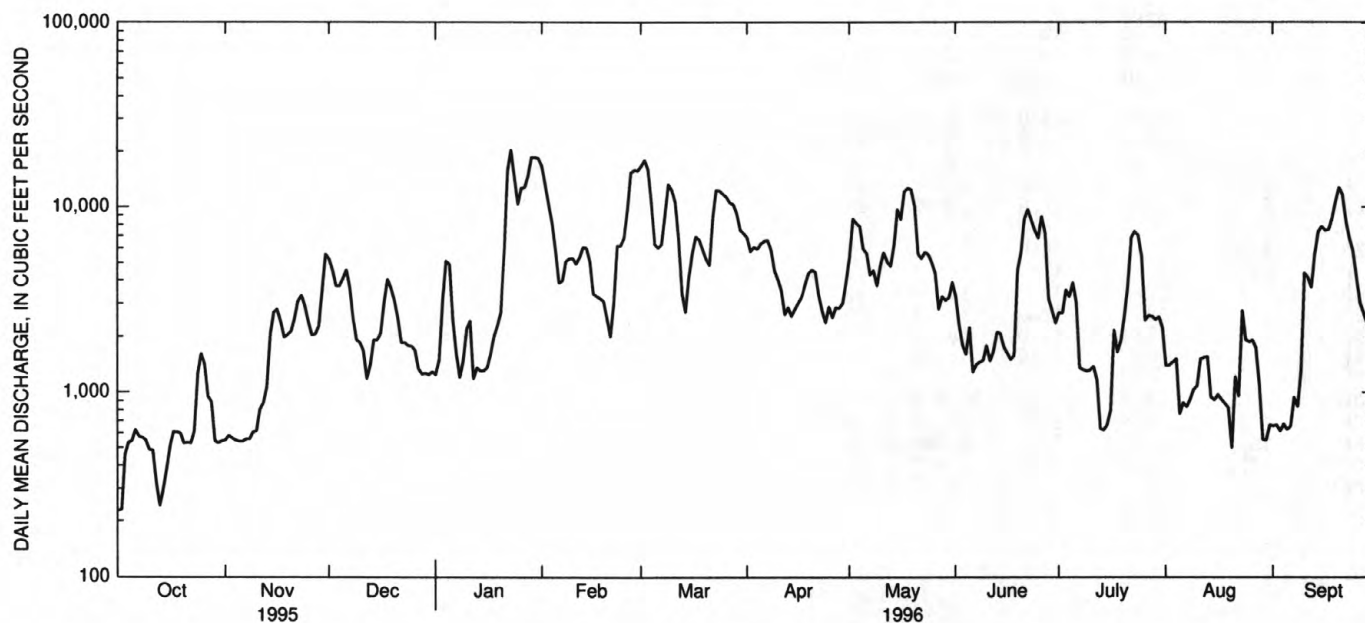
KISKIMINETAS RIVER BASIN

03048500 KISKIMINETAS RIVER AT VANDERGRIFF, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1287	1889	3385	3769	4704	6541	5688	3723	2463	1568	1161	1054
MAX	6429	5697	9057	8454	10140	12400	12550	7245	8262	5469	4138	4629
(WY)	1955	1986	1973	1991	1956	1945	1993	1978	1972	1977	1958	1996
MIN	255	307	587	847	1724	1802	1727	1127	666	378	363	297
(WY)	1964	1954	1961	1956	1958	1969	1946	1941	1965	1965	1939	1939

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1938 - 1996
ANNUAL TOTAL	736817	1518994	
ANNUAL MEAN	2019	4150	3094
HIGHEST ANNUAL MEAN			4518
LOWEST ANNUAL MEAN			1777
HIGHEST DAILY MEAN	7630	Mar 2	60400
LOWEST DAILY MEAN	221	Sep 2,3,4,5	60
ANNUAL SEVEN-DAY MINIMUM	222	Aug 31	145
INSTANTANEOUS PEAK FLOW			71900
INSTANTANEOUS PEAK STAGE			25.70
INSTANTANEOUS LOW FLOW			60
ANNUAL RUNOFF (CFSM)		2.27	1.70
ANNUAL RUNOFF (INCHES)		30.96	23.04
10 PERCENT EXCEEDS	4480	9800	7100
50 PERCENT EXCEEDS	1770	2780	1830
90 PERCENT EXCEEDS	397	612	490



BUFFALO CREEK BASIN

03049000 BUFFALO CREEK NEAR FREEPORT, PA

LOCATION.--Lat 40°42'57", long 79°41'59", Butler County, Hydrologic Unit 05010009, on right bank 0.6 mi upstream from Little Buffalo Creek and 3 mi north of Freeport.

DRAINAGE AREA.--137 mi².

PERIOD OF RECORD.--October 1940 to current year. Monthly discharge only for October 1940, published in WSP 1305.

GAGE.--Water-stage recorder. Elevation of gage is 792 ft above sea level, by barometer. Prior to July 19, 1962, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Several measurements of water temperature were made during the year.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 19	1130	*7,800	*9.94	Mar. 20	0530	2,870	5.76
Feb. 20	1900	2,220	5.01	June 19	0730	2,220	5.01

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.9	27	144	e110	194	441	162	764	54	99	26	e18
2	8.7	56	127	e150	227	346	226	703	49	108	e25	e16
3	10	151	106	237	181	277	172	502	49	163	e23	e15
4	32	111	104	152	e150	214	164	400	59	106	e21	e15
5	36	70	90	e125	e130	274	224	328	79	78	e19	e16
6	108	54	e80	e115	e115	838	192	283	58	63	e18	e18
7	45	55	e72	e110	e100	782	184	227	56	55	e17	e250
8	26	96	e66	e105	e120	553	170	251	73	51	e19	e160
9	20	82	e64	e100	e160	428	159	214	91	47	e43	e110
10	17	66	e60	e100	e210	331	146	577	61	41	e25	e160
11	16	85	e56	e98	e140	288	136	1100	81	37	e19	e130
12	14	394	e54	e96	e100	263	126	1310	141	33	e17	e100
13	13	221	e52	e94	e70	252	119	789	88	32	e16	e800
14	48	218	e100	e92	e98	248	111	522	77	39	e15	e470
15	151	324	e230	e90	e86	253	99	387	72	114	e18	e310
16	50	252	223	e88	e78	227	147	344	54	105	e19	e240
17	32	202	176	e130	e70	208	139	279	43	129	e17	e380
18	25	215	144	e700	e66	196	118	246	287	87	e15	e600
19	22	323	e125	e4300	e60	272	122	199	1550	179	e13	e350
20	21	339	e115	1410	e150	2120	139	166	659	136	e12	e250
21	53	325	e105	675	e600	1190	141	153	346	82	e105	e200
22	44	260	e100	e380	539	730	124	144	233	65	e70	e180
23	29	205	e96	e230	427	500	142	118	183	59	e45	e160
24	25	168	e92	e270	410	369	210	103	333	49	e44	e140
25	22	137	e88	e330	328	314	177	90	500	41	e38	e120
26	21	121	e86	e400	295	274	184	80	283	40	e32	e100
27	22	116	e84	e520	349	214	193	82	200	34	e29	e92
28	22	213	e80	456	957	194	158	109	157	31	e25	e300
29	24	193	e78	362	637	187	445	93	138	27	e23	762
30	26	160	e74	311	---	165	776	75	117	32	e21	401
31	26	---	e72	256	---	152	---	62	---	30	e19	---
TOTAL	1017.6	5239	3143	12592	7047	13100	5605	10700	6171	2192	848	6863
MEAN	32.8	175	101	406	243	423	187	345	206	70.7	27.4	229
MAX	151	394	230	4300	957	2120	776	1310	1550	179	105	800
MIN	8.7	27	52	88	60	152	99	62	43	27	12	15
CFSM	.24	1.27	.74	2.96	1.77	3.08	1.36	2.52	1.50	.52	.20	1.67
IN.	.28	1.42	.85	3.42	1.91	3.56	1.52	2.91	1.68	.60	.23	1.86

e Estimated.

BUFFALO CREEK BASIN

03049000 BUFFALO CREEK NEAR FREEPORT, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	70.7	136	244	260	320	407	318	222	137	85.1	66.1	57.1
MAX	571	720	625	821	861	964	704	525	732	522	511	287
(WY)	1955	1986	1991	1952	1956	1945	1957	1952	1972	1990	1984	1975
MIN	3.63	5.61	7.15	29.3	70.7	49.2	84.9	44.7	20.8	7.75	4.92	5.82
(WY)	1961	1961	1961	1977	1993	1969	1946	1941	1991	1966	1957	1946

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1941 - 1996

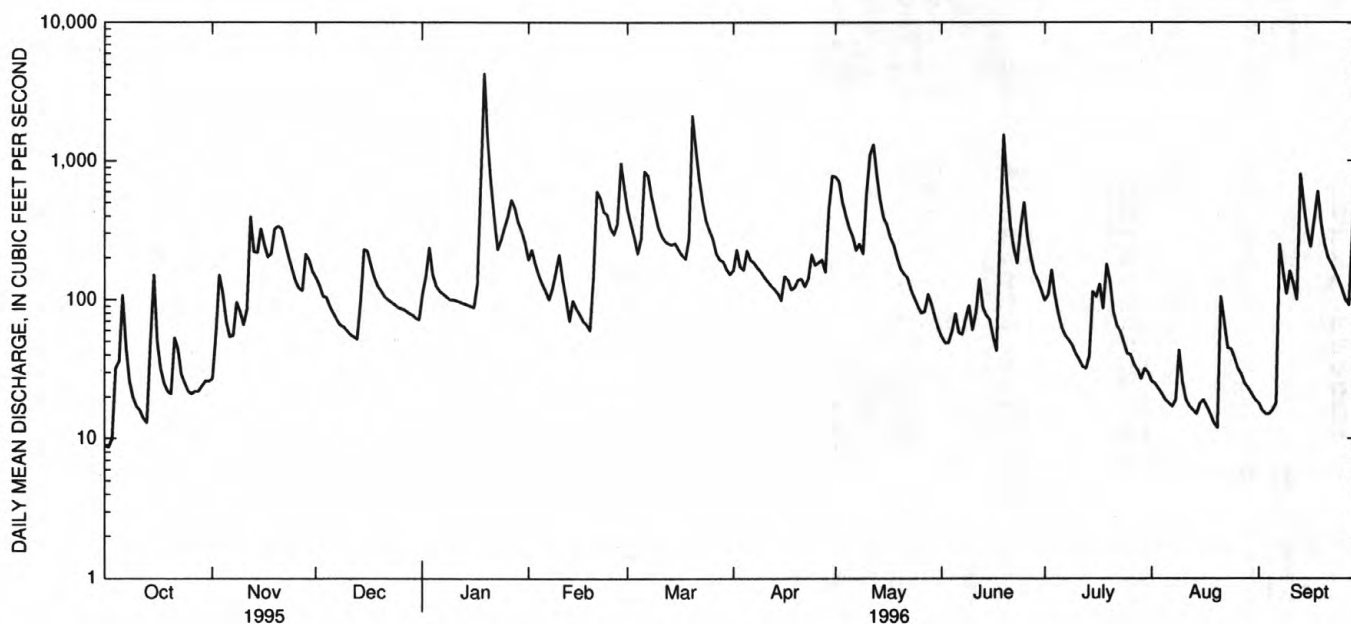
ANNUAL TOTAL	45363.5	74517.6	
ANNUAL MEAN	124	204	193
HIGHEST ANNUAL MEAN			312
LOWEST ANNUAL MEAN			125
HIGHEST DAILY MEAN	1080	Jan 16	7710
LOWEST DAILY MEAN	8.7	Oct 2	1.3
ANNUAL SEVEN-DAY MINIMUM	9.3	Sep 4	1.7
INSTANTANEOUS PEAK FLOW			7800
INSTANTANEOUS PEAK STAGE			9.94
INSTANTANEOUS LOW FLOW			8.2
ANNUAL RUNOFF (CFSM)	.91		1.49
ANNUAL RUNOFF (INCHES)	12.32		20.23
10 PERCENT EXCEEDS	259		427
50 PERCENT EXCEEDS	90		118
90 PERCENT EXCEEDS	15		22

a From rating curve extended above 4,300 ft³/s on basis of slope-area measurement of peak flow.

b From floodmarks.

c Minimum observed.

e Estimated.



October 1, 1995 to September 30, 1996

OHIO RIVER MAIN STEM

03049500 ALLEGHENY RIVER AT NATRONA, PA
(National water-quality assessment station)

LOCATION.--Lat 40°36'55", long 79°43'07", Allegheny County, Hydrologic Unit 05010009, on right bank 520 ft upstream from dam at lock 4 at Natrona, 5.8 mi downstream from Kiskiminetas River, at mile 24.3.

DRAINAGE AREA.--11,410 mi², approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1938 to current year.

REVISED RECORDS.--WSP 1435: 1939.

GAGE.--Water-stage recorder and concrete dam control. Datum of gage is 736.36 ft above sea level (U.S. Army Corps of Engineers bench mark). Prior to Apr. 14, 1940, nonrecording gage and Apr. 15, 1940 to Oct. 22, 1990, water-stage recorder at same site at datum 0.75 ft higher.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Allegheny Reservoir, Chautauqua and Tionesta Lakes, Union City Reservoir, Woodcock Creek, East Branch Clarion River, Mahoning Creek, Crooked Creek, Yellow Creek, Conemaugh River, and Loyahanna Lakes and by 15 smaller reservoirs, combined capacity, excluding that of Chautauqua Lake, 2,069,000 acre-ft. Slight diversion since 1952 from Beaver Run Reservoir into the Monongahela River Basin. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 18, 1936 reached a stage of 32.06 ft, discharge, 365,000 ft³/s, determined by U.S. Army Corps of Engineers.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3310	5730	31000	8520	53200	66000	22700	59000	10500	13200	11900	4020
2	3310	7450	29700	10400	46800	61500	21600	61900	8770	12200	12600	4300
3	4040	8960	28600	12400	40500	56300	20400	56800	7720	11900	11500	3640
4	4890	10400	26900	11800	36100	49000	19500	50000	8250	10800	9740	4260
5	4820	10600	26700	11400	30500	42800	18000	44200	8830	10400	7880	4450
6	5760	9400	27400	8380	28200	52400	18200	38100	6910	10200	7280	4220
7	6530	9400	25400	7540	23200	55000	17100	32200	6620	7230	6130	8710
8	6360	8990	24700	6920	17100	50200	16400	31300	8060	6380	6010	10500
9	6040	10300	21200	6690	18100	48900	14800	28400	14400	6620	8720	10100
10	5420	11200	18000	7590	20700	44800	14500	31300	15700	6250	10300	17200
11	4820	11200	12400	8050	23600	40000	13300	51200	14400	6230	9710	17200
12	5060	15800	11600	7310	26300	34200	11200	91600	15400	5690	7180	15700
13	3650	27200	9120	7690	26500	27500	11000	80100	15500	4830	7190	19800
14	4080	28100	11400	7540	25700	25800	12500	67200	16400	4240	5380	30600
15	4530	27900	13400	8210	23800	25100	21900	65500	15700	6030	4970	31200
16	4740	27700	16000	7920	19500	27000	27700	60100	12900	6830	5960	27600
17	5690	27300	19900	9720	16200	27300	31900	57300	11100	11700	6980	26700
18	4290	25900	22100	15200	16300	25300	34400	59500	11200	13900	5760	41000
19	5540	25100	19800	83300	15700	25400	37500	57900	27100	38600	5380	49900
20	4960	27300	14400	166000	18400	38500	34900	52500	53700	85500	4940	44800
21	4550	29000	13500	108000	32200	40000	31600	41100	46000	39700	6810	38300
22	5930	27600	11000	65800	44300	38500	27400	35500	39600	33900	10100	31800
23	7810	27300	11700	65100	51700	39800	26600	35100	34400	30100	8920	28400
24	5730	24500	12500	63800	49000	36900	29200	33200	32300	25900	8870	27400
25	7950	22300	11000	69200	47600	34900	36600	30900	32900	22600	8980	22900
26	10200	19700	10600	63300	45100	33900	37000	27800	32400	15500	6810	18700
27	9360	18200	9560	59300	52400	32400	33500	22100	27000	13200	7810	16600
28	9490	19400	9820	58800	63800	31400	31200	17800	21300	11000	5710	17500
29	7200	24700	9300	60400	69500	30800	29700	11900	18800	9490	4360	41900
30	6210	31000	8780	60400	---	27000	42200	13200	15900	9700	4020	44500
31	7740	---	8460	59700	---	25000	---	12200	---	11000	3770	---
TOTAL	180010	579630	525940	1146380	982000	1193600	744500	1356900	589760	500820	231670	663900
MEAN	5807	19320	16970	36980	33860	38500	24820	43770	19660	16160	7473	22130
MAX	10200	31000	31000	166000	69500	66000	42200	91600	53700	85500	12600	49900
MIN	3310	5730	8460	6690	15700	25000	11000	11900	6620	4240	3770	3640
CFSM	.51	1.69	1.49	3.24	2.97	3.37	2.17	3.84	1.72	1.42	.65	1.94
IN.	.59	1.89	1.71	3.74	3.20	3.89	2.43	4.42	1.92	1.63	.76	2.16

OHIO RIVER MAIN STEM

03049500 ALLEGHENY RIVER AT NATRONA, PA--Continued

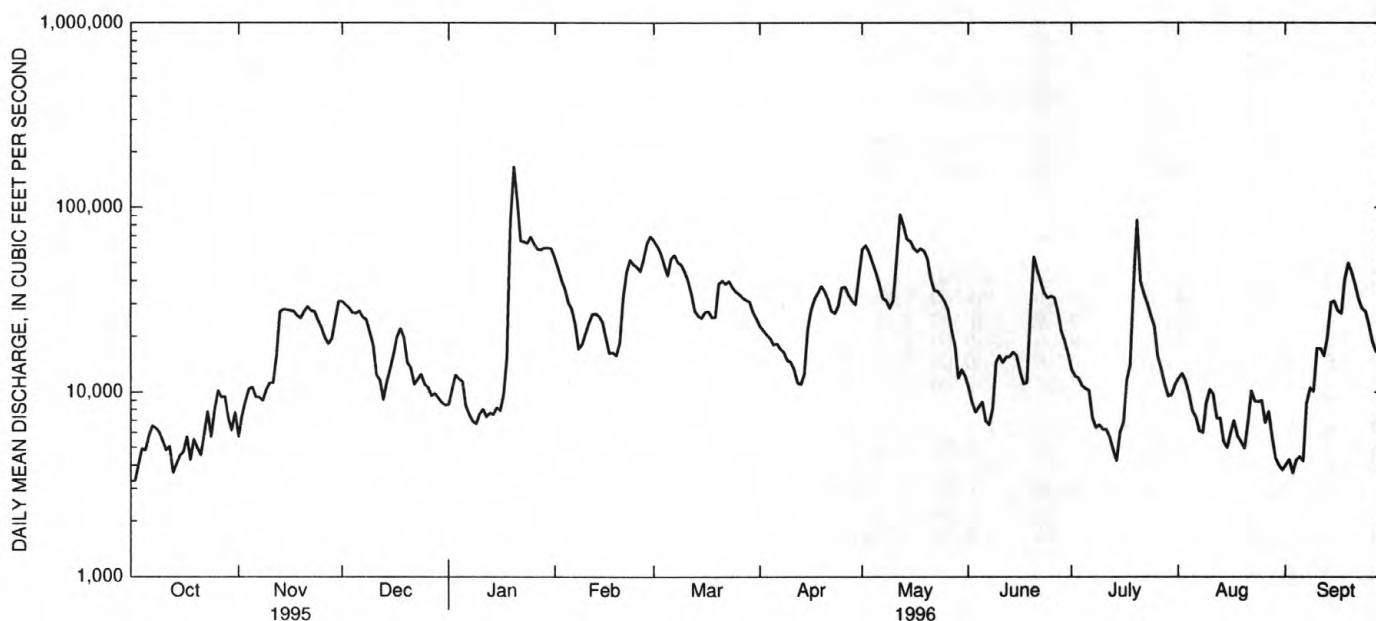
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	9616	16350	23980	24680	27350	39040	35840	22970	14790	9271	6716	7041
MAX	34470	45220	48690	68600	53390	87030	83780	48400	45820	34630	23020	22690
(WY)	1991	1986	1978	1952	1976	1945	1940	1943	1989	1972	1956	1990
MIN	1227	2686	2316	4520	7167	10410	9000	6129	3759	1944	1786	1444
(WY)	1964	1954	1961	1961	1963	1969	1946	1941	1991	1966	1962	1939

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1939 - 1996	
ANNUAL TOTAL	5067150		8695110		19760	
ANNUAL MEAN	13880		23760		27810	
HIGHEST ANNUAL MEAN					13540	
LOWEST ANNUAL MEAN					206000	
HIGHEST DAILY MEAN	44700	Jan 24	166000	Jan 20	949	Dec 31 1942
LOWEST DAILY MEAN	2210	Aug 25	3310	Oct 1, 2	1030	Oct 26 1963
ANNUAL SEVEN-DAY MINIMUM	2600	Aug 23	4050	Aug 29	238000	Oct 25 1963
INSTANTANEOUS PEAK FLOW			182000	Jan 20	b27.46	Dec 30 1942
INSTANTANEOUS PEAK STAGE			a24.18	Jan 20	985	Dec 30 1942
INSTANTANEOUS LOW FLOW					1.73	Oct 22 1963
ANNUAL RUNOFF (CFSM)			2.08		23.53	
ANNUAL RUNOFF (INCHES)			28.35		45200	
10 PERCENT EXCEEDS	28800		51900		13100	
50 PERCENT EXCEEDS	10600		17900		3090	
90 PERCENT EXCEEDS	3610		5750			

a From floodmark in gage.

b Datum then in use.



OHIO RIVER MAIN STEM

03049625 ALLEGHENY RIVER AT NEW KENSINGTON, PA
(National water-quality assessment station)

WATER-QUALITY RECORDS

LOCATION.--Lat 40°33'52", long 79°46'22", Allegheny County, Hydrologic Unit 05010009, at New Kensington highway bridge, 5.1 mi downstream from dam at Lock 4 at Natrona, 5.3 mi down stream from gaging station at Natrona, and 19.0 mi upstream from mouth.

DRAINAGE AREA.--11,500 mi².

PERIOD OF RECORD.--July 1972 to December 1973, October 1974 to current year.

REMARKS.--Records of discharge are given for 03049500 Allegheny River at Natrona, Pa. Additional sites in the fixed-station network are shown in figure 4, page 26.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996												
DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (μS/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	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)	
DEC 06...	1200	28200	210	6.1	4.0	740	13.0	68	19	5.1	9.3	
JAN 20...	1445	180000	177	5.5	1.5	--	--	47	13	3.6	9.6	
APR 25...	0930	37800	194	7.4	12.0	735	10.0	65	18	4.8	8.6	
MAY 16...	0900	58500	147	7.3	11.0	737	12.0	50	14	3.7	5.5	
JUN 24...	0845	31700	194	6.7	22.0	735	10.0	65	18	4.8	7.2	
JUL 22...	0930	36700	167	6.9	20.5	734	7.2	51	14	4.0	6.9	
AUG 08...	0900	5830	290	7.6	25.0	739	7.4	97	26	7.7	14	
SEP 11...	0930	14500	350	7.6	23.5	741	8.8	110	31	8.8	16	
DATE		POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	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 DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
DEC 06...		1.4	27	42	14	<0.10	4.9	112	<0.010	0.800	0.030	<0.20
JAN 20...		2.0	--	30	14	0.10	4.3	96	0.010	1.00	0.200	2.3
APR 25...		1.2	25	40	12	<0.10	3.6	110	<0.010	0.480	<0.015	<0.20
MAY 16...		1.2	20	28	8.2	<0.10	4.7	91	<0.010	0.500	0.040	0.30
JUN 24...		1.6	25	40	9.2	0.10	5.5	108	0.020	0.740	0.060	0.20
JUL 22...		2.1	15	41	8.0	<0.10	4.6	102	0.020	0.620	0.070	0.40
AUG 08...		1.7	37	73	15	0.10	4.2	180	<0.010	0.500	<0.015	0.20
SEP 11...		2.1	43	87	19	0.10	3.3	203	0.020	0.500	0.050	0.30
DATE		NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	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 (μG/L AS AL) (01106)	IRON, DIS-SOLVED (μG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (μG/L AS MN) (01056)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C) (00689)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
DEC 06...		<0.20	0.020	<0.010	<0.010	30	52	200	--	--	--	--
JAN 20...		0.60	0.650	0.010	0.010	--	160	620	--	--	--	--
APR 25...		<0.20	0.020	<0.010	<0.010	--	49	180	2.2	0.40	12	92
MAY 16...		<0.20	0.050	<0.010	<0.010	--	53	110	2.5	1.5	30	86
JUN 24...		0.30	<0.010	<0.010	<0.010	--	34	97	3.6	0.70	30	96
JUL 22...		0.30	0.050	<0.010	<0.010	--	65	140	4.2	3.6	190	99
AUG 08...		<0.20	0.030	<0.010	<0.010	--	14	120	2.1	0.60	9	98
SEP 11...		<0.20	<0.010	<0.010	<0.010	--	12	100	2.0	0.40	13	98

DEER CREEK BASIN

03049646 DEER CREEK NEAR DORSEYVILLE, PA
(National water-quality assessment station)

LOCATION.--Lat 40°34'57", long 79°51'41", Allegheny County, Hydrologic Unit 050100009, on left bank, 0.5 mi upstream from Blue Run, 0.6 mi downstream from Cunningham Run, and about 1.0 mi north of Indianola, Pa.

DRAINAGE AREA.--27.0 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1996 to current year.

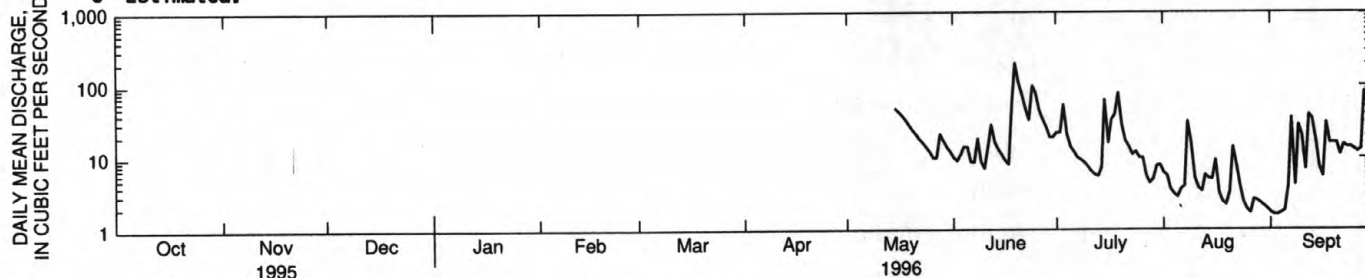
GAGE.--Water-stage recorder. Elevation of gage is 840 ft above sea level, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are fair. Several measurements of water temperature were made during the year. Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	e10	22	6.1	e1.7
2	---	---	---	---	---	---	---	---	e9.0	22	5.6	e1.6
3	---	---	---	---	---	---	---	---	e11	53	3.6	e1.6
4	---	---	---	---	---	---	---	---	14	21	3.1	e1.7
5	---	---	---	---	---	---	---	---	14	14	2.8	e1.8
6	---	---	---	---	---	---	---	---	8.7	12	3.6	4.0
7	---	---	---	---	---	---	---	---	8.6	10	4.0	35
8	---	---	---	---	---	---	---	---	18	9.3	31	4.2
9	---	---	---	---	---	---	---	---	8.7	8.5	16	28
10	---	---	---	---	---	---	---	---	7.0	7.5	5.2	20
11	---	---	---	---	---	---	---	---	e14	6.4	3.8	6.9
12	---	---	---	---	---	---	---	---	e28	5.8	3.4	39
13	---	---	---	---	---	---	---	---	e16	5.5	5.7	34
14	---	---	---	---	---	---	---	---	e13	7.3	5.1	17
15	---	---	---	---	---	---	---	e48	e11	62	5.0	7.4
16	---	---	---	---	---	---	---	e43	e9.0	16	9.2	5.5
17	---	---	---	---	---	---	---	e38	e8.0	33	3.2	30
18	---	---	---	---	---	---	---	e33	e50	39	2.4	16
19	---	---	---	---	---	---	---	e28	e200	77	2.2	16
20	---	---	---	---	---	---	---	e24	e110	28	3.3	16
21	---	---	---	---	---	---	---	e21	75	17	e14	11
22	---	---	---	---	---	---	---	e18	47	14	e8.0	15
23	---	---	---	---	---	---	---	e16	33	11	4.0	14
24	---	---	---	---	---	---	---	e14	98	12	2.4	14
25	---	---	---	---	---	---	---	e12	77	10	1.9	13
26	---	---	---	---	---	---	---	e10	45	10	1.7	12
27	---	---	---	---	---	---	---	e10	33	5.5	2.6	13
28	---	---	---	---	---	---	---	e21	26	4.4	2.5	82
29	---	---	---	---	---	---	---	e17	19	5.0	e2.3	51
30	---	---	---	---	---	---	---	e14	19	7.6	e2.1	22
31	---	---	---	---	---	---	---	e12	---	7.9	e1.9	---
TOTAL	---	---	---	---	---	---	---	---	1040.0	563.7	167.7	534.4
MEAN	---	---	---	---	---	---	---	---	34.7	18.2	5.41	17.8
MAX	---	---	---	---	---	---	---	---	200	77	31	82
MIN	---	---	---	---	---	---	---	---	7.0	4.4	1.7	1.6
CFSM	---	---	---	---	---	---	---	---	1.28	.67	.20	.66
IN.	---	---	---	---	---	---	---	---	1.43	.78	.23	.74

e Estimated.



October 1, 1995 to September 30, 1996

DEER CREEK BASIN

03049646 DEER CREEK NEAR DORSEYVILLE, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1996 to current year.

REMARKS.--All water-quality samples collected and analyzed by the U.S. Geological Survey. Additional sites in the fixed-station network are shown in figure 4, page 26.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (µS/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	HARDNESS TOTAL (MG/L AS CaCO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg) (00925)	SODIUM, DIS-SOLVED (MG/L AS Na) (00930)
APR 25...	1415	40	656	7.8	12.0	729	11.8	150	41	11	72
MAY 15...	0915	49	--	7.7	14.5	737	--	130	37	10	45
JUN 24...	1320	28	657	7.1	21.0	733	8.8	170	47	12	64
JUL 22...	1400	14	709	8.0	18.0	733	9.1	180	51	13	69
AUG 08...	1300	3.9	1200	8.3	21.0	740	11.8	210	57	17	150
SEP 11...	1315	6.9	825	8.3	20.0	734	10.2	170	47	12	95

DATE	POTASSIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKALINITY WAT DIS TOT IT FIELD (MG/L AS CaCO3) (39086)	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) (70300)	NITROGEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)
APR 25...	2.2	128	77	61	0.20	5.5	349	<0.010	0.450	<0.015	<0.20
MAY 15...	1.9	97	59	49	0.20	6.1	283	<0.010	0.680	0.020	<0.20
JUN 24...	2.5	136	75	60	0.30	8.3	372	0.010	0.540	0.040	<0.20
JUL 22...	2.9	164	77	69	0.20	8.0	395	0.010	0.470	0.030	<0.20
AUG 08...	3.5	288	170	63	0.30	5.8	650	<0.010	<0.050	<0.015	<0.20
SEP 11...	3.5	168	120	62	0.30	7.6	461	0.010	0.490	<0.015	0.20

DATE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	PHOSPHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	IRON, DIS-SOLVED (µG/L AS FE) (01046)	MANGANESE, DIS-SOLVED (µG/L AS MN) (01056)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C) (00689)	SEDIMENT, SUSPENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
APR 25...	<0.20	<0.010	<0.010	<0.010	14	26	1.8	0.20	4	45
MAY 15...	<0.20	0.020	<0.010	<0.010	12	31	1.7	0.50	4	78
JUN 24...	<0.20	<0.010	<0.010	0.010	5.0	25	2.6	0.90	5	96
JUL 22...	<0.20	0.020	<0.010	0.010	4.0	25	2.0	0.10	5	93
AUG 08...	<0.20	<0.010	<0.010	<0.010	8.0	23	1.6	--	1	80
SEP 11...	0.20	0.030	<0.010	0.020	12	13	3.0	0.40	4	85

DEER CREEK BASIN

03049646 DEER CREEK NEAR DORSEYVILLE, PA.--Continued

REMARKS.--Samples are filtered through a glass-fiber membrane filter with openings that are 0.7 microns in size to remove sediment and microorganisms. Therefore, this schedule is suitable for compounds dissolved in water. Each sample was analyzed for all of the compounds in this schedule. The MDL provides an index to indicate where measurement uncertainty is increased. When an analyte is detected and all criteria for a positive result are met, the concentration is reported. If the Concentration is less than the MDL, an 'E' code will be reported with the value. If the analyte is qualitatively identified as present, but the quantitative determination is substantially more uncertain, the NWQL will identify the result with an 'E' code even though the measured value is greater than the MDL. A value reported with an 'E' code should be used with caution. When no analyte is detected in a sample, the default reporting value is the MDL preceded by a less than sign (<).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	ACETO- CHLOR, WATER FLTRD REC (μG/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (μG/L) (46342)	DEETHYL ATRA- ZINE, WATER, DISS, REC (μG/L) (04040)	ATRA- ZINE, WATER, DISS, REC (μG/L) (39632)	METHYL AZIN- PHOS WAT FLT 0.7 U (μG/L) (82686)	BEN- FLUR- ALIN WAT FLD 0.7 U (μG/L) (82673)	BUTYL- ATE, WATER, DISS, REC (μG/L) (04028)	CAR- BARYL WATER FLTRD 0.7 U (μG/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 U (μG/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (μG/L) (38933)	CYANA- ZINE, WATER, DISS, REC (μG/L) (04041)	DCPA WATER FLTRD 0.7 U (μG/L) (82682)
JUN 19...	<0.002	<0.002	E0.003	0.250	<0.001	<0.002	<0.002	E0.044	<0.003	0.004	<0.004	<0.002
DATE	P,P' DDE DISSOLV (μG/L) (34653)	DI- AZINON, DIS- SOLVED (μG/L) (39572)	DI- ELDRIN DIS- SOLVED (μG/L) (39381)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U (μG/L) (82660)	DISUL- FOTON WATER FLTRD 0.7 U (μG/L) (82677)	EPTC WATER FLTRD 0.7 U (μG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 U (μG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U (μG/L) (82672)	FONOFOS WATER DISS REC (μG/L) (04095)	ALPHA BHC DIS- SOLVED (μG/L) (34253)	LINDANE DIS- SOLVED (μG/L) (39341)	LIN- URON WATER FLTRD 0.7 U (μG/L) (82666)
JUN 19...	<0.006	0.024	<0.001	<0.003	<0.017	<0.002	<0.004	<0.003	0.008	<0.002	<0.004	<0.002
DATE	MALA- THION, DIS- SOLVED (μG/L) (39532)	METO- LACHLOR WATER DISSOLV (μG/L) (39415)	METRI- BUZIN WATER DISSOLV (μG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U (μG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U (μG/L) (82684)	PARA- THION, DIS- SOLVED (μG/L) (39542)	METHYL PARA- THION WAT FLT 0.7 U (μG/L) (82667)	PEB- ULATE WATER FILTRD 0.7 U (μG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U (μG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U (μG/L) (82687)	PHORATE WATER FLTRD 0.7 U (μG/L) (82664)	PRO- METON, WATER DISS, REC (μG/L) (04037)
JUN 19...	<0.005	0.057	<0.004	<0.004	<0.003	<0.004	<0.006	<0.004	0.006	<0.005	<0.002	0.037
DATE	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (μG/L) (82676)	PROP- CHLOR, WATER, DISS, REC (μG/L) (04024)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (μG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (μG/L) (82685)	SI- MAZINE, WATER, DISS, REC (μG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (μG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (μG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (μG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (μG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (μG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (μG/L) (82661)	
JUN 19...	<0.003	<0.007	<0.004	<0.013	0.009	<0.010	<0.007	<0.013	<0.002	<0.001	<0.002	

PINE CREEK BASIN

03049800 LITTLE PINE CREEK NEAR ETNA, PA

LOCATION.--Lat 40°31'13", long 79°56'18", Allegheny County, Hydrologic Unit 05010009, on right bank at downstream side of highway bridge on Saxonburg Boulevard, 0.7 mi upstream from mouth, and 1.5 mi northeast of Etna.

DRAINAGE AREA.--5.78 mi².

PERIOD OF RECORD.--October 1962 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 775.26 ft above sea level.

REMARKS.--Records fair. Several measurements of water temperature were made during the year.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 150 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 19	0730	396	3.96	June 24	1530	324	3.77
June 19	1245	*519	*4.24	July 18	2100	284	3.65

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.34	1.0	1.2	e.56	e8.4	15	8.4	24	1.4	.40	e.21	e.14
2	.32	2.9	1.1	e2.5	e7.4	12	8.4	17	1.3	.86	e.19	e.13
3	.60	3.2	e.92	e6.0	e6.4	11	7.5	12	2.9	5.6	e.17	e.13
4	1.4	1.6	e.82	5.1	e5.8	19	7.4	10	4.7	.39	e.16	e.13
5	4.4	1.2	e.72	3.6	e5.2	15	8.5	9.9	4.8	.29	e.15	e.12
6	2.9	1.1	e.64	e2.3	e4.8	26	7.3	9.3	1.7	.26	e.13	4.3
7	1.2	2.1	e.56	e1.7	e4.3	22	6.8	11	1.8	e.23	e.12	8.2
8	.84	1.7	e.50	e1.2	e7.0	22	6.1	14	4.3	e.21	1.6	.55
9	.69	1.3	e.46	e.96	e13	28	5.6	12	1.3	e.19	.40	12
10	.61	1.2	e.41	e.82	e8.0	27	5.2	11	1.1	e.18	.24	3.0
11	.60	6.2	e.40	e.76	e5.6	18	4.5	14	.89	e.16	e.20	.32
12	.55	5.6	e.35	e.70	e4.0	13	4.3	15	.84	e.15	e.16	2.4
13	.55	3.3	e.33	e.66	e3.0	12	3.6	12	.71	e.14	e.13	7.1
14	16	7.8	e.90	e.62	e2.6	12	2.4	10	2.6	e.13	e.11	2.0
15	3.8	16	e2.5	e.58	e2.4	11	2.7	10	1.6	9.2	e.21	.32
16	1.6	7.0	e1.7	e.80	e2.2	9.9	8.2	10	.67	.29	.41	.66
17	1.1	4.9	e1.3	e3.5	e2.0	10	6.1	22	.61	.24	.22	12
18	.96	7.0	e1.1	e13	e1.9	9.4	5.4	16	4.2	22	e.19	3.8
19	.84	12	e.96	e90	e1.8	35	5.9	13	149	14	e.17	1.3
20	3.0	8.8	e.86	31	e7.0	61	7.5	10	29	2.7	e.15	.28
21	2.7	6.9	e.80	17	33	29	6.2	9.6	8.5	.62	.81	.21
22	1.3	4.5	e.74	13	22	17	5.6	8.0	3.7	.62	.22	.44
23	1.1	3.5	e.70	12	17	12	e6.4	6.8	.67	.37	.32	.31
24	.97	2.8	e.66	33	15	9.6	8.8	6.2	59	.29	.23	.21
25	.91	2.4	e.62	19	13	8.6	e7.6	5.7	34	.26	e.20	e.17
26	.86	2.3	e.60	16	15	7.6	e7.8	5.1	12	.24	e.18	e.15
27	.95	2.4	e.56	23	22	6.4	7.6	6.2	6.6	e.22	e.17	1.0
28	1.1	2.3	e.54	16	47	6.3	6.8	6.2	4.2	e.20	e.16	19
29	1.0	2.1	e.52	13	22	6.0	35	5.7	.69	e.19	e.16	7.3
30	.87	1.5	e.50	11	---	5.1	40	4.5	.58	.25	e.15	2.3
31	.96	---	e.48	e9.6	---	4.6	---	3.5	---	e.23	e.14	---
TOTAL	55.02	126.6	24.45	348.96	308.8	500.5	253.6	329.7	345.36	61.11	8.06	89.97
MEAN	1.77	4.22	.79	11.3	10.6	16.1	8.45	10.6	11.5	1.97	.26	3.00
MAX	16	16	2.5	90	47	61	40	24	149	22	1.6	19
MIN	.32	1.0	.33	.56	1.8	4.6	2.4	3.5	.58	.13	.11	.12
CFSM	.31	.73	.14	1.95	1.84	2.79	1.46	1.84	1.99	.34	.04	.52
IN.	.35	.81	.16	2.25	1.99	3.22	1.63	2.12	2.22	.39	.05	.58

e Estimated.

PINE CREEK BASIN

03049800 LITTLE PINE CREEK NEAR ETNA, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.92	4.84	7.84	7.60	9.75	13.4	10.4	8.30	4.25	3.47	1.68	1.62
MAX	8.55	25.4	26.4	22.4	21.0	32.4	23.8	26.1	17.8	26.4	6.92	10.4
(WY)	1980	1986	1987	1965	1966	1994	1987	1968	1972	1990	1980	1990
MIN	.010	.51	.69	.82	2.17	1.30	2.33	1.74	.42	.016	.10	.040
(WY)	1964	1964	1964	1977	1980	1969	1971	1965	1965	1965	1965	1963

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1963 - 1996

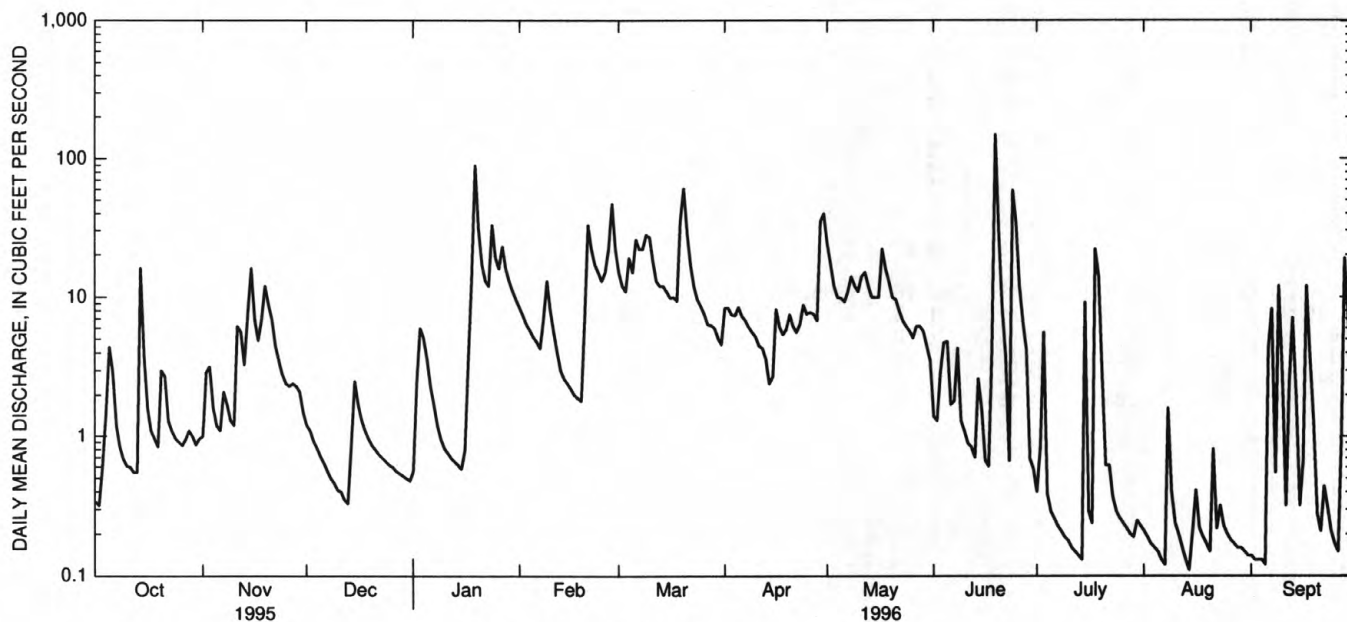
ANNUAL TOTAL	1263.84	2452.13	
ANNUAL MEAN	3.46	6.70	
HIGHEST ANNUAL MEAN			6.24
LOWEST ANNUAL MEAN			10.8
HIGHEST DAILY MEAN	56 Jun 3	149 Jun 19	525 May 30 1986
LOWEST DAILY MEAN	.15 Sep 8	e.11 Aug 14	.00 Jul 13 1963
ANNUAL SEVEN-DAY MINIMUM	.21 Sep 2	a.13 Aug 30	.00 Aug 26 1963
INSTANTANEOUS PEAK FLOW		519 Jun 19	b7190 May 30 1986
INSTANTANEOUS PEAK STAGE		4.24 Jun 19	c10.28 May 30 1986
INSTANTANEOUS LOW FLOW			.00 many days
ANNUAL RUNOFF (CFSM)	.60	1.16	1.08
ANNUAL RUNOFF (INCHES)	8.13	15.78	14.67
10 PERCENT EXCEEDS	7.4	16	15
50 PERCENT EXCEEDS	2.4	2.6	2.8
90 PERCENT EXCEEDS	.34	.21	.31

a Computed using estimated discharges.

b From rating curve extended above 150 ft³/s on basis of slope-area measurement of peak flow at site 0.6 mi downstream at datum then in use.

c 10.41 ft, from outside floodmark.

e Estimated.



October 1, 1995 to September 30, 1996

MONONGAHELA RIVER BASIN

LAKES AND RESERVOIRS IN MONONGAHELA RIVER BASIN

03055500 TYGART LAKE.--Lat 39°18'50", long 80°02'00", Taylor County, W. Va., Hydrologic Unit 05020001, at dam on Tygart Valley River, 2.2 mi upstream from Threefork Creek, and 2.4 mi upstream from Grafton, W. Va. DRAINAGE AREA, 1,184 mi². PERIOD OF RECORD, April 1938 to current year. Prior to October 1960 published as "Tygart Reservoir". GAGE, water-stage recorder. Datum of gage is at sea level.

Lake is formed by concrete gravity dam completed and accepted February 1938, storage began May 15, 1938. Capacity, 285,000 acre-ft (from sedimentation resurvey made in 1959) between elevations 991.5 ft (sill of valves) and 1,167.0 ft (crest of spillway) above sea level. Dead storage, 2,700 acre-ft. Figures given herein represent total contents. Conservation pool elevation is 1,010.0 ft and water below elevation 991.5 ft cannot be withdrawn. Lake is used for flood control, for supplementary supply for navigation on Monongahela River during periods of low flow, and for recreation. Records furnished by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 255,680 acre-ft, Nov. 7, 1985 (elevation, 1,156.69 ft); minimum since October 1939, 8,330 acre-ft, Jan. 25, 1940 (elevation, 1,005.15 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 253,900 acre-ft, May 18 (elevation, 1,156.13 ft); minimum, 25,950 acre-ft, Feb. 26 (elevation, 1,028.83 ft).

MONTHEND ELEVATION IN FEET ABOVE SEA LEVEL, AND CONTENTS AT 2400 HRS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

Date	Elevation (feet)	Contents (acre- feet)	Change in contents (equivalent in ft ³ /s)
Sept. 30	1,061.73	62,270	-
Oct. 31	1,046.18	43,360	- 308
Nov. 30	1,045.94	43,090	- 4.5
Dec. 31	1,030.21	27,190	- 259
CAL YR 1995	-	-	- .28
Jan. 31	1,083.28	93,490	+1,080
Feb. 29	1,069.62	72,970	- 357
Mar. 31	1,071.74	75,950	+ 48
Apr. 30	1,095.38	113,670	+ 633
May 31	1,108.71	138,590	+ 405
June 30	1,095.08	113,140	- 428
July 31	1,117.92	157,200	+ 717
Aug. 31	1,093.59	110,540	- 759
Sept. 30	1,078.65	86,200	- 409
WTR YR 1996	-	-	+ 33

MONONGAHELA RIVER BASIN

03072000 DUNKARD CREEK AT SHANNOPIN, PA
(National water-quality assessment station)

LOCATION.--Lat 39°45'33", long 79°58'15", Greene County, Hydrologic Unit 05020005, on left bank 1,300 ft upstream from highway bridge at mine buildings at Shannopin, 1.2 mi north of Dunkard, 3.5 mi upstream from mouth, and 4 mi southwest of Greensboro.

DRAINAGE AREA.--229 mi².

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1505: 1955.

GAGE.--Water-stage recorder. Datum of gage is 806.25 ft above sea level (levels by U.S. Army Corps of Engineers).

REMARKS.--Records good except for estimated daily discharges, which are fair. Some regulation at low flow by mine pumpage above station. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 4,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 19	1800	*10,200	a11.50	July 19	1100	8,030	10.55
Mar. 6	Unknown	Unknown	Unknown	Sept. 17	1600	4,110	8.51

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.8	9.3	51	e68	306	1170	445	e600	256	35	1270	20
2	5.9	12	48	e100	e220	790	776	e960	193	31	584	17
3	3.3	16	44	e600	e170	575	672	675	156	275	333	16
4	3.2	14	44	726	e140	403	542	533	147	236	216	20
5	6.0	12	43	398	e125	340	592	1070	139	114	155	24
6	21	11	43	241	e120	e4100	576	1980	116	71	121	29
7	31	11	44	160	e130	2580	510	1080	99	51	102	44
8	24	15	43	e150	e160	1640	426	908	96	44	91	54
9	15	22	36	e135	e1300	990	362	1530	129	42	228	55
10	11	28	23	e130	1080	e560	308	1430	96	44	e170	65
11	8.0	29	21	e120	763	e540	265	1070	91	36	e110	89
12	7.6	32	24	e115	580	e480	231	2130	85	30	e90	56
13	11	86	22	e110	440	e460	208	1140	77	25	e280	86
14	14	78	25	e100	365	e450	193	737	75	19	e180	255
15	26	137	38	e120	e300	576	174	575	83	20	117	126
16	76	175	854	e170	e250	732	284	1410	99	25	91	91
17	50	119	e450	e700	e210	561	540	2150	67	33	76	2390
18	31	110	e330	e2400	e190	471	507	1350	55	129	64	1270
19	23	261	e260	e7200	e170	438	416	801	50	5810	52	486
20	17	260	e220	2500	e350	2380	347	554	110	2110	47	259
21	18	185	e190	962	2070	1740	288	413	145	555	43	174
22	14	130	e160	612	1190	1100	240	326	86	297	41	131
23	12	92	e140	474	769	833	221	247	61	e220	60	115
24	18	75	e125	1710	572	859	215	202	80	e150	51	102
25	23	74	e115	2010	439	864	187	177	224	e250	42	83
26	21	67	e105	973	359	835	175	147	e150	e420	38	71
27	17	60	e96	1700	1350	637	180	143	e80	193	34	62
28	14	52	e86	1460	3380	538	149	230	63	128	34	235
29	12	51	e80	823	2020	615	140	356	52	95	31	1900
30	11	51	e76	587	---	528	214	781	43	558	31	879
31	9.9	---	e72	470	---	448	---	398	---	2260	28	---
TOTAL	562.7	2274.3	3908	28024	19518	29233	10383	26103	3203	14306	4810	9204
MEAN	18.2	75.8	126	904	673	943	346	842	107	461	155	307
MAX	76	261	854	7200	3380	4100	776	2150	256	5810	1270	2390
MIN	3.2	9.3	21	68	120	340	140	143	43	19	28	16
CFSM	.08	.33	.55	3.95	2.94	4.12	1.51	3.68	.47	2.02	.68	1.34
IN.	.09	.37	.63	4.55	3.17	4.75	1.69	4.24	.52	2.32	.78	1.50

a Maximum gage height, 11.59 ft, Jan. 19 (backwater from ice).

e Estimated.

MONONGAHELA RIVER BASIN

03072000 DUNKARD CREEK AT SHANNOPIN, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	69.2	161	340	435	508	621	470	327	179	90.0	80.5	76.6
MAX	381	1149	1071	1050	1100	1475	1033	903	877	461	890	573
(WY)	1955	1986	1991	1994	1956	1994	1948	1968	1981	1996	1980	1975
MIN	1.73	2.44	7.46	26.5	63.5	112	80.9	57.4	10.2	4.62	2.45	2.39
(WY)	1952	1954	1954	1967	1954	1987	1971	1986	1966	1962	1962	1953

SUMMARY STATISTICS

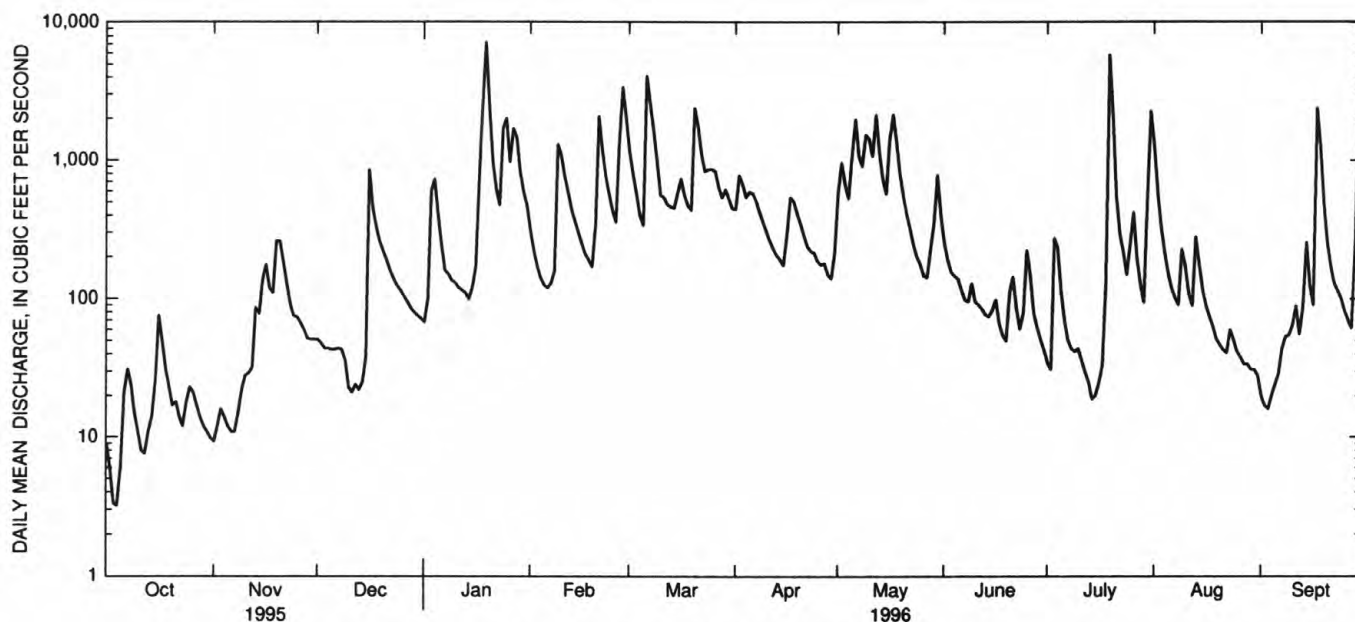
FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1941 - 1996

ANNUAL TOTAL	71330.2	151529.0	279
ANNUAL MEAN	195	414	462
HIGHEST ANNUAL MEAN			104
LOWEST ANNUAL MEAN			11200
HIGHEST DAILY MEAN	2710	May 14	1994
LOWEST DAILY MEAN	2.6	Sep 7,8	1954
ANNUAL SEVEN-DAY MINIMUM	3.6	Sep 5	Mar 5 1963
INSTANTANEOUS PEAK FLOW			Aug 27 1944
INSTANTANEOUS PEAK STAGE			Aug 25 1944
INSTANTANEOUS LOW FLOW			Aug 18 1980
ANNUAL RUNOFF (CFSM)	.85		Aug 18 1980
ANNUAL RUNOFF (INCHES)	11.59		Aug 28 1944
10 PERCENT EXCEEDS	548		
50 PERCENT EXCEEDS	78		
90 PERCENT EXCEEDS	7.7		

e Estimated.



October 1, 1995 to September 30, 1996

MONONGAHELA RIVER BASIN

03072000 DUNKARD CREEK AT SHANNOPIN, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1996 to current year.

REMARKS.--All water-quality samples collected and analyzed by the U.S. Geological Survey. Additional sites in the fixed-station network are shown in figure 4, page 26

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CAC03) (00900)	ACIDITY TOTAL HEATED (MG/L AS CAC03) (70508)	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)
APR 30...	0945	169	723	7.8	16.0	727	9.4	190	2.4	54	14	67
MAY 30...	1145	750	388	7.5	16.0	741	9.3	110	2.8	32	7.2	31
JUN 27...	1045	80	731	7.5	21.5	744	8.4	190	5.0	55	13	68
JUL 25...	1045	360	775	7.9	22.0	736	8.7	200	2.2	58	14	78
AUG 12...	1110	90	706	7.9	21.0	737	7.7	190	2.8	56	13	64
SEP 18...	1030	1220	289	7.8	16.5	737	9.0	84	1.6	25	5.3	18

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY WAT DIS TOT IT FIELD (MG/L AS CAC03) (39086)	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 DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
APR 30...	1.7	92	230	20	0.10	1.2	458	<0.010	0.060	0.020	0.20
MAY 30...	1.7	58	91	15	0.10	6.7	241	0.020	0.340	0.060	0.80
JUN 27...	2.9	93	--	--	--	5.5	--	0.030	0.650	0.050	0.40
JUL 25...	2.5	102	250	19	0.20	7.3	500	0.020	0.420	0.090	<0.20
AUG 12...	2.5	84	230	16	0.20	3.7	452	0.010	0.300	0.030	0.30
SEP 18...	2.2	108	67	6.5	0.10	7.7	164	0.010	0.730	0.050	0.40

DATE	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	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 (μ G/L AS AL) (01106)	IRON, DIS- SOLVED (μ G/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (μ G/L AS MN) (01056)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C) (00689)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
APR 30...	<0.20	0.020	0.020	<0.010	160	53	82	2.0	0.70	13	48
MAY 30...	0.30	0.110	<0.010	<0.010	70	34	30	2.9	1.9	68	95
JUN 27...	0.20	0.020	<0.010	<0.010	117	8.0	100	3.1	0.70	23	99
JUL 25...	<0.20	<0.010	<0.010	<0.010	145	15	61	2.2	0.40	9	96
AUG 12...	0.20	<0.010	<0.010	<0.010	131	19	74	2.6	0.60	6	86
SEP 18...	0.30	0.040	0.010	0.010	47	45	26	3.9	1.0	47	98

MONONGAHELA RIVER BASIN

03072655 MONONGAHELA RIVER NEAR MASONTOWN, PA

LOCATION.--Lat 39°49'30", long 79°55'23", Greene County, Hydrologic Unit 05020005, on left bank, 84 ft upstream from Lock and Dam at Grays Landing, 0.9 mi upstream from Masontown, 1.2 mi upstream from Whitley Creek, 5.3 mi downstream from Dunkard Creek, 7.6 mi downstream from Cheat River, at mile 81.9.

DRAINAGE AREA.--4,440 mi².

PERIOD OF RECORD.--October 1995 to current year. Published as "at Greensboro" (Station 03072500) October 1938 to September 1995. Prior to January 1939 monthly discharge only, published in WSP 1305.

REVISED RECORDS.--WSP 1113: 1939 (M), 1941 (M). WSP 1435: 1939. WSP 1907: 1936 (M), 1955 (M).

GAGE.--Water-stage recorder and concrete dam control. Datum of gage is 769.00 ft above sea level (U.S. Army Corps of Engineers bench mark). Prior to Nov. 9, 1990, at datum 1.45 ft lower.

REMARKS.--Records good above 5,000 ft³/s, fair below and for estimated daily discharges, except those below 1,000 ft³/s, which are poor. Flow regulated since 1938 by Tygart Lake 69 mi upstream and since 1926 by Lake Lynn 11 mi upstream, combined capacity, 357,300 acre-ft. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 1888 reached a stage of about 36 ft, from high-water profile by U.S. Army Corps of Engineers. Flood of Mar. 18, 1936, reached a stage of 28.4 ft, discharge, 130,000 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e748	e2740	11500	2700	18100	21800	16000	10900	23700	2450	43200	1480
2	e1050	e2840	8970	8450	17100	21000	18100	15200	15100	2360	25800	1920
3	e1420	e1990	8710	21200	11600	16900	15600	14300	8250	4140	25900	1940
4	e1840	e1500	8360	24400	10500	14800	11800	13700	6590	5080	21600	2440
5	e1780	e1230	8770	21100	9680	15600	14200	38700	5460	6370	19900	2440
6	e2080	e2080	6830	18000	6620	24600	10400	52500	4110	5810	16500	7450
7	e1750	e2650	7320	8650	6370	29900	8760	37900	4520	3410	13400	19700
8	e1470	e3070	7740	6950	7720	33400	10100	33900	4360	3490	9740	14600
9	e1870	e2780	5320	6710	32800	30000	10000	34100	3000	3270	9350	10800
10	e1100	e4960	2900	6660	30000	23400	8430	40600	4440	4730	7920	4670
11	e1070	e4230	4910	6390	25400	16200	7610	33000	4280	4440	8050	10700
12	e730	e3650	3360	6560	25000	12700	7180	46200	4490	3330	10000	7710
13	659	e4350	3020	6080	22500	11000	5890	37700	6210	2540	21800	7000
14	1210	e8060	3800	4950	16100	8890	5890	32200	3830	1480	24900	4430
15	2750	e8300	5790	5540	13500	14400	7650	26200	5760	2300	21400	5830
16	1850	e7770	10900	7090	9900	22900	12800	27100	2910	2210	14200	5400
17	1410	e7170	13700	13100	9730	17700	17300	49700	3510	2600	8580	33800
18	772	e7080	12700	34400	9200	15700	19700	38000	3440	5840	9790	32000
19	1820	e6580	20800	84900	6750	16300	20000	33400	2530	41300	5820	21700
20	e1300	e7770	32800	67200	12500	23600	16000	28400	4280	45400	6490	18400
21	e1000	e8200	27900	27900	22500	23100	10100	26400	3730	25600	3340	15200
22	e760	e10200	22400	22600	17600	20400	11100	30300	3720	27400	3640	7370
23	e1100	e6940	13500	24000	18100	16600	9620	27300	2040	33900	4130	7190
24	e1350	e7400	12900	30800	18900	13300	6630	23700	3530	25900	2910	6260
25	e1250	e8300	9700	37300	14300	17300	6570	18500	5870	19200	4670	4810
26	e1100	e7130	7390	31700	15300	20300	5490	9010	6700	14400	4340	4750
27	e900	e7630	5530	27300	24500	18900	4150	12200	5200	11600	2570	4360
28	e640	e11000	5630	27600	48400	20300	4050	22800	3430	5380	2760	6170
29	e1000	e13400	4450	24100	35100	24200	6860	30900	1650	4690	2410	15400
30	e1230	13300	3480	23900	---	19800	5260	32700	2110	5260	2450	8790
31	e3820	---	3100	23200	---	17000	---	28500	---	33400	2360	---
TOTAL	42829	184300	304180	661430	515770	601990	313240	906010	158750	359280	359920	294710
MEAN	1382	6143	9812	21340	17790	19420	10440	29230	5292	11590	11610	9824
MAX	3820	13400	32800	84900	48400	33400	20000	52500	23700	45400	43200	33800
MIN	640	1230	2900	2700	6370	8890	4050	9010	1650	1480	2360	1480
†	-333	+12	-313	+1270	-356	-11	+793	+425	-469	+876	-957	-442

† Change in contents, equivalent in cubic feet per second, in Tygart Lake, Stonewall Jackson Lake and Lake Lynn. Records of contents in Lake Lynn furnished by Allegheny Power Service Corp. Records of contents in Tygart Lake and Stonewall Jackson Lake furnished by U.S. Army Corps of Engineers.

e Estimated.

MONONGAHELA RIVER BASIN

03072655 MONONGAHELA RIVER NEAR MASONTOWN, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1996, BY WATER YEAR (WY)

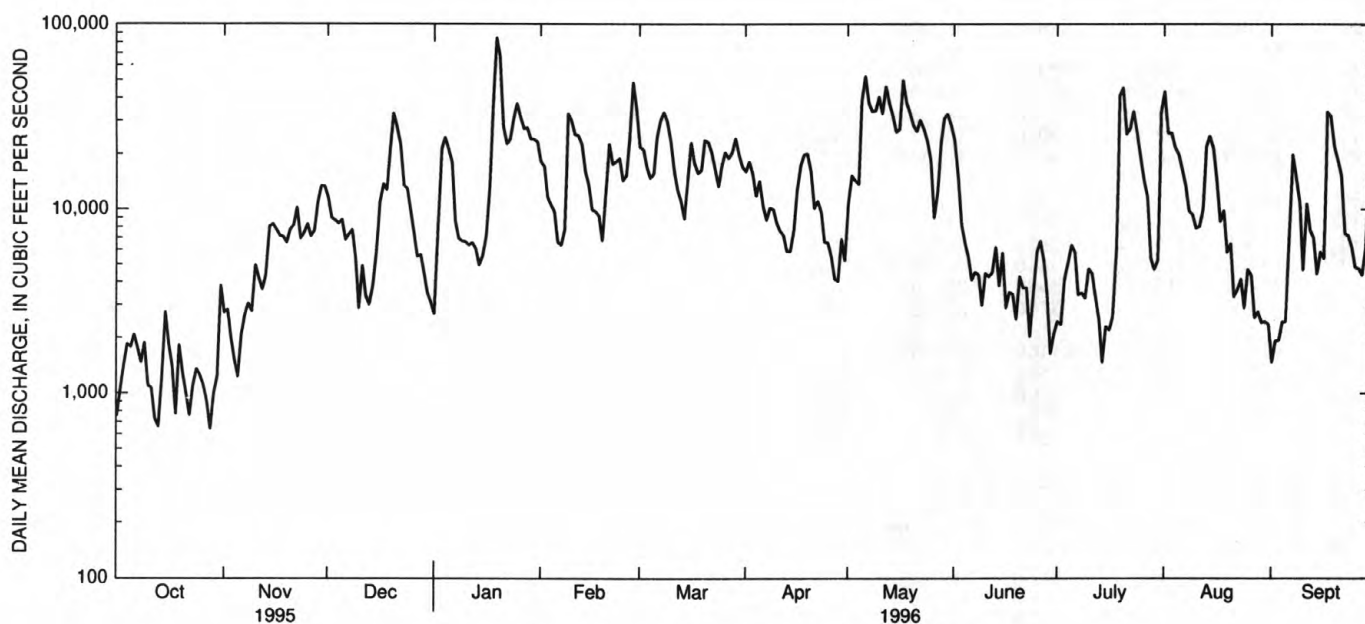
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3360	6577	11190	11930	14320	16070	11920	9063	5726	4050	3920	2766
MAX	15260	29580	26520	24690	30880	37830	23180	29230	22100	13240	15120	12470
(WY)	1980	1986	1973	1952	1994	1963	1940	1996	1981	1958	1956	1971
MIN	439	369	1648	1840	3781	6192	3781	1836	926	676	592	482
(WY)	1954	1954	1966	1977	1941	1987	1946	1982	1965	1966	1965	1946

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1939 - 1996	
ANNUAL TOTAL	2288945		4702409			
ANNUAL MEAN	6271		12850		8372	
HIGHEST ANNUAL MEAN	†+2.9		†+45		13010	
LOWEST ANNUAL MEAN					4995	
HIGHEST DAILY MEAN	e45000		84900		154000	
LOWEST DAILY MEAN	e370		e640		177	
ANNUAL SEVEN-DAY MINIMUM	760		1010		267	
INSTANTANEOUS PEAK FLOW			146000		220000	
INSTANTANEOUS PEAK STAGE			25.96		a39.39	
10 PERCENT EXCEEDS	15000		29900		21000	
50 PERCENT EXCEEDS	4000		8390		4740	
90 PERCENT EXCEEDS	892		2020		1020	

† Change in contents, equivalent in cubic feet per second, in Tygart Lake, Stonewall Jackson Lake and Lake Lynn. Records of contents in Lake Lynn furnished by Allegheny Power Service Corp. Records of contents in Tygart Lake and Stonewall Jackson Lake furnished by U.S. Army Corps of Engineers.

a From outside floodmarks, datum then in use.

e Estimated.



October 1, 1995 to September 30, 1996

MONONGAHELA RIVER BASIN

03074500 REDSTONE CREEK AT WALTERSBURG, PA

LOCATION.--Lat 39°58'48", long 79°45'52", Fayette County, Hydrologic Unit 05020005, on right bank, 15 ft upstream from highway bridge at Waltersburg, 400 ft upstream from Bolden Run, and 0.9 mi upstream from Allen Run.

DRAINAGE AREA.--73.7 mi².

PERIOD OF RECORD.--October 1942 to current year. Monthly discharge only for October 1942, published in WSP 1305.

REVISED RECORDS.--WSP 1435: 1943-45 (M), 1946, 1947 (M), 1948 (P), 1949-50 (M), 1951 (P), 1952 (M).

GAGE.--Water-stage recorder. Datum of gage is 883.28 ft above sea level. Prior to Nov. 15, 1973, nonrecording gage 15 ft downstream at same datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Some regulation at low flow by mine pumpage into stream above station. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 17	--	Unknown	ice jam	May 11	2000	1,290	4.74
Jan. 19	1230	*4,170	*9.68	May 17	1300	1,260	4.67
Feb. 28	0400	1,870	5.92	June 24	2000	1,320	4.81
May 5	2400	1,900	5.98	July 19	1000	2,710	7.50
May 9	0300	1,150	4.40	Sept. 17	0200	1,750	5.70

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e10	e25	59	e33	133	243	212	179	68	57	142	e43
2	e9.0	e40	51	e100	e105	191	251	169	62	93	119	e38
3	e8.4	56	46	e350	e90	156	191	137	59	184	e90	e45
4	e19	e40	46	207	e78	128	172	135	59	88	e80	e60
5	e35	e32	40	142	e74	152	300	432	56	67	e66	e80
6	e64	37	40	109	e70	430	222	751	51	56	e58	112
7	e40	38	35	87	e68	406	195	326	48	50	e52	152
8	e25	45	34	e70	e180	292	169	407	144	130	78	87
9	e15	39	36	e60	419	216	154	724	72	72	160	e66
10	e10	35	36	e54	263	178	139	388	103	55	89	e52
11	e17	42	49	e50	214	171	126	594	131	47	76	e45
12	e30	77	64	59	169	167	115	660	106	42	94	68
13	e50	48	76	53	141	155	106	368	82	45	104	298
14	e92	62	65	e49	e120	145	103	258	87	67	79	170
15	131	93	52	e46	e100	265	94	221	90	127	75	117
16	76	83	314	e43	e86	219	462	261	62	125	96	175
17	e50	72	143	e150	e80	194	324	542	53	104	71	922
18	e30	82	e100	e500	e70	166	227	347	49	252	e60	349
19	e21	105	e86	2400	e66	189	199	243	150	1400	e52	211
20	e40	95	e76	690	e130	458	166	186	185	422	e48	183
21	62	91	e68	363	e250	366	145	158	112	214	e44	149
22	e40	76	e62	247	200	286	128	133	78	190	e42	134
23	e30	64	e58	213	169	251	124	110	63	152	e52	128
24	e19	68	e54	561	164	244	115	105	306	126	62	107
25	e14	58	e48	346	138	263	101	97	222	113	e52	102
26	e20	53	e46	259	167	278	106	83	128	149	e45	89
27	e27	53	e43	513	427	212	98	104	100	102	e40	90
28	e40	68	e40	350	970	192	84	96	82	94	e37	249
29	52	71	e38	254	359	173	94	126	71	89	e45	229
30	e37	63	e37	199	---	148	216	91	63	324	e52	162
31	e30	---	e35	166	---	136	---	75	---	196	e47	---
TOTAL	1143.4	1811	1977	8723	5500	7070	5138	8506	2942	5232	2207	4712
MEAN	36.9	60.4	63.8	281	190	228	171	274	98.1	169	71.2	157
MAX	131	105	314	2400	970	458	462	751	306	1400	160	922
MIN	8.4	25	34	33	66	128	84	75	48	42	37	38
CFSM	.50	.82	.87	3.82	2.57	3.09	2.32	3.72	1.33	2.29	.97	2.13
IN.	.58	.91	1.00	4.40	2.78	3.57	2.59	4.29	1.48	2.64	1.11	2.38

e Estimated.

MONONGAHELA RIVER BASIN

03074500 REDSTONE CREEK AT WALTERSBURG, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	48.4	67.7	115	134	158	193	162	128	81.5	57.0	50.2	49.2
MAX	225	459	308	284	376	470	310	274	413	187	172	161
(WY)	1980	1986	1973	1994	1986	1994	1948	1996	1972	1990	1980	1987
MIN	11.2	19.0	14.2	23.1	33.0	45.5	49.2	27.3	15.4	9.59	12.4	8.92
(WY)	1964	1967	1961	1967	1954	1969	1971	1963	1962	1962	1962	1991

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

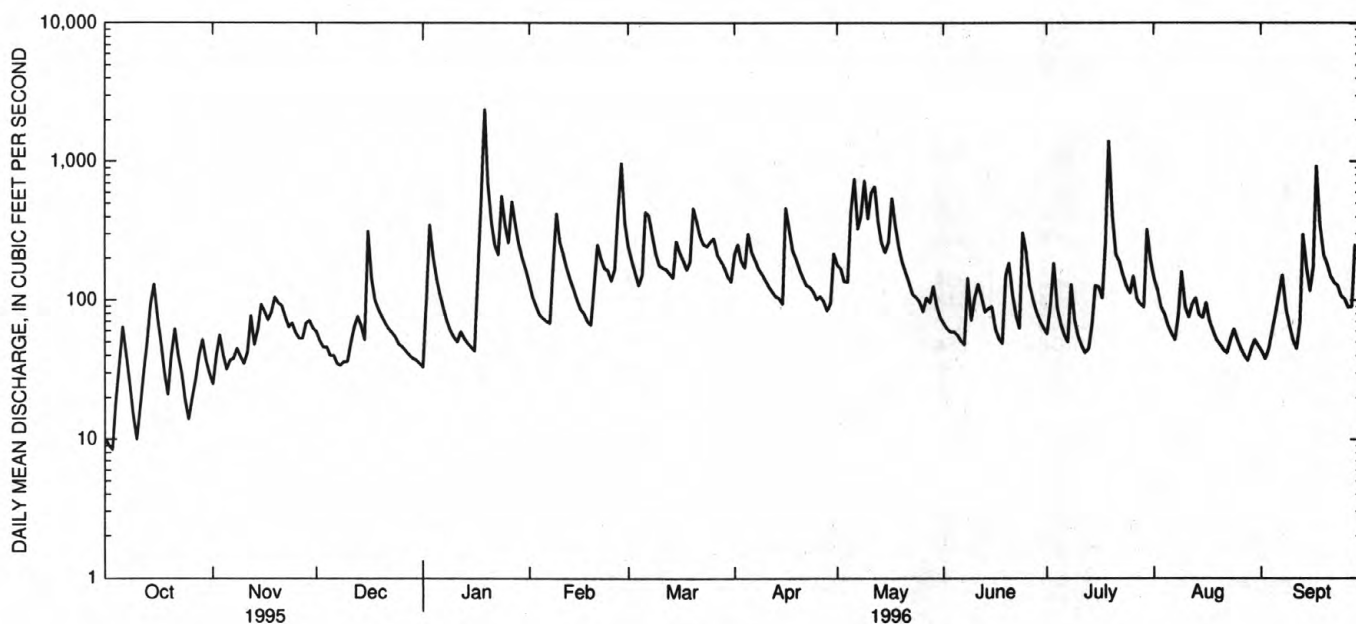
WATER YEARS 1943 - 1996

ANNUAL TOTAL	24184.4	54961.4	
ANNUAL MEAN	66.3	150	103
HIGHEST ANNUAL MEAN			166
LOWEST ANNUAL MEAN			44.2
HIGHEST DAILY MEAN	349	Feb 28	2400
LOWEST DAILY MEAN	e8.4	Oct 3	e8.4
ANNUAL SEVEN-DAY MINIMUM	10	Jul 9	a26
INSTANTANEOUS PEAK FLOW			4170
INSTANTANEOUS PEAK STAGE			9.68
INSTANTANEOUS LOW FLOW			
ANNUAL RUNOFF (CFSM)	.90	2.04	1.40
ANNUAL RUNOFF (INCHES)	12.21	27.74	19.07
10 PERCENT EXCEEDS	144	308	211
50 PERCENT EXCEEDS	51	94	62
90 PERCENT EXCEEDS	15	40	21

a Computed using estimated daily values.

b Minimum observed.

e Estimated.



October 1, 1995 to September 30, 1996

MONONGAHELA RIVER BASIN

03075070 MONONGAHELA RIVER AT ELIZABETH, PA

LOCATION.--Lat 40°15'44", long 79°54'05", Allegheny County, Hydrologic Unit 05020005, on right bank 30 ft landward from upstream end of guide wall, 1,050 ft upstream from dam at lock 3 at Elizabeth, 0.4 mi downstream from Lobbs Creek, at mile 24.0.

DRAINAGE AREA.--5,340 mi².

PERIOD OF RECORD.--October 1933 to current year. Published as "at Charleroi" (station 03075000) October 1933 to September 1976. Monthly discharge prior to 1940, adjusted for reservoir contents, published in WSP 1305. Records for March 1886 to March 1905 (high-water periods, only), published in WSP 169, are unreliable and should not be used (peak discharge of July 11, 1888, as published in WSP 183, is still considered reliable).

REVISED RECORDS.--WSP 758: Drainage area. WSP 783: 1888 (M). WSP 1435: 1934, 1936. See also "PERIOD OF RECORD."

GAGE.--Water-stage recorder and concrete dam control. Datum of gage is 717.90 ft above sea level (U.S. Army Corps of Engineers bench mark). From Oct. 1, 1967 to Sept. 30, 1976, at site 17.5 mi upstream at datum 15.70 ft higher. Prior to Oct. 1, 1967, water-stage recorder at site 17.9 mi upstream at datum 17.43 ft higher. Oct. 1, 1965 to Sept. 30, 1967, auxiliary staff gage, Apr. 14, 1966 to Sept. 30, 1967, auxiliary water-stage recorder and Oct. 1, 1967 to Nov. 4, 1990, water-stage recorder at present site at datum 7.60 ft higher.

REMARKS.--Records good, except for estimated daily discharges, and those below 2,500 ft³/s, which are fair. Flow regulated by locks above station, since 1938 by Tygart Lake, and since 1926 by Lake Lynn, combined capacity, 357,000 acre-ft. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	825	2550	11500	3140	19500	26300	15600	12000	25400	1810	61900	2000
2	789	3110	8480	6440	18600	22100	21100	15200	16800	3840	29800	1660
3	1130	1860	9040	21000	12600	18400	17900	15900	9770	4350	26300	2000
4	2050	2440	7220	25900	11000	16700	13700	13900	6780	4250	21900	2030
5	2270	1450	8020	22400	10400	15400	15900	32900	5800	6580	19300	2750
6	1700	1480	6760	18600	7850	27400	12500	61000	3720	5540	17300	6210
7	1210	2690	6810	10200	6640	38200	9690	50900	5420	4260	13500	17300
8	1140	3080	7440	6270	7400	39200	10500	40100	4110	3310	10400	15700
9	1310	2900	5670	7440	30200	34600	11400	41300	3460	3260	10900	11200
10	1400	4330	3470	6820	36300	28000	9380	48700	4340	4660	7910	4520
11	847	4400	4160	6130	26900	16900	8860	40100	5010	4360	8040	10200
12	1100	3970	3070	5790	26100	15300	7840	51700	3960	3380	8150	7480
13	845	7430	3490	6690	23900	13100	5420	48800	6490	2940	18400	7420
14	953	7530	3060	4980	17300	10100	6910	37800	4540	1880	25700	4500
15	2860	8670	4700	5530	13800	13100	7750	30400	4700	2010	22700	5780
16	2820	7200	9560	7180	9990	25900	12100	28900	3930	2920	14800	5010
17	2600	7410	15700	10600	10900	20000	18300	57400	3450	2310	8730	30900
18	1670	6790	11900	39800	10400	17500	20900	66200	3860	5060	9980	39900
19	1870	6380	17900	84900	6310	17700	21100	39000	e9000	38200	6570	22900
20	1530	7600	37100	158000	10400	32500	18900	32000	e6400	75200	5640	19400
21	1580	7860	29500	62400	26400	31100	10100	28400	e5800	31500	4510	15600
22	877	10300	24900	24300	19700	24700	11400	31700	4680	26800	3430	8000
23	1620	7210	14200	25700	18900	18600	10500	31200	2770	35600	3620	6580
24	1540	7380	13500	33500	19800	16200	8170	24900	3280	29300	3280	5740
25	1430	8250	9620	46100	15600	18500	6910	20800	7930	20100	3870	5140
26	1450	7610	6540	38400	15200	22700	6680	11000	7630	14400	4320	4840
27	1080	7620	6270	32400	25200	20200	4650	11600	5350	12900	3200	4210
28	661	9890	5170	32700	59300	20700	4000	20400	4460	5550	2240	5450
29	880	13200	5200	26200	51700	24500	6840	29100	2270	4550	2720	16400
30	1980	12600	3460	25700	---	22100	7950	39000	2760	4930	2160	10800
31	3210	---	2590	24500	---	19000	---	29600	---	26000	2680	---
TOTAL	47227	185190	306000	829710	568290	686700	342950	1041900	183870	391750	383950	301620
MEAN	1523	6173	9871	26760	19600	22150	11430	33610	6129	12640	12390	10050
MAX	3210	13200	37100	158000	59300	39200	21100	66200	25400	75200	61900	39900
MIN	661	1450	2590	3140	6310	10100	4000	11000	2270	1810	2160	1660
†	-333	+12	-313	+1270	-356	-11	+793	+425	-469	+876	-957	-442

† Change in contents, equivalent in cubic feet per second, in Tygart Lake, Stonewall Jackson Lake and Lake Lynn. Records of contents in Lake Lynn furnished by Allegheny Power Service Corp. Records of contents in Tygart Lake and Stonewall Jackson Lake furnished by U.S. Army Corps of Engineers.

e Estimated.

MONONGAHELA RIVER BASIN

03075070 MONONGAHELA RIVER AT ELIZABETH, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3590	6696	11830	13710	15610	18170	13550	10250	6279	4377	4240	2992
MAX	16770	33750	29760	37480	33170	41930	26500	33610	24840	13570	17890	13300
(WY)	1980	1986	1973	1937	1994	1963	1940	1996	1981	1958	1956	1945
MIN	475	400	1991	2249	3210	6636	4478	2128	1009	915	812	581
(WY)	1954	1954	1966	1977	1934	1987	1971	1982	1936	1966	1957	1936

SUMMARY STATISTICS

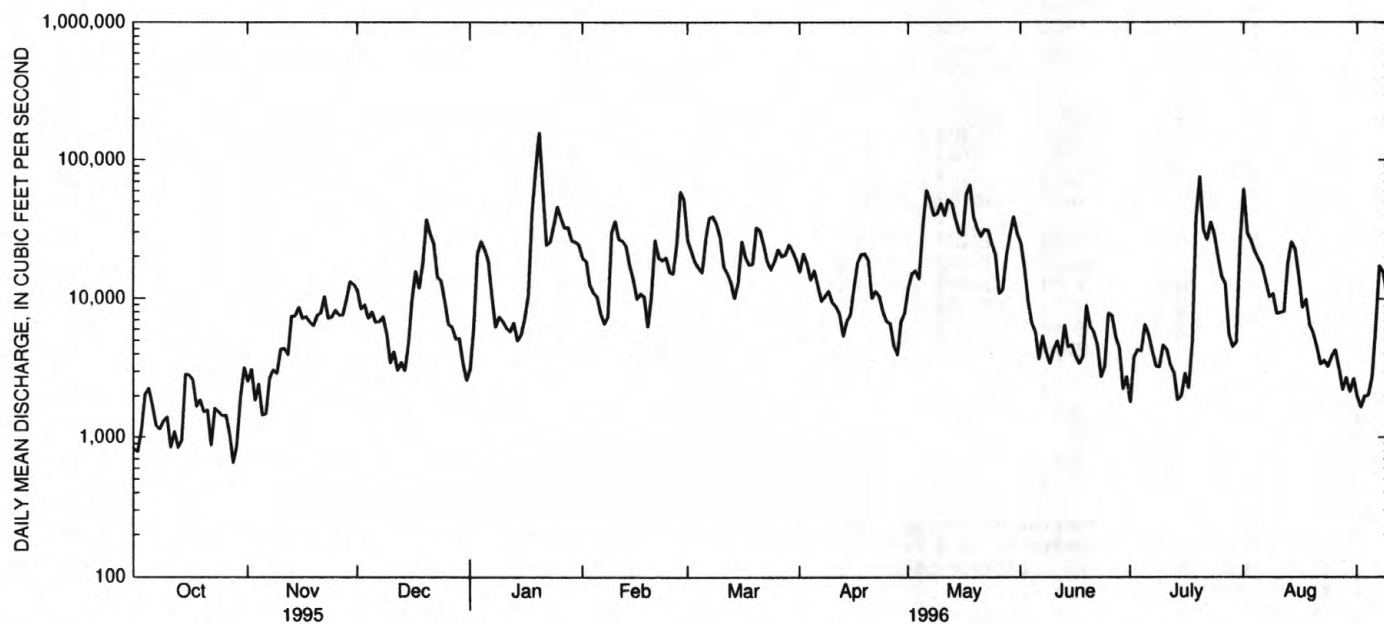
FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1934 - 1996

ANNUAL TOTAL	2515980		5269157									
ANNUAL MEAN	6893	†+2.9	14400	†+45								
HIGHEST ANNUAL MEAN										9248		
LOWEST ANNUAL MEAN										14400		1996
HIGHEST DAILY MEAN										5282		1954
LOWEST DAILY MEAN										158000		Jan 20 1996
ANNUAL SEVEN-DAY MINIMUM										206		Jun 29 1936
INSTANTANEOUS PEAK FLOW										301		Oct 1 1936
INSTANTANEOUS PEAK STAGE										a178000		Nov 6 1985
10 PERCENT EXCEEDS										30.39		Jan 20 1996
50 PERCENT EXCEEDS										22400		
90 PERCENT EXCEEDS										5180		
										1140		

a Gage height 23.60 ft, datum then in use.



October 1, 1995 to September 30, 1996

MONONGAHELA RIVER BASIN

03076500 YOUGHIOGHENY RIVER AT FRIENDSVILLE, MD

LOCATION.--Lat 39°39'13", long 79°24'31", Garrett County, Hydrologic Unit 05020006, on left bank 0.7 mi upstream from bridge on State Highway 42 at Friendsville, and 1.5 mi upstream from Bear Creek.

DRAINAGE AREA.--295 mi².

PERIOD OF RECORD.--August 1898 to December 1904 and October 1940 to current year. Annual maximum, water years 1905, 1923-31, 1940, published in WSP 1675. October, November 1940 monthly discharge only, published in WSP 1305. September 1922 to September 1926 (gage heights only) in reports of Pennsylvania Department of Forests and Waters.

REVISED RECORDS.--WSP 1385: Drainage area at former site, 1898-1905, 1941(M), 1942, 1944-45, 1948-49, 1951(M).

GAGE.--Water-stage recorder. Datum of gage is 1,487.33 ft above sea level. Aug. 17, 1898, to Dec. 31, 1904, and Sept. 1, 1922, to Sept. 30, 1926, nonrecording gages at bridge 0.7 mi downstream at datum 16.24 ft and 16.29 ft lower, respectively.

REMARKS.--Records good except those for estimated daily discharges (ice effect), which are fair. Low and medium flow regulated since July 1925 by Deep Creek Reservoir, 12 mi upstream from station (see station 03076000). U.S. Army Corps of Engineers satellite telemeter at station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

PEAK DISCHARGE FOR CURRENT YEAR.--Peak discharge 16,100 ft³/s, Jan. 19, gage height, 9.54 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	158	1310	279	1130	1760	1010	630	1480	195	3800	134
2	116	150	1230	572	793	1120	1320	917	1230	152	1750	192
3	46	237	926	1440	630	982	1070	966	1080	158	1240	201
4	61	184	1170	1410	663	899	951	932	1060	314	938	201
5	54	157	1040	974	466	879	951	1970	681	242	829	257
6	136	195	922	783	379	2680	718	2750	583	200	708	1390
7	77	140	779	534	267	3150	612	1840	508	154	667	4890
8	65	347	661	421	580	2870	696	2030	500	187	594	2520
9	120	314	462	487	2950	1520	704	3550	1730	230	635	1630
10	54	301	347	e430	1910	1010	673	2790	1280	127	628	1350
11	51	294	410	e320	2010	1190	662	2320	1050	90	529	1170
12	53	566	487	e320	1640	1140	677	2980	1220	150	573	489
13	121	654	437	e150	1210	898	495	1910	1190	125	2320	623
14	66	479	453	193	1030	789	468	1240	684	218	1280	559
15	205	417	821	490	869	1730	508	1140	737	246	816	359
16	254	495	1040	544	866	1890	1270	2580	465	234	585	530
17	110	466	1280	758	488	1240	1360	2840	493	265	638	2930
18	79	389	1090	2230	408	1280	1150	2370	368	135	513	2950
19	140	528	1500	11200	529	1170	1040	1580	290	5010	359	1860
20	133	697	1260	7110	698	2670	906	1410	426	6560	239	1320
21	91	747	978	3190	1050	1770	723	1250	392	2340	219	1030
22	144	685	804	2180	1550	1310	773	1830	267	1850	276	932
23	173	532	640	1770	1670	956	678	1450	227	1910	293	916
24	127	699	484	3320	1860	819	571	981	279	1240	256	559
25	108	555	386	3960	1520	1350	483	817	413	959	297	503
26	72	493	441	2530	1430	2050	508	950	277	842	287	437
27	127	769	482	2810	2460	1560	456	1380	209	709	181	390
28	67	2250	404	2750	3980	1230	397	2460	243	613	364	390
29	147	2200	401	2060	3040	1270	444	3060	199	589	386	431
30	438	1590	263	1730	---	977	445	3360	186	855	256	637
31	238	---	271	1530	---	820	---	2260	---	3670	225	---
TOTAL	3721	17688	23179	58475	38076	44979	22719	58543	19747	30569	22681	31780
MEAN	120	590	748	1886	1313	1451	757	1888	658	986	732	1059
MAX	438	2250	1500	11200	3980	3150	1360	3550	1730	6560	3800	4890
MIN	46	140	263	150	267	789	397	630	186	90	181	134
(†)	-22.8	+23.5	-11.4	0	+67.6	+83.2	+48.8	+79.7	-38.7	-22.8	-78.1	-18.5
MEAN‡	97.2	614	737	1886	1380	1530	806	1960	619	905	654	1040
CFSM‡	0.33	2.08	2.50	6.39	4.68	5.19	2.73	6.64	2.10	3.07	2.22	3.53
IN‡	0.38	2.32	2.88	7.37	5.05	5.98	3.05	7.66	2.34	3.54	2.56	3.94

† Change in contents in Deep Creek Reservoir, equivalent in cubic feet per second, provided by Pennsylvania Electric Co.

‡ Adjusted for change in reservoir contents.

e Estimated.

MONONGAHELA RIVER BASIN

03076500 YOUGHIOGHENY RIVER AT FRIENDSVILLE, MD--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1898 - 1905, 1941 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	279	497	854	888	994	1224	946	700	478	373	303	245
MAX	1103	2190	2147	1886	2277	2644	2231	1888	1823	1335	1319	1059
(WY)	1955	1986	1903	1996	1903	1963	1901	1996	1903	1990	1956	1996
MIN	50.2	55.7	145	140	337	285	327	176	84.2	64.6	51.0	49.8
(WY)	1992	1905	1944	1981	1954	1990	1995	1982	1969	1991	1991	1991

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

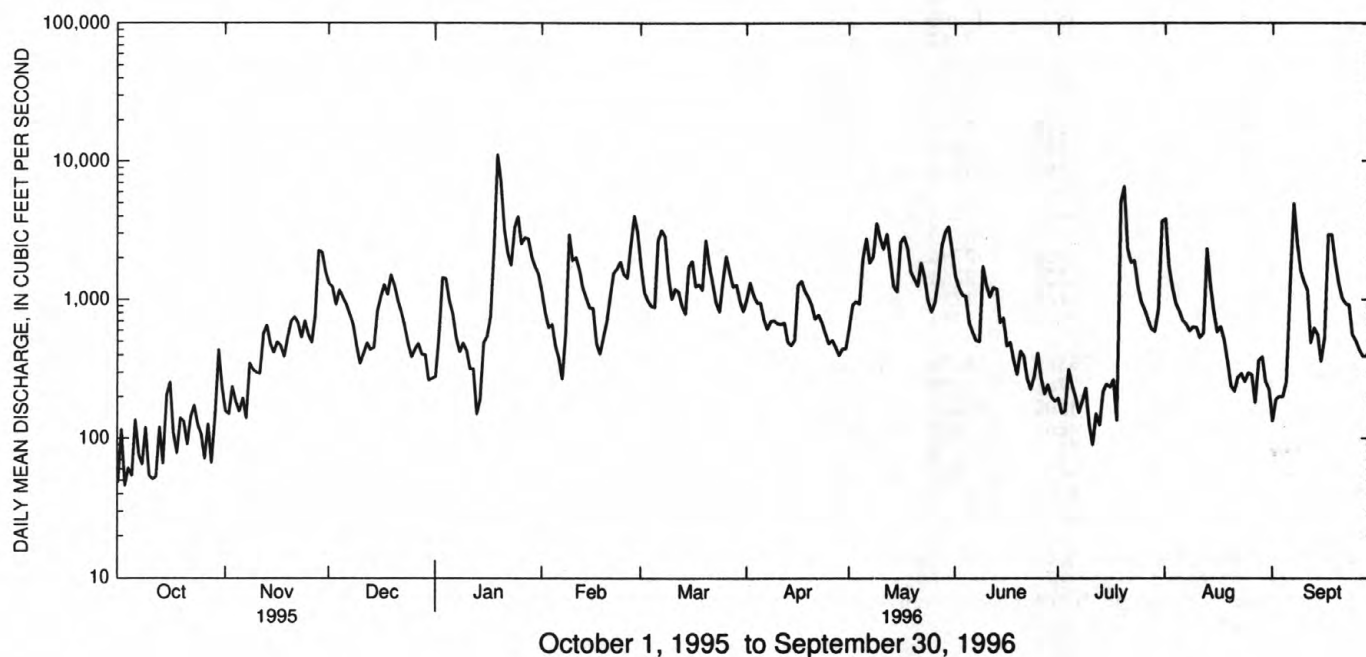
WATER YEARS 1898 - 1905
1941 - 1996

ANNUAL TOTAL	170790	372157	
ANNUAL MEAN	468	1017	645
ANNUAL MEAN‡	468	1026	649
HIGHEST ANNUAL MEAN			1052
LOWEST ANNUAL MEAN			375
HIGHEST DAILY MEAN	2650	Feb 24	11200
LOWEST DAILY MEAN	46	Oct 3	46
ANNUAL SEVEN-DAY MINIMUM	63	Sep 10	76
INSTANTANEOUS PEAK FLOW			a16100
INSTANTANEOUS PEAK STAGE			9.54
INSTANTANEOUS LOW FLOW			41
ANNUAL RUNOFF (CFSM)	1.59		3.45
ANNUAL RUNOFF (CFSM)‡	1.59		3.48
ANNUAL RUNOFF (INCHES)	21.54		46.93
ANNUAL RUNOFF (INCHES)‡	21.54		47.23
10 PERCENT EXCEEDS	1160		2320
50 PERCENT EXCEEDS	307		679
90 PERCENT EXCEEDS	81		153
			1430
			409
			106
			11200
			8.2
			29
			a16100
			b14.20
			Unknown
			2.19
			2.20
			29.71
			29.88
			Jan 19
			Oct 3
			Oct 8
			Jan 19
			Jan 19
			Mar 29
			1996
			1954
			1903
			1996
			1966
			1972
			1996
			1924

‡ Adjusted for change in reservoir contents since October 1940.

a From rating curve extended above 5,800 ft 3/s on basis of slope-area measurement of peak flow.

b From floodmarks, site and datum then in use.



MONONGAHELA RIVER BASIN

3078000 CASSELMAN RIVER AT GRANTSVILLE, MD

LOCATION.--Lat 39°42'08", long 79°08'12", Garrett County, Hydrologic Unit 05020006, on left bank at downstream side of highway bridge, 0.3 mi upstream from Slaubaugh Run, 0.7 mi downstream from U.S. Highway 40, and 1.0 mi north-east of Grantsville.

DRAINAGE AREA.--62.5 mi².

PERIOD OF RECORD.--July 1947 to current year.

REVISED RECORDS.--WSP 1143: 1948.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 2,088.97 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges (ice effect), which are fair. U.S. Army Corps of Engineers satellite telemeter at station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 19	Unknown	*6,410	a*9.15	July 19	1300	2,610	5.56
Jan. 24	1645	1,330	4.01	July 31	1500	1,160	3.76
Feb. 27	1800	1,160	3.76	Aug. 9	0030	1,410	4.11
Mar. 20	0100	1,160	3.76	Sept. 6	2130	4,830	7.79
May 9	0845	1,040	3.59	Sept. 17	0915	1,350	4.04

a From floodmark.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.3	28	214	e70	e180	322	322	201	166	46	397	22
2	3.0	49	237	e100	e150	254	394	390	136	38	212	20
3	3.2	52	176	393	e130	210	251	230	118	68	157	19
4	3.4	41	225	244	e120	198	205	194	119	60	123	29
5	17	31	172	e180	e105	218	200	421	122	41	103	29
6	34	27	158	e150	e95	589	169	585	92	31	88	1410
7	19	28	129	e100	e90	570	152	327	77	26	73	1750
8	12	53	114	e85	e170	e400	138	546	111	74	264	394
9	7.7	45	99	e80	532	e320	136	845	227	82	656	225
10	5.8	36	e70	e78	308	e260	135	428	143	41	221	161
11	4.8	81	e68	e78	600	e230	130	431	282	31	135	126
12	4.6	165	e67	e76	e310	e200	132	477	482	26	227	109
13	4.3	85	e66	e76	e250	e180	113	301	221	23	300	323
14	8.8	74	e75	e72	e190	167	109	235	159	20	159	188
15	26	79	e80	e76	e160	329	97	236	158	25	117	126
16	19	91	271	e85	e145	267	204	492	105	29	120	337
17	13	80	214	e100	e135	203	218	366	85	20	97	1120
18	9.8	84	151	e350	e125	181	205	288	75	187	77	556
19	7.7	119	157	e3600	e120	362	188	221	93	1720	64	308
20	17	116	131	e950	e145	773	168	180	91	608	55	213
21	161	146	e120	e450	e220	357	141	164	67	218	66	162
22	56	124	e108	e270	e330	266	123	177	69	217	85	158
23	30	111	e96	235	461	224	120	129	78	232	54	165
24	22	119	e86	831	703	209	135	113	171	144	46	125
25	18	103	e78	635	493	267	110	112	215	107	41	118
26	16	94	e72	404	486	364	104	94	103	100	35	93
27	15	215	e68	649	861	240	105	161	72	82	31	82
28	18	537	e66	e450	964	217	88	317	57	64	40	105
29	62	304	e64	e350	489	221	88	442	49	58	44	139
30	67	203	e62	e240	---	230	214	347	44	172	31	90
31	38	---	e67	e210	---	193	---	216	---	832	26	---
OTAL	726.4	3320	3761	11667	9067	9021	4894	9666	3987	5422	4144	8702
MEAN	23.4	111	121	376	313	291	163	312	133	175	134	290
MAX	161	537	271	3600	964	773	394	845	482	1720	656	1750
MIN	3.0	27	62	70	90	167	88	94	44	20	26	19
CFSM	.37	1.77	1.94	6.02	5.00	4.66	2.61	4.99	2.13	2.80	2.14	4.64
IN.	.43	1.98	2.24	6.94	5.40	5.37	2.91	5.75	2.37	3.23	2.47	5.18

e Estimated.

MONONGAHELA RIVER BASIN

03078000 CASSELMAN RIVER AT GRANTSVILLE, MD--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	46.1	86.8	149	164	195	264	212	137	72.1	50.5	38.3	35.6
MAX	288	449	341	376	414	582	468	312	200	175	202	290
(WY)	1955	1986	1973	1996	1956	1963	1970	1996	1951	1996	1956	1996
MIN	1.65	3.38	14.5	26.4	60.3	57.0	77.1	40.1	10.0	4.30	2.87	1.58
(WY)	1954	1954	1954	1977	1964	1990	1968	1976	1965	1965	1991	1991

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1947 - 1996

ANNUAL TOTAL	31873.4	74377.4	120
ANNUAL MEAN	87.3	203	203
HIGHEST ANNUAL MEAN			64.2
LOWEST ANNUAL MEAN			1996
HIGHEST DAILY MEAN	537	Nov 28	e3600
LOWEST DAILY MEAN	2.2	Sep 12	3.0
ANNUAL SEVEN-DAY MINIMUM	2.4	Sep 7	6.9
INSTANTANEOUS PEAK FLOW			6410
INSTANTANEOUS PEAK STAGE			c9.15
INSTANTANEOUS LOW FLOW			2.4
ANNUAL RUNOFF (CFSM)	1.40		3.25
ANNUAL RUNOFF (INCHES)	18.97		44.27
10 PERCENT EXCEEDS	194		429
50 PERCENT EXCEEDS	70		129
90 PERCENT EXCEEDS	7.1		28
			8.4

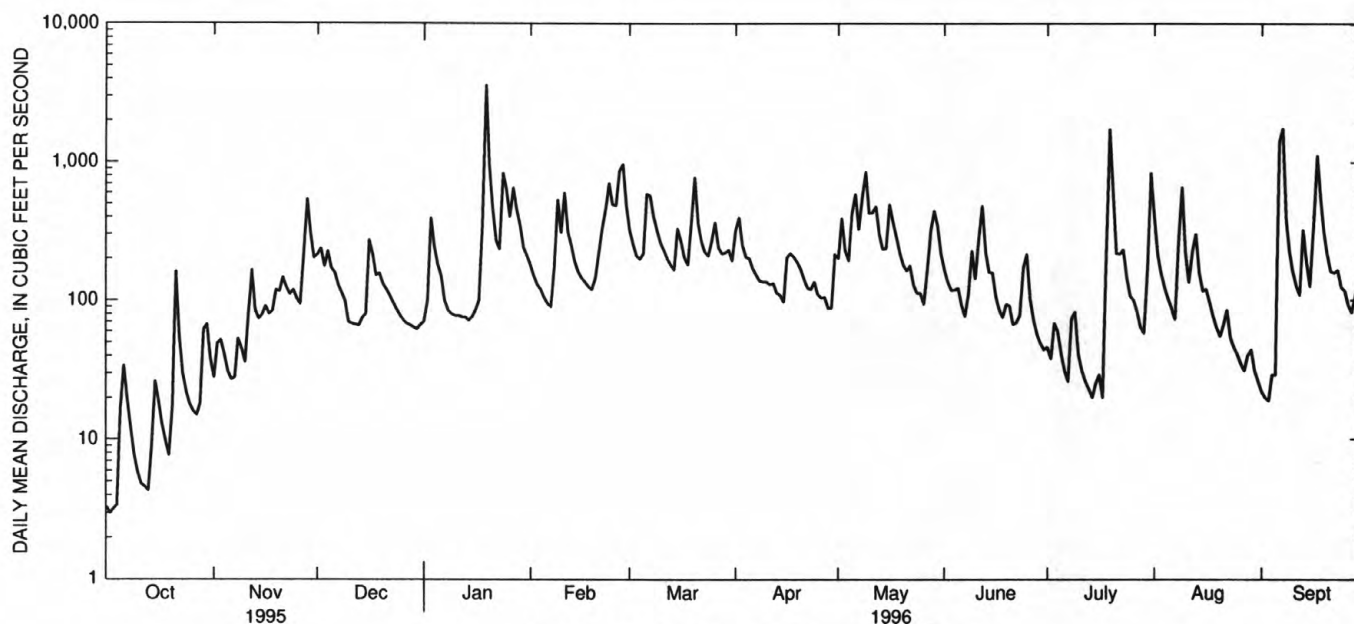
a Result of regulation from unknown source.

b From rating curve extended above 1,600 ft 3/s on basis of contracted-opening measurement at gage height 8.13 ft.

c From floodmark.

d Also Sep. 1, 1962.

e Estimated.



October 1, 1995 to September 30, 1996

MONONGAHELA RIVER BASIN

03079000 CASSELMAN RIVER AT MARKLETON, PA

LOCATION.--Lat 39°51'35", long 79°13'40", Somerset County, Hydrologic Unit 05020006, on right bank at downstream side of highway bridge at Markleton, 2 mi southwest of Casselman, and 7 mi downstream from Coxes Creek.

DRAINAGE AREA.--382 mi².

PERIOD OF RECORD.--August to September 1913 (gage heights and discharge measurements only), October 1920 to current year. Monthly discharge only for some periods, published in WSP 1305. October 1913 to September 1920 (gage heights and discharge measurements only) in reports of Water Supply Commission of Pennsylvania.

REVISED RECORDS.--WSP 743: Drainage area. WSP 1305: 1923-31. WSP 1435: 1932-34, 1935 (M), 1936-38. WSP 1625: 1924 (M).

GAGE.--Water-stage recorder. Datum of gage is 1,655.29 ft above sea level. Prior to Nov. 19, 1940, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Slight diversion above station to city of Frostburg, MD, in the Potomac River Basin. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 8,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 19	1400	*45,000	*13.26	July 19	1700	17,400	9.19
Mar. 20	0400	8,260	6.83	Sept. 7	0500	19,900	9.66
May 9	0800	11,300	7.72	Sept. 17	0700	10,400	7.46

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	143	1220	e340	906	2150	1480	1410	778	304	1740	112
2	34	128	1400	e450	e720	1640	2450	1460	652	287	902	99
3	32	189	1060	e1200	e600	1310	1590	1210	567	482	724	90
4	44	207	1100	1020	e520	967	1300	1020	558	414	661	109
5	84	162	957	728	e450	1030	1200	1330	542	295	503	149
6	200	138	846	530	e480	2790	1030	3330	454	214	420	1780
7	135	134	713	422	e520	3250	906	1990	372	174	354	13100
8	87	192	577	e360	e1000	2590	797	3040	340	174	311	2940
9	63	225	547	e330	3670	1710	746	7960	503	256	1970	1500
10	52	186	326	e300	1990	1300	715	3680	496	218	981	1040
11	45	233	270	e290	3250	1170	692	3010	535	147	583	781
12	43	992	e240	e270	2180	1140	632	3410	1440	120	526	639
13	41	617	e210	e260	1440	1110	576	2120	851	108	1090	1860
14	57	508	e190	e250	1260	1040	571	1560	604	100	665	1380
15	153	562	e620	e240	1050	1700	519	1310	531	138	475	866
16	111	556	e1800	e230	850	1720	757	2270	412	228	575	922
17	87	544	1640	e300	716	1310	1030	2480	339	140	495	8050
18	64	548	1050	e1600	713	1230	1060	2120	288	201	356	4270
19	54	726	e800	e25000	e680	1800	987	1490	1490	8570	290	2400
20	53	783	e640	8490	e500	5990	990	1200	1030	4560	247	1550
21	1050	902	e560	3260	e700	2980	817	1010	559	1540	506	1150
22	529	843	e500	2090	3080	2060	712	932	402	1090	511	1030
23	253	735	e450	1610	2870	1610	673	759	442	1120	319	1440
24	172	758	e410	3900	3490	1420	810	647	473	783	244	953
25	135	679	e370	3960	2840	1670	665	611	1490	580	204	799
26	114	614	e350	2250	2400	2040	602	524	750	489	175	649
27	101	994	e330	3850	3740	1480	631	605	487	413	155	557
28	99	2960	e300	3070	5800	1310	528	1150	374	342	178	628
29	115	2050	e290	1960	3270	1350	515	1230	315	297	209	1110
30	216	1340	e280	1520	---	1390	1090	1580	280	871	169	714
31	186	---	e300	1260	---	1180	---	991	---	1470	131	---
TOTAL	4444	19648	20346	71340	51685	55437	27071	57439	18354	26125	16669	52667
MEAN	143	655	656	2301	1782	1788	902	1853	612	843	538	1756
MAX	1050	2960	1800	25000	5800	5990	2450	7960	1490	8570	1970	13100
MIN	32	128	190	230	450	967	515	524	280	100	131	90
CFSM	.38	1.71	1.72	6.02	4.67	4.68	2.36	4.85	1.60	2.21	1.41	4.60
IN.	.43	1.91	1.98	6.95	5.03	5.40	2.64	5.59	1.79	2.54	1.62	5.13

e Estimated.

MONONGAHELA RIVER BASIN

03079000 CASSELMAN RIVER AT MARKLETON, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	277	461	768	872	1041	1489	1164	798	437	266	220	201
MAX	1769	2975	2217	2709	2324	3860	2437	2147	1499	920	842	1756
(WY)	1955	1986	1973	1937	1956	1936	1970	1924	1941	1924	1956	1996
MIN	14.9	22.6	69.2	133	153	307	316	126	60.6	35.6	24.5	19.9
(WY)	1954	1954	1954	1925	1934	1990	1921	1926	1965	1965	1957	1943

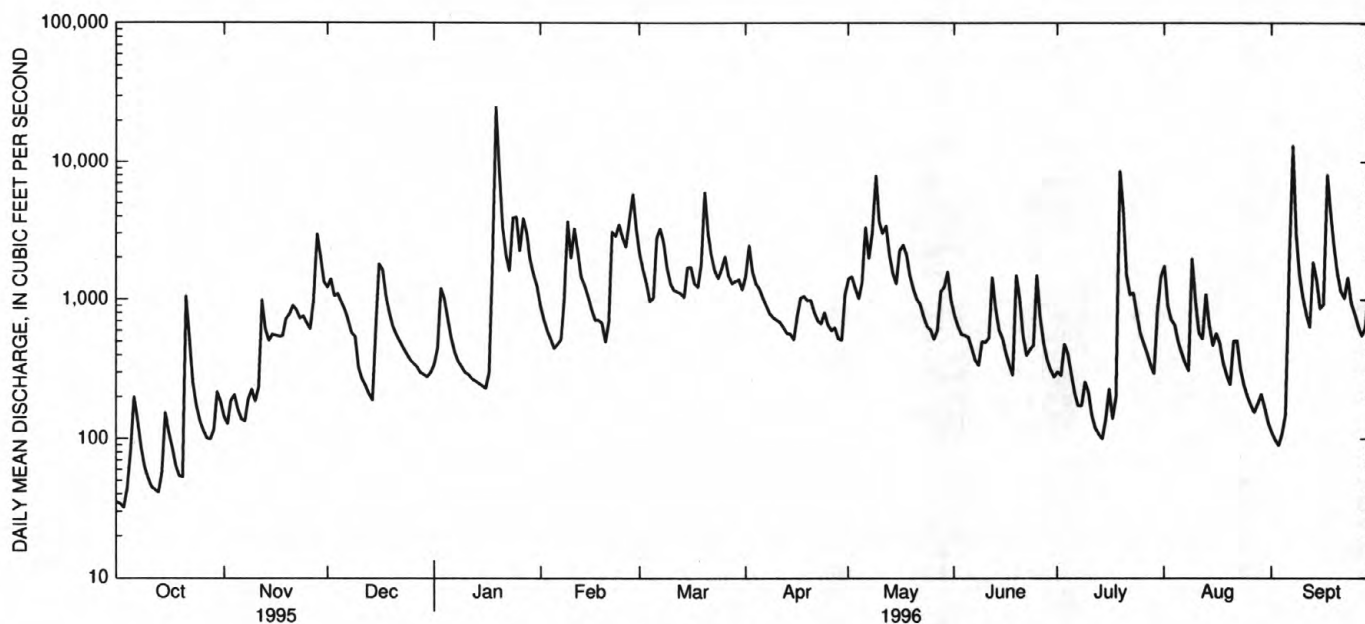
SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1921 - 1996

ANNUAL TOTAL	183824	421225	664	
ANNUAL MEAN	504	1151	1151	1996
HIGHEST ANNUAL MEAN			336	1954
LOWEST ANNUAL MEAN			25000	Jan 19 1996
HIGHEST DAILY MEAN	2960	Nov 28	11	Jul 23 1936 ^a
LOWEST DAILY MEAN	28	Sep 11	12	Sep 4 1957
ANNUAL SEVEN-DAY MINIMUM	29	Sep 5	150000	Oct 15 1954
INSTANTANEOUS PEAK FLOW			13.26	Oct 15 1954
INSTANTANEOUS PEAK STAGE			31	Sep 9 1957
INSTANTANEOUS LOW FLOW			3.01	
ANNUAL RUNOFF (CFSM)	1.32		41.02	
ANNUAL RUNOFF (INCHES)	17.90		23.63	
10 PERCENT EXCEEDS	1100		1540	
50 PERCENT EXCEEDS	350		342	
90 PERCENT EXCEEDS	51		56	

^a Also Sept. 7-9, 1957.^b Estimated on basis of summation of peak flows at nearby stations.^c Estimated.

MONONGAHELA RIVER BASIN

03080000 LAUREL HILL CREEK AT URSINA, PA

LOCATION.--Lat 39°49'13", long 79°19'18", Somerset County, Hydrologic Unit 05020006, on right bank 500 ft downstream from bridge on State Highway 281 at Ursina, and 2.7 mi upstream from mouth.

DRAINAGE AREA.--121 mi².

PERIOD OF RECORD.--August to September 1913 (gage heights and discharge measurements only), October 1918 to current year. Monthly discharge only for some periods, published in WSP 1305. October 1913 to September 1918 (gage heights and discharge measurements only) in reports of Water Supply Commission of Pennsylvania.

REVISED RECORDS.--WSP 743: Drainage area. WSP 893: 1919-21, 1932-34. WSP 1305: 1922-31.
WSP 1435: 1919-20. WSP 1625: 1932 (M).

GAGE.--Water-stage recorder and masonry control. Datum of gage is 1,335.26 ft above sea level. Prior to July 18, 1939, nonrecording gage at bridge 0.5 mi downstream at datum 6.20 ft lower.

REMARKS.--Records good except for estimated daily discharges, which are fair. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 19	1130	*7,210	*7.74	July 19	1900	5,840	6.69
Feb. 28	0900	3,090	4.56	Sept. 17	0630	4,120	5.37
May 9	0400	3,290	4.72				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	28	517	e96	296	935	674	471	229	85	372	27
2	16	27	568	e200	258	628	974	439	198	68	261	24
3	16	42	435	e660	194	462	694	365	173	203	208	23
4	17	59	535	502	e150	379	538	330	173	171	165	24
5	23	50	459	379	e120	343	549	442	147	106	136	25
6	39	42	397	279	e200	1110	450	1020	119	74	112	176
7	26	36	312	221	e400	1190	389	658	104	57	99	719
8	21	63	261	187	e900	896	338	1380	100	75	87	384
9	19	66	210	e170	e1500	618	294	2430	89	60	106	186
10	18	54	176	e140	835	497	257	1430	82	41	81	136
11	17	68	120	e130	1120	424	240	1250	80	34	59	99
12	17	332	e100	e120	854	352	215	1540	106	30	80	79
13	17	207	e88	e115	567	342	202	1010	89	28	159	248
14	20	172	e78	e105	468	334	201	684	84	27	99	303
15	113	212	e300	e100	e340	622	179	535	89	109	69	182
16	45	189	801	e120	e250	644	417	952	71	203	113	231
17	26	169	768	e220	e210	515	529	1030	52	81	85	2680
18	21	170	522	e450	e180	448	546	987	48	168	61	1810
19	20	217	e390	e4600	e160	536	501	682	378	3530	50	932
20	20	249	e300	2810	e400	1420	447	500	520	2090	43	522
21	70	283	e250	1220	1230	993	371	390	242	770	75	346
22	105	279	e210	719	1400	681	315	329	191	482	167	298
23	43	246	e180	498	1310	525	288	251	201	375	72	477
24	31	254	e160	1010	1520	455	339	212	249	250	51	320
25	25	224	e145	1190	1250	579	274	190	463	187	41	253
26	22	197	e130	772	1010	1080	252	161	258	158	34	201
27	22	307	e120	1020	1420	761	257	183	165	124	31	171
28	22	1230	e115	967	2760	622	218	268	120	101	31	290
29	24	996	e110	630	1670	577	223	343	95	87	36	676
30	40	620	e105	461	---	525	369	403	79	774	40	396
31	35	---	e100	370	---	496	---	277	---	613	29	---
TOTAL	966	7088	8962	20461	22972	19989	11540	21142	4994	11161	3052	12238
MEAN	31.2	236	289	660	792	645	385	682	166	360	98.5	408
MAX	113	1230	801	4600	2760	1420	974	2430	520	3530	372	2680
MIN	16	27	78	96	120	334	179	161	48	27	29	23
CFSM	.26	1.95	2.39	5.45	6.55	5.33	3.18	5.64	1.38	2.98	.81	3.37
IN.	.30	2.18	2.76	6.29	7.06	6.15	3.55	6.50	1.54	3.43	.94	3.76

e Estimated.

MONONGAHELA RIVER BASIN

03080000 LAUREL HILL CREEK AT URSINA, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1919 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	116	219	333	354	401	558	442	316	182	107	100	84.5
MAX	564	1011	815	1141	1000	1331	879	689	700	388	416	608
(WY)	1955	1986	1973	1937	1956	1936	1970	1924	1941	1985	1935	1971
MIN	6.15	8.91	42.2	57.0	89.3	155	114	52.0	29.4	9.20	8.90	5.73
(WY)	1931	1931	1931	1925	1934	1990	1921	1926	1965	1966	1983	1959

SUMMARY STATISTICS

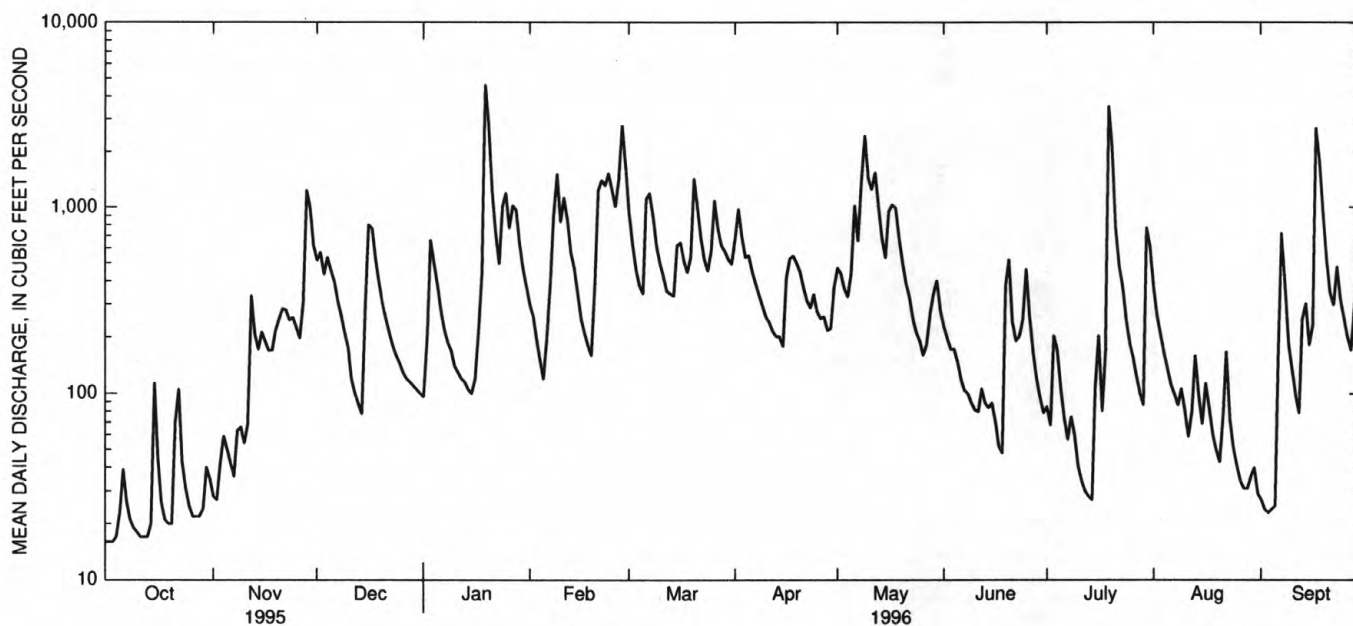
FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1919 - 1996

ANNUAL TOTAL	71464.4	144565	
ANNUAL MEAN	196	395	
HIGHEST ANNUAL MEAN			267
LOWEST ANNUAL MEAN			395
HIGHEST DAILY MEAN	1490	Feb 24	164
LOWEST DAILY MEAN	9.0	Sep 11	6980
ANNUAL SEVEN-DAY MINIMUM	9.6	Sep 5	2.4
INSTANTANEOUS PEAK FLOW			3.4
INSTANTANEOUS PEAK STAGE			10.63
INSTANTANEOUS LOW FLOW			2.2
ANNUAL RUNOFF (CFSM)	1.62		2.21
ANNUAL RUNOFF (INCHES)	21.97		30.00
10 PERCENT EXCEEDS	500		636
50 PERCENT EXCEEDS	127		148
90 PERCENT EXCEEDS	17		21

a From rating curve extended above 6,100 ft³/s on basis of slope-area measurement of peak flow.
 e Estimated.



October 1, 1995 to September 30, 1996

MONONGAHELA RIVER BASIN

03081000 YOUGHIOGHENY RIVER BELOW CONFLUENCE, PA

LOCATION.--Lat 39°49'39", long 79°22'22", Fayette County, Hydrologic Unit 05020006, on left bank 1.0 mi downstream from Casselman River, 1.5 mi northwest of Confluence, at mile 72.0.

DRAINAGE AREA.--1,029 mi².

PERIOD OF RECORD.--June 1940 to current year. Monthly discharge only for June 1940, published in WSP 1305.

GAGE.--Water-stage recorder. Datum of gage is 1,302.77 ft above sea level.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated since 1925 by Deep Creek Reservoir and since 1943 by Youghiogheny River Lake 1.7 mi upstream. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 17, or 18, 1936 reached a stage of 21.6 ft, from floodmarks, discharge, 85,000 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	620	712	2170	1140	4800	5660	3500	2860	5160	944	4190	1220
2	533	683	2530	1400	4500	5410	5430	2740	3970	871	3790	1200
3	577	716	1990	2810	4140	5120	4560	2520	2370	1210	2400	1180
4	551	808	2070	2380	3940	4610	4050	2270	1510	1150	2290	1180
5	587	751	1880	1990	3830	3890	3580	2720	1480	1060	2270	1220
6	812	703	1660	1740	3860	5130	3070	6120	1370	988	2350	1740
7	812	688	1580	1590	3860	6370	2890	5820	1270	921	2270	13900
8	734	797	1470	1370	4480	6330	2520	7710	1230	1030	2090	4320
9	708	842	1390	1550	8120	5480	2270	13600	1300	1020	2550	3630
10	701	760	1120	1490	6240	4870	2190	8050	1380	1020	1780	4480
11	633	784	971	1260	7400	4630	1930	7610	1550	846	1380	4160
12	687	1690	1040	1230	6450	4540	1590	8530	2420	909	1440	3270
13	667	1340	1110	1200	5390	4490	1340	7300	2090	888	1990	3530
14	640	1150	1160	1210	e5100	3540	1320	6860	1840	871	2000	3490
15	836	1240	1650	1290	e4210	3130	1530	6000	1760	938	2260	2000
16	750	1220	3410	1280	3060	3220	2200	5840	1640	1210	2120	1750
17	645	1200	3560	1600	2540	2670	2940	6720	1540	993	1520	3980
18	587	1200	2400	4530	2140	2500	3470	6440	1240	1110	1360	11300
19	646	1390	2270	30500	1600	2680	3510	5600	2330	12200	1270	6270
20	647	1470	2020	14100	e2090	8560	3510	5130	2610	8980	1220	4650
21	1470	1610	1700	6000	e4200	5410	3250	4150	1650	5910	1340	2660
22	1340	1640	1510	5090	e5690	4580	2930	4180	1370	6070	1680	2420
23	806	1500	1430	4630	5500	4120	2410	4160	1450	5950	1350	3260
24	702	1520	1350	5930	6270	3640	2380	2700	1320	4340	1240	2970
25	689	1430	1280	6930	5550	3350	1980	1840	2530	2760	1190	2740
26	663	1320	1230	5040	5020	3950	1710	1460	1730	1940	1250	2530
27	643	1670	1160	6020	7050	3590	1750	1480	1300	1540	1280	2390
28	635	5070	1120	6640	11500	3520	1610	2330	1110	1430	1290	2160
29	650	3940	1100	6280	7410	3480	1550	3050	1010	1360	1320	2700
30	728	2560	964	6220	---	3460	2040	5020	929	2350	1310	2390
31	774	---	1080	5880	---	3210	---	5810	---	2830	1240	---
TOTAL	22473	42404	51375	140320	145940	135140	79010	156620	54459	75639	57030	104690
MEAN	725	1413	1657	4526	5032	4359	2634	5052	1815	2440	1840	3490
MAX	1470	5070	3560	30500	11500	8560	5430	13600	5160	12200	4190	13900
MIN	533	683	964	1140	1600	2500	1320	1460	929	846	1190	1180
†	-459	+265	+409	+1440	-377	+317	+22	+193	-179	+105	-405	+20

† Change in contents, equivalent in cubic feet per second, in Deep Creek Reservoir and Youghiogheny River Lake. Records of contents in Deep Creek Reservoir furnished by Pennsylvania Electric Co. Records of contents in Youghiogheny River Lake furnished by U.S. Army Corps of Engineers.

e Estimated.

MONONGAHELA RIVER BASIN

03081000 YOUGHIOGHENY RIVER BELOW CONFLUENCE, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1177	1519	2361	2517	2870	3646	3045	2359	1489	1122	1068	1100
MAX	4699	5065	6171	5441	5204	7868	6984	5052	4137	2950	3565	3882
(WY)	1980	1986	1973	1974	1956	1963	1993	1996	1941	1985	1956	1971
MIN	287	433	384	496	903	778	1157	602	491	384	290	213
(WY)	1948	1954	1944	1981	1954	1990	1963	1982	1965	1942	1944	1946

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

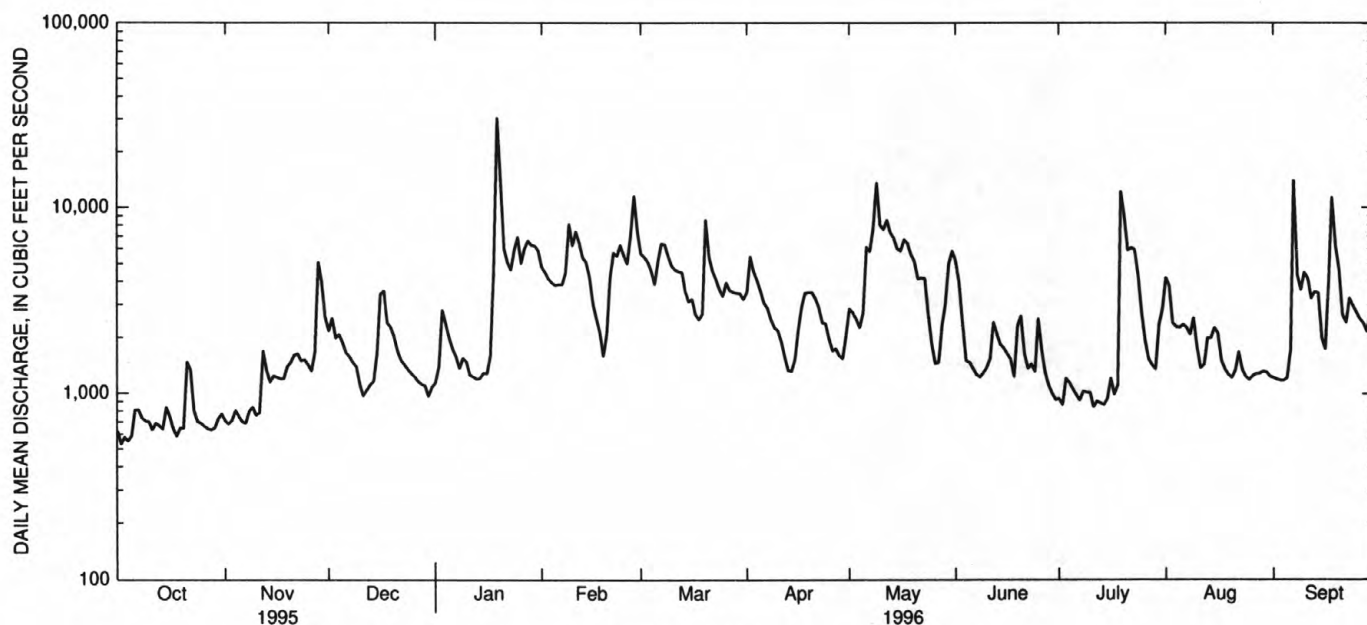
FOR 1996 WATER YEAR

WATER YEARS 1941 - 1996

ANNUAL TOTAL	530370		1065100									
ANNUAL MEAN	1453	†-3.1	2910	†+116						2019		
HIGHEST ANNUAL MEAN										2910		1996
LOWEST ANNUAL MEAN										1074		1954
HIGHEST DAILY MEAN	5860	Mar 1	30500	Jan 19						34600	Oct 16	1954
LOWEST DAILY MEAN	533	Oct 2	533	Oct 2						121	Sep 27	1943
ANNUAL SEVEN-DAY MINIMUM	590	Sep 29	642	Oct 1						175	Sep 16	1946
INSTANTANEOUS PEAK FLOW			48500	Jan 19						69500	Oct 15	1954
INSTANTANEOUS PEAK STAGE			17.74	Jan 19						19.92	Oct 15	1954
10 PERCENT EXCEEDS	2830		5960							4460		
50 PERCENT EXCEEDS	1100		2030							1280		
90 PERCENT EXCEEDS	671		811							611		

† Change in contents, equivalent in cubic feet per second, in Deep Creek Reservoir and Youghiogheny River Lake. Records of contents in Deep Creek Reservoir furnished by Pennsylvania Electric Co. Records of contents in Youghiogheny River Lake furnished by U.S. Army Corps of Engineers.

a From rating curve extended above 25,000 ft³/s on basis of slope-area measurement of peak flow.



October 1, 1995 to September 30, 1996

MONONGAHELA RIVER BASIN

03082500 YOUGHIOGHENY RIVER AT CONNELLSVILLE, PA

LOCATION.--Lat 40°01'03", long 79°35'38", Fayette County, Hydrologic Unit 05020006, on left bank at downstream side of Crawford Avenue bridge at Conneltsville, 1.2 mi upstream from Mounts Creek, at mile 44.0.

DRAINAGE AREA.--1,326 mi².

PERIOD OF RECORD.--July 1908 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 743: Drainage area. WSP 1305: 1912 (M), 1914 (M), 1916-17 (M), 1918, 1922-25. WSP 1435: 1919-20. WSP 1725: 1916, 1932 (monthly, yearly summaries).

GAGE.--Water-stage recorder. Datum of gage is 860.13 ft above sea level. Prior to Aug. 15, 1928, nonrecording gage, and Aug. 15, 1928 to July 7, 1958, water-stage recorder at same site and datum. July 8, 1958 to Sept. 8, 1959, nonrecording gage at site 0.4 mi downstream at different datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated since 1925 by Deep Creek Reservoir, since 1943 by Youghiogheny River Lake 29.4 mi upstream, and by several smaller reservoirs above station. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	625	789	2920	e1300	e5600	8320	4690	4730	6410	1040	4830	1260
2	613	748	3250	e1700	e5200	7420	7650	4180	4940	1040	5360	1230
3	530	765	2760	e4600	e4800	6880	6630	3960	3360	1410	3100	1200
4	618	884	2620	4100	e4500	5990	5740	3390	1750	1510	2840	1190
5	626	856	2580	3010	e4300	5610	5610	4020	1700	1220	2670	1220
6	710	777	2270	2570	e4000	7250	4700	9500	1720	1160	2810	1370
7	900	754	2060	2310	e3900	9490	4310	8340	1590	1050	2690	14600
8	798	851	1960	1960	e4300	9160	3850	10600	1480	1350	2660	6350
9	737	981	1770	e1800	e10000	7630	3310	19300	1440	1310	3160	3810
10	734	887	1480	e1700	8910	6490	3110	12300	1640	1140	2590	5280
11	686	877	1130	e1650	9490	6110	2870	11100	1650	1070	1710	4830
12	645	1790	1290	e1600	8830	5930	2410	13800	2630	919	1800	4170
13	689	1860	1440	e1550	7160	5870	1980	10500	2730	979	2420	4330
14	738	1480	1550	e1500	6660	5230	1880	9470	2300	985	2460	4470
15	1010	1600	1990	e1500	5820	4640	1930	8330	2230	1240	2590	2590
16	927	1580	4510	e1450	4340	5270	3920	7910	2010	1670	2850	2330
17	724	1500	5320	e2000	3380	4300	4870	9450	1800	1270	1930	15300
18	660	1500	3570	e5400	3080	3890	5190	9500	1620	1520	1640	12400
19	610	1800	3300	e38000	2220	3770	5180	7830	1850	16600	1460	8670
20	674	2010	3040	23300	3070	11800	5090	6910	3970	15200	1360	6870
21	1010	2120	2500	9470	6810	8520	4610	5850	2290	7960	1350	3720
22	1880	2240	2160	7270	8490	6740	4150	5080	1700	7800	2020	3230
23	1040	2020	e1800	6610	7860	5920	3560	5660	1710	7420	1610	4010
24	737	2040	e1600	8310	8260	5320	3310	3900	1730	6050	1400	3930
25	748	1950	e1500	10600	7850	5420	2980	2660	3170	3770	1300	3470
26	703	1740	e1400	7780	6600	6800	2480	2020	2530	2810	1260	3150
27	677	2020	e1350	8440	9350	5700	2500	1920	1710	2050	1370	2910
28	673	6060	e1250	9880	18200	5330	2310	2740	1340	1830	1340	3150
29	691	5650	e1200	8540	12100	5190	2210	3700	1180	1690	1400	4320
30	723	3700	e1150	e7200	---	4880	3010	5630	1070	2990	1400	3450
31	845	---	e1250	e6200	---	4530	---	7110	---	3720	1310	---
TOTAL	23981	53829	67970	193300	195080	195400	116040	221390	67250	101773	68690	138810
MEAN	774	1794	2193	6235	6727	6303	3868	7142	2242	3283	2216	4627
MAX	1880	6060	5320	38000	18200	11800	7650	19300	6410	16600	5360	15300
MIN	530	748	1130	1300	2220	3770	1880	1920	1070	919	1260	1190
†	-459	+265	+409	+1440	-377	+317	+22	+193	-179	+105	-405	+20

† Change in contents, equivalent in cubic feet per second, in Deep Creek Reservoir and Youghiogheny River Lake. Records of contents in Deep Creek Reservoir furnished by Pennsylvania Electric Co. Records of contents in Youghiogheny River Lake furnished by U.S. Army Corps of Engineers.

e Estimated.

MONONGAHELA RIVER BASIN

03082500 YOUGHIOGHENY RIVER AT CONNELLSVILLE, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 1996, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1419	1912	2988	3336	3847	4926	4155	3118	1873	1345	1269	1209
MAX	5938	7518	8050	9737	7916	11370	8463	7142	5805	4143	4772	5400
(WY)	1955	1986	1973	1937	1939	1936	1993	1996	1941	1985	1956	1971
MIN	139	84.5	296	465	630	1189	1321	662	503	279	155	146
(WY)	1931	1931	1931	1925	1934	1990	1925	1926	1925	1930	1930	1925

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1925 - 1996

ANNUAL TOTAL	689373		1443513									
ANNUAL MEAN	1889	†-3.1	3944	†+116								
HIGHEST ANNUAL MEAN									2611			
LOWEST ANNUAL MEAN									3944			1996
HIGHEST DAILY MEAN			7800	Mar 1		e38000	Jan 19		58100		Mar 18	1936
LOWEST DAILY MEAN			530	Oct 3		530	Oct 3		39		Nov 16	1930
ANNUAL SEVEN-DAY MINIMUM			592	Sep 27		660	Oct 1		62		Nov 14	1930
INSTANTANEOUS PEAK FLOW						65300	Jan 19		a103000		Oct 16	1954
INSTANTANEOUS PEAK STAGE						18.65	Jan 19		21.96		Oct 16	1954
ANNUAL RUNOFF (CFSM)		1.42				2.97			1.97			
ANNUAL RUNOFF (INCHES)		19.34				40.50			26.75			
10 PERCENT EXCEEDS		3940				8330			5810			
50 PERCENT EXCEEDS		1420				2680			1630			
90 PERCENT EXCEEDS		692				913			595			

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1909 - 1924, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1126	1653	2574	4697	4098	5490	3830	2696	2379	1110	764	1100
MAX	5117	4937	5795	8679	9354	9777	6572	6675	5224	5102	1904	5158
(WY)	1912	1914	1922	1913	1918	1912	1914	1924	1910	1912	1912	1911
MIN	36.4	68.4	342	503	1589	1913	1335	1125	938	221	99.5	132
(WY)	1909	1909	1909	1918	1924	1915	1921	1911	1922	1918	1910	1922

SUMMARY STATISTICS

WATER YEARS 1909 - 1924

ANNUAL MEAN	2620											
HIGHEST ANNUAL MEAN	3976					1912						
LOWEST ANNUAL MEAN	1879					1923						
HIGHEST DAILY MEAN	59200				Mar 21	1912						
LOWEST DAILY MEAN	11				Oct 18	1910						
ANNUAL SEVEN-DAY MINIMUM	14				Oct 15	1910						
INSTANTANEOUS PEAK FLOW	b65900				Mar 29	1924						
INSTANTANEOUS PEAK STAGE	c20.5				Mar 29	1924						
INSTANTANEOUS LOW FLOW	11				Sep 23	1908d						
ANNUAL RUNOFF (CFSM)	1.98											
ANNUAL RUNOFF (INCHES)	26.84											
10 PERCENT EXCEEDS	6200											
50 PERCENT EXCEEDS	1370											
90 PERCENT EXCEEDS	195											

† Change in contents, equivalent in cubic feet per second, in Deep Creek Reservoir and Youghiogheny River Lake. Records of contents in Deep Creek Reservoir furnished by Pennsylvania Electric Co. Records of contents in Youghiogheny River Lake furnished by U.S. Army Corps of Engineers.

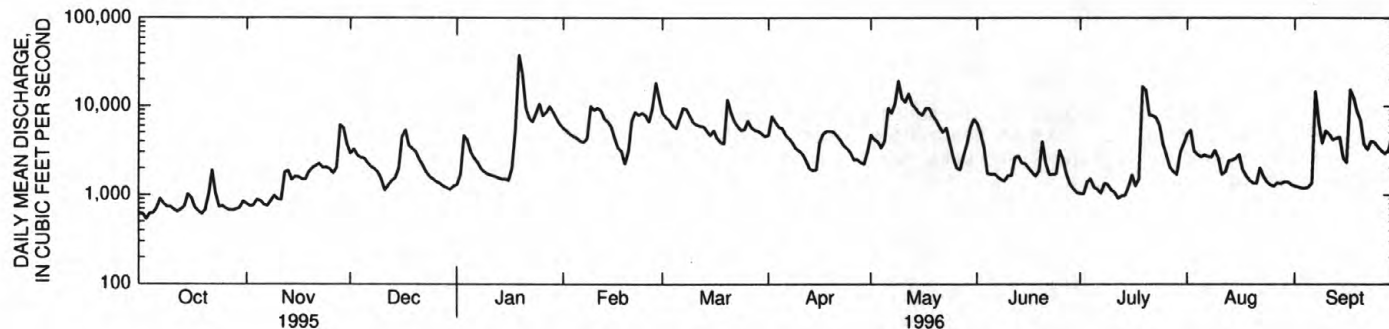
a From rating curve extended above 55,000 ft³/s.

b Estimated from hydrograph.

c From graph based on gage readings.

d Also Sept. 26, 27, 1908 and Oct. 18, 1910.

e Estimated.



October 1, 1995 to September 30, 1996

MONONGAHELA RIVER BASIN

03083500 YOUGHIOGHENY RIVER AT SUTERSVILLE, PA
(National water-quality assessment station)

LOCATION.--Lat 40°14'24", long 79°48'24", Allegheny County, Hydrologic Unit 05020006, on left bank 500 ft upstream from highway bridge at Sutersville, 2.1 mi downstream from Sewickley Creek, at mile 15.2.

DRAINAGE AREA.--1,715 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1920 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 743: Drainage area. WSP 1305: 1924, 1926 (M), 1931 (M). WSP 1435: 1935-36.

GAGE.--Water-stage recorder. Datum of gage is 733.36 ft above sea level. Prior to June 1, 1939, nonrecording gage at site 500 ft downstream at same datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated since 1925 by Deep Creek Reservoir, since 1943 by Youghiogheny River Lake 58 mi upstream, and by several smaller reservoirs above station. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	671	900	3270	1690	e6200	10000	5070	6470	6660	1240	4400	1350
2	653	886	3220	2270	e5800	8300	8160	5310	5710	1290	5670	1320
3	631	849	3130	6050	e5400	7620	7780	4920	4050	1990	3660	1280
4	718	882	2710	5860	e5000	6570	6570	4120	2450	2020	2930	1270
5	783	966	2800	3860	e4800	6380	7100	4130	2040	1620	2720	1280
6	844	888	2500	3360	e4700	8750	6060	8710	1900	1420	2770	1340
7	893	836	2230	2720	e4600	11800	5350	9220	1740	1290	2720	10600
8	911	872	2100	e2500	e4600	11000	4800	10800	1760	1260	2720	9130
9	806	1010	1890	e2200	e9000	9050	4010	21900	1650	1600	3140	3830
10	762	1040	1690	e2200	10200	7460	3690	15900	1680	1340	3230	4890
11	758	942	1130	e2100	9050	6910	3480	12500	1850	1270	2070	4830
12	688	1370	1350	e2000	9620	6690	2950	16900	2230	1060	1750	4500
13	709	2270	1640	e2000	7540	6560	2560	12700	3130	1090	2190	4310
14	850	1840	1760	e1900	6830	6340	2290	10800	2620	1070	2570	5320
15	1250	2030	2000	e1800	6410	5180	2200	9360	2430	1160	2480	3220
16	1130	1960	3660	e3000	4860	6270	4400	8700	2190	1740	3020	2410
17	904	1760	6140	e5400	3620	5510	5820	9650	1950	1570	2400	12400
18	748	1750	4270	e8900	3440	4860	5890	10700	1940	1400	1780	15200
19	679	2080	3700	43500	2550	4560	5920	8680	3360	11700	1580	9650
20	695	2420	3720	53000	3020	12800	5770	7510	4390	21800	1470	7840
21	741	2420	3000	13500	7300	11900	5200	6860	3130	9160	1480	4520
22	1710	2540	2560	8850	9030	8600	4690	5450	2260	8090	1840	3440
23	1400	2340	2230	7580	8540	7340	4130	6080	1970	7550	1920	3770
24	932	2280	2030	8850	8260	6620	3650	4650	2290	6900	1800	4270
25	778	2230	1860	12400	8640	6300	3480	3360	3710	4200	1470	3630
26	768	2020	1760	9330	6890	7530	2920	2550	3480	3230	1370	3300
27	736	1910	1620	8530	9150	6780	2900	2230	2300	2420	1420	3040
28	726	4580	1620	11200	22900	6150	2690	2610	1760	2000	1440	3470
29	731	6800	1590	9350	16700	5980	3100	3550	1480	1830	1440	5500
30	758	4370	1490	e8000	---	5470	4560	5050	1350	2470	1470	4270
31	813	---	1580	e7000	---	5100	---	7000	---	3980	1420	---
TOTAL	26176	59041	76250	260900	214650	230380	137190	248370	79460	110760	72340	145180
MEAN	844	1968	2460	8416	7402	7432	4573	8012	2649	3573	2334	4839
MAX	1710	6800	6140	53000	22900	12800	8160	21900	6660	21800	5670	15200
MIN	631	836	1130	1690	2550	4560	2200	2230	1350	1060	1370	1270
†	-459	+265	+409	+1440	-377	+317	+22	+193	-179	+105	-405	+20

† Change in contents, equivalent in cubic feet per second, in Deep Creek Reservoir and Youghiogheny River Lake. Records of contents in Deep Creek Reservoir furnished by Pennsylvania Electric Co. Records of contents in Youghiogheny River Lake furnished by U.S. Army Corps of Engineers.

e Estimated.

MONONGAHELA RIVER BASIN

03083500 YOUGHIOGHENY RIVER AT SUTERSVILLE, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 1996, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1503	2085	3662	4021	4596	5964	4931	3684	2256	1595	1452	1372
MAX	7006	5818	9373	8488	9630	13720	10230	8012	7318	4853	5707	6382
(WY)	1955	1922	1973	1974	1939	1936	1940	1996	1941	1985	1956	1971
MIN	107	209	596	611	716	1539	1637	1012	585	614	309	185
(WY)	1924	1923	1954	1925	1934	1990	1921	1982	1925	1942	1922	1922

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

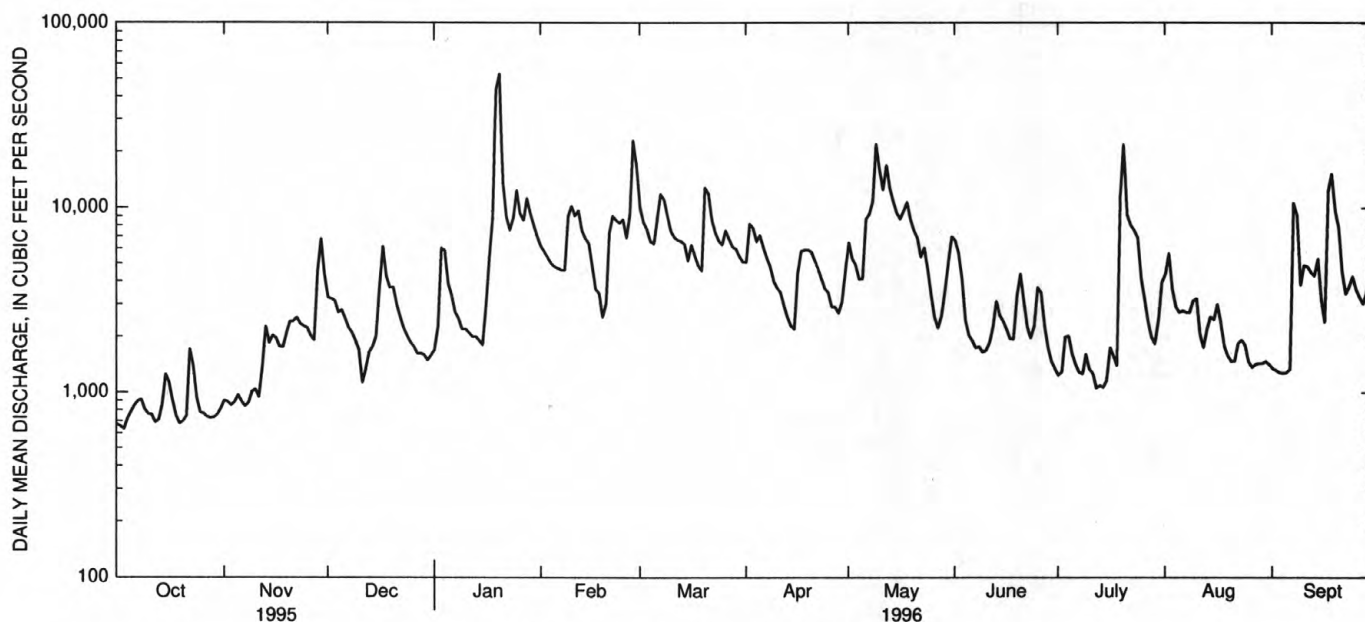
WATER YEARS 1921 - 1996

ANNUAL TOTAL	783916		1660697									
ANNUAL MEAN	2148	†-3.1	4537	†+116						3086		1996
HIGHEST ANNUAL MEAN										4537		1925
LOWEST ANNUAL MEAN										1496		1925
HIGHEST DAILY MEAN			9320	Mar 1		53000	Jan 20			79000	Mar 18	1936
LOWEST DAILY MEAN			623	Sep 30		631	Oct 3			57	Sep 30	1922
ANNUAL SEVEN-DAY MINIMUM			643	Sep 27		742	Oct 1			64	Sep 24	1922
INSTANTANEOUS PEAK FLOW						84100	Jan 19			108000	Oct 16	1954
INSTANTANEOUS PEAK STAGE						28.19	Jan 19			a32.50	Oct 16	1954
INSTANTANEOUS LOW FLOW										b57	Sep 29,30	1922
ANNUAL RUNOFF (CFSM)			1.25			2.65				1.80		
ANNUAL RUNOFF (INCHES)			17.00			36.02				24.45		
10 PERCENT EXCEEDS			4520			9070				6850		
50 PERCENT EXCEEDS			1640			3110				1930		
90 PERCENT EXCEEDS			745			997				686		

† Change in contents, equivalent in cubic feet per second, in Deep Creek Reservoir and Youghiogheny River Lake. Records of contents in Deep Creek Reservoir furnished by Pennsylvania Electric Co. Records of contents in Youghiogheny River Lake furnished by U.S. Army Corps of Engineers.

a From floodmark.

b Minimum observed.



October 1, 1995 to September 30, 1996

MONONGAHELA RIVER BASIN

03083500 YOUGHIOGHENY RIVER AT SUTERSVILLE, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1996 to current year.

REMARKS.--All water-quality samples collected and analyzed by the U.S. Geological Survey. Additional sites in the fixed-station network are shown in figure 4, page 26.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (μS/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	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)
APR 29...	1015	3080	314	6.9	12.0	734	10.2	98	27	7.5	16
MAY 28...	1430	2700	291	7.5	14.0	735	9.7	97	26	7.7	14
JUN 26...	1000	3610	249	6.9	19.0	743	8.3	79	22	5.9	11
JUL 24...	0930	7030	155	7.3	19.0	739	8.9	50	14	3.6	7.1
AUG 13...	1415	2220	254	7.5	21.5	739	9.0	78	22	5.7	14
SEP 17...	0930	8040	234	7.4	16.5	731	8.8	78	22	5.7	10

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	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 DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
APR 29...	1.4	27	78	17	<0.10	3.8	183	0.010	0.870	0.070	0.20
MAY 28...	1.5	33	82	12	0.10	4.8	177	<0.010	0.690	0.110	0.20
JUN 26...	1.7	26	58	11	0.10	5.1	128	0.010	1.00	0.040	0.60
JUL 24...	1.3	16	32	7.5	0.10	4.4	89	0.010	0.790	0.050	<0.20
AUG 13...	1.8	25	65	10	<0.10	4.0	150	0.020	0.760	0.030	0.20
SEP 17...	2.1	46	52	12	<0.10	4.9	140	0.020	0.830	0.030	0.50

DATE	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	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)	IRON, DIS-SOLVED (μG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (μG/L AS MN) (01056)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C) (00689)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
APR 29...	<0.20	0.020	<0.010	<0.010	88	180	1.5	0.40	21	92
MAY 28...	0.30	0.020	<0.010	<0.010	85	150	1.3	0.50	3	29
JUN 26...	0.20	0.110	<0.010	<0.010	13	36	2.2	2.2	70	90
JUL 24...	<0.20	<0.010	<0.010	<0.010	69	68	1.8	0.70	15	81
AUG 13...	0.20	<0.010	0.030	0.010	86	30	2.2	0.70	11	90
SEP 17...	<0.20	0.110	<0.010	0.010	72	34	2.7	4.1	94	91

MONONGAHELA RIVER BASIN

03085000 MONONGAHELA RIVER AT BRADDOCK, PA
(National water-quality assessment station)

LOCATION.--Lat 40°23'28", long 79°51'30", Allegheny County, Hydrologic Unit 05020005, near right bank on river guide wall 300 ft upstream from dam at lock 2 at Braddock, 1,700 ft downstream from Turtle Creek, and 11.2 mi upstream of confluence with Allegheny River.

DRAINAGE AREA.--7,337 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1938 to current year. Monthly discharge only for some periods, published in WSP 1305.

GAGE.--Water-stage recorder and fixed-crest concrete dam control with streamward lock chamber usable as floodway during high flow since 1951. Datum of gage is 709.66 ft above sea level (U.S. Army Corps of Engineers bench mark). Prior to Aug. 13, 1951, at site 700 ft upstream, and Aug. 13, 1951 to Nov. 8, 1990 at present site at datum 2.50 ft lower.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by locks and hydroelectric plants, since 1938 by Tygart Lake, since 1926 by Lake Lynn, since 1925 by Deep Creek Reservoir, and since 1943 by Youghiogheny River Lake, combined capacity, 704,300 acre-ft. Figures of daily discharge include slight diversion from Beaver Run Reservoir in the Kiskiminetas River Basin to the borough of Jeannette in the Monongahela River Basin. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 18, 1936 reached a stage of 38.8 ft from, floodmarks, discharge, 210,000 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1780	3360	14700	4890	27400	37900	20600	18500	32000	3260	63800	3300
2	1500	4230	11500	7240	24100	30600	28200	20800	23400	5070	36400	2780
3	1850	3070	12500	25000	18900	26300	26500	21500	15400	6040	29300	3120
4	3020	3320	9450	31700	15900	23900	20900	18600	9390	6510	25200	3000
5	3260	2440	10600	26800	14800	21400	22800	32300	8270	8090	21900	3730
6	2990	2440	9920	21600	12900	34000	19200	65700	5990	6950	20100	5950
7	2360	3190	8720	13600	11500	48200	15500	61000	6960	6090	16400	22500
8	2120	3950	9210	7860	11600	47700	15300	48400	6100	4400	13900	27800
9	2210	3980	8060	9090	33500	43000	15600	58100	5890	4790	13900	15700
10	2300	4830	5610	8750	45700	35400	13300	64300	5640	5530	11500	9110
11	1910	5740	4490	8390	35000	24500	12500	50800	6900	5710	10400	13800
12	1940	5790	4570	7270	34800	22600	11000	64700	6120	4670	9030	12300
13	1700	8650	4600	8710	31500	20200	8520	61800	9130	4120	19000	11700
14	2260	9820	4820	7200	25100	16500	9130	47500	8290	3080	27900	9590
15	4270	10700	6070	7420	19800	17700	9500	39900	6770	3140	24900	8870
16	3870	9760	11200	8850	15900	31300	15400	36800	6860	4390	18400	7050
17	3810	9200	22000	12100	14500	26400	23800	59600	5080	3470	11900	33400
18	2680	8730	16000	44600	13400	22900	26500	73300	5870	6040	11800	54200
19	2840	8760	19900	100000	9350	22700	26900	46900	12900	38400	8630	33500
20	2390	9410	38000	188000	12300	42800	25300	39200	9030	88100	6980	27200
21	2430	10300	32400	63300	32100	45000	15700	35200	8840	43700	6380	20600
22	2340	12900	27300	33600	29100	34000	15900	35900	7260	33000	4850	12000
23	2990	9840	17200	32700	27400	26800	15000	36400	5310	39900	5160	9910
24	2890	9570	15600	38600	28000	23800	12900	30000	6540	36300	5360	9720
25	2380	10300	12100	56100	24900	24500	10600	24900	13100	25400	4700	8610
26	2380	9870	8510	46400	21900	29600	9600	15100	11500	17900	5790	7780
27	1990	9360	8000	39500	31100	27500	8090	12700	8330	15600	4960	6940
28	1730	12200	6810	42800	75000	26900	6740	21700	6720	8300	3500	8190
29	1740	19700	6890	35500	70600	29500	10300	30700	4250	6540	3930	20800
30	2470	17500	5040	33800	---	28000	13400	42000	4020	6690	3480	15900
31	3960	---	4170	32400	---	24700	---	35200	---	24600	3880	---
TOTAL	78360	242910	375940	1003770	768050	916300	484680	1249500	271860	475780	453330	429050
MEAN	2528	8097	12130	32380	26480	29560	16160	40310	9062	15350	14620	14300
MAX	4270	19700	38000	188000	75000	48200	28200	73300	32000	88100	63800	54200
MIN	1500	2440	4170	4890	9350	16500	6740	12700	4020	3080	3480	2780
CFSM	.34	1.10	1.65	4.41	3.61	4.03	2.20	5.49	1.24	2.09	1.99	1.95
IN.	.40	1.23	1.91	5.09	3.89	4.65	2.46	6.34	1.38	2.41	2.30	2.18

MONONGAHELA RIVER BASIN

03085000 MONONGAHELA RIVER AT BRADDOCK, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5321	9278	15780	17300	20920	24040	18860	14220	9131	6342	5919	4729
MAX	23130	42130	37600	36150	43120	54500	39180	40310	30240	15620	23720	18290
(WY)	1980	1986	1973	1952	1956	1963	1940	1996	1981	1958	1956	1971
MIN	1200	971	2748	3389	6387	8042	6473	3352	2107	1765	1531	1005
(WY)	1954	1954	1954	1977	1954	1969	1971	1982	1965	1966	1957	1946

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

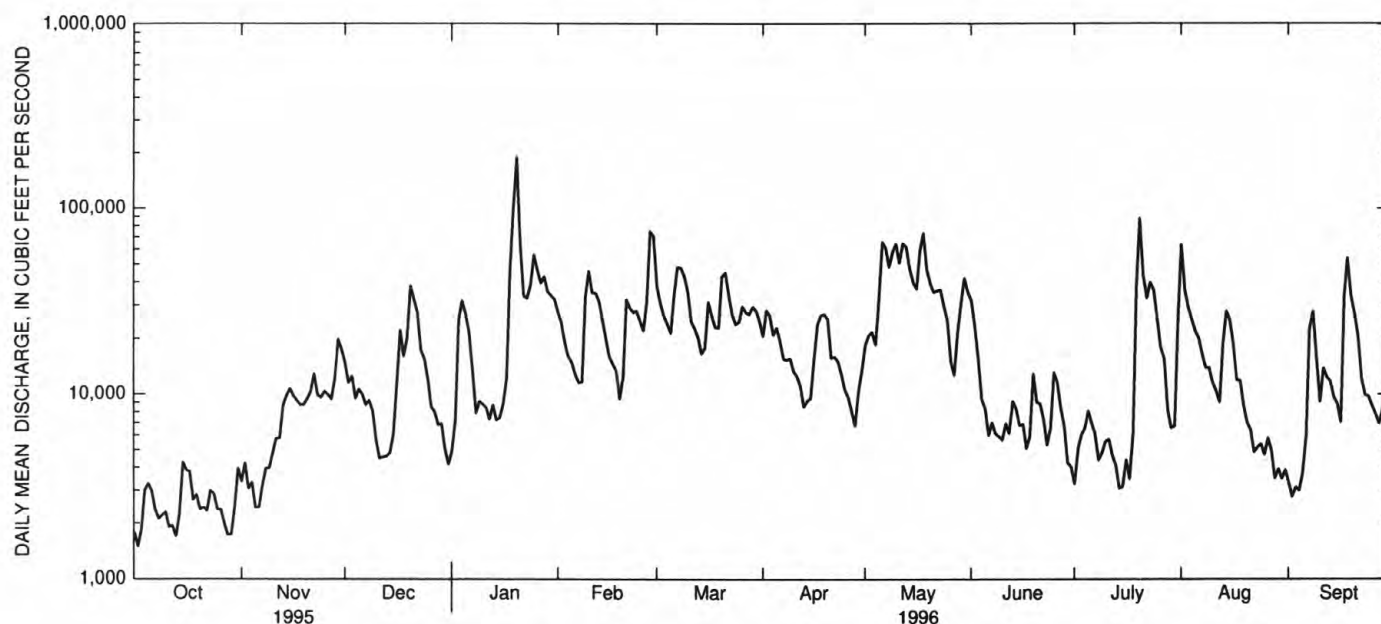
FOR 1996 WATER YEAR

WATER YEARS 1939 - 1996

ANNUAL TOTAL	3386880	6749530	
ANNUAL MEAN	9279	18440	12600
HIGHEST ANNUAL MEAN			18440
LOWEST ANNUAL MEAN			6946
HIGHEST DAILY MEAN	55700	May 15	188000
LOWEST DAILY MEAN	1430	Sep 2	1500
ANNUAL SEVEN-DAY MINIMUM	1710	Sep 6	2060
INSTANTANEOUS PEAK FLOW			210000
INSTANTANEOUS PEAK STAGE			29.07
ANNUAL RUNOFF (CFSM)	1.26		2.51
ANNUAL RUNOFF (INCHES)	17.17		34.22
10 PERCENT EXCEEDS	22300		38800
50 PERCENT EXCEEDS	6240		12100
90 PERCENT EXCEEDS	1930		3260

a Also Sept. 4, 22, 1946.

b Maximum gage height, 31.39 ft, June 24, 1972 (backwater from Allegheny River). Datum then in use.



October 1, 1995 to September 30, 1996

MONONGAHELA RIVER BASIN

03085000 MONONGAHELA RIVER AT BRADDOCK, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1958 to September 1993 (discontinued). September 1994 to current year.

REMARKS.--All water-quality samples collected and analyzed by the U.S. Geological Survey. Additional sites in the fixed-station network are shown in figure 4, page 26.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	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)
DEC 07...	1030	8400	265	6.1	4.5	739	12.0	81	23	5.7	14
JAN 20...	1700	179000	153	5.8	2.5	--	--	47	14	3.0	5.9
APR 22...	0830	15700	307	7.1	14.0	740	10.5	110	31	8.1	15
MAY 28...	0900	21400	249	7.6	15.5	734	9.2	82	23	6.0	11
JUN 11...	0930	6940	357	7.4	23.0	738	10.0	120	33	8.3	20
JUL 18...	1000	4780	490	7.6	26.5	739	6.8	160	43	12	30
AUG 13...	0915	18200	245	7.6	23.0	738	9.8	76	22	5.2	13
SEP 12...	0900	12200	200	7.5	23.5	734	9.1	66	19	4.5	9.5
DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	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 DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
DEC 07...	1.5	20	63	15	<0.10	4.7	144	0.010	0.950	0.110	<0.20
JAN 20...	1.7	--	27	9.2	0.10	4.0	90	0.030	1.10	0.140	0.80
APR 22...	1.1	27	92	12	0.10	4.6	175	0.020	0.660	0.130	0.20
MAY 28...	1.4	27	68	8.1	0.10	5.0	158	0.010	0.520	0.090	0.30
JUN 11...	1.7	36	95	16	0.20	5.3	212	0.030	0.690	0.110	0.30
JUL 18...	2.3	57	140	20	0.20	4.5	297	0.020	0.800	0.070	0.30
AUG 13...	1.6	29	62	7.7	<0.10	4.7	146	0.020	0.540	0.050	0.30
SEP 12...	1.3	38	55	7.1	<0.10	4.2	117	0.020	0.590	0.110	0.30
DATE	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	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 (μ G/L AS AL) (01106)	IRON, DIS- SOLVED (μ G/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (μ G/L AS MN) (01056)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C) (00689)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
DEC 07...	<0.20	0.040	0.030	<0.010	40	41	140	--	--	--	--
JAN 20...	0.40	0.040	0.050	0.070	--	170	410	--	--	--	--
APR 22...	0.20	<0.010	<0.010	<0.010	--	37	190	1.3	0.30	7	81
MAY 28...	0.20	0.030	0.010	<0.010	--	39	110	1.6	1.3	83	97
JUN 11...	0.40	0.090	0.080	<0.010	--	47	110	1.8	0.50	12	98
JUL 18...	0.20	0.040	<0.010	0.010	--	30	9.0	1.7	0.50	20	87
AUG 13...	<0.20	0.020	<0.010	0.010	--	44	19	2.4	0.70	29	96
SEP 12...	0.20	<0.010	0.020	0.010	--	45	71	1.9	0.50	13	94

MONONGAHELA RIVER BASIN

LAKES AND RESERVOIRS IN MONONGAHELA RIVER BASIN

03076000 DEEP CREEK RESERVOIR.--Lat 39°30'34", long 79°23'28", Garrett County, Md., Hydrologic Unit 05020006, on Deep Creek at dam, 1.8 mi upstream from mouth, and 7 mi north of Oakland, Md. DRAINAGE AREA, 64.7 mi². PERIOD OF RECORD, July 1925 to current year. Prior to October 1950, monthend contents published in WSP 1305, and October 1950 to September 1955, monthend contents published in WSP 1385. GAGE, water-stage recorder at right end of spillway. Datum of gage is at sea level (unadjusted).

Reservoir is formed by an earthfill dam completed January 1925. Usable capacity, 92,975 acre-ft between elevations 2,425 ft (top of intake to outlet tunnel) and 2,462 ft (crest of spillway). Dead storage, 13,085 acre-ft. Figures given herein represent usable contents. Reservoir is used for hydroelectric power. Records furnished by Pennsylvania Electric Co.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 93,260 acre-ft, July 24, 25, 1949 (elevation, 2,462.075 ft); minimum observed, 11,760 acre-ft, Sept. 30, 1925 (elevation, 2,433.45 ft).

EXTREME FOR CURRENT YEAR.--Maximum contents, 90,370 acre-ft, May 30, 31 (elevation, 2,461.3 ft); minimum, 71,100 acre-ft, Jan. 9, Feb. 7, 8 (elevation, 2,456.0).

03077000 YOUGHIOGHENY RIVER LAKE.--Lat 39°47'56", long 79°22'06", Somerset County, Hydrologic Unit 05020006, remote control recorder at control house at dam, 1.2 mi upstream from Confluence, Pa., since June 1951. Water-stage recorder and transmitter at lat 39°45'21", long 79°24'00", at bridge on U.S. Highway 40, 500 ft upstream from Stuck Hollow Run, 0.6 mi upstream from Tub Run, on Youghiogheny River, 7.5 mi upstream from Youghiogheny River Dam, Pa. DRAINAGE AREA, 434 mi². PERIOD OF RECORD, October 1943 to current year. Prior to October 1970 published as "Youghiogheny River Reservoir." GAGE, water-stage recorder. Datum of gage is at sea level. Prior to Mar. 9, 1948, non-recording gage at dam at same datum. Mar. 9, 1948 to present, water-stage recorder also at transmitter site at datum.

Lake is formed by a rock-faced earthfill dam with uncontrolled side channel spillway. Storage began during construction and lake acted as a retention basin from December 1942 to December 1947. Dam became fully operational in January 1948. Lake first reached minimum pool elevation, 1,344.0 ft (capacity, 5,230 acre-ft) in December 1942. Capacity 254,000 acre-ft between elevations 1,319.50 ft (invert at intake to outlet tunnel) and 1,470.00 ft (full pool). Winter low-water pool elevation is 1,419.0 ft, capacity, 103,000 acre-ft. Summer pool normally occurs during period Mar. 15 to Apr. 15. Depletion of low-water storage for Youghiogheny River flow augmentation occurs normally during the period July through November. Figures given herein represent total contents. Lake is used for flood control, for low-flow augmentation of Youghiogheny River and downstream rivers, and for recreation. Records furnished by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 222,610 acre-ft, May 16, 1967 (elevation, 1,460.95); minimum (after dam became fully operational), 3,700 acre-ft, Oct. 31, 1946 (elevation 1,340.30 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 181,700 acre-ft, May 12 (elevation, 1,448.21 ft); minimum 35,530 acre-ft, Nov. 12 (elevation, 1,380.55).

MONTHEND ELEVATION IN FEET ABOVE SEA LEVEL, AND CONTENTS AT 2400 HRS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

Date	Elevation (feet)	Contents (acre- feet)	Change in contents (equivalent in ft ³ /s)	Elevation (feet)	Contents (acre- feet)	Change in contents (equivalent in ft ³ /s)
<u>03076000 Deep Creek Reservoir</u>				<u>03077000 Youghiogheny River Lake</u>		
Sept. 30	2,456.9	74,300	-	1,402.21	68,430	-
Oct. 31	2,456.5	72,890	-23	1,385.31	41,650	- 436
Nov. 30	2,456.9	74,300	+24	1,394.98	55,970	+ 241
Dec. 31	2,456.7	73,600	-11	1,409.14	81,780	+ 420
CAL YR 1995	-	-	+ .48	-	-	- 2.6
Jan. 31	2,456.7	73,600	0.0	1,444.34	170,030	+1,440
Feb. 29	2,457.8	77,500	+68	1,435.39	144,420	- 445
Mar. 31	2,459.2	82,600	+83	1,440.50	158,800	+ 234
Apr. 30	2,460.0	85,540	+49	1,439.94	157,190	- 27
May 31	2,461.3	90,370	+79	1,442.36	164,200	+ 114
June 30	2,460.7	88,140	-37	1,439.43	155,740	- 142
July 31	2,460.3	86,650	-24	1,442.18	163,670	+ 129
Aug. 31	2,459.0	81,860	-78	1,435.07	143,540	- 327
Sept. 30	2,458.7	80,760	-18	1,435.89	145,800	+ 38
WTR YR 1996	-	-	+ 8.9	-	-	+ 107

CHARTIERS CREEK BASIN

03085500 CHARTIERS CREEK AT CARNEGIE, PA

LOCATION.--Lat 40°24'02", long 80°05'48", Allegheny County, Hydrologic Unit 05030101, on left bank 100 ft downstream from Hammond Street bridge, 0.3 mi downstream from Robinson Run, 0.8 mi upstream from Campbells Run, and 8.9 mi upstream from mouth.

DRAINAGE AREA.--257 mi².

PERIOD OF RECORD.--October 1919 to September 1933, October 1940 to current year. Published as "at Crafton" October 1971 to September 1975. Monthly discharge only for some periods, published in WSP 1305. June 1915 to September 1919 (gage heights and discharge measurements only) in reports of Water Supply Commission of Pennsylvania.

GAGE.--Water-stage recorder and concrete weir control. Datum of gage is 755.45 ft above sea level. Prior to Dec. 15, 1931, nonrecording gage at site 0.5 mi downstream at different datum. Jan. 8, 1932 to Sept. 30, 1933, nonrecording gage at site 1.0 mi downstream at different datum. Nov. 20, 1940 to Aug. 18, 1967, water-stage recorder at site 400 ft upstream at datum 1.00 ft higher. Oct. 1, 1971 to Sept. 30, 1975, nonrecording gage at site 4.6 mi downstream, at datum 725.99 ft above sea level.

REMARKS.--Records good except for estimated daily discharges, which are fair. Some regulations at low flow by mine drainage, reservoirs, and industrial usage above station. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 2, 1912 reached a discharge of 20,000 ft³/s, from U.S. Army Corps of Engineers.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 2,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 19	1030	*10,900	*11.31	May 9	0930	5,360	7.59
Feb. 28	1230	2,570	4.95	June 19	0700	9,300	10.48
Mar. 20	0400	5,540	7.74				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	63	103	e70	284	574	589	735	221	234	121	71
2	43	111	97	e150	293	476	862	540	201	289	110	70
3	47	103	92	634	260	410	581	455	222	404	104	70
4	93	80	97	320	e220	315	507	434	261	268	98	67
5	123	69	95	e180	e210	416	584	446	219	204	94	69
6	141	63	111	e120	e190	1490	483	588	185	185	92	165
7	81	81	89	e100	e170	1280	452	494	201	175	93	477
8	66	86	80	e90	e230	754	407	700	205	181	278	175
9	59	71	e70	e80	e350	581	385	3060	174	185	235	132
10	57	67	e66	e76	258	493	354	1100	160	160	113	124
11	54	97	e64	e72	e200	489	330	860	205	149	94	112
12	52	174	e100	e70	e170	541	300	867	199	145	102	122
13	52	118	e130	e68	e130	551	287	636	153	142	111	178
14	221	184	e180	e66	e170	532	263	541	179	140	99	132
15	269	331	179	e64	e160	524	271	556	141	290	107	114
16	102	241	132	e62	e140	523	630	839	126	200	318	121
17	74	156	111	e180	e130	580	483	776	119	151	132	300
18	66	161	100	e780	e125	547	389	676	409	262	101	198
19	62	221	e90	e7050	e120	1080	379	544	5110	890	91	137
20	73	175	e84	1370	e450	4190	338	474	892	440	88	121
21	120	142	e80	610	955	2010	298	560	499	252	95	113
22	89	122	e76	457	573	1170	271	523	392	219	97	142
23	72	107	e70	435	477	889	366	389	316	201	87	144
24	66	106	e66	1010	500	796	349	348	620	141	89	118
25	64	87	e64	762	421	730	285	336	784	131	82	113
26	61	94	e62	513	401	642	286	293	399	125	77	107
27	61	104	e60	743	803	539	277	333	305	119	78	122
28	67	109	e58	611	1950	517	237	374	261	107	76	460
29	67	108	e56	463	873	513	998	366	241	220	76	509
30	68	108	e54	402	---	456	923	301	259	135	74	188
31	64	---	e56	347	---	416	---	243	---	171	73	---
TOTAL	2577	3739	2772	17955	11213	25024	13164	19387	13658	6915	3485	4971
MEAN	83.1	125	89.4	579	387	807	439	625	455	223	112	166
MAX	269	331	180	7050	1950	4190	998	3060	5110	890	318	509
MIN	43	63	54	62	120	315	237	243	119	107	73	67
CFSM	.32	.48	.35	2.25	1.50	3.14	1.71	2.43	1.77	.87	.44	.64
IN.	.37	.54	.40	2.60	1.62	3.62	1.91	2.81	1.98	1.00	.50	.72

e Estimated.

HARTIERS CREEK BASIN

03085500 CHARTIERS CREEK AT CARNEGIE, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	116	198	291	356	463	586	477	341	229	175	142	129
MAX	393	1400	1003	986	1255	1361	999	887	694	951	960	757
(WY)	1980	1986	1951	1924	1926	1945	1961	1924	1980	1928	1980	1926
MIN	31.3	35.5	36.5	37.8	80.9	101	154	92.7	46.5	30.0	28.4	24.1
(WY)	1933	1931	1931	1931	1964	1969	1925	1926	1926	1926	1930	1927

SUMMARY STATISTICS

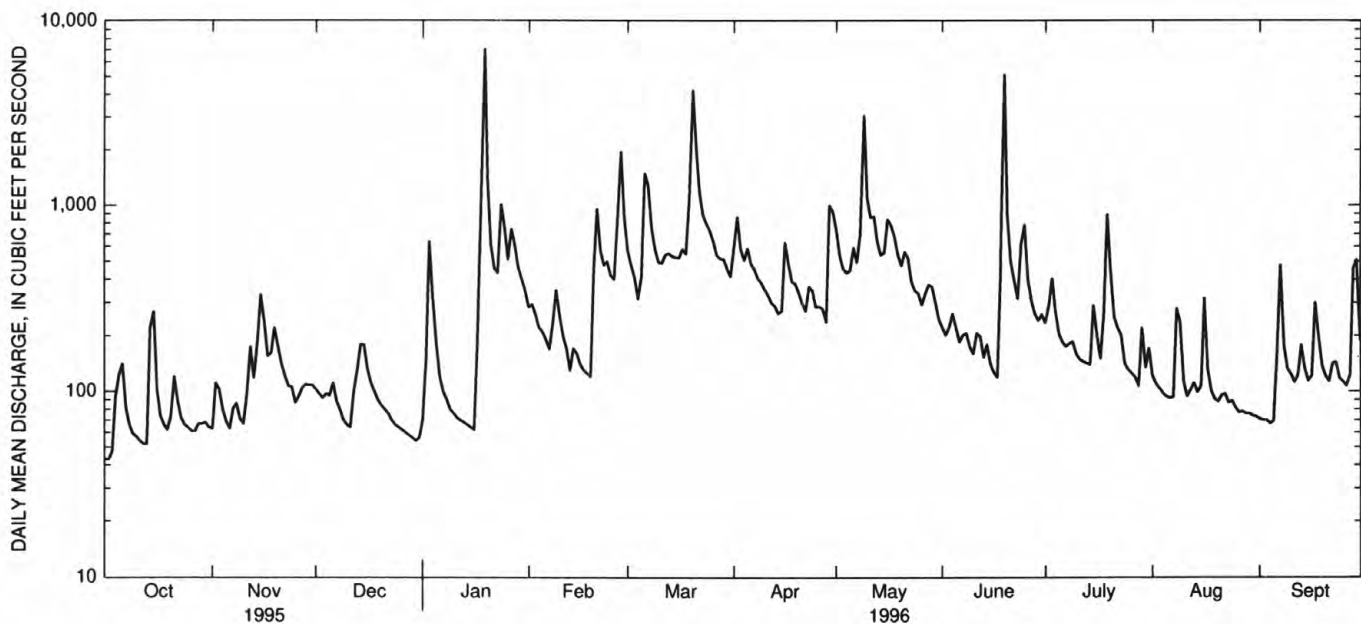
FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1920 - 1996

ANNUAL TOTAL	67085	124860	291
ANNUAL MEAN	184	341	527
HIGHEST ANNUAL MEAN			132
LOWEST ANNUAL MEAN			11100
HIGHEST DAILY MEAN	e1140	Feb 16	Aug 6 1956
LOWEST DAILY MEAN	43	Oct 1,2	Aug 9 1926
ANNUAL SEVEN-DAY MINIMUM	46	Sep 27	Sep 26 1927
INSTANTANEOUS PEAK FLOW		59	Aug 6 1956
INSTANTANEOUS LOW FLOW		10900	Aug 6 1956
ANNUAL RUNOFF (CFSM)		11.31	Aug 6 1956
ANNUAL RUNOFF (INCHES)		42	Aug 9 1926c
10 PERCENT EXCEEDS	383	1.33	1.13
50 PERCENT EXCEEDS	141	18.07	15.38
90 PERCENT EXCEEDS	60	652	626
		180	160
		68	54

- a Site and datum then in use.
b Minimum observed.
c Also at times in September 1932.
e Estimated.



October 1, 1995 to September 30, 1996

OHIO RIVER MAIN STEM

03086000 OHIO RIVER AT SEWICKLEY, PA

LOCATION.--Lat 40°32'57", Long 80°12'21", Allegheny County, Hydrologic Unit 05030101, near left bank 50 ft upstream from Dashields Dam, 1.0 mi downstream from Narrows Run, 1.0 mi northwest of Sewickley, and 13.3 mi downstream from confluence of Allegheny and Monongahela Rivers.

DRAINAGE AREA.--19,500 mi², approximately.

PERIOD OF RECORD.--October 1933 to current year.

REVISED RECORDS.--WSP 1305: 1938-40 (adjusted monthly runoff). WSP 1435: 1934.

GAGE.--Water-stage recorder and fixed-crest concrete dam control. Datum of gage is 680.00 ft above sea level (U.S. Army Corps of Engineers bench mark). Prior to Nov. 22, 1933, nonrecording gage, Nov. 22, 1933 to May 4, 1981, water-stage recorder at site 1.5 mi upstream, Nov. 14, 1988 to July 12, 1990, nonrecording gage, and July 13, 1990 to June 13, 1991, water-stage recorder at present site at datum 10.41 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are fair. Some regulation by locks, and by many reservoirs above station. Combined capacity of reservoirs and lakes, excluding that of Chautauqua Lake, but including Lake Lynn, Deep Creek Reservoir, and 15 smaller reservoirs, 2,773,000 acre-ft. Several measurements of water temperature were made during the year. Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4940	10200	48200	e13600	91800	115000	47900	82200	46700	20100	79000	8590
2	5000	11600	43800	e18100	75200	101000	54100	90300	36200	20300	52100	7490
3	5270	12900	44800	e38700	66000	90400	51700	85900	27300	21400	44600	8090
4	8970	13900	38100	e44100	56000	79700	44300	74600	19600	20400	39100	8110
5	10500	14200	40000	e38600	48200	68100	e42000	79500	19500	20500	32900	8900
6	9200	12600	40100	e30300	44400	90200	e38400	109000	15800	20600	32200	12000
7	8680	13200	36600	e21400	41800	113000	e33500	102000	15700	16200	25600	33800
8	8370	13600	35700	e15000	30900	105000	e32500	85800	16000	11900	24500	43500
9	8160	14100	31900	e16200	51600	100000	e31200	92700	21000	14000	26100	30500
10	7840	17200	24700	e16700	71000	87700	31800	102000	23600	12400	24400	26600
11	7460	19300	17600	e16700	62300	69600	28900	104000	e21700	15200	22900	34200
12	6590	21500	17700	e14800	67700	63100	25500	153000	e20900	12000	18700	31800
13	5670	37800	15300	e16600	80700	52900	22700	159000	26800	10400	28700	33400
14	7900	40900	16200	e15000	54900	46800	22200	125000	27900	8780	37700	42300
15	10700	42800	20400	e15900	46400	46500	32900	113000	25700	11300	33600	44700
16	8620	41300	e27500	e17000	40400	61400	46900	106000	23100	12700	28400	38200
17	10300	39400	e42100	e22800	34100	59000	60300	121000	18600	15300	21400	61100
18	8130	37600	e38300	e62700	31300	52300	63800	149000	18600	23700	20500	97800
19	7690	36900	e40000	e198000	28300	53500	69100	116000	54100	54600	15900	90100
20	8670	38400	e52800	e357000	34200	92000	64500	100000	68400	202000	13800	77300
21	7160	42300	e46200	e173000	67000	98200	51600	84600	60700	96800	14900	63900
22	6880	44100	e38500	109000	77100	77600	47800	76100	52200	71500	16900	48500
23	12600	40300	e29100	106000	85200	73200	46300	76500	44300	74600	14700	42000
24	9240	36300	e28300	110000	81700	67200	45200	68200	47900	68700	16700	41400
25	9630	35000	e23300	132000	77800	63600	51400	59900	53000	53500	15100	34900
26	12500	31900	e19300	119000	71000	68100	50600	48000	48500	37400	14600	29400
27	12000	28900	e17800	108000	87700	64000	46600	38200	40400	32500	14400	26300
28	11500	33000	e16800	108000	137000	62800	42100	43500	31300	22900	10300	29000
29	9430	46400	e16400	105000	152000	64400	46800	45800	26600	19100	9910	63500
30	8740	50900	e14000	101000	---	59000	60500	59500	22300	19100	8750	66000
31	12600	---	e12800	102000	---	53800	---	51600	---	38400	8660	---
TOTAL	270940	878500	934300	2262200	1893700	2299100	1333100	2801900	974400	1078280	767020	1183380
MEAN	8740	29280	30140	72970	65300	74160	44440	90380	32480	34780	24740	39450
MAX	12600	50900	52800	357000	152000	115000	69100	159000	68400	202000	79000	97800
MIN	4940	10200	12800	13600	28300	46500	22200	38200	15700	8780	8660	7490
CFSM	.45	1.50	1.55	3.74	3.35	3.80	2.28	4.64	1.67	1.78	1.27	2.02
IN.	.52	1.68	1.78	4.32	3.61	4.39	2.54	5.35	1.86	2.06	1.46	2.26

e Estimated.

OHIO RIVER MAIN STEM

03086000 OHIO RIVER AT SEWICKLEY, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	15000	25620	40310	45130	49730	66100	56710	38240	24330	16090	13260	11940
MAX	51010	83490	88890	132000	91820	147900	124500	90380	70490	50770	48180	39450
(WY)	1955	1986	1973	1937	1939	1936	1940	1996	1989	1972	1956	1996
MIN	3073	3991	6705	10470	11610	18670	16790	9593	5001	3892	3565	3081
(WY)	1964	1954	1961	1977	1934	1969	1946	1934	1934	1966	1957	1946

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

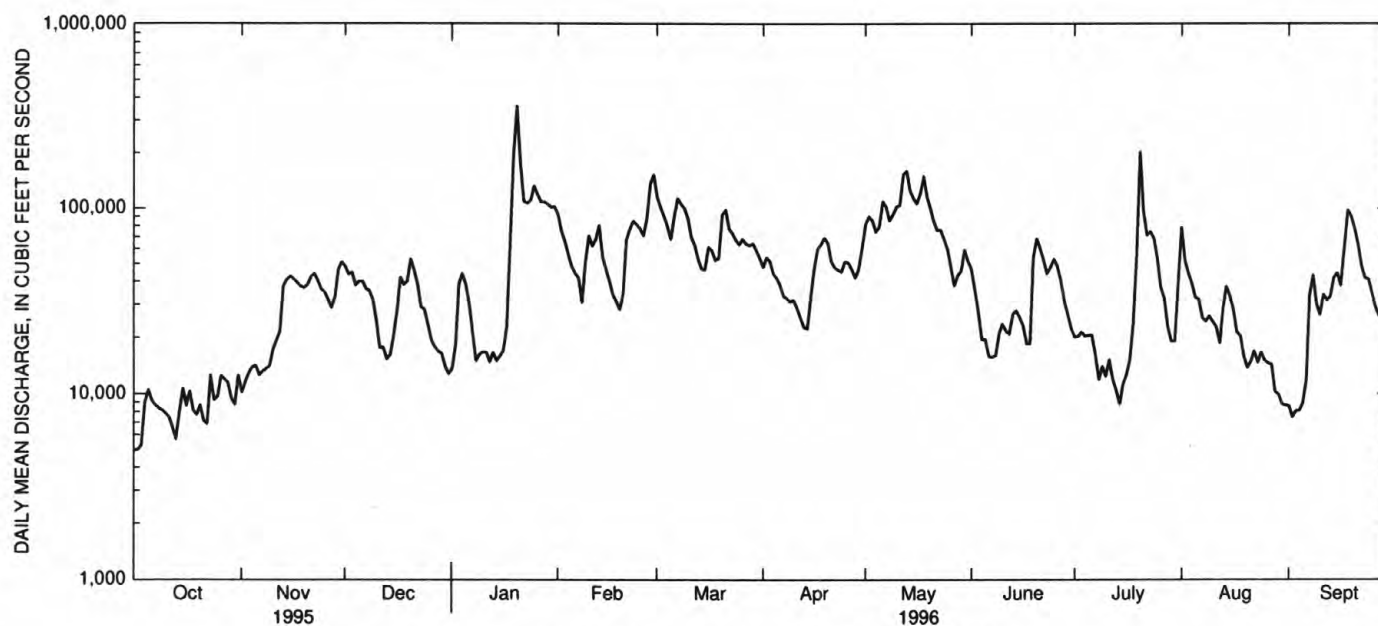
WATER YEARS 1934 - 1996

ANNUAL TOTAL	9046750	16676820	
ANNUAL MEAN	24790	45570	33460
HIGHEST ANNUAL MEAN			46520
LOWEST ANNUAL MEAN			21110
HIGHEST DAILY MEAN	81400	May 20	e357000
LOWEST DAILY MEAN	3800	Sep 3	4940
ANNUAL SEVEN-DAY MINIMUM	4670	Aug 28	7430
INSTANTANEOUS PEAK FLOW			372000
INSTANTANEOUS PEAK STAGE			a33.34
INSTANTANEOUS LOW FLOW			1800
ANNUAL RUNOFF (CFSM)	1.27	2.34	1.72
ANNUAL RUNOFF (INCHES)	17.26	31.81	23.31
10 PERCENT EXCEEDS	49500	97100	74600
50 PERCENT EXCEEDS	20100	37700	22800
90 PERCENT EXCEEDS	5730	10500	5910

a From floodmark.

b From floodmarks in gage house, site and datum then in use.

e Estimated.



October 1, 1995 to September 30, 1996

BEAVER RIVER BASIN

03101500 SHENANGO RIVER AT PYMATUNING DAM, PA

LOCATION.--Lat 41°29'53", long 80°27'37", Crawford County, Hydrologic Unit 05030102, on left bank 500 ft downstream from Sugar Run, 900 ft downstream from Pymatuning Dam, 1.5 mi northwest of Jamestown, at mile 84.9.

DRAINAGE AREA.--167 mi².

PERIOD OF RECORD.--June 1934 to current year.

REVISED RECORDS.--WSP 823: 1934-36. WSP 1083: 1936 (M), 1937, 1940 (M), 1941-45. WSP 1335: 1940.

GAGE.--Water-stage recorder and concrete dam control. Datum of gage is 970.00 ft above sea level.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since 1933 by Pymatuning Reservoir (station 03100500). Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	120	46	68	239	480	483	246	357	67	101	106	99
2	121	64	81	240	478	513	187	568	57	87	106	99
3	123	63	81	239	477	508	161	634	57	79	106	99
4	116	62	81	250	476	505	131	628	60	78	106	99
5	104	61	105	246	473	485	107	623	59	78	106	99
6	107	61	120	245	473	390	82	618	58	78	106	259
7	105	63	119	245	416	473	76	614	80	78	106	107
8	104	63	118	245	442	493	75	613	118	78	112	114
9	104	50	118	245	451	489	60	611	130	78	134	107
10	78	45	118	245	447	488	53	611	127	78	108	106
11	44	83	118	245	447	487	53	428	160	78	107	104
12	70	76	118	245	443	489	53	137	223	78	104	105
13	89	52	118	245	443	491	62	601	371	82	104	107
14	91	50	122	245	443	491	63	729	428	82	101	106
15	91	61	137	245	439	494	60	726	356	94	99	106
16	91	55	128	245	432	492	121	726	250	92	99	103
17	91	52	122	325	429	488	75	726	250	90	99	119
18	91	60	120	441	429	470	63	725	325	82	99	126
19	91	72	146	381	429	461	63	719	377	387	99	107
20	91	60	178	93	500	340	65	714	406	511	100	104
21	93	54	178	281	511	457	61	714	428	503	116	104
22	92	50	200	367	471	496	58	712	424	501	103	104
23	80	48	210	366	454	492	236	710	514	501	109	108
24	70	47	210	432	452	491	305	507	609	499	115	107
25	70	45	210	384	447	488	381	275	610	498	103	106
26	70	45	210	368	443	487	423	273	599	498	101	104
27	70	44	210	409	471	487	452	270	596	335	101	104
28	70	44	229	445	508	487	447	270	257	260	101	262
29	70	44	240	488	454	385	484	175	101	255	101	141
30	47	43	240	484	---	328	437	101	101	255	99	114
31	34	---	236	481	---	327	---	89	---	159	99	---
TOTAL	2688	1663	4689	9654	13258	14455	5140	16204	8198	6653	3255	3529
MEAN	86.7	55.4	151	311	457	466	171	523	273	215	105	118
MAX	123	83	240	488	511	513	484	729	610	511	134	262
MIN	34	43	68	93	416	327	53	89	57	78	99	99
CFSM	.52	.33	.91	1.86	2.74	2.79	1.03	3.13	1.64	1.29	.63	.70
IN.	.60	.37	1.04	2.15	2.95	3.22	1.14	3.61	1.83	1.48	.73	.79

BEAVER RIVER BASIN

03101500 SHENANGO RIVER AT PYMATUNING DAM, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	170	177	295	274	282	261	201	162	160	154	166	190
MAX	601	573	753	728	783	682	608	548	773	408	587	558
(WY)	1982	1986	1987	1943	1952	1956	1950	1956	1947	1987	1956	1956
MIN	17.3	6.27	3.79	10.4	13.2	17.0	2.78	5.78	5.37	20.0	31.6	40.2
(WY)	1935	1935	1945	1936	1935	1992	1935	1935	1935	1968	1935	1935

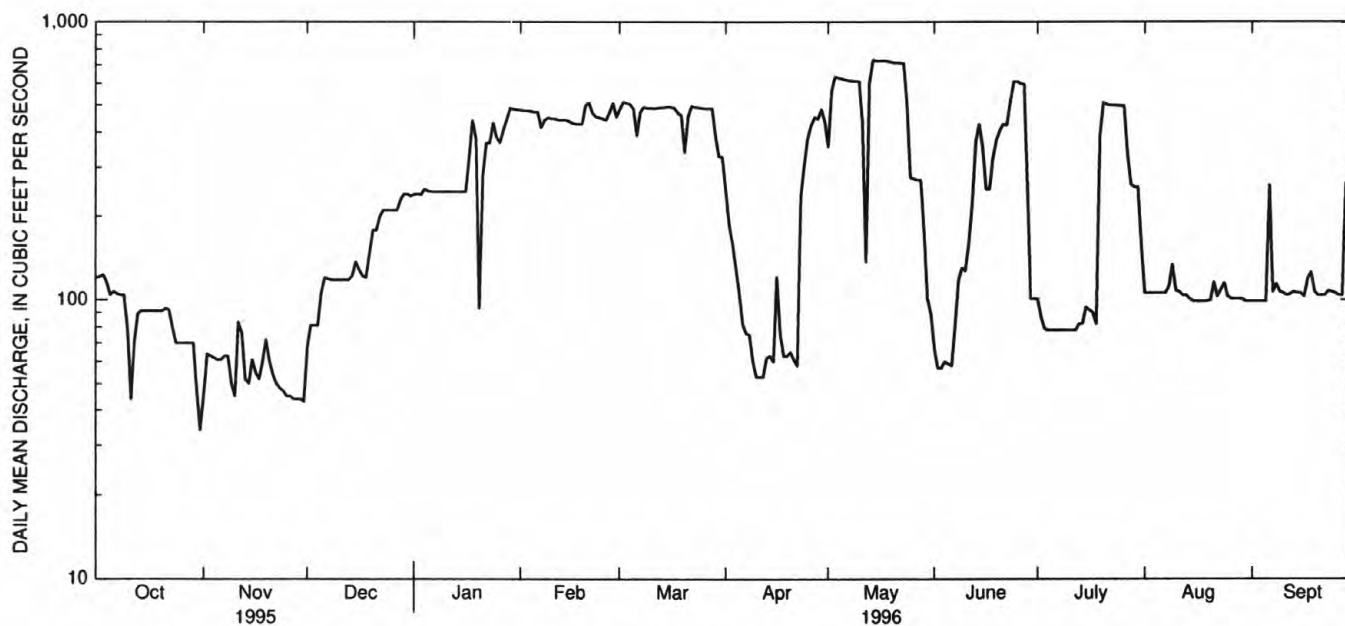
SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1935 - 1996

ANNUAL TOTAL	45596	89386	207
ANNUAL MEAN	125	244	330
HIGHEST ANNUAL MEAN			16.6
LOWEST ANNUAL MEAN			1240
HIGHEST DAILY MEAN	514	Jan 16	729
LOWEST DAILY MEAN	24	May 9 ^a	34
ANNUAL SEVEN-DAY MINIMUM	24	Jun 8	45
INSTANTANEOUS PEAK FLOW			798
INSTANTANEOUS PEAK STAGE			6.61
ANNUAL RUNOFF (CFSM)	.75		1.46
ANNUAL RUNOFF (INCHES)	10.16		19.91
10 PERCENT EXCEEDS	260		499
50 PERCENT EXCEEDS	110		126
90 PERCENT EXCEEDS	30		61

^a Also May 27, 28, and June 8-14.

BEAVER RIVER BASIN

03102500 LITTLE SHENANGO RIVER AT GREENVILLE, PA

LOCATION.--Lat 41°25'19", long 80°22'35", Mercer County, Hydrologic Unit 05030102, on left bank 1,700 ft downstream from Williamson Crossing bridge, 1 mi northeast of Greenville, and 2.0 mi upstream from mouth.

DRAINAGE AREA.--104 mi².

PERIOD OF RECORD.--October 1913 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 743: Drainage area. WSP 1305: 1914, 1922-23, 1926-29. WSP 1335: 1923 (m).

GAGE.--Water-stage recorder. Datum of gage is 953.46 ft above sea level. Prior to Nov. 4, 1915, nonrecording gage; Nov. 4, 1915, to Sept. 30, 1918, water-stage recorder; Nov. 7, 1919, to Aug. 31, 1923, and Nov. 19, 1925, to June 20, 1934, nonrecording gage at site 1 mi downstream at datum 8.96 ft lower.

REMARKS.--Records good except for estimated daily discharges, which are fair. Several measurements of water temperature were made during the year.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 18	--	Unknown	ice jam	May 12	0930	2,550	7.92
Jan. 19	1800	*3,150	*8.92				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.4	12	53	e86	e90	256	102	1110	44	48	59	19
2	5.0	16	53	e84	e82	218	148	864	42	42	47	18
3	5.2	23	50	e80	e74	183	122	523	47	45	40	17
4	9.0	28	51	e76	e66	160	101	327	118	44	36	16
5	14	21	50	e72	e60	260	101	278	88	38	32	16
6	28	15	47	e68	e54	889	91	238	61	34	29	17
7	31	17	44	e66	e50	481	80	202	128	30	27	61
8	18	36	42	e62	e66	251	72	173	365	29	29	143
9	12	43	40	e58	e160	192	67	155	228	27	54	90
10	9.2	31	e37	e56	197	159	65	149	134	28	42	113
11	8.1	87	e36	e56	183	148	65	860	149	23	31	78
12	7.1	412	e34	e54	141	146	62	2090	253	22	27	61
13	6.9	212	e33	e52	119	173	104	916	340	22	25	95
14	12	126	e40	e52	103	192	197	389	266	33	23	99
15	18	174	e150	e52	92	197	169	277	157	63	23	106
16	14	170	193	e50	e84	166	522	239	95	99	35	95
17	10	130	127	e200	e76	130	617	203	71	165	33	96
18	8.5	131	88	e800	e70	109	316	180	149	103	26	246
19	7.5	240	71	2690	e64	122	233	151	872	644	23	167
20	7.4	251	145	1960	e90	735	224	121	859	1060	21	92
21	14	197	237	664	e250	596	210	101	284	390	46	63
22	17	155	202	355	e250	295	165	96	189	247	59	71
23	14	118	172	278	e210	231	388	81	136	184	105	221
24	11	95	150	511	e300	200	883	69	255	139	144	158
25	9.2	78	e125	612	e240	178	515	61	279	102	64	85
26	8.6	68	e110	312	e180	198	302	56	157	80	41	62
27	8.7	66	e90	e230	e150	155	254	55	100	66	34	52
28	8.8	68	e80	e170	e200	130	212	56	75	52	29	523
29	9.7	65	e74	e140	e380	117	222	55	62	44	25	1200
30	9.6	57	e70	e115	---	102	680	50	55	44	23	474
31	10	---	e76	e100	---	92	---	46	---	79	21	---
TOTAL	356.9	3142	2770	10161	4081	7461	7289	10171	6058	4026	1253	4554
MEAN	11.5	105	89.4	328	141	241	243	328	202	130	40.4	152
MAX	31	412	237	2690	380	889	883	2090	872	1060	144	1200
MIN	5.0	12	33	50	50	92	62	46	42	22	21	16
CFSM	.11	1.01	.86	3.15	1.35	2.31	2.34	3.15	1.94	1.25	.39	1.46
IN.	.13	1.12	.99	3.63	1.46	2.67	2.61	3.64	2.17	1.44	.45	1.63

e Estimated.

BEAVER RIVER BASIN

03102500 LITTLE SHENANGO RIVER AT GREENVILLE, PA

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	59.4	124	176	207	226	301	231	155	90.2	62.2	43.5	42.1
MAX	343	639	521	773	553	659	506	511	395	457	284	316
(WY)	1927	1986	1928	1937	1976	1963	1957	1929	1989	1958	1980	1926
MIN	5.19	6.31	16.8	21.3	36.0	66.5	16.7	21.8	11.9	5.91	5.33	5.90
(WY)	1964	1931	1961	1977	1963	1915	1915	1934	1934	1934	1930	1930

SUMMARY STATISTICS

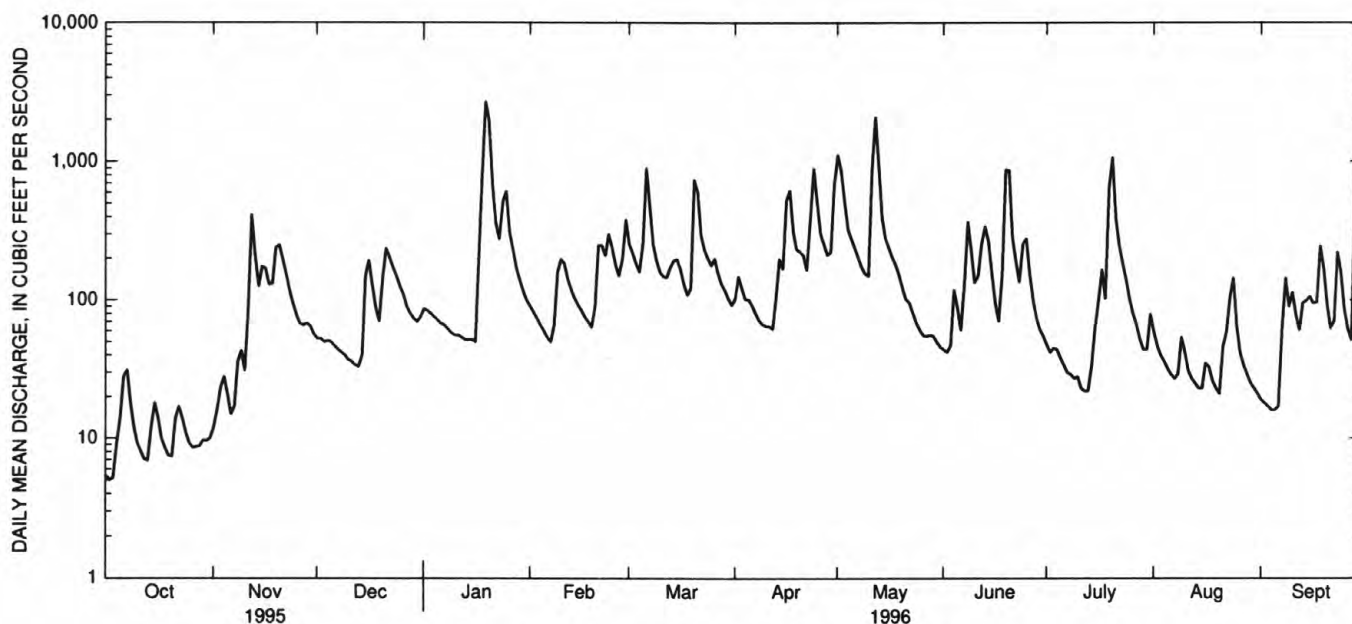
FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1914 - 1996

ANNUAL TOTAL	31222.0	61322.9	143
ANNUAL MEAN	85.5	168	218
HIGHEST ANNUAL MEAN			65.6
LOWEST ANNUAL MEAN			1931
HIGHEST DAILY MEAN	626	Apr 10	5980
LOWEST DAILY MEAN	5.0	Oct 2	3.1
ANNUAL SEVEN-DAY MINIMUM	5.4	Sep 6	3.4
INSTANTANEOUS PEAK FLOW			14.30
INSTANTANEOUS PEAK STAGE			2.9
INSTANTANEOUS LOW FLOW			1.37
ANNUAL RUNOFF (CFSM)	.82	1.61	18.64
ANNUAL RUNOFF (INCHES)	11.17	21.93	330
10 PERCENT EXCEEDS	219	331	65
50 PERCENT EXCEEDS	47	89	13
90 PERCENT EXCEEDS	7.0	18	

■ From rating curve extended above 3,200 ft³/s on basis of slope-area measurement at gage height 12.26 ft.



October 1, 1995 to September 30, 1996

BEAVER RIVER BASIN

03102850 SHENANGO RIVER NEAR TRANSFER, PA

LOCATION.--Lat 41°21'13", long 80°23'53", Mercer County, Hydrologic Unit 05030102, on left bank at downstream side of covered wooden bridge, 200 ft downstream from highway bridge, 0.6 mi downstream from Big Run, 2.5 mi north-east of Transfer, at mile 71.8.

DRAINAGE AREA.--337 mi².

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

REVISED RECORDS.--WDR PA-71-3: 1966, 1967.

GAGE.--Water-stage recorder. Datum of gage is 913.94 ft above sea level (Pennsylvania Department of Transportation bench mark).

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated since 1933 by Pymatuning Reservoir (station 03100500) 13 mi upstream and by mills above station. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	133	58	138	e370	e580	873	484	1850	139	159	174	110
2	133	115	180	e370	e540	859	447	1740	104	141	153	108
3	150	129	175	e370	e540	785	396	1300	110	131	140	105
4	158	137	176	e370	e540	705	314	1110	227	126	131	103
5	153	120	186	e360	e540	1160	295	1030	180	112	124	102
6	186	109	227	e350	e540	1940	237	958	143	106	121	154
7	178	139	219	e350	e540	1200	197	882	294	99	118	392
8	152	171	209	e340	e540	885	182	841	695	98	124	360
9	137	184	e200	e340	e700	877	168	811	489	97	267	272
10	129	134	e190	e340	699	877	147	865	337	97	155	281
11	60	366	e180	e340	728	877	144	3150	411	93	129	222
12	55	805	e170	e340	653	835	140	3340	604	90	120	235
13	109	412	e170	e340	618	763	217	1680	783	89	116	274
14	142	272	e180	e340	610	796	336	1270	769	106	116	275
15	151	396	e400	e340	591	801	289	1110	609	183	123	275
16	147	368	480	e340	563	733	1310	1060	408	269	141	252
17	135	294	364	e640	553	679	954	1020	376	342	134	307
18	130	323	308	e1700	552	640	526	985	549	216	121	554
19	126	538	268	4510	536	727	447	919	1710	1050	116	370
20	144	512	360	2810	1030	1940	447	875	1470	1740	114	251
21	191	395	369	1170	2080	1360	391	848	810	964	214	201
22	175	317	451	898	1700	987	308	834	653	772	188	221
23	164	254	395	799	1160	863	1370	804	622	688	335	443
24	120	212	376	1410	1050	795	1820	729	1100	639	420	347
25	104	180	e370	1420	875	754	1040	402	1020	607	208	240
26	101	162	e360	898	767	769	835	387	782	585	154	198
27	102	156	e350	e760	936	693	810	385	699	497	136	183
28	104	158	e360	e720	1620	667	718	383	514	339	127	1780
29	106	149	e350	e700	1110	604	1060	329	188	326	120	1840
30	100	133	e350	e670	---	497	2390	191	173	341	116	795
31	58	---	e360	e620	---	483	---	153	---	316	113	---
TOTAL	4033	7698	8871	25325	23491	27424	18419	32241	16968	11418	4868	11250
MEAN	130	257	286	817	810	885	614	1040	566	368	157	375
MAX	191	805	480	4510	2080	1940	2390	3340	1710	1740	420	1840
MIN	55	58	138	340	536	483	140	153	104	89	113	102
CFSM	.39	.76	.85	2.42	2.40	2.63	1.82	3.09	1.68	1.09	.47	1.11
IN.	.45	.85	.98	2.80	2.59	3.03	2.03	3.56	1.87	1.26	.54	1.24

e Estimated.

BEAVER RIVER BASIN

03102850 SHENANGO RIVER NEAR TRANSFER, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	294	545	839	660	684	678	554	427	321	263	211	268
MAX	1034	1627	1343	1242	1319	1212	1273	1119	1080	873	1005	717
(WY)	1991	1986	1991	1993	1990	1985	1994	1984	1989	1972	1980	1987
MIN	57.9	114	236	151	121	172	207	82.9	86.2	46.5	81.6	107
(WY)	1983	1992	1992	1977	1987	1969	1968	1987	1967	1968	1982	1994

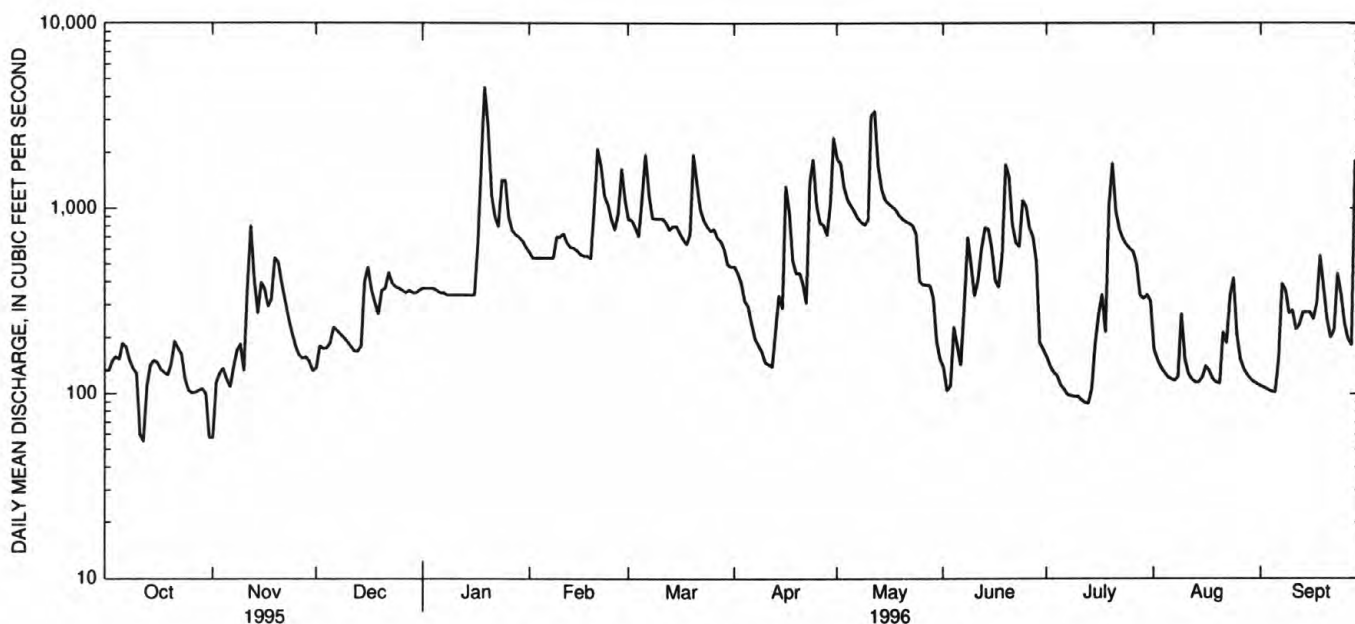
SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1966 - 1996

ANNUAL TOTAL	108840	192006	
ANNUAL MEAN	298	525	478
HIGHEST ANNUAL MEAN			635
LOWEST ANNUAL MEAN			290
HIGHEST DAILY MEAN	1840	Feb 28	5120
LOWEST DAILY MEAN	53	Jun 15	33
ANNUAL SEVEN-DAY MINIMUM	67	Jun 9	39
INSTANTANEOUS PEAK FLOW			5390
INSTANTANEOUS PEAK STAGE			10.47
INSTANTANEOUS LOW FLOW			33
ANNUAL RUNOFF (CFSM)	.88	1.56	1.42
ANNUAL RUNOFF (INCHES)	12.01	21.19	19.26
10 PERCENT EXCEEDS	629	1060	1010
50 PERCENT EXCEEDS	180	355	294
90 PERCENT EXCEEDS	104	117	102



October 1, 1995 to September 30, 1996

BEAVER RIVER BASIN

03105500 BEAVER RIVER AT WAMPUM, PA

LOCATION.--Lat 40°53'19", long 80°20'14", Lawrence County, Hydrologic Unit 05030104, on right bank at downstream side of bridge on State Highway 288 at Wampum, 2.9 mi upstream from Connoquenessing Creek, at mile 15.4.

DRAINAGE AREA.--2,235 mi².

PERIOD OF RECORD.--July 1914 to September 1918, August 1932 to current year. Monthly discharge only for some periods, published in WSP 1305. Published as "at Newport" 1914-18.

REVISED RECORDS.--WSP 728: Drainage area. WSP 1385: 1933-40, 1946, 1951-52. WSP 1725: 1960 (adjusted runoff). WDR PA-85-3: 1984 (M).

GAGE.--Water-stage recorder. Datum of gage is 736.24 ft above sea level (Penn Central Railroad bench mark). Prior to Sept. 20, 1914, nonrecording gage at site 500 ft downstream at datum 0.76 ft lower. Oct. 1, 1914 to Sept. 30, 1918, nonrecording gage at site 1 mi upstream at datum 0.84 ft higher. Aug. 26, 1932 to Nov. 16, 1938, nonrecording gage at present site and datum. Since 1932 an auxiliary gage 10 mi downstream at Beaver Falls (station 03107500) is used during periods of backwater from Connoquenessing Creek.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since 1942 by Berlin Lake, since 1916 by Milton Reservoir, since 1966 by Michael J. Kirwan Reservoir, since 1943 by Mosquito Creek Lake, since 1929 by Meander Creek Reservoir, since 1933 by Pymatuning Reservoir, and since 1967 by Shenango River Lake 40 mi upstream. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1912, 29.9 ft, Mar. 26, 1913, from floodmark, discharge, about 87,000 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	563	1040	1060	1550	6610	6040	2810	14500	1440	2130	1300	807
2	522	1380	1050	1760	6490	5110	3220	10800	1270	1720	1170	796
3	487	1340	1010	1920	6100	5080	2640	8910	1370	1560	1070	817
4	954	1220	1000	1710	5740	4700	2270	8200	1990	1240	1030	831
5	848	1110	986	1770	5560	4940	2090	8210	1880	1110	998	803
6	1760	1040	999	1660	5370	10900	1890	8050	1560	1070	951	808
7	1330	1100	969	1560	4580	8200	1640	7840	1900	1060	907	2520
8	1100	1260	911	1440	4020	5970	1520	7720	3630	1090	869	2450
9	845	1360	895	1440	4110	5150	1450	7150	3820	1120	1520	1940
10	752	1350	800	1430	4000	4640	1420	6810	3130	1050	1510	2990
11	707	1480	646	1320	4150	4510	1230	13700	2930	1010	1180	1860
12	689	3630	710	1350	3930	4170	1100	26400	2920	1000	1190	1630
13	680	2940	675	1370	3050	3970	1080	21700	3810	1040	1350	2020
14	817	2730	886	1270	2580	4080	1180	11000	4520	1430	1160	1980
15	1170	3100	1280	1350	2470	4020	1180	8820	5470	1770	1090	1740
16	940	3600	1380	1470	2340	3250	4570	8520	4370	1860	1370	1620
17	793	3660	1350	2610	1770	2910	5510	8440	4380	2600	1050	1660
18	901	3640	1200	8920	1720	2720	4620	9030	4510	2170	950	2120
19	919	4240	1450	27200	1640	2950	4220	8800	12400	1760	907	1880
20	958	4280	1370	26600	3810	20300	3990	8230	7510	1630	881	1640
21	1830	3530	1520	9880	8990	16300	3390	7990	4990	1660	1460	1910
22	1380	3080	1610	4610	7200	8980	2640	7860	4820	2470	1290	2020
23	1120	2390	1620	4780	6470	5990	3590	7230	4490	2960	998	2300
24	1030	2180	1600	7190	6770	5560	9470	5900	5990	2950	1350	1820
25	983	2080	1580	7870	6350	4870	8270	4110	8170	2460	1180	1650
26	959	2010	1560	6520	5700	4340	5570	3060	5210	1990	987	1500
27	956	1740	1560	7580	6150	3890	5230	2500	4530	1540	1140	1480
28	963	1530	1560	8110	11400	3500	4950	2130	3390	1430	898	3990
29	818	1280	1540	6830	9790	2940	6500	1990	3020	1400	779	6930
30	769	1130	1480	6830	---	2750	14100	1880	2490	1310	825	4300
31	798	---	1500	6960	---	2660	---	1750	---	1560	808	---
TOTAL	29341	66450	37757	166860	148860	175390	113340	259230	121910	51150	34168	60812
MEAN	946	2215	1218	5383	5133	5658	3778	8362	4064	1650	1102	2027
MAX	1830	4280	1620	27200	11400	20300	14100	26400	12400	2960	1520	6930
MIN	487	1040	646	1270	1640	2660	1080	1750	1270	1000	779	796
CFSM	.42	.99	.54	2.41	2.30	2.53	1.69	3.74	1.82	.74	.49	.91
IN.	.49	1.11	.63	2.78	2.48	2.92	1.89	4.31	2.03	.85	.57	1.01

BEAVER RIVER BASIN

03105500 BEAVER RIVER AT WAMPUM, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1248	1786	2792	3402	3916	4960	3857	2652	1936	1500	1271	1206
MAX	5888	7936	7978	13030	8779	9098	9226	8362	8004	5893	4923	4759
(WY)	1991	1986	1991	1937	1915	1916	1994	1996	1989	1958	1956	1990
MIN	168	278	447	534	304	1074	657	288	222	198	156	153
(WY)	1934	1915	1961	1918	1934	1969	1915	1934	1934	1918	1933	1916

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

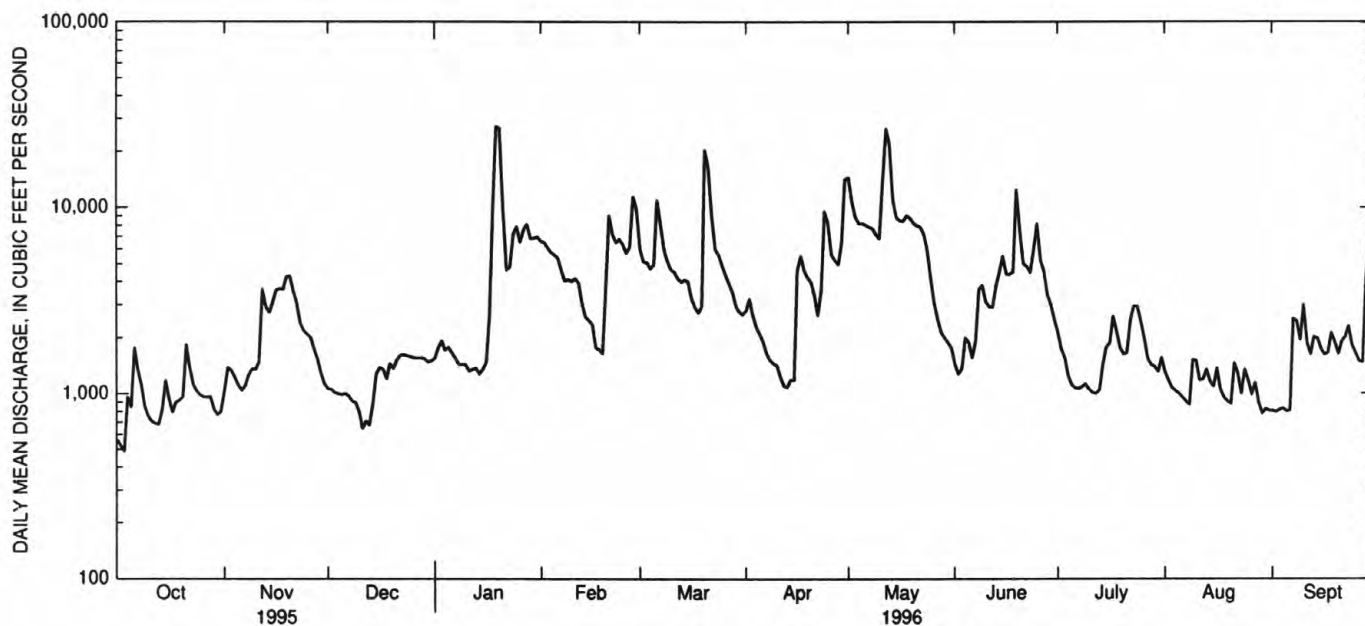
WATER YEARS 1915 - 1996

ANNUAL TOTAL	717786	1265268	
ANNUAL MEAN	1967	3457	
HIGHEST ANNUAL MEAN			2544
LOWEST ANNUAL MEAN			3995
HIGHEST DAILY MEAN	8420	Jan 21	834
LOWEST DAILY MEAN	487	Oct 3	47500
ANNUAL SEVEN-DAY MINIMUM	565	Sep 27	88
INSTANTANEOUS PEAK FLOW			94
INSTANTANEOUS PEAK STAGE			a50100
INSTANTANEOUS LOW FLOW			b21.53
ANNUAL RUNOFF (CFSM)	.88	1.55	c74
ANNUAL RUNOFF (INCHES)	11.95	21.06	1.14
10 PERCENT EXCEEDS	4150	7860	15.47
50 PERCENT EXCEEDS	1350	1890	5800
90 PERCENT EXCEEDS	714	917	1410
			548

a From slope-rating curve extended above 28,000 ft³/s on basis of contracted-opening measurement at gage height 21.44 ft.

b Maximum gage height, 24.86 ft, Jan. 22, 1959 (backwater from Connoquenessing Creek).

c Minimum discharge observed.



October 1, 1995 to September 30, 1996

BEAVER RIVER BASIN

03106000 CONNOQUENESSING CREEK NEAR ZELIENOPLE, PA

LOCATION.--Lat 40°49'01", long 80°14'33", Beaver County, Hydrologic Unit 05030105, on right bank at downstream side of highway bridge at Hazen, 0.3 mi upstream from Brush Creek, 4 mi southeast of Ellwood City, and 6.0 mi west of Zelienople.

DRAINAGE AREA.--356 mi².

PERIOD OF RECORD.--October 1919 to current year. Monthly discharge only for some periods, published in WSP 1305. June 1915 to September 1919 (gage heights and discharge measurements only) in reports of Water Supply Commission of Pennsylvania. Published as "at Hazen" 1915-16, 1929-63, and as "near Hazen" 1917-28.

REVISED RECORDS.--WSP 743: Drainage area. WSP 893: 1937-38, 1939 (M). WSP 1305: 1922-26, 1928. WSP 1335: 1920-21, 1924 (M). WSP 1385: 1952.

GAGE.--Water-stage recorder. Datum of gage is 852.31 ft above sea level. Prior to June 23, 1941, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Some regulation by mills above station. Several measurements of water temperature were made during the year. Satellite telemeter at station.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 18	--	Unknown	ice jam	May 11	2230	5,170	7.96
Jan. 19	1800	*11,600	*13.35	June 19	1430	5,840	8.56
Mar. 20	0900	8,340	10.67				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	51	276	e170	429	1170	421	1740	166	264	93	41
2	28	92	257	e270	e350	918	652	1820	155	214	76	39
3	29	470	219	e470	e370	746	510	1300	164	459	67	37
4	52	367	213	e400	e680	535	459	1040	216	347	61	37
5	105	189	199	e300	e560	632	588	879	254	238	56	35
6	183	135	207	e250	e430	2150	527	774	195	183	53	40
7	161	132	197	e190	e330	2170	491	638	206	153	52	362
8	87	257	159	e160	e290	1460	454	700	292	134	85	364
9	62	239	156	e125	e470	1070	424	614	247	127	303	215
10	50	183	140	e115	e390	816	394	1370	185	113	113	569
11	44	222	e125	e105	e330	732	370	3110	173	98	60	265
12	41	864	e115	e100	e270	690	336	3970	173	88	47	177
13	40	513	e100	e96	e230	681	313	2130	160	81	45	268
14	56	483	e120	e92	e220	662	297	1340	136	78	42	302
15	275	801	e300	e90	e210	682	267	982	132	169	46	230
16	156	679	e260	e86	e200	638	543	899	120	316	96	182
17	85	497	e220	e180	e200	572	575	758	104	244	111	186
18	65	484	e180	e1600	e190	536	449	662	135	226	67	307
19	57	714	e160	e9480	e250	758	404	549	3920	328	53	253
20	56	792	e140	e7070	e1000	6980	434	454	2240	297	47	189
21	96	748	e125	e1710	2970	3720	471	410	942	170	145	149
22	149	633	e115	1160	1470	1940	390	405	595	129	323	131
23	69	504	e105	899	1110	1330	424	320	439	119	122	408
24	49	417	e100	1520	1040	972	752	275	665	111	120	268
25	44	343	e94	1400	851	826	614	240	1760	99	121	197
26	40	301	e88	991	752	735	592	214	906	90	84	161
27	40	283	e84	1220	925	586	635	210	598	86	68	155
28	43	307	e80	1110	2810	512	506	310	433	73	59	711
29	46	339	e76	852	1790	491	1100	275	350	66	51	1610
30	50	310	e72	733	---	444	1740	228	299	92	47	802
31	50	---	e100	615	---	402	---	186	---	120	44	---
TOTAL	2337	12349	4782	33559	21117	36556	16132	28802	16360	5312	2757	8690
MEAN	75.4	412	154	1083	728	1179	538	929	545	171	88.9	290
MAX	275	864	300	9480	2970	6980	1740	3970	3920	459	323	1610
MIN	28	51	72	86	190	402	267	186	104	66	42	35
CFSM	.21	1.16	.43	3.04	2.05	3.31	1.51	2.61	1.53	.48	.25	.81
IN.	.24	1.29	.50	3.51	2.21	3.82	1.69	3.01	1.71	.56	.29	.91

e Estimated.

BEAVER RIVER BASIN

03106000 CONNOQUENESSING CREEK NEAR ZELIENOPLE, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	162	334	560	656	760	990	770	519	332	208	152	134
MAX	1290	1648	1778	2607	2048	2324	2054	1283	1518	1373	775	1743
(WY)	1955	1986	1928	1937	1956	1945	1940	1983	1989	1928	1980	1926
MIN	11.3	12.3	22.3	16.4	97.7	154	182	62.3	24.4	20.5	11.2	11.4
(WY)	1931	1931	1961	1931	1934	1969	1946	1934	1934	1936	1930	1930

SUMMARY STATISTICS

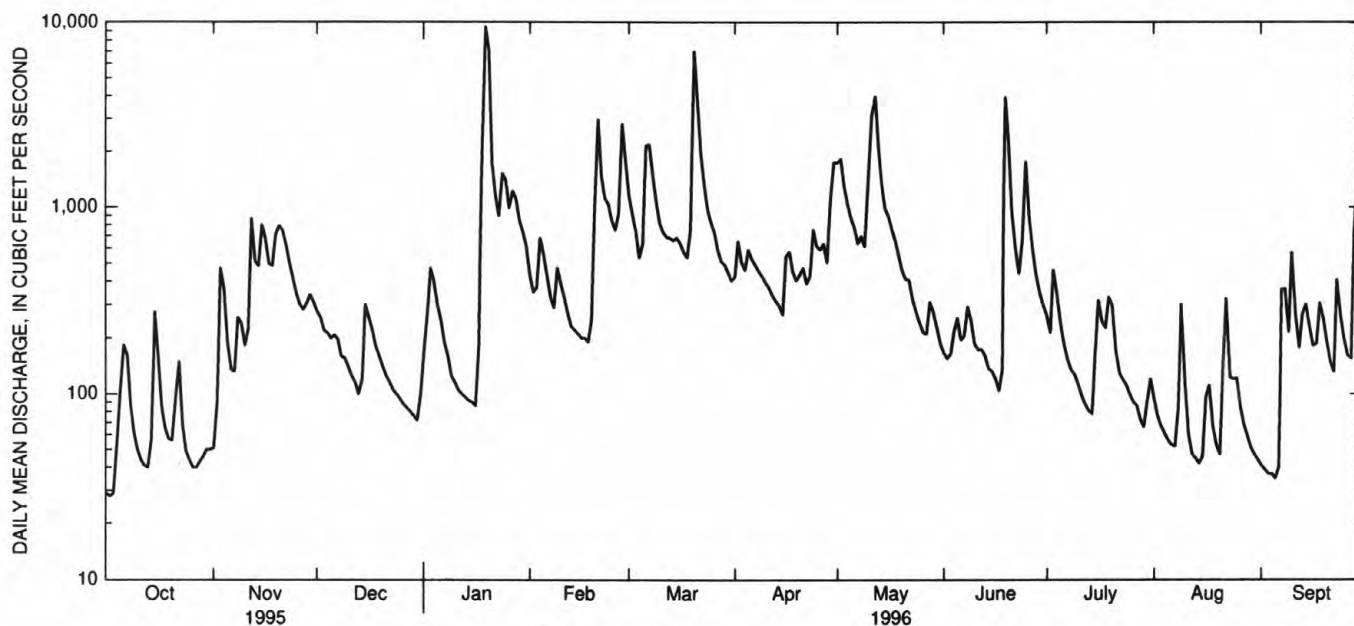
FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1920 - 1996

ANNUAL TOTAL	127372	188753	
ANNUAL MEAN	349	516	463
HIGHEST ANNUAL MEAN			816
LOWEST ANNUAL MEAN			221
HIGHEST DAILY MEAN	2730	Jan 16	16000
LOWEST DAILY MEAN	27	Sep 7	6.5
ANNUAL SEVEN-DAY MINIMUM	29	Sep 4	8.7
INSTANTANEOUS PEAK FLOW			23000
INSTANTANEOUS PEAK STAGE			16.66
INSTANTANEOUS LOW FLOW			6.0
ANNUAL RUNOFF (CFSM)	.98		1.30
ANNUAL RUNOFF (INCHES)	13.31		17.68
10 PERCENT EXCEEDS	792	1080	1100
50 PERCENT EXCEEDS	220	264	210
90 PERCENT EXCEEDS	40	56	32

e Estimated.



October 1, 1995 to September 30, 1996

BEAVER RIVER BASIN

03106300 MUDDY CREEK NEAR PORTERSVILLE, PA

LOCATION.--Lat 40°57'47", Long 80°07'31", Butler County, Hydrologic Unit 05030105, on left bank 1,000 ft downstream of Lake Arthur Dam, 0.2 mi north of U.S. Highway 422, and 3 mi north of Portersville.

DRAINAGE AREA.--51.2 mi².

PERIOD OF RECORD.--March 1963 to September 1993, July 1994 to current year.

REVISED RECORDS.--WDR PA-79-3: 1978.

GAGE.--Water-stage recorder. Datum of gage is 1,160.91 ft above sea level (Pennsylvania Department of Environmental Protection bench mark). Prior to Apr. 8, 1963 nonrecording gage at site 2,000 ft downstream at different datum. Apr. 8 to May 1, 1963, nonrecording gage and May 2, 1963 to Sept. 30, 1980, water-stage recorder at site 1,000 ft downstream at datum 5.71 ft lower.

REMARKS.--Records fair. Some regulation from October 1966 to May 1969 and completely regulated thereafter by Lake Arthur (station 03106280) 1,000 ft upstream. Several measurements of water temperature were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.7	3.9	20	109	149	166	69	157	39	85	15	12
2	4.6	4.9	19	108	150	167	73	172	35	74	13	11
3	4.3	5.5	17	109	151	167	72	174	38	63	12	9.8
4	4.1	4.9	25	108	147	165	70	171	39	53	11	9.4
5	4.0	6.4	28	107	147	165	69	168	37	47	10	8.3
6	4.1	7.2	23	106	147	166	67	159	36	41	9.4	9.7
7	3.9	9.2	19	104	147	166	64	153	35	36	8.4	24
8	3.9	10	18	89	162	166	61	144	36	31	11	26
9	3.9	11	15	66	181	166	57	134	35	26	16	32
10	4.1	9.6	12	65	176	166	52	153	31	23	14	43
11	3.9	12	22	55	175	166	51	198	33	21	13	43
12	3.9	17	26	34	175	165	49	249	31	19	14	44
13	3.9	22	25	34	174	165	49	262	27	17	13	51
14	4.0	24	26	34	176	165	46	255	26	15	12	47
15	4.1	26	23	35	177	165	50	242	24	20	12	45
16	4.1	25	23	35	177	107	60	221	22	21	15	43
17	4.1	24	22	36	177	5.2	63	203	22	29	14	43
18	4.1	23	33	39	177	5.0	66	185	29	29	12	46
19	4.1	23	98	e66	177	8.0	67	168	95	27	11	43
20	4.0	21	117	122	87	13	70	150	159	26	10	40
21	3.9	20	118	143	66	29	68	137	169	24	26	38
22	3.9	21	118	148	85	53	66	123	161	23	30	40
23	3.9	20	118	144	116	67	70	109	148	20	28	47
24	3.9	18	114	172	116	79	78	95	159	20	30	45
25	3.9	16	111	183	116	82	80	83	173	18	28	41
26	3.8	14	111	182	116	81	78	73	160	16	25	41
27	3.7	15	111	186	117	82	79	67	144	15	22	44
28	3.9	22	110	183	120	83	78	63	127	14	19	75
29	3.9	26	110	175	138	76	102	56	113	13	17	110
30	3.9	24	110	164	---	72	131	48	97	15	15	117
31	3.8	---	110	153	---	70	---	43	---	15	14	---
TOTAL	124.3	485.6	1852	3294	4219	3398.2	2055	4615	2280	896	499.8	1228.2
MEAN	4.01	16.2	59.7	106	145	110	68.5	149	76.0	28.9	16.1	40.9
MAX	4.7	26	118	186	181	167	131	262	173	85	30	117
MIN	3.7	3.9	12	34	66	5.0	46	43	22	13	8.4	8.3
CFSM	.08	.32	1.17	2.08	2.84	2.14	1.34	2.91	1.48	.56	.31	.80
IN.	.09	.35	1.35	2.39	3.07	2.47	1.49	3.35	1.66	.65	.36	.89

e Estimated.

BEAVER RIVER BASIN

03106300 MUDDY CREEK NEAR PORTERSVILLE, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	29.6	63.4	101	96.0	106	121	111	77.0	55.9	34.9	22.7	23.8
MAX	268	248	268	212	220	298	200	187	332	155	127	227
(WY)	1976	1973	1973	1965	1990	1964	1972	1983	1989	1990	1980	1975
MIN	1.11	1.50	2.41	2.40	31.0	10.8	2.78	2.97	1.53	3.01	1.98	.61
(WY)	1964	1970	1970	1970	1980	1973	1986	1986	1969	1965	1966	1969

SUMMARY STATISTICS

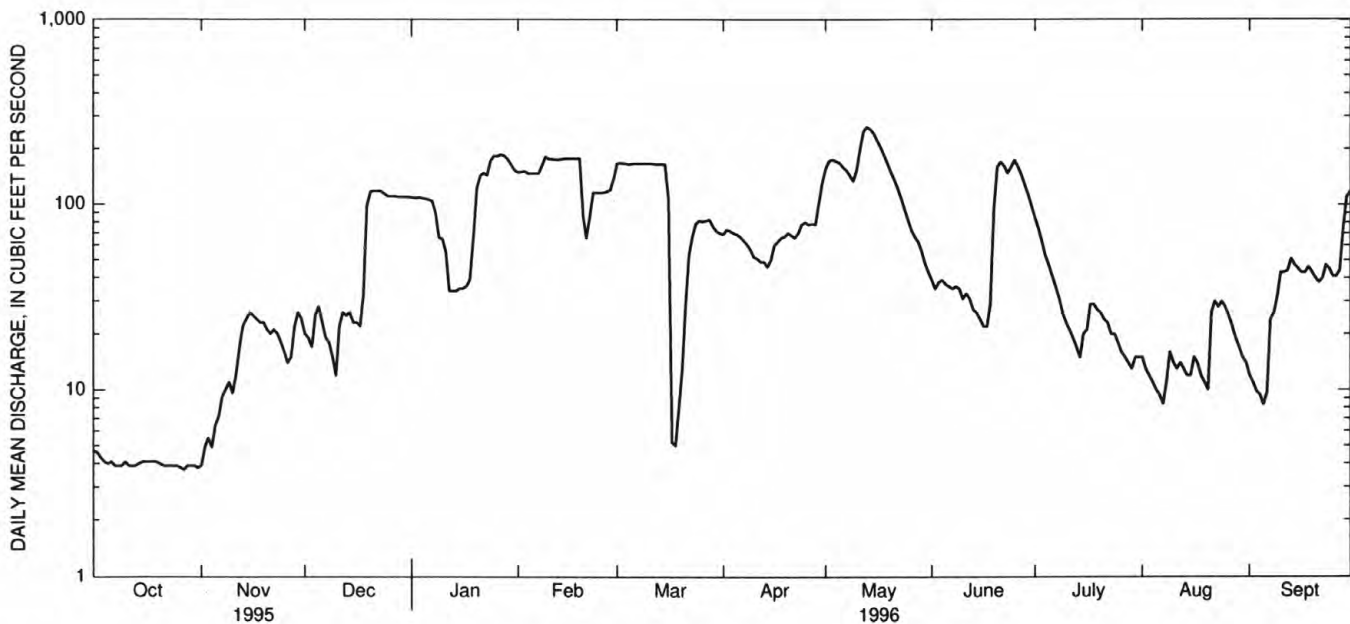
FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1963 - 1996

ANNUAL TOTAL	16813.2	24947.1	
ANNUAL MEAN	46.1	68.2	70.5
HIGHEST ANNUAL MEAN			98.9
LOWEST ANNUAL MEAN			24.1
HIGHEST DAILY MEAN	210	262	1450
LOWEST DAILY MEAN	3.7	3.7	.50
ANNUAL SEVEN-DAY MINIMUM	3.8	3.8	.54
INSTANTANEOUS PEAK FLOW		266	a1640
INSTANTANEOUS PEAK STAGE		4.41	8.18
INSTANTANEOUS LOW FLOW			.40
ANNUAL RUNOFF (CFSM)	.90	1.33	1.38
ANNUAL RUNOFF (INCHES)	12.22	18.13	18.70
10 PERCENT EXCEEDS	116	166	183
50 PERCENT EXCEEDS	30	43	38
90 PERCENT EXCEEDS	4.4	5.4	3.8

a From rating curve extended above 820 ft³/s on basis of slope-area measurement of peak flow.



October 1, 1995 to September 30, 1996

BEAVER RIVER BASIN

03106500 SLIPPERY ROCK CREEK AT WURTEMBERG, PA

LOCATION.--Lat 40°53'02", long 80°14'02", Lawrence County, Hydrologic Unit 05030105, on left bank at downstream side of highway bridge at Camp Allegheny, 2 mi north of Wurtemberg, and 2.8 mi upstream from mouth.

DRAINAGE AREA.--398 mi².

PERIOD OF RECORD.--October 1911 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 743: Drainage area. WSP 1305: 1914-18, 1920-22, 1923-24 (M), 1925-28, 1930.
WSP 1385: 1932, 1935, 1936 (M), 1937-39. WSP 1625: 1955.

GAGE.--Water-stage recorder. Datum of gage is 832.06 ft above sea level. Jan. 1, 1912 to Sept. 30, 1922, nonrecording gage at site 1.5 mi downstream at datum 13.77 ft lower and Oct. 1, 1922 to Sept. 30, 1940, nonrecording gage at site 2 mi downstream at datum 18.92 ft lower.

REMARKS.--Records good except for estimated daily discharges, which are fair. Some regulation since May 1969 by Lake Arthur (station 03106280) 13 mi upstream. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 3,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 19	1500	*8,900	*8.00	May 12	1200	3,710	5.18
Feb. 20	--	Unknown	ice jam	June 19	1400	3,780	5.24
Mar. 20	0600	4,670	5.82				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	114	408	e140	e640	1080	547	2660	339	e360	226	104
2	50	162	424	e200	e540	930	737	2070	330	e320	174	100
3	51	443	377	e290	e470	812	628	1620	395	293	143	94
4	80	429	365	e270	e420	773	551	1390	677	285	127	90
5	112	239	362	e250	e380	810	537	1220	695	258	117	90
6	213	165	367	e230	e340	2510	493	1100	484	229	111	95
7	266	170	348	e210	e310	2090	448	961	447	210	105	533
8	178	311	297	e240	e280	1270	418	962	526	194	111	871
9	123	304	273	e280	e350	1020	394	842	493	197	319	513
10	97	243	195	e340	e450	796	368	1170	363	181	409	1090
11	82	337	e160	e400	e410	747	359	2210	353	163	211	730
12	73	1270	e140	e350	e380	767	337	3550	624	152	169	387
13	68	960	e130	e310	e350	848	328	e2500	623	146	158	424
14	90	643	e120	e270	e330	903	403	e2000	680	174	139	633
15	186	798	e200	e230	e300	912	418	e1500	830	212	134	571
16	165	738	e380	e260	e270	815	990	1270	375	306	347	429
17	118	574	e330	e400	e250	576	1180	1100	286	429	337	381
18	96	576	e290	e1550	e240	504	780	1160	284	529	192	1090
19	86	1010	e250	e6800	e300	653	629	982	2620	349	142	925
20	85	1050	e210	7080	e600	4190	628	804	2750	445	123	555
21	122	897	e190	2820	e1600	3240	613	757	1410	288	313	406
22	152	729	e170	1590	2460	1850	508	759	892	219	447	404
23	127	571	e160	1180	1760	1350	622	629	670	196	235	537
24	104	469	e145	2010	1480	1080	1180	545	1160	194	279	450
25	91	395	e135	2320	1190	932	875	487	2130	177	251	326
26	86	350	e125	e1300	973	851	697	445	1200	160	184	287
27	84	339	e120	1610	983	750	715	433	837	170	151	272
28	91	398	e115	1570	1800	683	623	468	617	145	133	1440
29	101	514	e105	1160	1500	610	1460	456	443	130	123	2580
30	105	442	e100	946	---	550	2690	404	e400	175	115	1550
31	106	---	e100	764	---	503	---	360	---	254	108	---
TOTAL	3441	15640	7091	37370	21356	35405	21156	36814	23933	7540	6133	17957
MEAN	111	521	229	1205	736	1142	705	1188	798	243	198	599
MAX	266	1270	424	7080	2460	4190	2690	3550	2750	529	447	2580
MIN	50	114	100	140	240	503	328	360	284	130	105	90
CFSM	.28	1.31	.57	3.03	1.85	2.87	1.77	2.98	2.00	.61	.50	1.50
IN.	.32	1.46	.66	3.49	2.00	3.31	1.98	3.44	2.24	.70	.57	1.68

e Estimated.

BEAVER RIVER BASIN

03106500 SLIPPERY ROCK CREEK AT WURTEMBERG, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1996, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	277	573	822	671	899	1085	949	646	548	367	289	265
MAX	741	1822	1576	1264	1949	1972	1608	1400	2075	1109	1323	992
(WY)	1976	1986	1978	1974	1981	1972	1987	1983	1989	1990	1980	1975
MIN	56.5	82.2	178	153	289	243	345	215	111	89.7	64.4	63.7
(WY)	1992	1992	1990	1977	1987	1969	1971	1976	1992	1988	1991	1991

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1969 - 1996

ANNUAL TOTAL	177865	233836	
ANNUAL MEAN	487	639	614
HIGHEST ANNUAL MEAN			813
LOWEST ANNUAL MEAN			406
HIGHEST DAILY MEAN	3410	Jun 12	8620
LOWEST DAILY MEAN	50	Oct 2	40
ANNUAL SEVEN-DAY MINIMUM	56	Sep 3	43
INSTANTANEOUS PEAK FLOW			9090
INSTANTANEOUS PEAK STAGE			8.09
INSTANTANEOUS LOW FLOW			40
ANNUAL RUNOFF (CFSM)	1.22	1.61	1.54
ANNUAL RUNOFF (INCHES)	16.62	21.86	20.97
10 PERCENT EXCEEDS	1020	1420	1390
50 PERCENT EXCEEDS	346	399	374
90 PERCENT EXCEEDS	77	115	100

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 1968, BY WATER YEAR (WY) (PRIOR TO REGULATION)

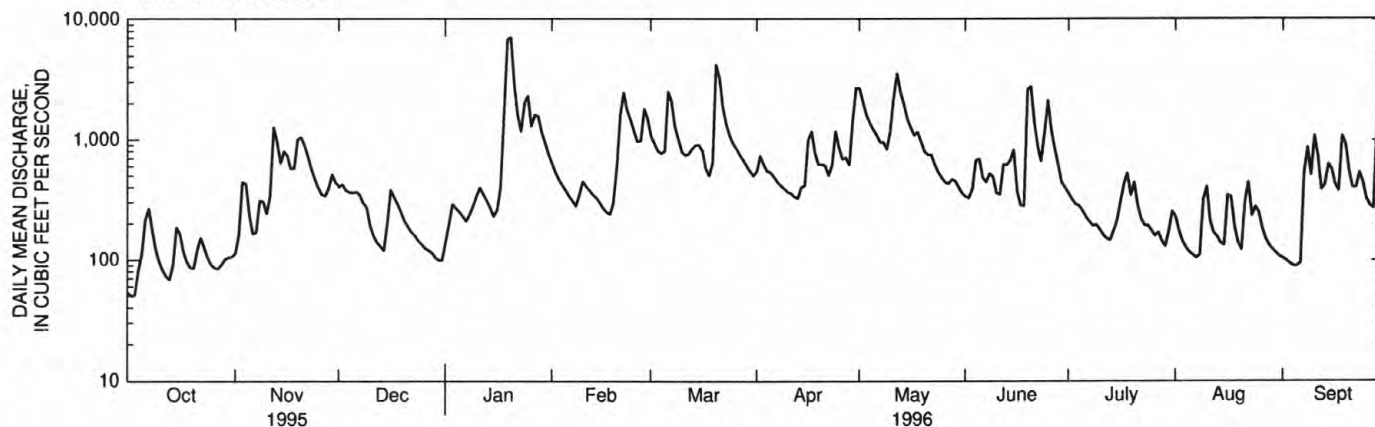
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	237	379	589	839	856	1203	911	653	386	237	191	160
MAX	1391	1329	2088	3161	2089	2728	1974	1472	1559	1307	905	1675
(WY)	1912	1922	1928	1937	1956	1913	1940	1924	1956	1958	1956	1926
MIN	37.7	43.0	58.5	56.3	94.7	291	238	94.3	79.3	54.8	35.3	38.2
(WY)	1964	1931	1931	1931	1934	1931	1925	1934	1936	1944	1930	1944

SUMMARY STATISTICS

WATER YEARS 1912 - 1968

ANNUAL MEAN	552
HIGHEST ANNUAL MEAN	917
LOWEST ANNUAL MEAN	216
HIGHEST DAILY MEAN	16700
LOWEST DAILY MEAN	20
ANNUAL SEVEN-DAY MINIMUM	24
INSTANTANEOUS PEAK FLOW	a19000
INSTANTANEOUS PEAK STAGE	b12.05
INSTANTANEOUS LOW FLOW	c16
ANNUAL RUNOFF (CFSM)	1.39
ANNUAL RUNOFF (INCHES)	18.85
10 PERCENT EXCEEDS	1390
50 PERCENT EXCEEDS	248
90 PERCENT EXCEEDS	58

- a From rating curve extended above 14,000 ft³/s.
b From floodmark, site and datum then in use.
c Minimum observed.



October 1, 1995 to September 30, 1996

BEAVER RIVER BASIN

03107500 BEAVER RIVER AT BEAVER FALLS, PA

LOCATION.--Lat 40°45'48", long 80°18'55", Beaver County, Hydrologic Unit 05030104, on left bank at Beaver Falls, 200 ft upstream from pumping plant of Beaver Falls Municipal Authority, 7.0 mi downstream from Connoquenessing Creek, at mile 5.5.

DRAINAGE AREA.--3,106 mi².

PERIOD OF RECORD.--October 1935 to current year (fragmentary records only prior to October 1956). Gage-height records collected at same site since 1908 are contained in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 1725: 1960 (adjusted runoff).

GAGE.--Water-stage recorder and concrete dam control. Datum of gage is 727.48 ft above sea level (U.S. Army Corps of Engineers bench mark). Prior to Dec. 3, 1941, nonrecording gage at site 200 ft downstream at same datum.

REMARKS.--No estimated daily discharges. Records good above 2,000 ft³/s, and fair below, except those below 1,200 ft³/s, which are poor. Pumpage from gage pool, averaging 3.4 ft³/s in 1935 and 6.0 ft³/s at present, for local water supply returns to river 2 mi downstream; information furnished by Beaver Falls Municipal Authority. Flow regulated since 1942 by Berlin Lake, since 1916 by Milton Reservoir, since 1966 by Michael J. Kirwan Reservoir, since 1943 by Mosquito Creek Lake, since 1929 by Meander Creek Reservoir, since 1933 by Pymatuning Reservoir, since 1967 by Shenango River Lake, all over 50 mi upstream, and since 1969 by Lake Arthur 29 mi upstream. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 27, 1913 reached a stage of 17.4 ft, discharge, 103,000 ft³/s, from rating curve extended above 60,000 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	759	1170	1850	2080	7540	8740	3640	20100	1910	2790	1530	820
2	739	1700	1840	2350	7400	7080	4660	15800	1720	2250	1320	805
3	710	2180	1720	2700	6820	6640	3870	12700	1850	2240	1160	796
4	1070	2200	1670	2510	6320	5820	3320	11200	2680	1950	1090	806
5	1150	1690	1640	2460	6050	6030	3210	10700	2760	1650	1040	795
6	2100	1420	1630	2270	5930	15600	3000	10300	2230	1490	971	810
7	1990	1420	1610	2120	5200	13600	2640	9670	2330	1390	917	2720
8	1550	1820	1470	1920	4660	9220	2430	9550	4040	1350	923	3660
9	1140	1960	1380	1970	4980	7410	2290	8820	4430	1350	1920	2520
10	974	1870	1100	1980	5070	6240	2200	9490	3520	1260	2060	4190
11	909	1920	922	1810	5180	5980	1980	18300	3210	1180	1450	2820
12	881	5420	1100	1800	4840	5670	1770	35700	3340	1140	1240	2010
13	863	4620	1070	1810	3700	5500	1660	28600	4170	1130	1430	2400
14	980	3940	1300	1750	3240	5580	1730	15300	4860	1530	1240	2600
15	1680	4650	2070	1830	3110	5630	1780	11700	6210	1830	1110	2400
16	1450	5130	2420	1940	2920	4790	5530	11100	4740	2440	1560	2060
17	1110	4800	2290	3140	2280	4090	7270	10400	4450	2930	1460	2000
18	1080	4690	1970	12200	2280	3740	5830	11000	4630	2960	1110	2960
19	1100	5790	2130	44400	2100	3950	5140	10500	17600	2320	976	2900
20	1110	6170	1950	44400	4810	31600	4950	9800	14200	2310	920	2230
21	1980	5290	2260	16200	15600	25500	4430	9330	7760	2010	1460	2190
22	1790	4580	2350	7830	11700	14200	3450	9300	6430	2520	2030	2260
23	1450	3620	2320	7030	9620	9200	4080	8410	5670	3040	1310	2850
24	1250	3180	2250	10700	9380	7950	11200	6980	6870	3080	1530	2400
25	1160	2900	2200	12400	8610	6750	10000	5010	12900	2600	1480	1970
26	1130	2720	2160	9480	7550	6040	6940	3840	7650	2090	1140	1770
27	1100	2440	2120	10300	7970	5280	6580	3240	6060	1700	1140	1690
28	1130	2300	2120	11300	16200	4710	6160	3000	4500	1550	997	4720
29	1020	2240	2100	9070	14100	4080	8550	2810	3800	1470	827	11100
30	980	2020	1950	8600	---	3760	18700	2470	3240	1440	839	6560
31	985	---	1990	8400	---	3540	---	2250	---	1800	834	---
TOTAL	37320	95850	56952	248750	195160	253920	148990	337370	159760	60790	39014	79812
MEAN	1204	3195	1837	8024	6730	8191	4966	10880	5325	1961	1259	2660
MAX	2100	6170	2420	44400	16200	31600	18700	35700	17600	3080	2060	11100
MIN	710	1170	922	1750	2100	3540	1660	2250	1720	1130	827	795
CFSM	.39	1.03	.59	2.58	2.17	2.64	1.60	3.50	1.71	.63	.41	.86
IN.	.45	1.15	.68	2.98	2.34	3.04	1.78	4.04	1.91	.73	.47	.96

BEAVER RIVER BASIN

03107500 BEAVER RIVER AT BEAVER FALLS, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1842	3099	4799	4802	5605	6969	5770	4014	2911	2389	1761	1849
MAX	6760	11520	11880	11620	12360	13040	13620	10880	11090	7925	6505	5804
(WY)	1991	1986	1991	1993	1990	1993	1957	1996	1989	1958	1980	1975
MIN	531	439	540	714	887	1606	1861	1271	966	916	777	740
(WY)	1992	1992	1961	1961	1963	1969	1971	1962	1992	1965	1991	1962

SUMMARY STATISTICS

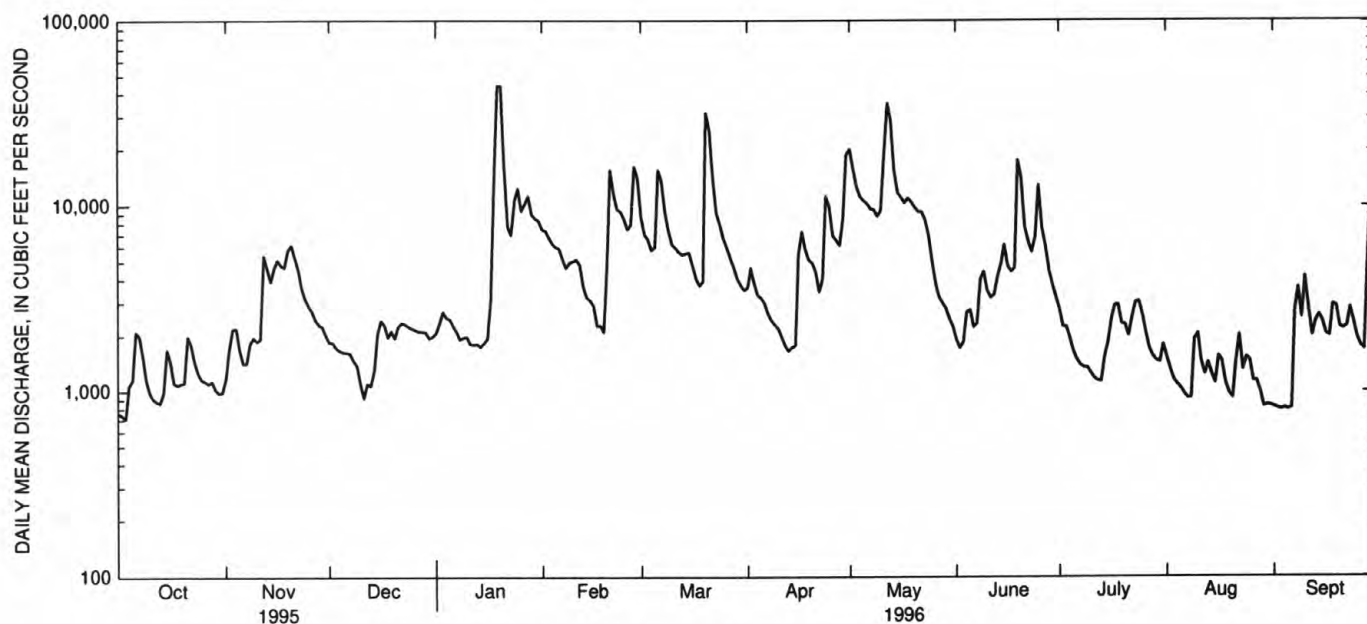
FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1957 - 1996

ANNUAL TOTAL	1051996	1713688	
ANNUAL MEAN	2882	4682	3808
HIGHEST ANNUAL MEAN			5044
LOWEST ANNUAL MEAN			1938
HIGHEST DAILY MEAN	13700	Jan 21	44400
LOWEST DAILY MEAN	710	Oct 3	710
ANNUAL SEVEN-DAY MINIMUM	771	Sep 27	809
INSTANTANEOUS PEAK FLOW			58400
INSTANTANEOUS PEAK STAGE			12.03
INSTANTANEOUS LOW FLOW			
ANNUAL RUNOFF (CFSM)		1.51	
ANNUAL RUNOFF (INCHES)		20.52	
10 PERCENT EXCEEDS	5940		10300
50 PERCENT EXCEEDS	2020		2510
90 PERCENT EXCEEDS	900		1110

3808	
5044	1993
1938	1963
65400	Jan 22 1959
320	Nov 5 1991
333	Nov 1 1991
69900	Jan 22 1959
14.42	Jan 22 1959
minimum not determined	
1.23	
16.66	
8320	
2370	
912	



October 1, 1995 to September 30, 1996

BEAVER RIVER BASIN

LAKES AND RESERVOIRS IN BEAVER RIVER BASIN

03100500 PYMATUNING RESERVOIR.--Lat 41°29'54", long 80°27'47", Crawford County, Hydrologic Unit 05030102, in gatehouse at Pymatuning Dam on Shenango River, 1.8 mi northwest of Jamestown, Pa., and at mile 85.1. DRAINAGE AREA, 158 mi². PERIOD OF RECORD, October 1932 to current year. Contents prior to October 1938 published in WSP 1305. GAGE, water-stage recorder. Datum of gage is sea level. Prior to Nov. 20, 1934, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed in two parts. The main dam is earthfill with stone facing, provided with regulating gates (outlet gate sill elevation at 975.3 ft), and a spillway with crest elevation at 1,008.0 ft. An auxiliary dam 15 mi upstream from the main dam with spillway elevation at 1,010 ft has a fixed crest weir section in the earthfill causeway. Storage began Jan. 23, 1934, when all regulating gates were closed. Capacity, 188,040 acre-ft between elevations, 975.3 ft and 1,008.0 ft was reached in March 1936. Dead storage 10,150 acre-ft (93 acre-ft behind main dam below elevation 975.3 ft and 10,060 acre-ft behind upstream dam below elevation 1,010 ft). Upstream pool was filled (all dead storage accumulated) on March 5, 1934. Figures given herein represent usable contents. Reservoir is used for flood control, and for recreation. Dam built by Pennsylvania Department of Forests and Waters and now maintained by Pennsylvania Department of Environmental Protection.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 210,680 acre-ft, June 26, 1972 (elevation, 1,009.53 ft); minimum (after first filling), 110,570 acre-ft, Dec. 4, 1953 (elevation, 1,002.17 ft).

EXTREMES FOR CURRENT YEAR. Maximum contents, 205,420 acre-ft, May 12 (elevation, 1,009.18 ft); minimum, 153,220 acre-ft, Oct. 27 (elevation, 1,005.51 ft).

03106280 LAKE ARTHUR.--Lat 40°57'45", long 80°07'17", Butler County, Hydrologic Unit 05030105, in gatehouse at left end of spillway of Lake Arthur Dam on Muddy Creek, at Moraine State Park, 3 mi northeast of Portersville, Pa. DRAINAGE AREA, 50.8 mi². PERIOD OF RECORD, May 1969 to current year. GAGE, water-stage recorder. Datum of gage is sea level (Pennsylvania Department of Environmental Protection bench mark). Prior to Aug. 23, 1969, nonrecording gage at same site and datum.

REMARKS.--Lake is formed by an earthfill dam with concrete spillway. Storage began May 15, 1969. Usable capacity, 37,000 acre-ft between elevations 1,160 ft, sill of 6 ft outlet gate and 1,189.8 ft (spillway crest). No dead storage. Figures given herein represent usable contents. Lake is used for recreation. Dam built by Pennsylvania Department of Forests and Waters and now maintained by Pennsylvania Department of Environmental Protection.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 44,240 acre-ft, June 16, 1989 (elevation, 1,192.01 ft); minimum (after first filling), 21,320 acre-ft, Nov. 30, 1975 (elevation, 1,183.88 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 41,340 acre-ft, May 13 (elevation, 1,191.16 ft); minimum, 34,350 acre-ft, Feb. 19 (elevation, 1,188.91 ft).

MONTHEND ELEVATION IN FEET ABOVE SEA LEVEL, AND CONTENTS AT 2400 HRS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	Elevation (feet)	Contents (acre- feet)	Change in contents (equivalent in ft ³ /s)	Elevation (feet)	Contents (acre- feet)	Change in contents (equivalent in ft ³ /s)
<u>03100500 Pymatuning Reservoir</u>			<u>03106280 Lake Arthur</u>			
Sept. 30	1,005.78	156,880	-	1,189.59	36,370	-
Oct. 31	1,005.67	155,380	- 24	1,189.82	37,060	+11
Nov. 30	1,006.66	168,980	+229	1,190.31	38,590	+26
Dec. 31	1,006.78	170,650	+ 27	1,189.32	35,560	-49
CAL YR 1995	-	-	+ 11	-	-	- .33
Jan. 31	1,007.93	180,020	+266	1,190.44	39,010	+56
Feb. 29	1,007.66	183,130	- 68	1,189.65	36,550	-43
Mar. 31	1,007.21	176,710	-104	1,190.47	39,100	+41
Apr. 30	1,008.64	197,400	+348	1,190.78	40,100	+17
May 31	1,008.03	188,480	-145	1,190.32	38,620	-24
June 30	1,008.13	189,930	+ 24	1,190.55	39,360	+12
July 31	1,008.21	191,100	+ 19	1,190.05	37,760	-26
Aug. 31	1,007.74	184,290	-111	1,190.09	37,890	+ 2.1
Sept. 30	1,008.11	189,640	+ 90	1,190.63	39,620	+29
WTR YR 1996	-	-	+ 45	-	-	+ 4.5

1969
50.8
40000 apts
31 mi²
Flood zone

RACCOON CREEK BASIN

03108000 RACCOON CREEK AT MOFFATTS MILL, PA

LOCATION.--Lat 40°37'40", long 80°20'16", Beaver County, Hydrologic Unit 05030101, on left bank at downstream side of highway bridge at Moffatts Mill, 1.4 mi downstream from Gums Run, 4 mi south of Vanport, and 4.2 mi upstream from mouth.

DRAINAGE AREA.--178 mi².

PERIOD OF RECORD.--September 1941 to current year. May 1915 to July 1932 (gage heights and discharge measurements only) in reports of Water Supply Commission of Pennsylvania or Pennsylvania Department of Forests and Waters.

REVISED RECORDS.--WSP 1385: 1941-43.

GAGE.--Water-stage recorder. Datum of gage is 719.16 ft above sea level (U.S. Army Corps of Engineers bench mark). May 27, 1915 to July 31, 1932, and Sept. 2 to Dec. 3, 1941, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Normally, no regulation from Raccoon Creek Lake. Diversion out of the basin from Cherry Valley and Service Creek Reservoirs upstream increased from an average of 4.0 ft³/s at the close of 1957 to 6.8 ft³/s for the present year; diversion began with 2.0 ft³/s for September 1957. Published records do not include diversion. Records of diversion furnished by Western Pennsylvania Water Company and Ambridge Water Authority. Several measurements of water temperature were made during the year. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 15, 1922, reached a stage of 9.80 ft, discharge, 10,000 ft³/s. Flood of Mar. 5, 1920, also reached a stage of 9.80 ft, backwater from ice.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 19	2100	*4,720	*7.19	June 19	2300	3,900	6.50
Mar. 20	1330	3,040	5.72	June 24	2100	2,320	5.12

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	29	44	e40	172	474	323	772	141	130	45	17
2	13	32	43	e66	e135	383	573	641	131	111	36	16
3	13	59	39	e120	e120	315	426	493	141	243	33	16
4	24	59	38	e210	e110	215	356	409	178	152	29	16
5	41	43	40	e145	e100	271	456	356	182	109	27	15
6	82	38	45	e115	e96	667	377	344	133	92	26	17
7	60	38	42	e90	e92	760	336	305	220	78	26	160
8	40	52	36	e70	e90	566	291	414	375	74	32	85
9	30	50	45	e60	e110	415	262	554	317	70	131	49
10	36	41	35	e56	e140	340	233	473	214	64	54	59
11	68	43	e32	e52	e170	307	208	603	160	58	36	43
12	72	113	e31	e50	140	319	187	798	127	55	31	33
13	70	85	e28	e48	101	317	174	588	125	54	30	66
14	106	91	e50	e45	e70	299	163	456	149	52	31	53
15	230	212	e140	e43	e68	348	149	377	122	79	49	40
16	104	186	127	e41	e64	312	456	478	97	102	59	34
17	78	116	96	e150	e62	297	409	820	83	69	57	56
18	55	102	79	e680	e60	293	319	931	84	70	35	64
19	33	151	70	e3400	e58	398	289	642	2620	149	29	46
20	30	166	e60	2150	e200	2540	317	469	1700	120	25	36
21	51	135	e56	800	1040	1530	291	369	646	69	24	30
22	64	110	e52	446	616	879	243	341	376	59	27	29
23	44	90	e49	345	492	630	269	265	255	57	26	48
24	35	79	e46	681	445	513	388	233	843	52	28	44
25	31	66	e43	636	354	458	303	217	1040	48	31	34
26	29	60	e40	444	325	424	286	185	462	45	23	31
27	28	58	e38	517	520	326	269	190	282	43	21	35
28	28	58	e36	478	1010	297	214	266	208	38	19	185
29	30	55	e34	371	671	290	819	230	169	35	19	317
30	32	50	e33	315	---	256	1000	197	143	39	18	119
31	31	---	e31	259	---	230	---	160	---	64	17	---
TOTAL	1603	2467	1578	12923	7631	15669	10386	13576	11723	2480	1074	1793
MEAN	51.7	82.2	50.9	417	263	505	346	438	391	80.0	34.6	59.8
MAX	230	212	140	3400	1040	2540	1000	931	2620	243	131	317
MIN	13	29	28	40	58	215	149	160	83	35	17	15
CFSM	.29	.46	.29	2.34	1.48	2.84	1.94	2.46	2.20	.45	.19	.34
IN.	.34	.52	.33	2.70	1.59	3.27	2.17	2.84	2.45	.52	.22	.37

e Estimated.

RACCOON CREEK BASIN

03108000 RACCOON CREEK AT MOFFATTS MILL, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	63.7	111	195	250	325	413	345	263	140	86.8	71.0	56.5
MAX	359	764	717	737	788	1010	757	618	632	389	651	453
(WY)	1955	1986	1991	1952	1956	1945	1957	1983	1989	1990	1980	1975
MIN	7.98	14.8	15.1	34.5	47.7	56.3	94.7	65.6	26.3	15.6	10.2	9.73
(WY)	1964	1964	1964	1967	1964	1969	1946	1986	1988	1965	1965	1964

SUMMARY STATISTICS

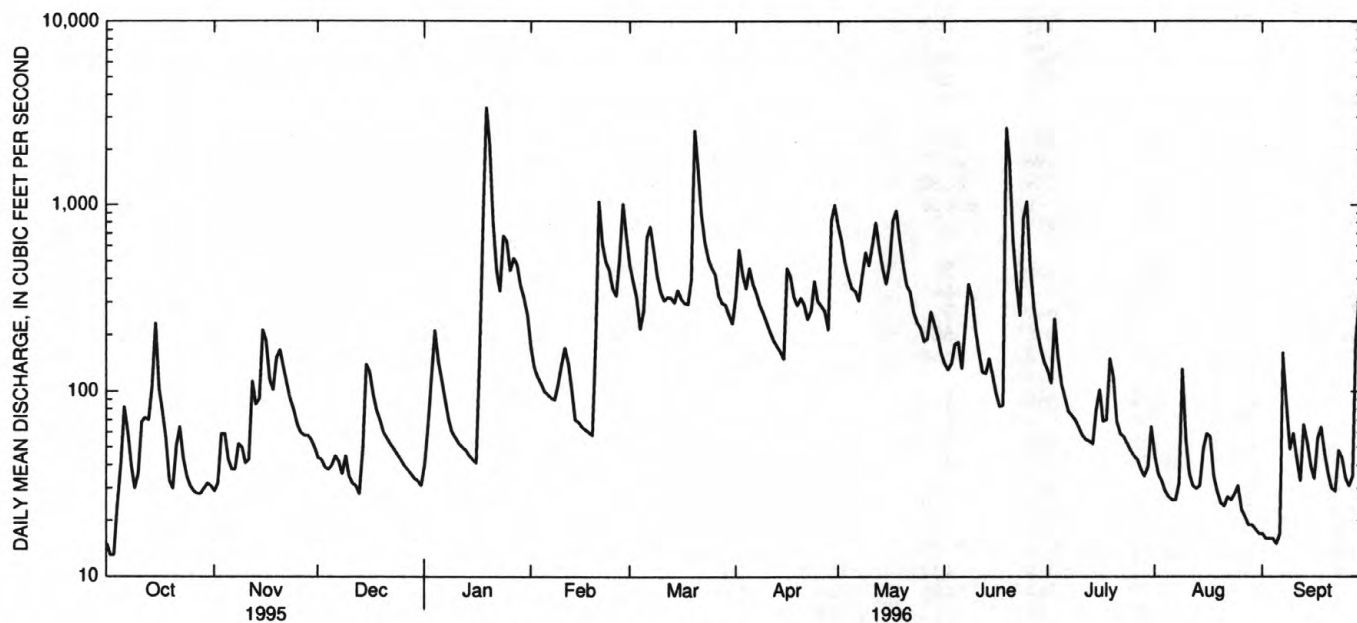
FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1942 - 1996

ANNUAL TOTAL	44001	82903	
ANNUAL MEAN	121	227	193
HIGHEST ANNUAL MEAN			314
LOWEST ANNUAL MEAN			90.9
HIGHEST DAILY MEAN	525	Mar 12	6120
LOWEST DAILY MEAN	10	Sep 7,8	4.8
ANNUAL SEVEN-DAY MINIMUM	11	Sep 2	5.6
INSTANTANEOUS PEAK FLOW			8590
INSTANTANEOUS PEAK STAGE			9.71
INSTANTANEOUS LOW FLOW			4.5
ANNUAL RUNOFF (CFSM)	.68	1.27	1.08
ANNUAL RUNOFF (INCHES)	9.20	17.33	14.71
10 PERCENT EXCEEDS	303	514	450
50 PERCENT EXCEEDS	83	101	97
90 PERCENT EXCEEDS	21	30	21

e Estimated.



October 1, 1995 to September 30, 1996

STREAMS TRIBUTARY TO LAKE ERIE

04213000 CONNEAUT CREEK AT CONNEAUT, OH

LOCATION.--Lat 41°55'37", long 80°36'15", Ashtabula County, Hydrologic Unit 04120101, on right bank at downstream side of Keefus Road bridge at Conneaut, and 6.4 mi upstream from mouth.

DRAINAGE AREA.--175 mi².

PERIOD OF RECORD.--July 1922 to December 1935, March 1950 to September 1961 (published as "at Amboy"), October 1961 to current year.

REVISED RECORDS.--WSP 714: 1926. WSP 784: 1933. WSP 1437: 1923-25(M), 1926-30, 1931-32(M), 1933, 1935(M).

WSP 1912: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 610.30 ft above sea level. Prior to Aug. 17, 1924, nonrecording gage at same site and datum.

REMARKS.--Records fair, except for periods of estimated record, which are poor. Water-quality and sediment data collected at this site.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e4.5	e30	e216	e110	e190	409	121	2400	e31	e46	e70	10
2	e5.2	e40	210	e270	e150	280	135	982	e29	e39	e56	10
3	e6.0	e63	183	e210	e130	232	164	550	e27	e35	e49	9.6
4	e12	131	200	e180	e110	187	148	466	e26	e31	e43	8.8
5	e30	105	e260	e150	e100	248	137	466	e90	e28	e37	8.4
6	e140	85	e180	e130	e90	1020	134	399	153	e25	e33	8.2
7	e90	126	e140	e120	e84	887	123	339	145	e23	e30	53
8	e65	427	e100	e110	e260	391	109	e270	1030	e21	e26	71
9	e45	314	e80	e100	e580	267	97	e220	1040	e20	e24	70
10	e19	156	e70	e94	e700	656	94	e200	295	e18	e22	62
11	e14	489	e64	e90	e1100	942	98	e2700	371	e17	e110	43
12	e11	2100	e58	e86	e480	167	108	3700	1030	e16	e56	105
13	e9.4	1610	e56	e80	e160	249	266	1650	611	e14	e28	97
14	e8.0	459	e190	e76	e130	530	1470	447	265	e13	e20	260
15	e35	911	e740	e74	e100	760	664	277	164	e50	e30	293
16	e54	1030	e1100	e72	e88	477	1430	223	120	e64	46	301
17	e60	621	e450	e560	e80	275	1890	193	92	e80	29	362
18	e40	495	e270	e2300	e74	204	678	161	348	e250	22	1930
19	25	800	e230	e5000	e70	174	358	138	3610	e600	20	860
20	25	1110	e700	e3800	e700	204	382	120	2730	e1000	27	220
21	44	875	e860	e1500	e2000	610	538	105	2050	e500	45	118
22	25	679	e600	e1100	2220	398	367	146	e500	e200	54	142
23	53	479	e450	e1000	1220	272	1480	e140	e100	e100	47	847
24	38	367	e330	e1300	688	310	4100	e110	e170	e80	33	772
25	28	287	e250	e1000	492	484	1700	e84	e120	e58	24	230
26	22	236	e200	e580	308	388	538	e66	e130	e45	19	131
27	e18	278	e170	e1200	262	274	378	e56	e150	e36	17	93
28	20	669	e150	e1100	1310	186	306	e50	e110	e30	15	772
29	20	582	e130	e660	1390	158	272	e44	e72	e26	13	2680
30	20	306	e120	e400	---	140	1030	e39	e56	e50	12	965
31	23	---	e110	e280	---	124	---	e35	---	e58	11	---
TOTAL	1009.1	15860	8867	23732	15266	11903	19315	16776	15665	3573	1068	11532.0
MEAN	32.6	529	286	766	526	384	644	541	522	115	34.5	384
MAX	140	2100	1100	5000	2220	1020	4100	3700	3610	1000	110	2680
MIN	4.5	30	56	72	70	124	94	35	26	13	11	8.2
CFSM	.19	3.02	1.63	4.37	3.01	2.19	3.68	3.09	2.98	.66	.20	2.20
IN.	.21	3.37	1.88	5.04	3.25	2.53	4.11	3.57	3.33	.76	.23	2.45

e Estimated.

STREAMS TRIBUTARY TO LAKE ERIE

04213000 CONNEAUT CREEK AT CONNEAUT, OH

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	136	317	418	417	460	540	391	231	131	78.3	67.4	108
MAX	804	1373	1049	929	1115	987	839	670	1013	415	493	709
(WY)	1927	1986	1928	1990	1981	1972	1957	1953	1986	1969	1980	1990
MIN	4.95	17.1	35.1	81.0	39.6	235	69.9	20.2	5.46	2.79	3.19	3.56
(WY)	1924	1954	1961	1977	1934	1969	1935	1934	1934	1934	1923	1932

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1922 - 1996

ANNUAL TOTAL	69758.8		144566.1									
ANNUAL MEAN	191		395							274		
HIGHEST ANNUAL MEAN										401		1986
LOWEST ANNUAL MEAN										140		1931
HIGHEST DAILY MEAN	2100	Nov 12	5000	Jan 19					11000		Jan 31	1968
LOWEST DAILY MEAN	1.8	Sep 11	4.5	Oct 1						.30	Jul 30	1933
ANNUAL SEVEN-DAY MINIMUM	2.1	Sep 7	9.4	Aug 31						.64	Aug 27	1933
INSTANTANEOUS PEAK FLOW			7200	Jan 19 e a					17000		Jan 22	1959
INSTANTANEOUS PEAK STAGE			8.79	Jan 19 e						12.94	Mar 4	1934
INSTANTANEOUS LOW FLOW			4.5	Oct 1						.20	Jul 31	1933
ANNUAL RUNOFF (CFSM)	1.09		2.26							1.57		
ANNUAL RUNOFF (INCHES)	14.83		30.73							21.27		
10 PERCENT EXCEEDS	511		1030							680		
50 PERCENT EXCEEDS	70		145							96		
90 PERCENT EXCEEDS	5.4		22							10		

a Peaks above base shown in Table of peak discharges and stages at continuous-record surface-water-discharge stations.

e Estimated.

STREAMS TRIBUTARY TO LAKE ERIE

04213075 BRANDY RUN NEAR GIRARD, PA

LOCATION.--Lat 41°59'31", long 80°17'29", Erie County, Hydrologic Unit 04120101, on left bank 100 ft upstream from highway bridge on Tannery Road, 0.5 mi upstream from mouth, and 1.8 mi southeast of Girard.

DRAINAGE AREA.--4.45 mi².

PERIOD OF RECORD.--May 1986 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 800 ft above sea level, from topographic map.

REVISED RECORDS.--WRD PA-94-3: 1987-89 (M).

REMARKS.--Records good except for estimated daily discharges, which are fair. Several measurements of water temperature were made during the year.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 19	Unknown	Unknown	Unknown	June 19	0215	207	1.92
Apr. 23	1245	*546	*2.86	Sept. 17	1530	392	2.42

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.78	e2.7	9.9	e4.5	e3.1	11	9.6	23	4.7	3.0	1.7	.95
2	.78	e4.0	9.0	e4.2	e2.7	6.1	12	15	4.3	3.0	1.6	.95
3	1.5	e6.8	7.8	e3.9	e2.3	16	11	9.3	4.3	3.0	1.4	.95
4	3.9	e5.0	8.8	e3.7	e2.2	27	10	11	4.6	3.0	1.4	.95
5	5.0	e4.4	8.7	e3.5	e2.0	12	10	9.0	4.9	2.7	1.4	.95
6	9.1	e3.5	5.9	e3.4	e2.2	18	9.5	8.1	4.3	2.7	1.3	.95
7	2.8	e7.0	3.5	e3.3	e2.5	29	9.0	6.9	9.0	2.7	1.1	3.1
8	2.1	4.3	e2.9	e3.1	e10	44	9.2	5.9	15	2.6	1.1	4.3
9	1.7	2.5	e2.5	e3.0	e50	30	9.0	15	6.1	2.5	1.0	1.9
10	1.6	2.1	e2.4	e2.9	15	19	9.3	43	5.4	2.4	.95	1.4
11	1.4	32	e4.0	e2.8	7.6	12	9.3	55	8.0	2.2	.95	1.4
12	1.4	22	e6.0	e2.6	e6.0	e9.0	10	42	12	2.2	.95	3.5
13	1.4	10	e9.6	e2.5	e5.4	e7.4	29	14	6.1	2.4	.95	3.1
14	3.2	8.5	e14	e2.4	e4.9	e16	22	9.9	5.0	2.4	.95	5.5
15	4.6	26	e22	e2.3	e4.5	13	17	8.6	4.6	3.6	3.5	6.7
16	3.1	15	e17	e2.3	e4.3	9.1	63	8.4	4.0	2.7	2.3	5.0
17	2.3	12	e13	e10	e4.0	8.5	30	7.9	3.9	2.2	1.5	104
18	2.2	13	e10	e40	e3.7	8.4	21	7.5	42	2.2	1.3	26
19	2.0	27	e8.0	e200	e3.4	7.6	25	6.6	53	16	1.1	6.0
20	3.1	18	e6.2	e90	e20	11	26	6.2	10	3.4	1.1	3.0
21	3.3	14	e5.6	e40	14	15	19	6.3	7.1	2.7	1.1	2.5
22	e2.5	10	e5.0	e20	14	14	21	6.1	8.4	2.4	1.1	7.0
23	e2.2	8.1	e4.6	e10	7.3	14	158	5.5	5.6	2.2	1.4	14
24	e2.0	7.9	e4.3	e32	6.7	14	44	5.4	6.9	2.0	1.3	4.4
25	e1.8	6.3	e4.2	10	5.1	25	15	5.1	5.7	1.9	1.1	3.0
26	e1.7	5.8	e4.0	4.1	4.6	17	10	5.1	4.3	1.9	1.1	2.6
27	e1.6	12	e3.8	7.1	5.6	12	9.4	5.1	3.9	1.9	1.1	2.2
28	e3.5	14	e3.7	6.4	27	11	7.6	5.1	3.6	1.9	1.1	43
29	e8.6	7.3	e3.5	e5.0	8.9	11	8.7	5.0	3.6	1.6	.95	11
30	e6.0	7.4	e4.0	e4.3	---	9.5	40	4.7	3.4	3.0	.95	4.8
31	e4.0	---	e4.6	e3.6	---	9.4	---	4.7	---	2.7	.95	---
TOTAL	91.16	318.6	218.5	532.9	249.0	466.0	683.6	370.4	263.7	91.1	39.70	275.10
MEAN	2.94	10.6	7.05	17.2	8.59	15.0	22.8	11.9	8.79	2.94	1.28	9.17
MAX	9.1	32	22	200	50	44	158	55	53	16	3.5	104
MIN	.78	2.1	2.4	2.3	2.0	6.1	7.6	4.7	3.4	1.6	.95	.95
CFSM	.66	2.39	1.58	3.86	1.93	3.38	5.12	2.69	1.98	.66	.29	2.06
IN.	.76	2.66	1.83	4.45	2.08	3.90	5.71	3.10	2.20	.76	.33	2.30

e Estimated.

STREAMS TRIBUTARY TO LAKE ERIE

04213075 BRANDY RUN NEAR GIRARD, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.91	7.82	8.83	8.48	9.07	10.8	13.4	6.59	4.13	2.37	4.32	4.54
MAX	12.1	17.2	12.9	18.9	28.7	17.6	22.8	14.4	10.9	6.13	19.1	11.1
(WY)	1988	1993	1988	1990	1990	1989	1996	1989	1994	1992	1987	1992
MIN	1.30	2.03	2.49	3.13	2.21	6.52	6.88	1.56	.86	.81	.49	.75
(WY)	1992	1992	1990	1987	1987	1995	1995	1991	1991	1991	1991	1995

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

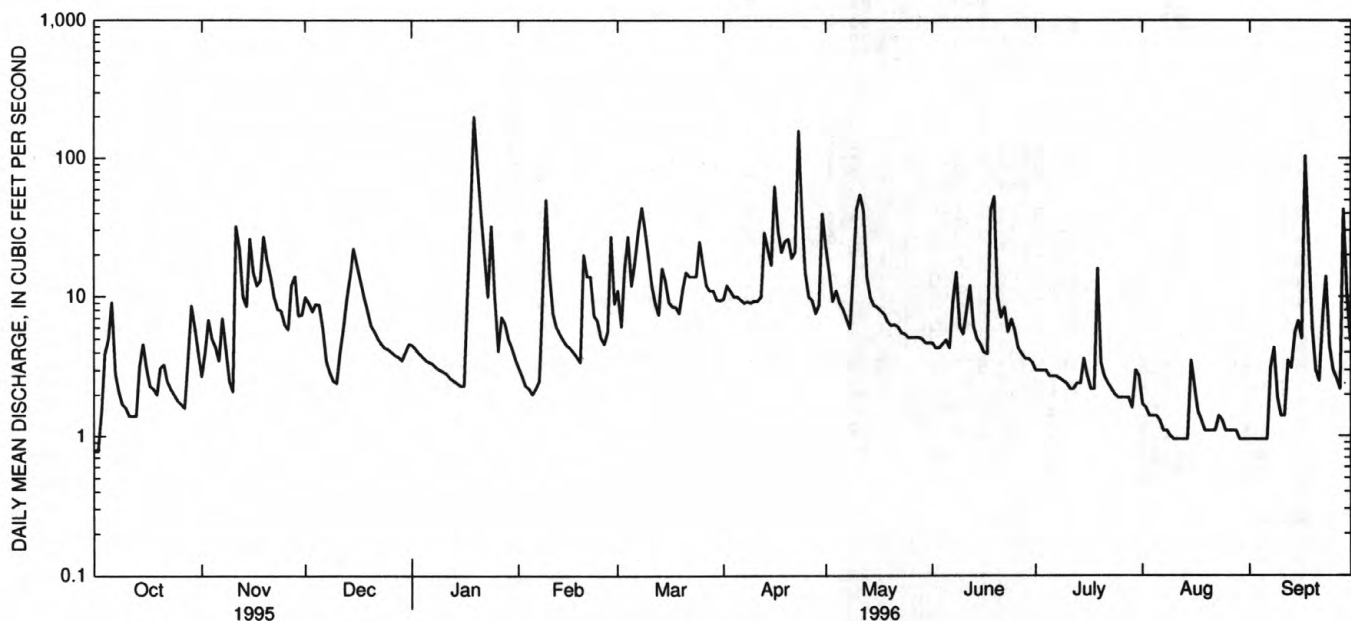
FOR 1996 WATER YEAR

WATER YEARS 1986 - 1996

ANNUAL TOTAL	1738.06	3599.76	
ANNUAL MEAN	4.76	9.84	7.23
HIGHEST ANNUAL MEAN			9.84
LOWEST ANNUAL MEAN			4.67
HIGHEST DAILY MEAN	51	Jan 16	e200 Jan 19
LOWEST DAILY MEAN	.30	Sep 12	.78 Oct 1,2
ANNUAL SEVEN-DAY MINIMUM	.33	Sep 1	.95 Aug 29
INSTANTANEOUS PEAK FLOW			546 Apr 23
INSTANTANEOUS PEAK STAGE			2.86 Apr 23
INSTANTANEOUS LOW FLOW			a3.36 Jun 13 1994
ANNUAL RUNOFF (CFSM)	1.07	2.21	1.62 Jul 11 1986
ANNUAL RUNOFF (INCHES)	14.53	30.09	22.07
10 PERCENT EXCEEDS	11	21	14
50 PERCENT EXCEEDS	2.6	5.0	3.3
90 PERCENT EXCEEDS	.78	1.4	.95

a Maximum gage height, 4.55 ft, Dec. 19, 1989 (backwater from ice).

e Estimated.



October 1, 1995 to September 30, 1996

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and other collected for some special reason are called measurements at miscellaneous sites.

Records collected at crest-stage partial-record stations are presented in the following table. Discharge measurements made at low-flow partial-record sites and at miscellaneous sites and for special studies are given in separate tables.

Crest-stage partial-record stations

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained but is not published herein. The years given in the "Period of record" represent water years for which the annual maximum has been determined.

Annual maximum discharge at crest-stage partial-record stations during water year 1996

Station name and number	Location and drainage area	Period of record	Water year 1996 maximum			Period of record maximum		
			Date	Gage height (ft)	Dis- charge (ft ³ /s)	Date	Gage height (ft)	Dis- charge (ft ³ /s)
<u>OHIO RIVER BASIN</u>								
POTATO CREEK BASIN								
Potato Creek at Smethport, Pa. (03009680)	Lat 41°48'35", long 78°25'50", McKean County, on left bank 30 ft upstream from U.S. Highway 6 at east borough limits of Smethport, and 500 ft downstream from Marvin Creek.	1974-96	1-19-96	13.19	8,160	1-19-96	13.19	8,160
ALLEGHENY RIVER BASIN								
Allegheny River at Warren, Pa. (03015310)	Lat 41°50'38", long 79°09'00", Warren County, on right bank at downstream end of municiple parking lot at Warren, 1,400 ft. downstream from confluence of Conewango Creek, and at mile 188.7.	1988-96	5-14-96 5-17-96	10.50 10.50	27,700 27,700	1- 3-91	a10.19	31,700
FRENCH CREEK BASIN								
Woodcock Creek at Blooming Valley, Pa. (03022540)	Lat 41°41'26", long 80°02'54", Crawford County, on left bank at upstream side of bridge, 0.7 mi northeast of Blooming Valley, and 3.4 mi upstream from Woodcock Creek Dam.	1974-96	1-19-96	10.29	2,100	2-17-76	b11.48	2,980

a Maximum gage height, 11.41 ft, Apr. 16, 1994.

b Maximum gage height, 12.27 ft, Feb. 26, 1977 (backwater from ice).

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Crest-stage partial-record stations--continuedAnnual maximum discharge at crest-stage partial-record stations during water year 1996--Continued

Station name and number	Location and drainage area	Period of record	<u>Water year 1996 maximum</u>			<u>Period of record maximum</u>		
			Date	Gage height (ft)	Dis- charge (ft ³ /s)	Date	Gage height (ft)	Dis- charge (ft ³ /s)
CLARION RIVER BASIN								
Clarion River at Johnsonburg, Pa. (03028500)	Lat 41°29'10", long 78°40'43", Elk County, on left bank at upstream side of highway bridge at Johnsonburg, 0.1 mi downstream from confluence of East and West Branches.	1945-96	1-19-96	10.14	12,800	1-19-96	10.14	12,800
KISKIMINETAS RIVER BASIN								
Little Conemaugh River at East Conemaugh, Pa. (03041000)	Lat 40°20'45", long 78°52'58", Cabria County, on right bank 1,000 ft upstream from bridge on State Highway 271 at East Conemaugh, 300 ft downstream from Clapboard Run, and 2.7 mi upstream from confluence with Stoneycreek River.	1939-96	1-19-96	19.78	15,600	7-20-77	18.85	40,000
LAKE ERIE BASIN								
Mill Creek at Erie, Pa. (04213200)	Lat 42°05'54", long 80°04'35", Erie County, at bridge on West 38th Street, 100 ft west of State Highway 505, at Erie. Drainage area is 9.16 mi ² .	1964-96	9-17-96	15.06	3,310	9-17-96	15.06	3,310

Miscellaneous sites

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements Date	Discharge (ft ³ /s)
OHIO RIVER BASIN						
ALLEGHENY RIVER BASIN						
03010956 Tunungwant Creek	Allegheny River	Lat 41°57'44", long 78°37'30", McKean County, at bridge on State Highway 346 and 1.5 mi downstream from confluence of East and West branch Tunungwant Creek.	138	1989-95	11- 2-95 4-23-96 6- 3-96 7-30-96 9-23-96	108 337 79.6 56.8 221
3017500 Tionesta Creek	Allegheny River	Lat 41°36'07", long 79°03'01", Forest County, in Allegheny National Forest, on left bank at downstream side of highway bridge at Lynch, 500 ft upstream from Bluejay Creek and 7 mi south of Sheffield.	233	1939-79† 1981, 1988-95	11- 1-95 7-17-96 9-10-96	95.4 148 265
03022000 French Creek	Allegheny River	Lat 41°46'19", long 80°06'29", Crawford County, at downstream side of bridge at Venango, 1.2 mi upstream from Gravel Run and 2.2 mi downstream from Boles Run.	597	1938-46† 1994-95	11- 6-95 2-27-96 4-23-96 5-31-96 6-17-96 8-12-96	573 2,410 4,590 316 424 324
03025000 Sugar Creek	Allegheny River	Lat 41°25'43", long 79°52'48", Venango County, at bridge 0.8 mi north of Sugarcreek, 0.9 mi upstream from mouth, and 3 mi northeast of Franklin.	166	1932-79† 1989-95	10-30-95 4- 1-96 5-20-96 7-15-96 9-12-96	42.4 195 277 86.2 151
03029000 Clarion River	Allegheny River	Lat 41°25'15", long 78°44'10", Elk County, at bridge on State Highway 948 in Ridgway, 50 ft downstream from Elk Creek.	303	1940-53† 1954, 1988-95	11- 1-95 1- 5-96 2-14-96 4-22-96 6- 3-96 7-29-96 9-25-96	127 181 411 487 548 267 398
03030852 Clarion River	Allegheny River	Lat 41°07'47", long 79°33'18", Clarion County, at bridge on State Highway 58 at Callensburg and 0.3 mi upstream from Licking Creek.	1,163	1970-72† 1979-95	11- 2-95 1- 5-96 2- 9-96 4- 9-96 5-23-96 7-18-96 9-14-96	165 205 569 369 367 2,930 184
03036995 Crooked Creek	Allegheny River	Lat 40°40'53", long 79°11'27", Indiana County, at bridge on State Highway 110 at Creekside and 150 ft upstream from McKee Run.	53.4	-	7- 2-96 7- 2-96 7-15-96 7-23-96 8- 5-96 9- 4-96	25.9 24.9 42.0 53.2 11.3 9.63

† Operated as a continuous record station.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES--Continued

Miscellaneous sites --continued

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements Date	Discharge (ft ³ /s)
BEAVER RIVER BASIN						
03099600 Mahoning River	Beaver River	Lat 41°01'06", long 80°26'27", Lawrence County, at bridge on State Highway 224 and 0.4 mi northwest of Edinburg.	1,099	1989-95	11- 1-95 560 2-28-96 5,620 4-25-96 4,540 6-20-96 3,420 8-16-96 664	
03104500 Shenango River	Beaver River	Lat 41°00'00", long 80°21'21", Lawrence County, at bridge on Grant Street in New Castle and 0.6 mi above confluence with Neshannock Creek.	792	1910-11† 1912-34† 1989-95	11- 1-95 380 2-28-96 4,120 4-25-96 2,260 6-21-96 1,800 8-16-96 593	
03105810 Connoquenessing Creek	Beaver River	Lat 40°48'21", long 79°57'55", Butler County, at bridge on SR 3006 at Renfrew and 0.8 mi upstream from Thorn Creek.	137	1989-95	11- 2-95 109 4- 9-96 143 5-20-96 167 9- 9-96 61.0	
LAKE ERIE BASIN						
04212945 Conneaut Creek	Lake Erie	Lat 41°55'04", long 80°28'09", Erie County, at bridge on Griffey Road and 1.2 mi north- west of Cherry Hill and 1.9 mi south of West Springfield.	149	1989-95	11- 7-95 151 2-26-96 214 4-24-96 4,710 6-17-96 55.2 8-13-96 25.6	
04213273 Twelvemile Creek	Lake Erie	Lat 42°12'15", long 79°54'16", Erie County, at bridge on Malbert Place at Mooreheadville and 0.5 mi upstream from mouth.	12.5	1989-95	11- 7-95 95.7 2-27-96 14.1 4-23-96 612 6-18-96 815 8-12-96 2.1	

† Operated as a continuous record station.

GROUND-WATER LEVELS

ALLEGHENY COUNTY

403734080063001. Local number, AG 700.

LOCATION.--Lat 40°37'34", long 80°06'30", Hydrologic Unit 05030101, at State Game Land Number 203, Bradford Woods.
 Owner: U.S. Geological Survey.

AQUIFER.--Sandstone and shale of Glenshaw Formation of Late Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in, depth 100 ft, cased to 24 ft, open hole.

INSTRUMENTATION.--Satellite telemeter.

DATUM.--Elevation of land-surface datum is 1,035 ft above sea level, from topographic map. Measuring point: Top of casing, 3.45 ft above land-surface datum.

REMARKS.--In addition to the daily maximum water level table shown below, daily minimum and mean water levels, since October 1987, are available from the District Office.

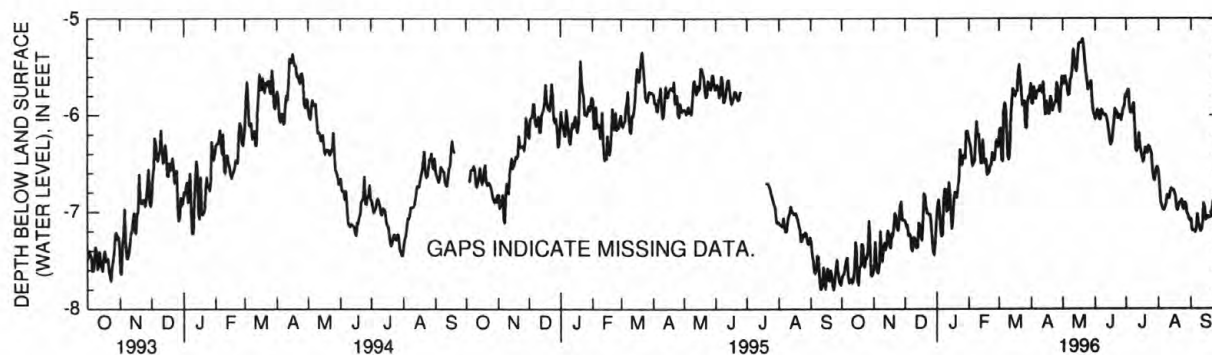
PERIOD OF RECORD.--November 1967 to current year.

EXTREMES FOR PERIOD OF RECORD.--The extremes shown are extremes of the daily maximum depth below land surface for the period of record indicated above. Highest water level, 4.84 ft below land-surface datum, Jan. 20, 1991; lowest, 8.94 ft below land-surface datum, Nov. 14, 1968.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
 MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.67	7.58	7.10	6.94	6.27	6.16	5.87	5.62	6.04	5.81	6.59	7.07
2	7.65	7.31	7.15	6.87	6.31	6.13	5.88	5.67	6.00	5.75	6.77	7.19
3	7.63	7.52	7.13	6.97	6.42	6.45	5.70	5.59	5.94	5.73	6.89	7.19
4	7.56	7.62	7.24	7.17	6.52	6.47	5.78	5.65	5.95	5.91	6.94	7.19
5	7.49	7.63	7.22	7.25	6.49	5.97	5.83	5.69	6.04	5.97	6.97	7.21
6	7.47	7.54	7.25	7.24	6.47	5.87	5.75	5.79	6.04	5.97	6.98	7.17
7	7.66	7.20	7.38	6.87	6.26	5.92	5.74	5.78	5.94	5.93	6.95	7.02
8	7.73	7.48	7.40	6.76	6.06	6.15	5.75	5.63	5.97	5.87	6.92	7.12
9	7.71	7.51	7.26	6.77	6.21	6.42	5.69	5.60	5.99	6.10	6.82	7.15
10	7.69	7.36	7.26	6.99	6.19	6.45	5.73	5.50	6.00	6.35	6.85	7.20
11	7.73	7.32	7.35	6.98	6.35	6.32	5.76	5.31	5.99	6.37	6.86	7.19
12	7.69	7.39	7.37	6.69	6.49	6.01	5.65	5.42	6.02	6.33	6.79	7.11
13	7.59	7.32	7.36	6.78	6.49	5.84	5.81	5.50	6.08	6.18	6.75	6.91
14	7.31	7.19	7.11	7.02	6.25	5.72	5.99	5.54	6.15	6.31	6.78	6.95
15	7.43	7.23	7.13	7.17	6.45	5.77	5.85	5.41	6.25	6.37	6.77	7.08
16	7.70	7.35	7.25	7.02	6.49	5.80	5.90	5.26	6.30	6.43	6.80	7.07
17	7.75	7.37	7.29	6.86	6.45	5.75	5.98	5.24	6.27	6.48	6.83	7.04
18	7.57	7.22	7.09	6.79	6.61	5.75	5.98	5.24	6.17	6.43	6.96	7.06
19	7.56	7.25	6.81	6.82	6.60	5.57	5.80	5.24	6.07	6.33	6.98	7.05
20	7.33	7.13	6.83	6.85	6.59	5.47	5.85	5.20	5.93	6.38	6.94	7.05
21	7.34	7.01	6.94	6.72	6.51	5.61	5.95	5.31	5.95	6.39	6.90	6.97
22	7.54	7.05	7.01	6.67	6.51	5.74	5.90	5.43	5.97	6.31	6.90	6.89
23	7.57	7.16	7.01	6.35	6.38	5.89	5.87	5.55	6.03	6.32	6.87	7.00
24	7.46	7.19	7.03	6.46	6.43	5.89	5.87	5.63	5.99	6.36	6.96	6.99
25	7.48	7.09	7.02	6.51	6.46	5.85	5.66	5.73	6.02	6.39	6.97	7.11
26	7.37	6.94	7.15	6.41	6.37	6.12	5.71	5.67	6.05	6.56	6.90	7.09
27	7.09	6.89	7.30	6.41	6.25	6.13	5.89	5.69	5.99	6.65	6.92	7.00
28	7.34	7.08	7.41	6.44	6.31	5.87	5.96	5.64	5.93	6.67	7.01	6.93
29	7.65	7.08	7.44	6.17	6.32	5.80	5.75	5.84	5.91	6.59	7.03	7.00
30	7.66	7.08	7.30	6.16	---	5.81	5.59	5.96	5.78	6.53	7.07	7.03
31	7.62	---	7.07	6.21	---	5.67	---	5.99	---	6.54	7.09	---
MEAN	7.55	7.27	7.18	6.75	6.40	5.95	5.81	5.56	6.03	6.27	6.90	7.07
MAX	7.75	7.63	7.44	7.25	6.61	6.47	5.99	5.99	6.30	6.67	7.09	7.21
MIN	7.09	6.89	6.81	6.16	6.06	5.47	5.59	5.20	5.78	5.73	6.59	6.89

WTR YR 1996 MEAN 6.56 HIGH 5.20 MAY 20 LOW 7.75 OCT 17



3-YEAR HYDROGRAPH
 OCTOBER 1, 1993 TO SEPTEMBER 30, 1996

BEAVER COUNTY

403006080252301. Local number, BV 156.

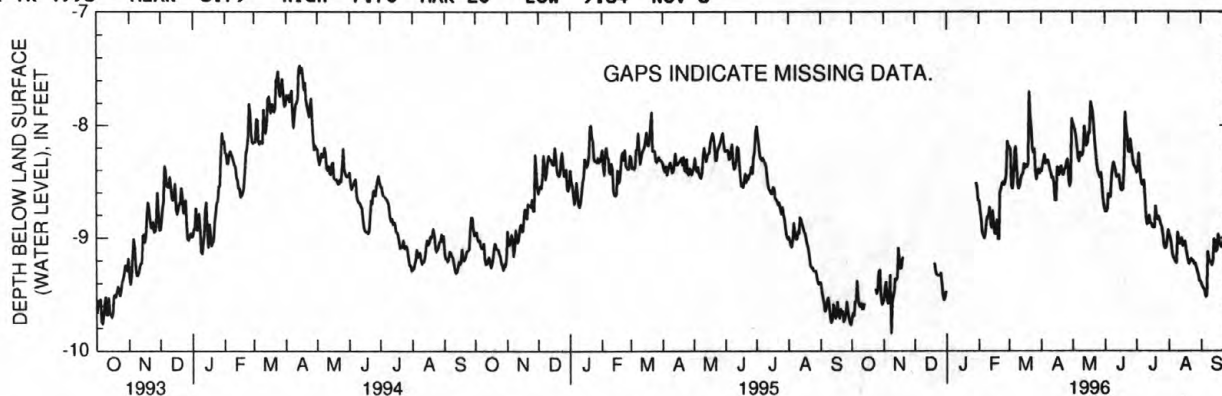
LOCATION.--Lat 40°30'06", long 80°25'23", Hydrologic Unit 05030101, at Raccoon State Park.

Owner: U.S. Geological Survey.

AQUIFER.--Shale of Glenshaw Formation of Late Pennsylvanian age.**WELL CHARACTERISTICS.**--Drilled observation artesian well, diameter 6 in, depth 101 ft, cased to 25 ft, open hole.**INSTRUMENTATION.**--Digital water-level recorder with 60-minute recording interval.**DATUM.**--Elevation of land-surface datum is 930 ft above sea level, from topographic map. Measuring point: Top of casing, 2.00 ft above land-surface datum.**REMARKS.**--Missing record Oct. 14-23, Nov. 21 to Dec. 19, and Jan. 1-28. In addition to the daily maximum water level table shown below, daily minimum and mean water levels, since October 1991, are available from the District Office.**PERIOD OF RECORD.**--November 1967 to current year.**EXTREMES FOR PERIOD OF RECORD.**--The extremes shown are extremes of the daily maximum depth below land surface for the period of record indicated above. Highest water level, 7.47 ft below land-surface datum, Apr. 14, 1994: lowest, 13.72 ft below land-surface datum, June 5, 1968.DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.71	9.54	---	---	8.67	8.19	8.41	7.98	8.77	8.42	8.96	9.41
2	9.67	9.43	---	---	8.76	8.21	8.36	8.02	8.77	8.41	9.00	9.43
3	9.69	9.39	---	---	8.85	8.53	8.31	8.04	8.75	8.25	9.05	9.45
4	9.56	9.55	---	---	8.96	8.56	8.26	8.10	8.61	8.38	9.14	9.46
5	9.56	9.58	---	---	8.97	8.47	8.34	8.18	8.63	8.48	9.17	9.52
6	9.38	9.52	---	---	9.00	8.25	8.33	8.29	8.64	8.52	9.19	9.51
7	9.53	9.33	---	---	8.96	8.19	8.31	8.32	8.47	8.53	9.21	9.12
8	9.60	9.84	---	---	8.85	8.34	8.34	8.24	8.37	8.49	9.22	9.18
9	9.61	9.57	---	---	8.81	8.52	8.39	8.27	8.33	8.63	8.95	9.21
10	9.58	9.52	---	---	8.81	8.56	8.42	8.27	8.37	8.82	9.00	9.22
11	9.63	9.47	---	---	8.73	8.54	8.47	8.23	8.42	8.88	9.05	9.24
12	9.63	9.36	---	---	8.88	8.47	8.46	8.01	8.46	8.87	9.01	9.19
13	9.58	9.37	---	---	8.91	8.44	8.52	8.10	8.44	8.80	9.00	9.01
14	---	9.35	---	---	8.76	8.43	8.67	8.18	8.44	8.87	9.07	9.02
15	---	9.09	---	---	8.89	8.34	8.67	8.16	8.51	8.87	9.06	9.12
16	---	9.19	---	---	8.96	8.38	8.37	8.06	8.57	8.90	9.03	9.10
17	---	9.27	---	---	8.96	8.35	8.44	8.07	8.58	8.91	9.09	8.97
18	---	9.26	---	---	8.84	8.37	8.44	7.79	8.57	8.91	9.15	9.03
19	---	9.18	---	---	9.01	8.34	8.37	7.84	8.36	8.72	9.20	9.06
20	---	9.17	9.22	---	9.01	7.70	8.36	7.88	7.88	8.81	9.23	9.08
21	---	---	9.29	---	8.60	7.92	8.44	8.00	8.02	8.84	9.21	9.07
22	---	---	9.32	---	8.56	8.02	8.44	8.14	8.09	8.81	9.18	8.99
23	---	---	9.33	---	8.52	8.19	8.39	8.25	8.23	8.84	9.20	9.01
24	9.45	---	9.33	---	8.50	8.24	8.38	8.35	8.24	8.88	9.20	9.02
25	9.49	---	9.33	---	8.53	8.21	8.33	8.41	8.12	8.90	9.23	9.14
26	9.46	---	9.31	---	8.50	8.40	8.30	8.43	8.21	8.97	9.22	9.14
27	9.30	---	9.40	---	8.44	8.48	8.47	8.46	8.28	9.06	9.26	9.11
28	9.28	---	9.50	---	8.14	8.42	8.54	8.42	8.34	9.09	9.29	8.94
29	9.50	---	9.55	8.51	8.19	8.39	8.50	8.53	8.37	9.08	9.32	8.81
30	9.59	---	9.53	8.55	---	8.43	7.94	8.66	8.37	9.02	9.38	8.90
31	9.57	---	9.47	8.67	---	8.39	---	8.72	---	8.93	9.38	---
MEAN	9.54	9.40	9.38	8.58	8.74	8.33	8.40	8.21	8.41	8.77	9.15	9.15
MAX	9.71	9.84	9.55	8.67	9.01	8.56	8.67	8.72	8.77	9.09	9.38	9.52
MIN	9.28	9.09	9.22	8.51	8.14	7.70	7.94	7.79	7.88	8.25	8.95	8.81

WTR YR 1996 MEAN 8.79 HIGH 7.70 MAR 20 LOW 9.84 NOV 8

3-YEAR HYDROGRAPH
OCTOBER 1, 1993 TO SEPTEMBER 30, 1996

BUTLER COUNTY

410501079524401. Local number, BT 311.

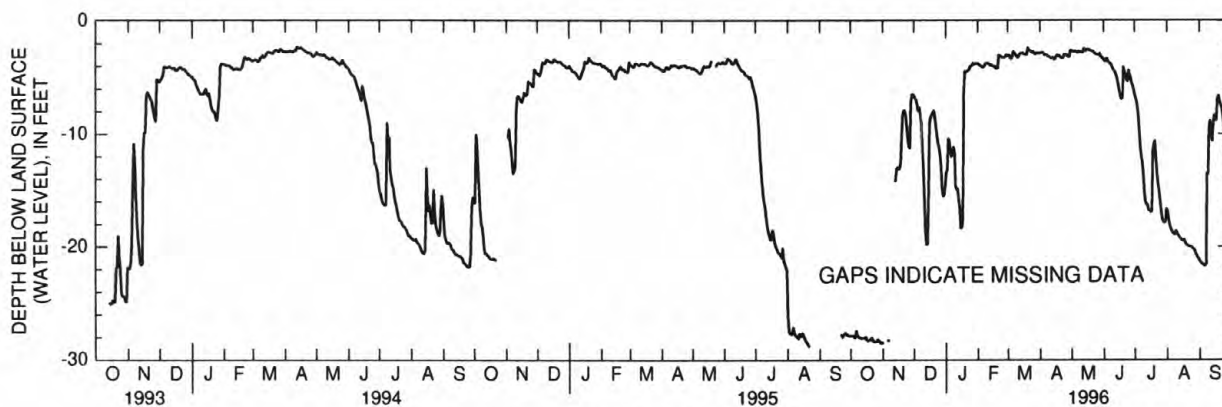
LOCATION.--Lat 41°05'01", long 79°52'44", Hydrologic Unit 05030105, at State Game Land Number 95.

Owner: U.S. Geological Survey.

AQUIFER.--Kittanning Formation of Middle Pennsylvanian age.**WELL CHARACTERISTICS.**--Drilled observation artesian well, diameter 6 in, depth 89 ft, cased to 12 ft, open hole.**INSTRUMENTATION.**--Continuous strip-chart recorder.**DATUM.**--Elevation of land-surface datum is 1,465 ft above sea level, from topographic map. Measuring point: Top of casing, 2.30 ft above land-surface datum.**REMARKS.**--Missing record Nov. 2-4, and 8-12, due to instrumentation malfunction.**PERIOD OF RECORD.**--November 1970 to current year.**EXTREMES FOR PERIOD OF RECORD.**--Highest water level, 2.31 ft below land-surface datum, Apr. 12, 1994; lowest, 31.06 ft below land-surface datum, Oct. 16, 17, 18, 1983.DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27.84	28.40	6.60	13.42	3.76	3.05	2.87	2.66	3.43	6.64	16.78	21.28
2	27.84	---	6.82	13.10	3.84	3.00	2.79	2.69	3.54	6.90	17.46	21.41
3	27.85	---	6.91	10.40	3.91	3.30	2.78	2.69	3.54	7.42	18.02	21.50
4	28.00	---	7.38	10.52	3.97	3.33	2.85	2.69	3.30	8.21	18.37	21.56
5	28.00	28.25	7.93	11.58	4.04	3.18	3.01	2.68	3.58	9.73	18.56	21.70
6	27.40	28.29	7.61	12.01	4.08	2.70	2.97	2.79	3.65	11.15	18.76	21.71
7	27.80	28.20	8.15	11.72	4.00	2.81	3.01	2.79	3.73	11.92	18.87	21.55
8	27.97	---	9.05	11.15	3.77	2.94	3.11	2.69	3.82	12.62	18.94	21.50
9	28.00	---	11.10	11.70	3.73	3.12	3.15	2.74	4.06	13.71	18.59	13.53
10	28.02	---	13.30	14.60	3.73	3.22	3.18	2.74	4.30	15.33	18.74	9.50
11	28.08	---	16.05	14.92	3.73	3.17	3.26	2.77	4.41	16.05	18.97	8.80
12	28.08	---	18.60	14.85	3.86	2.93	3.28	2.77	4.53	16.30	19.07	9.95
13	28.08	14.23	19.77	15.72	3.90	2.88	3.21	2.44	4.85	16.31	19.22	10.62
14	28.08	13.11	19.77	16.55	3.84	2.86	3.38	2.61	5.17	16.77	19.32	9.10
15	27.95	12.95	15.01	18.32	3.96	2.82	3.36	2.67	5.69	16.77	19.47	8.35
16	28.22	13.09	9.12	18.30	3.97	2.94	3.19	2.51	6.25	16.92	19.47	8.74
17	28.30	13.09	8.42	17.50	3.97	2.93	3.01	2.56	6.73	16.91	19.37	8.79
18	28.24	12.58	8.41	6.40	4.18	2.97	3.06	2.55	6.90	11.51	19.64	7.00
19	28.27	10.48	8.14	4.45	4.18	2.97	3.06	2.63	6.78	10.90	19.80	6.57
20	28.15	8.37	7.90	4.55	4.18	2.38	3.13	2.66	4.06	10.62	19.91	6.99
21	28.04	7.93	8.40	4.42	3.02	2.57	3.26	2.67	4.42	12.30	19.93	7.40
22	28.30	7.90	9.22	4.39	3.09	2.62	3.26	2.72	4.79	13.56	20.01	7.52
23	28.37	8.35	9.95	4.32	3.10	2.73	3.26	2.83	5.25	14.38	20.01	8.26
24	28.35	9.40	10.88	4.05	3.20	2.77	2.96	2.91	5.33	15.12	20.04	8.98
25	28.39	10.45	11.08	3.96	3.21	2.70	2.96	2.99	4.36	15.93	20.12	11.45
26	28.35	11.12	11.80	3.95	3.22	2.87	2.96	2.99	4.79	16.87	20.21	13.00
27	28.18	11.25	12.84	3.72	3.22	2.94	3.10	2.99	5.06	17.53	20.34	13.72
28	28.30	7.25	14.71	3.85	2.98	2.86	3.18	2.87	5.49	17.81	20.56	9.90
29	28.48	6.48	15.50	3.80	3.08	2.85	3.16	3.10	5.75	17.86	20.81	5.30
30	28.52	6.48	15.45	3.74	---	2.88	2.59	3.24	6.12	17.85	20.99	4.98
31	28.51	---	14.60	3.74	---	2.84	---	3.24	---	16.65	21.11	---
MEAN	28.13	13.53	11.31	9.54	3.68	2.91	3.08	2.77	4.79	13.82	19.40	12.09
MAX	28.52	28.40	19.77	18.32	4.18	3.33	3.38	3.24	6.90	17.86	21.11	21.71
MIN	27.40	6.48	6.60	3.72	2.98	2.38	2.59	2.44	3.30	6.64	16.78	4.98

WTR YR 1996 MEAN 10.41 HIGH 2.38 MAR 20 LOW 28.52 OCT 30



CRAWFORD COUNTY

413542080245002. Local number, CW 413.

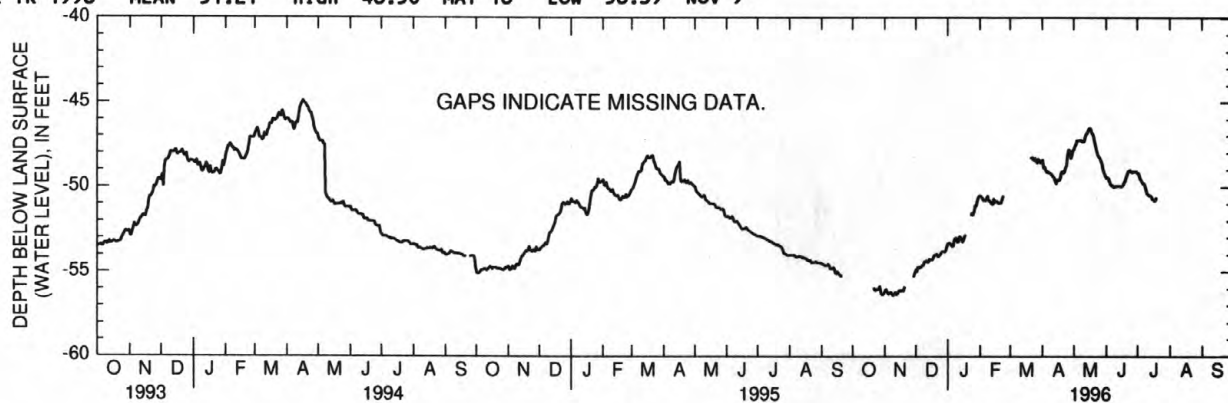
LOCATION.--Lat 41°35'42", long 80°24'50", Hydrologic Unit 05030102, at State Game Land Number 214 near Hartstown.

Owner: U.S. Geological Survey.

AQUIFER.--Sandstone of Cussewago Formation of Early Mississippian age.**WELL CHARACTERISTICS.**--Drilled observation artesian well, diameter 6 in, depth 100 ft, cased to 19 ft, open hole.**INSTRUMENTATION.**--Continuous strip-chart recorder.**DATUM.**--Elevation of land-surface datum is 1,110 ft above sea level, from topographic map. Measuring point: Top of casing, 2.70 ft above land-surface datum.**REMARKS.**--Missing record Oct. 1-20, Nov. 21-27, Jan. 19-22, Feb. 24 to Mar. 19 and July 20 to Sept. 30. Since the June 9, 1981 well pumping and clean out, the monthly mean water levels have generally been from 12 to 24 feet lower. Water levels were also affected by intermittent pumping.**PERIOD OF RECORD.**--July 1967 to current year. Prior to June 1981, water-level data stored with well identification number 413542080245001.**EXTREMES FOR PERIOD OF RECORD.**--Highest water level, 20.02 ft below land-surface datum, Feb. 23, 1975; lowest, 56.39 ft below land-surface datum, Nov. 9, 1995.DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	56.16	54.87	53.33	50.51	---	48.40	47.78	49.48	49.19		
2	---	56.02	54.97	53.31	50.56	---	48.85	47.60	49.43	49.18		
3	---	56.17	54.71	53.31	50.65	---	48.80	47.48	49.47	49.40		
4	---	56.29	54.76	53.40	50.78	---	49.00	47.25	49.62	49.58		
5	---	56.29	54.72	53.49	50.77	---	49.11	47.26	49.83	49.67		
6	---	56.21	54.73	53.49	50.81	---	49.08	47.25	49.91	49.77		
7	---	56.21	54.63	53.11	50.70	---	49.16	47.25	49.90	49.78		
8	---	56.36	54.63	53.01	50.53	---	49.18	47.22	49.99	49.89		
9	---	56.39	54.42	53.00	50.81	---	49.20	47.33	49.98	50.13		
10	---	56.29	54.41	53.24	50.81	---	49.30	47.33	49.96	50.37		
11	---	56.22	54.36	53.23	50.90	---	49.36	47.31	49.93	50.40		
12	---	56.34	54.43	52.91	50.99	---	49.42	47.00	49.94	50.50		
13	---	56.30	54.43	52.96	51.02	---	49.64	46.86	49.94	50.48		
14	---	56.17	54.25	53.04	50.70	---	49.80	46.81	49.94	50.53		
15	---	56.10	54.29	53.22	50.89	---	49.60	46.61	49.97	50.68		
16	---	56.12	54.28	53.11	50.83	---	49.58	46.50	49.95	50.73		
17	---	56.12	54.29	52.88	50.82	---	49.61	46.53	49.89	50.80		
18	---	56.10	54.10	52.81	50.95	---	49.50	46.80	49.76	50.78		
19	---	56.13	54.02	---	50.94	---	49.14	46.83	49.65	50.60		
20	---	55.87	54.00	---	50.95	48.28	49.08	47.00	49.42	---		
21	55.94	---	53.95	---	50.93	48.29	49.18	47.35	49.31	---		
22	56.08	---	54.09	---	50.74	48.25	49.11	47.62	49.10	---		
23	56.09	---	54.09	51.68	50.50	48.39	48.86	47.87	49.05	---		
24	56.01	---	54.00	51.52	---	48.40	48.73	48.11	49.00	---		
25	56.05	---	53.90	51.62	---	48.30	48.16	48.22	49.08	---		
26	56.00	---	53.81	51.43	---	48.52	47.79	48.30	49.15	---		
27	55.86	---	53.78	51.08	---	48.57	47.83	48.45	49.12	---		
28	56.26	55.29	53.82	51.13	---	48.35	48.30	48.60	49.07	---		
29	56.34	55.23	53.81	50.87	---	48.45	48.17	48.95	49.10	---		
30	56.34	55.03	53.71	50.63	---	48.58	47.82	49.18	49.08	---		
31	56.24	---	53.45	50.51	---	48.53	---	49.27	---	---		
MEAN	56.11	56.06	54.25	52.49	50.79	48.41	48.96	47.55	49.57	50.13		
MAX	56.34	56.39	54.97	53.49	51.02	48.58	49.80	49.27	49.99	50.80		
MIN	55.86	55.03	53.45	50.51	50.50	48.25	47.79	46.50	49.00	49.18		

WTR YR 1996 MEAN 51.21 HIGH 46.50 MAY 16 LOW 56.39 NOV 9

3-YEAR HYDROGRAPH
OCTOBER 1, 1993 TO SEPTEMBER 30, 1996

ELK COUNTY

412458078324601. Local number, EK 108.

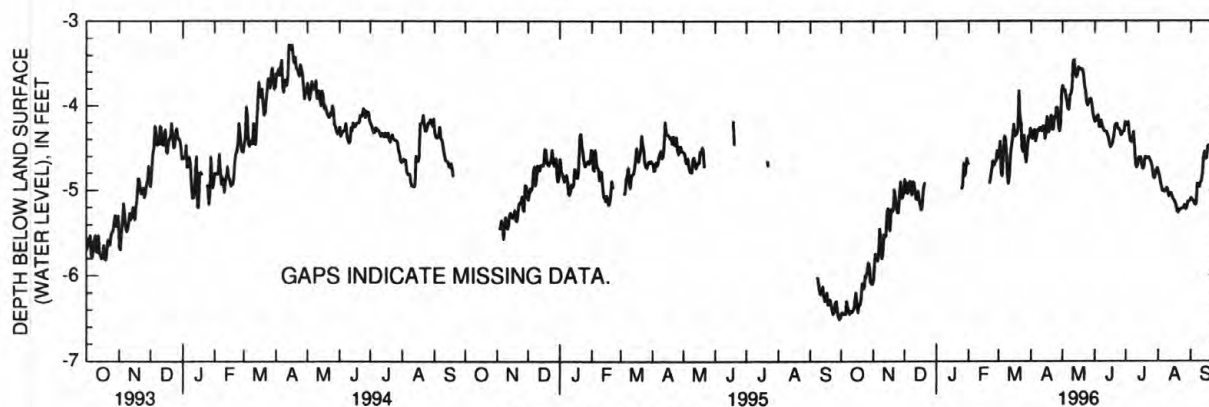
LOCATION.--Lat 41°24'58", long 78°32'46", Hydrologic Unit 05010005, at St. Marys.

Owner: St. Marys Municipal Joint Water Authority.

AQUIFER.--Pottsville Group of Middle Pennsylvanian age.**WELL CHARACTERISTICS.**--Drilled artesian well, diameter 12 in, depth 340 ft, cased to 40 ft, open hole.**INSTRUMENTATION.**--Continuous strip-chart recorder.**DATUM.**--Elevation of land-surface datum is 1,740 ft above sea level, from topographic map. Measuring point: Top of casing, 2.30 ft above land-surface datum.**REMARKS.**--Missing record Dec. 22 to Jan. 24, and Feb. 2-20.**PERIOD OF RECORD.**--October 1974 to current year.**EXTREMES FOR PERIOD OF RECORD.**--Highest water level, 1.95 ft below land-surface datum, Mar. 4, 1991; lowest, 6.62 ft below land-surface datum, Oct. 7, 8, 1980.DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.44	6.06	4.87	---	4.70	4.57	4.32	3.76	4.19	4.23	4.79	5.09
2	6.43	5.85	5.02	---	---	4.42	4.39	3.82	4.17	4.22	4.84	5.10
3	6.45	5.75	4.91	---	---	4.80	4.31	3.81	4.12	4.19	4.91	5.12
4	6.45	5.81	5.03	---	---	4.83	4.28	3.87	4.11	4.34	4.97	5.14
5	6.45	5.83	5.00	---	---	4.60	4.42	3.94	4.25	4.42	5.01	5.17
6	6.30	5.75	4.89	---	---	4.36	4.36	4.03	4.25	4.43	5.01	5.16
7	6.36	5.45	4.97	---	---	4.37	4.28	4.04	4.17	4.40	5.02	4.92
8	6.42	5.61	5.05	---	---	4.53	4.30	3.87	4.24	4.31	4.99	4.95
9	6.45	5.80	4.90	---	---	4.82	4.26	3.86	4.27	4.48	4.97	4.96
10	6.41	5.75	4.91	---	---	4.92	4.26	3.77	4.30	4.69	5.01	4.91
11	6.43	5.52	5.00	---	---	4.81	4.30	3.47	4.30	4.73	5.07	4.90
12	6.41	5.55	5.10	---	---	4.57	4.24	3.45	4.30	4.70	5.03	4.80
13	6.39	5.53	5.10	---	---	4.46	4.24	3.61	4.34	4.61	5.03	4.61
14	6.30	5.25	5.01	---	---	4.37	4.39	3.66	4.37	4.61	5.07	4.54
15	6.20	5.21	5.11	---	---	4.22	4.32	3.63	4.45	4.61	5.10	4.63
16	6.34	5.41	5.17	---	---	4.36	4.13	3.54	4.49	4.70	5.12	4.62
17	6.43	5.47	5.23	---	---	4.35	4.30	3.55	4.47	4.75	5.14	4.48
18	6.33	5.22	5.18	---	---	4.33	4.31	3.56	4.44	4.73	5.19	4.47
19	6.34	5.25	5.00	---	---	4.28	4.18	3.57	4.36	4.60	5.25	4.47
20	6.27	5.23	4.92	---	---	3.82	4.11	3.56	4.25	4.61	5.26	4.47
21	6.09	4.99	4.91	---	4.92	4.13	4.28	3.63	4.22	4.62	5.23	4.46
22	6.12	5.08	---	---	4.83	4.21	4.28	3.76	4.21	4.61	5.22	4.31
23	6.15	5.19	---	---	4.76	4.50	4.13	3.84	4.27	4.61	5.21	4.50
24	6.00	5.26	---	---	4.65	4.54	4.15	3.96	4.27	4.65	5.21	4.49
25	6.01	5.26	---	4.99	4.71	4.35	4.02	3.99	4.29	4.67	5.21	4.85
26	5.95	5.06	---	4.94	4.67	4.57	4.02	3.95	4.35	4.74	5.17	4.97
27	5.85	4.90	---	4.68	4.66	4.67	4.24	3.92	4.33	4.84	5.22	5.00
28	5.90	5.09	---	4.83	4.53	4.54	4.30	3.91	4.30	4.86	5.20	4.97
29	6.07	5.08	---	4.79	4.62	4.36	4.22	3.98	4.30	4.82	5.13	5.05
30	6.10	5.02	---	4.62	---	4.39	3.81	4.09	4.19	4.75	5.13	5.16
31	6.10	---	---	4.68	---	4.27	---	4.15	---	4.74	5.12	---
MEAN	6.26	5.41	5.01	4.79	4.71	4.46	4.24	3.79	4.29	4.59	5.09	4.81
MAX	6.45	6.06	5.23	4.99	4.92	4.92	4.42	4.15	4.49	4.86	5.26	5.17
MIN	5.85	4.90	4.87	4.62	4.53	3.82	3.81	3.45	4.11	4.19	4.79	4.31

WTR YR 1996 MEAN 4.79 HIGH 3.45 MAY 12 LOW 6.45 OCT 3,4,5,9



ERIE COUNTY

415607080044601. Local number, ER 82.

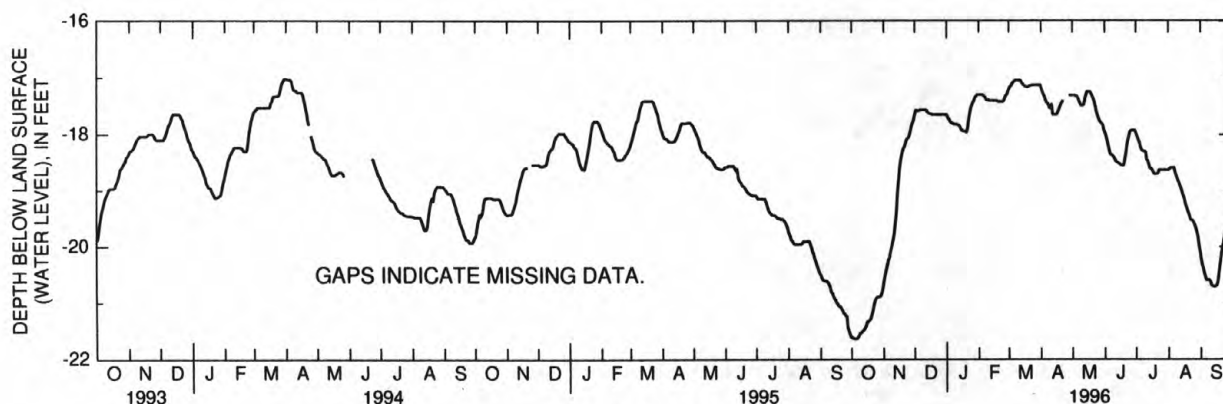
LOCATION.--Lat 41°56'07", long 80°04'46", Hydrologic Unit 05010004, near McLane.

Owner: U.S. Geological Survey.

AQUIFER.--Shale of Riceville Formation of Late Devonian age.**WELL CHARACTERISTICS.**--Drilled observation artesian well, diameter 6 in, depth 82 ft, cased to 56 ft, open hole.**INSTRUMENTATION.**--Continuous strip-chart recorder.**DATUM.**--Elevation of land-surface datum is 1,419 ft above sea level, from topographic map. Measuring point: Top of plywood cover, 3.50 ft above land-surface datum.**REMARKS.**--Missing record Apr. 22-27, due to instrumentation malfunction.**PERIOD OF RECORD.**--July 1966 to current year.**EXTREMES FOR PERIOD OF RECORD.**--Highest water level, 10.00 ft below land-surface datum, Mar. 17, 1973; lowest, 23.51 ft below land-surface datum, Oct. 4, 5, 1991.DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.61	20.60	17.63	17.66	17.30	17.19	17.19	17.31	17.96	17.99	18.63	20.20
2	21.62	20.51	17.57	17.72	17.30	17.15	17.24	17.31	18.01	18.03	18.61	20.30
3	21.63	20.42	17.58	17.72	17.30	17.14	17.29	17.31	18.10	18.10	18.60	20.37
4	21.63	20.34	17.58	17.78	17.30	17.09	17.32	17.32	18.17	18.13	18.59	20.46
5	21.63	20.25	17.58	17.79	17.31	17.08	17.39	17.32	18.25	18.22	18.59	20.52
6	21.63	20.20	17.56	17.80	17.33	17.06	17.43	17.35	18.34	18.27	18.59	20.59
7	21.61	20.12	17.57	17.81	17.35	17.04	17.45	17.40	18.36	18.29	18.66	20.59
8	21.57	20.03	17.56	17.82	17.39	17.04	17.48	17.44	18.37	18.30	18.72	20.59
9	21.53	19.95	17.56	17.82	17.39	17.04	17.53	17.49	18.39	18.30	18.77	20.59
10	21.53	19.87	17.56	17.82	17.39	17.04	17.54	17.49	18.41	18.31	18.82	20.62
11	21.50	19.76	17.56	17.83	17.40	17.04	17.47	17.49	18.47	18.45	18.86	20.69
12	21.49	19.59	17.56	17.83	17.40	17.05	17.65	17.47	18.48	18.47	18.92	20.70
13	21.47	19.36	17.60	17.85	17.40	17.09	17.65	17.36	18.50	18.53	18.97	20.70
14	21.43	19.07	17.62	17.88	17.40	17.11	17.65	17.30	18.51	18.60	19.04	20.71
15	21.39	18.84	17.63	17.92	17.40	17.13	17.65	17.24	18.52	18.61	19.09	20.70
16	21.33	18.62	17.63	17.93	17.40	17.15	17.65	17.24	18.54	18.62	19.15	20.69
17	21.33	18.49	17.64	17.94	17.40	17.15	17.59	17.24	18.55	18.67	19.23	20.62
18	21.30	18.38	17.65	17.94	17.40	17.16	17.56	17.25	18.55	18.70	19.29	20.50
19	21.29	18.30	17.65	17.95	17.42	17.16	17.50	17.29	18.55	18.70	19.35	20.34
20	21.23	18.24	17.65	17.96	17.42	17.15	17.46	17.33	18.45	18.70	19.40	20.20
21	21.14	18.22	17.65	17.88	17.42	17.14	17.43	17.37	18.35	18.70	19.45	20.07
22	21.06	18.15	17.65	17.73	17.42	17.14	17.40	17.43	18.22	18.68	19.52	19.97
23	20.99	18.09	17.65	17.62	17.42	17.13	---	17.52	18.10	18.63	19.52	19.86
24	20.93	18.07	17.65	17.53	17.42	17.13	---	17.60	18.03	18.63	19.53	19.73
25	20.90	18.05	17.65	17.48	17.40	17.13	---	17.67	17.95	18.63	19.56	19.66
26	20.89	17.98	17.65	17.43	17.34	17.13	---	17.71	17.93	18.63	19.61	19.60
27	20.89	17.91	17.65	17.40	17.30	17.13	---	17.76	17.93	18.63	19.66	19.56
28	20.89	17.83	17.65	17.35	17.29	17.13	17.31	17.79	17.92	18.63	19.73	19.52
29	20.87	17.79	17.65	17.33	17.22	17.13	17.31	17.81	17.92	18.63	19.82	19.41
30	20.81	17.73	17.65	17.30	---	17.13	17.31	17.83	17.93	18.63	19.95	19.30
31	20.72	---	17.65	17.30	---	17.13	---	17.91	---	18.63	20.07	---
MEAN	21.29	19.03	17.62	17.71	17.37	17.11	17.46	17.46	18.26	18.49	19.17	20.25
MAX	21.63	20.60	17.65	17.96	17.42	17.19	17.65	17.91	18.55	18.70	20.07	20.71
MIN	20.72	17.73	17.56	17.30	17.22	17.04	17.19	17.24	17.92	17.99	18.59	19.30

WTR YR 1996 MEAN 18.45 HIGH 17.04 MAR 7-11 LOW 21.63 OCT 3-6

3-YEAR HYDROGRAPH
OCTOBER 1, 1993 TO SEPTEMBER 30, 1996

FAYETTE COUNTY

394843079351401. Local number, FA 17.

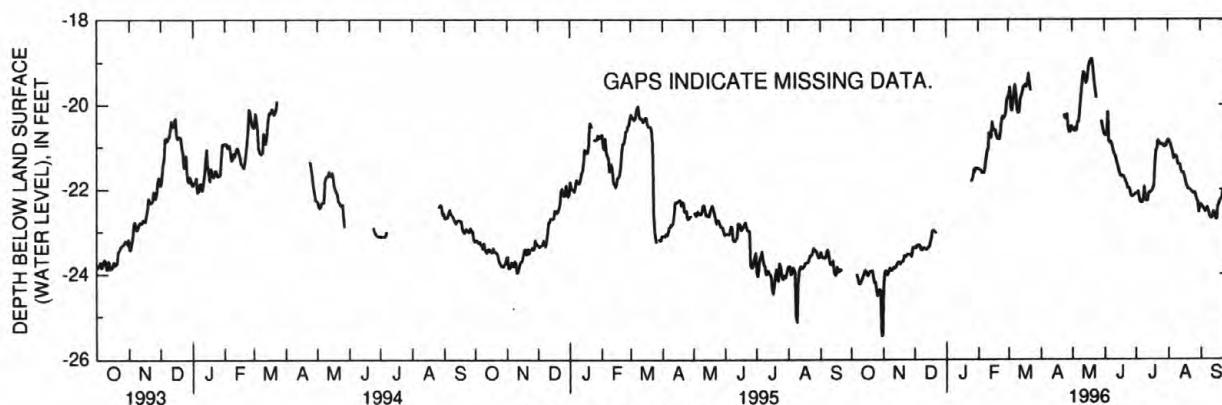
LOCATION.--Lat 39°48'43", long 79°35'14", Hydrologic unit 05020006, at Fort Necessity National Battlefield.

Owner: U.S. Geological Survey.

AQUIFER.--Shale and sandstone of Glenshaw Formation of Late Pennsylvanian age.**WELL CHARACTERISTICS.**--Drilled observation artesian well, diameter 6 in, depth 100 ft, cased to 19 ft, open hole.**INSTRUMENTATION.**--Continuous strip-chart recorder.**DATUM.**--Elevation of land-surface datum is 1,910 ft above sea level, from topographic map. Measuring point: Top of plywood cover 2.05 ft above land-surface datum.**REMARKS.**--Missing record Oct. 1-5, Dec. 23 to Jan. 23, Mar. 23 to Apr. 22, and May 25-28. Water levels affected by intermittent pumping.**PERIOD OF RECORD.**--November 1967 to current year.**EXTREMES FOR PERIOD OF RECORD.**--Highest water level, 18.56 ft below land-surface datum, Apr. 1, 1992; lowest, 40.00 ft below land-surface datum, Nov. 8, 1967.DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	24.30	23.37	---	21.51	19.77	---	20.55	20.72	22.09	20.82	22.36
2	---	23.95	23.38	---	21.53	19.57	---	20.59	20.73	22.10	20.87	22.40
3	---	23.90	23.31	---	21.54	20.03	---	20.62	20.69	22.04	20.93	22.42
4	---	24.00	23.34	---	21.60	20.13	---	20.54	20.17	22.19	21.04	22.47
5	---	24.00	23.30	---	21.60	19.92	---	20.60	20.87	22.30	21.11	22.52
6	23.99	23.92	23.33	---	21.60	19.67	---	20.40	20.90	22.31	21.27	22.49
7	24.07	23.85	23.42	---	21.48	19.52	---	20.40	20.87	22.31	21.20	22.42
8	24.21	23.90	23.43	---	21.27	19.74	---	20.17	20.97	22.23	21.20	22.50
9	24.22	23.90	23.37	---	21.11	20.10	---	19.83	21.07	21.93	21.23	22.60
10	24.17	23.87	23.37	---	21.03	20.19	---	19.61	21.17	22.23	21.40	22.67
11	24.12	23.82	23.40	---	20.66	20.17	---	19.35	21.20	22.27	21.40	22.68
12	24.04	23.84	23.41	---	20.75	19.87	---	19.22	21.30	22.26	21.40	22.63
13	23.98	23.82	23.40	---	20.78	19.78	---	19.33	21.41	22.07	21.56	22.52
14	23.89	23.75	23.35	---	20.41	19.71	---	19.48	21.50	22.09	21.61	22.57
15	23.92	23.70	23.35	---	20.59	19.56	---	19.45	21.61	22.05	21.59	22.70
16	24.01	23.71	23.24	---	20.60	19.56	---	19.24	21.68	22.04	21.66	22.70
17	24.02	23.75	23.13	---	20.59	19.51	---	19.07	21.69	21.98	21.75	22.40
18	23.95	23.70	22.98	---	20.72	19.57	---	18.97	21.67	21.92	21.88	22.35
19	23.93	23.70	22.96	---	20.79	19.46	---	18.93	21.69	21.43	21.95	22.26
20	23.92	23.65	22.98	---	20.81	19.26	---	18.91	21.74	21.09	21.99	22.23
21	23.90	23.55	23.01	---	20.81	19.49	---	19.14	21.80	21.04	21.99	22.20
22	24.05	23.58	23.00	---	20.63	19.67	---	19.43	21.86	20.84	22.02	22.00
23	24.18	23.55	---	---	20.39	---	20.22	19.65	21.96	20.88	22.04	22.19
24	24.17	23.52	---	21.80	20.27	---	20.32	19.85	21.96	20.94	22.07	22.19
25	24.35	23.52	---	21.79	20.33	---	20.30	---	21.99	20.94	22.09	22.35
26	24.50	23.52	---	21.74	20.27	---	20.21	---	22.14	20.93	22.07	22.38
27	24.40	23.55	---	21.52	20.20	---	20.54	---	22.16	20.97	22.14	22.36
28	24.35	23.57	---	21.59	19.87	---	20.65	---	22.16	20.99	22.24	22.29
29	24.38	23.36	---	21.49	19.83	---	20.65	20.37	22.13	20.94	22.30	22.26
30	25.45	23.36	---	21.49	---	---	20.50	20.54	22.11	20.97	22.53	22.30
31	25.43	---	---	21.51	---	---	---	20.64	---	20.84	22.35	---
MEAN	24.22	23.74	23.27	21.62	20.81	19.74	20.42	19.81	21.46	21.65	21.67	22.41
MAX	25.45	24.30	23.43	21.80	21.60	20.19	20.65	20.64	22.16	22.31	22.53	22.70
MIN	23.89	23.36	22.96	21.49	19.83	19.26	20.21	18.91	20.17	20.84	20.82	22.00

WTR YR 1996 MEAN 21.84 HIGH 18.91 MAY 20 LOW 25.45 OCT 30

3-YEAR HYDROGRAPH
OCTOBER 1, 1993 TO SEPTEMBER 30, 1996

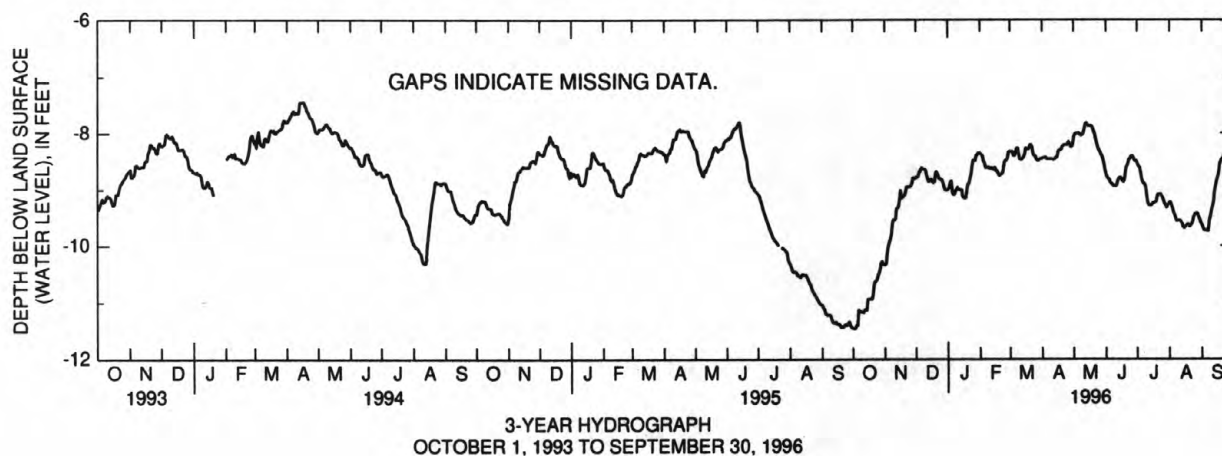
FOREST COUNTY

412823079030601. Local number, FO 11.

LOCATION.--Lat 41°28'23", long 79°03'06", Hydrologic Unit 05010005, in Allegheny National Forest.**Owner:** U.S. Geological Survey.**AQUIFER.**--Clarion Formation of Middle Pennsylvanian age.**WELL CHARACTERISTICS.**--Drilled observation artesian well, diameter 6 in, depth 110 ft, cased to 23 ft, open hole.**INSTRUMENTATION.**--Continuous strip-chart recorder.**DATUM.**--Elevation of land-surface datum is 1,780 ft above sea level, from topographic map. Measuring point: Top of casing, 1.40 ft above land-surface datum.**REMARKS.**--None.**PERIOD OF RECORD.**--August 1973 to current year.**EXTREMES FOR PERIOD OF RECORD.**--Highest water level, 7.44 ft below land-surface datum, Apr. 16-17, 1994; lowest, 12.07 ft below land-surface datum, Sept. 18, 19, 1982.DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11.46	10.34	8.78	9.00	8.36	8.32	8.44	8.06	8.73	8.55	9.23	9.63
2	11.46	10.32	8.78	8.97	8.38	8.32	8.44	8.02	8.79	8.59	9.23	9.68
3	11.46	10.13	8.78	8.87	8.40	8.33	8.44	8.01	8.81	8.60	9.28	9.72
4	11.40	10.00	8.68	8.85	8.50	8.40	8.43	8.00	8.82	8.68	9.35	9.73
5	11.40	9.95	8.68	9.05	8.52	8.40	8.46	8.00	8.87	8.80	9.42	9.73
6	11.14	9.89	8.62	9.09	8.61	8.35	8.46	8.00	8.90	8.87	9.45	9.74
7	11.15	9.80	8.62	9.09	8.61	8.26	8.46	8.03	8.91	8.90	9.53	9.74
8	11.17	9.60	8.64	9.03	8.61	8.26	8.46	8.04	8.94	8.91	9.56	9.56
9	11.17	9.54	8.64	9.00	8.60	8.36	8.46	8.03	8.94	8.96	9.55	9.49
10	11.17	9.54	8.65	8.96	8.63	8.46	8.46	8.01	8.94	9.12	9.55	9.38
11	11.18	9.53	8.72	9.00	8.62	8.47	8.47	7.94	8.94	9.24	9.55	9.31
12	11.13	9.34	8.80	9.00	8.62	8.47	8.47	7.84	8.87	9.28	9.58	9.23
13	11.13	9.33	8.86	9.00	8.64	8.45	8.46	7.82	8.82	9.28	9.60	9.05
14	11.14	9.31	8.86	9.00	8.64	8.42	8.43	7.85	8.79	9.29	9.67	8.93
15	10.94	9.18	8.82	9.13	8.61	8.36	8.43	7.87	8.79	9.28	9.69	8.84
16	10.94	9.02	8.83	9.15	8.66	8.26	8.33	7.87	8.83	9.24	9.67	8.78
17	10.94	9.15	8.87	9.15	8.67	8.28	8.30	7.87	8.86	9.24	9.65	8.71
18	10.94	9.14	8.88	9.15	8.71	8.28	8.30	7.88	8.87	9.23	9.62	8.55
19	10.94	9.12	8.86	9.03	8.75	8.28	8.29	7.90	8.78	9.22	9.62	8.50
20	10.91	9.10	8.69	8.91	8.75	8.20	8.24	7.97	8.62	9.12	9.66	8.46
21	10.70	9.03	8.69	8.90	8.73	8.21	8.22	8.01	8.59	9.08	9.65	8.45
22	10.63	8.95	8.74	8.82	8.72	8.25	8.21	8.10	8.54	9.08	9.62	8.41
23	10.63	8.95	8.80	8.73	8.67	8.37	8.20	8.18	8.46	9.08	9.59	8.36
24	10.61	8.95	8.81	8.60	8.52	8.40	8.20	8.25	8.46	9.11	9.49	8.36
25	10.52	8.95	8.82	8.48	8.49	8.40	8.20	8.30	8.41	9.14	9.46	8.39
26	10.49	8.94	8.83	8.49	8.48	8.46	8.15	8.33	8.40	9.20	9.43	8.42
27	10.42	8.89	8.88	8.49	8.46	8.49	8.19	8.37	8.43	9.25	9.42	8.42
28	10.30	8.79	8.95	8.39	8.34	8.49	8.24	8.40	8.48	9.29	9.43	8.42
29	10.28	8.81	9.01	8.39	8.32	8.47	8.24	8.46	8.50	9.32	9.50	8.32
30	10.34	8.81	9.01	8.35	---	8.46	8.20	8.55	8.49	9.29	9.54	8.30
31	10.34	---	9.01	8.35	---	8.46	---	8.64	---	9.26	9.60	---
MEAN	10.92	9.35	8.79	8.85	8.57	8.37	8.34	8.08	8.72	9.08	9.52	8.95
MAX	11.46	10.34	9.01	9.15	8.75	8.49	8.47	8.64	8.94	9.32	9.69	9.74
MIN	10.28	8.79	8.62	8.35	8.32	8.20	8.15	7.82	8.40	8.55	9.23	8.30

WTR YR 1996 MEAN 8.97 HIGH 7.82 MAY 13 LOW 11.46 OCT 1,2,3



GREENE COUNTY

394655080014301. Local number, GR 118.

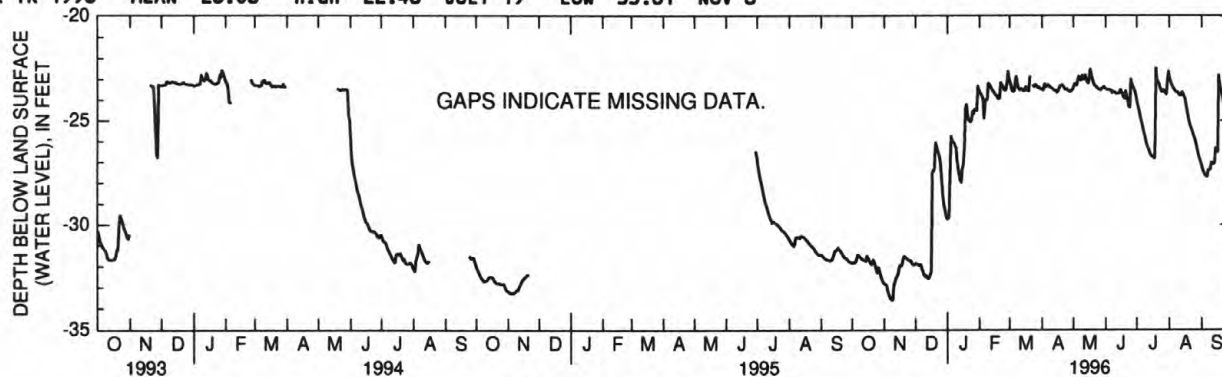
LOCATION.--Lat 39°46'55", long 80°01'43", Hydrologic Unit 05020005, at State Game Land Number 223.

Owner: U.S. Geological Survey.

AQUIFER.--Shale and sandstone of lower member of Waynesburg Formation of Late Pennsylvanian and Early Permian age.**WELL CHARACTERISTICS.**--Drilled observation artesian well, diameter 6 in, depth 104 ft, cased to 22 ft, open hole.**INSTRUMENTATION.**--Data logger.**DATUM.**--Elevation of land-surface datum is 1,000 ft above sea level, from topographic map. Measuring point: Top of casing, 1.40 ft above land-surface datum.**REMARKS.**--Missing record Mar. 21-22. Water levels affected by water cascading into the well. In addition to the daily maximum water level table shown below, daily minimum and mean water levels, since October 1987, are available from the District Office.**PERIOD OF RECORD.**--June 1973 to current year.**EXTREMES FOR PERIOD OF RECORD.**--The extremes shown are extremes of the daily maximum depth below land surface for the period of record indicated above. Highest water level, 22.33 ft below land-surface datum, Mar. 22, 1993; lowest, 48.18 ft below land-surface datum, Aug. 17, 1987.DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31.83	32.84	31.87	29.72	23.63	23.14	23.51	23.37	23.49	24.13	22.94	27.19
2	31.83	32.85	31.90	29.64	23.71	23.35	23.53	23.22	23.51	24.36	23.13	27.41
3	31.82	32.88	31.90	27.66	23.83	23.58	23.23	23.28	23.51	24.56	23.28	27.51
4	31.81	33.18	31.96	25.75	23.96	23.61	23.28	23.30	23.51	24.82	23.38	27.62
5	31.65	33.31	31.92	25.96	24.88	23.57	23.37	23.05	23.53	25.04	23.47	27.69
6	31.45	33.46	31.91	26.01	24.05	23.11	23.32	22.86	23.55	25.25	23.55	27.72
7	31.47	33.54	32.13	26.06	24.00	22.87	23.29	23.02	23.66	25.47	23.62	27.37
8	31.54	33.61	32.22	26.22	23.98	23.21	23.38	23.06	23.61	25.69	23.62	27.36
9	31.58	33.60	32.41	26.32	23.20	23.45	23.42	22.83	23.63	25.91	23.65	27.36
10	31.65	32.91	32.49	26.90	23.24	23.51	23.44	23.00	23.66	26.13	23.74	27.00
11	31.69	32.76	32.42	27.32	23.37	23.53	23.48	23.01	23.70	26.27	23.79	27.04
12	31.70	32.54	32.52	27.59	23.47	23.47	23.55	22.81	23.70	26.38	23.78	27.09
13	31.71	32.47	32.57	27.88	23.54	23.54	23.54	23.02	23.68	26.54	23.62	27.04
14	31.76	32.39	32.56	27.96	23.60	23.57	23.57	23.15	23.69	26.67	23.76	26.32
15	31.50	32.09	32.39	27.34	23.69	23.55	23.65	23.20	23.52	26.71	23.86	26.49
16	31.58	31.94	32.22	27.09	23.77	23.38	23.59	22.91	23.64	26.73	23.99	26.52
17	31.72	31.98	27.46	26.34	23.77	23.52	23.46	22.54	23.71	26.80	24.29	22.82
18	31.82	31.90	27.44	24.42	23.91	23.57	23.33	22.84	23.87	26.80	24.59	23.24
19	31.90	31.63	27.31	24.21	23.94	23.58	23.31	23.02	23.94	22.48	24.88	23.50
20	31.91	31.51	26.05	24.68	23.92	22.85	23.28	23.17	23.58	23.03	25.11	23.71
21	31.69	31.58	26.22	24.96	23.17	---	23.36	23.31	23.83	23.21	25.30	23.93
22	31.84	31.62	26.43	25.02	23.30	---	23.44	23.34	24.04	23.22	25.41	24.20
23	31.94	31.64	26.61	25.05	23.34	23.28	23.52	23.41	24.31	23.44	25.56	24.73
24	32.17	31.70	26.77	24.95	23.51	23.38	23.51	23.45	24.36	23.58	25.70	25.13
25	32.30	31.73	27.14	24.53	23.55	23.27	23.49	23.50	23.01	23.62	25.88	25.45
26	32.05	31.72	27.92	24.65	23.53	23.29	23.57	23.51	23.25	23.52	26.04	25.66
27	32.19	31.81	28.52	24.43	23.18	23.38	23.61	23.54	23.39	23.60	26.27	25.73
28	32.41	31.92	29.00	24.49	22.64	23.44	23.61	23.46	23.48	23.68	26.50	25.63
29	32.56	31.91	29.25	24.52	22.97	23.39	23.56	23.45	23.62	23.74	26.74	22.74
30	32.70	31.92	29.51	23.35	---	23.48	23.51	23.37	23.84	23.03	26.86	23.04
31	32.79	---	29.70	23.55	---	23.49	---	23.45	---	22.64	27.06	---
MEAN	31.89	32.36	30.02	25.95	23.61	23.39	23.46	23.18	23.66	24.74	24.62	25.81
MAX	32.79	33.61	32.57	29.72	24.88	23.61	23.65	23.54	24.36	26.80	27.06	27.72
MIN	31.45	31.51	26.05	23.35	22.64	22.85	23.23	22.54	23.01	22.48	22.94	22.74

WTR YR 1996 MEAN 26.08 HIGH 22.48 JULY 19 LOW 33.61 NOV 8

3-YEAR HYDROGRAPH
OCTOBER 1, 1993 TO SEPTEMBER 30, 1996

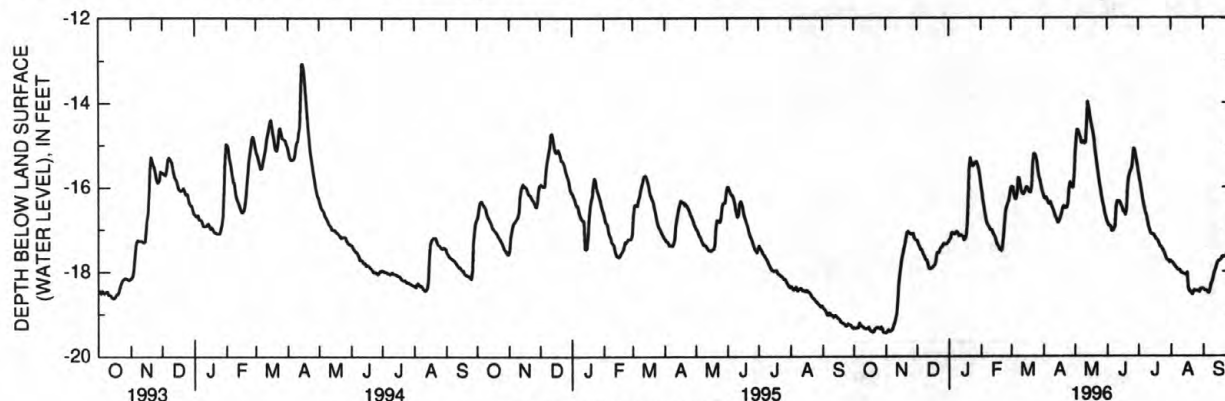
LAWRENCE COUNTY

410538080280801. Local number, LA 1201.

LOCATION.--Lat 41°05'38", long 80°28'08", Hydrologic Unit 05030102, at State Game Land 150, near Pulaski.**Owner:** U.S. Geological Survey.**AQUIFER.**--Shale and sandstone of Connoquenessing Formation of Early Pennsylvanian age.**WELL CHARACTERISTICS.**--Drilled observation artesian well, diameter 6 in, depth 150 ft, cased to 30 ft, open hole.**INSTRUMENTATION.**--Satellite telemeter.**DATUM.**--Elevation of land-surface datum is 1,040 ft above sea level, from topographic map. Measuring point: Top of casing, 3.40 ft above land-surface datum.**REMARKS.**--In addition to the daily maximum water level table shown below, daily minimum and mean water levels, since October 1987, are available from the District Office.**PERIOD OF RECORD.**--November 1967 to current year.**EXTREMES FOR PERIOD OF RECORD.**--The extremes shown are extremes of the daily maximum depth below land surface for the period of record indicated above. Highest water level, 12.25 ft below land-surface datum, May 19, 1978; lowest, 22.94 ft below land-surface datum, Apr. 15, 1986.DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.31	19.45	17.27	17.24	16.09	15.98	16.25	15.17	16.85	15.77	17.78	18.42
2	19.33	19.41	17.35	17.22	16.28	16.00	16.27	14.80	16.91	15.89	17.79	18.45
3	19.33	19.37	17.40	17.08	16.44	16.18	16.23	14.63	16.91	16.05	17.83	18.44
4	19.31	19.41	17.47	17.07	16.61	16.27	16.28	14.66	16.93	16.22	17.87	18.45
5	19.32	19.41	17.47	17.10	16.73	16.27	16.38	14.75	17.04	16.37	17.90	18.49
6	19.20	19.39	17.53	17.11	16.85	16.12	16.39	14.84	17.03	16.48	17.93	18.51
7	19.25	19.35	17.60	17.07	16.90	15.78	16.34	14.95	17.01	16.59	17.96	18.41
8	19.28	19.26	17.64	17.05	16.93	15.78	16.43	14.95	16.91	16.66	17.96	18.28
9	19.30	19.20	17.71	17.07	17.00	15.95	16.48	14.91	16.47	16.79	17.97	18.25
10	19.31	19.10	17.73	17.15	17.01	16.08	16.54	14.97	16.33	16.93	18.02	18.14
11	19.34	18.99	17.78	17.15	17.02	16.15	16.61	14.94	16.33	17.00	18.03	18.01
12	19.34	18.71	17.91	17.13	17.11	16.16	16.71	14.49	16.33	17.10	18.05	17.96
13	19.34	18.30	17.93	17.15	17.14	16.12	16.73	13.97	16.38	17.11	18.05	17.88
14	19.33	18.07	17.93	17.16	17.18	16.06	16.83	14.11	16.43	17.12	18.06	17.79
15	19.30	17.88	17.91	17.25	17.30	15.99	16.83	14.28	16.50	17.13	18.08	17.76
16	19.37	17.70	17.90	17.24	17.37	16.01	16.76	14.44	16.57	17.18	18.02	17.75
17	19.41	17.59	17.86	17.17	17.39	16.08	16.68	14.57	16.60	17.23	18.38	17.73
18	19.40	17.46	17.84	16.89	17.47	16.12	16.60	14.70	16.65	17.24	18.45	17.70
19	19.43	17.36	17.75	16.29	17.49	16.12	16.48	14.87	16.49	17.28	18.49	17.64
20	19.42	17.20	17.55	15.57	17.51	15.97	16.44	15.11	15.98	17.34	18.51	17.64
21	19.35	17.07	17.55	15.30	17.41	15.45	16.49	15.33	15.77	17.41	18.54	17.65
22	19.32	17.04	17.55	15.41	17.12	15.21	16.49	15.50	15.68	17.42	18.45	17.63
23	19.33	17.08	17.47	15.49	16.83	15.21	16.47	15.71	15.60	17.46	18.44	17.60
24	19.31	17.10	17.42	15.50	16.52	15.27	16.36	15.90	15.55	17.51	18.46	17.57
25	19.33	17.11	17.42	15.42	16.46	15.38	16.03	16.03	15.32	17.55	18.46	17.54
26	19.35	17.11	17.35	15.43	16.38	15.59	15.88	16.20	15.08	17.63	18.45	17.55
27	19.30	17.09	17.34	15.39	16.32	15.76	15.95	16.33	15.13	17.70	18.46	17.52
28	19.34	17.20	17.35	15.46	16.13	15.83	16.00	16.44	15.29	17.73	18.49	17.49
29	19.43	17.24	17.35	15.55	16.01	15.97	16.00	16.59	15.43	17.73	18.40	16.99
30	19.44	17.25	17.33	15.72	---	16.08	15.67	16.69	15.59	17.79	18.41	16.52
31	19.44	---	17.30	15.91	---	16.17	---	16.78	---	17.75	18.40	---
MEAN	19.34	18.13	17.58	16.48	16.86	15.91	16.39	15.21	16.24	17.07	18.20	17.86
MAX	19.44	19.45	17.93	17.25	17.51	16.27	16.83	16.78	17.04	17.79	18.54	18.51
MIN	19.20	17.04	17.27	15.30	16.01	15.21	15.67	13.97	15.08	15.77	17.78	16.52

WTR YR 1996 MEAN 17.11 HIGH 13.97 MAY 13 LOW 19.45 NOV 1

3-YEAR HYDROGRAPH
OCTOBER 1, 1993 TO SEPTEMBER 30, 1996

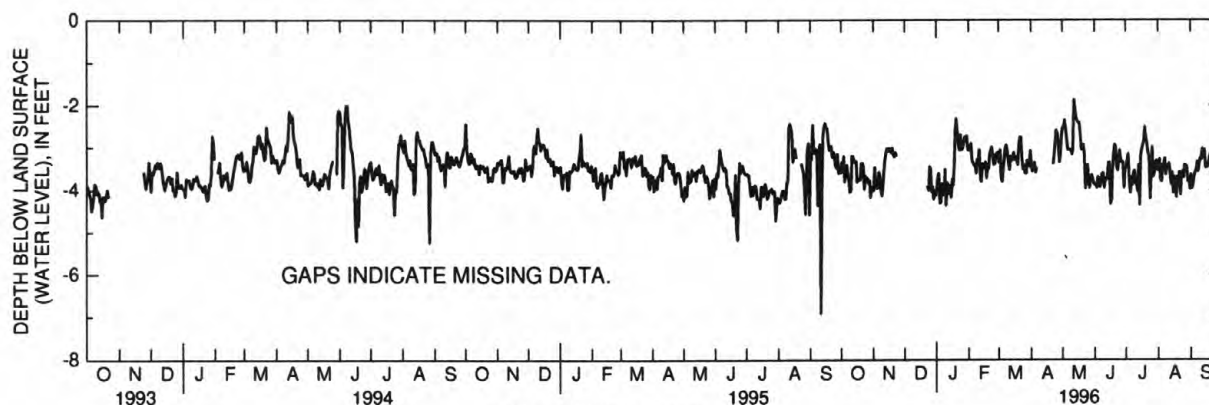
MERCER COUNTY

412350080223701. Local number, MR 1364.

LOCATION.--Lat 41°23'50", long 80°22'37", Hydrologic Unit 05030102, at Greenville.**Owner:** Borough of Greenville.**AQUIFER.**--Sandstone of Cussewago Formation of Early Mississippian age.**WELL CHARACTERISTICS.**--Drilled artesian well, diameter 6 in, depth 235 ft, cased to 41 ft, open hole.**INSTRUMENTATION.**--Continuous strip-chart recorder.**DATUM.**--Elevation of land-surface datum is 965 ft above sea level, from topographic map. Measuring point: Top of plywood cover, 2.26 ft above land-surface datum.**REMARKS.**--Missing record Nov. 24 to Dec. 22, Apr. 7-21, and Sept. 24-30. Water levels affected by intermittent pumping.**PERIOD OF RECORD.**--March 1964 to current year.**EXTREMES FOR PERIOD OF RECORD.**--Highest water level, 1.43 ft below land-surface datum, Dec. 25, 1968; lowest, 8.31 ft below land-surface datum, Feb. 12, 1967.DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.35	4.00	---	3.97	3.06	3.35	3.43	2.52	3.84	3.46	3.43	3.63
2	3.55	3.46	---	3.68	2.99	3.05	3.55	2.54	3.89	3.31	3.27	3.96
3	3.20	3.82	---	3.60	2.90	3.70	3.45	2.35	3.94	3.15	3.76	3.87
4	3.80	3.96	---	4.31	3.30	3.80	3.35	2.55	3.69	3.78	3.80	3.67
5	3.50	3.94	---	4.29	3.35	3.49	3.58	2.79	3.74	4.06	3.40	3.59
6	3.41	3.58	---	3.84	3.41	3.25	3.47	3.04	3.93	3.69	3.43	3.54
7	3.60	3.68	---	4.11	3.40	3.00	---	3.04	3.76	3.87	3.26	3.34
8	3.76	4.02	---	4.09	3.60	2.94	---	3.04	3.62	3.61	3.63	3.56
9	4.05	4.13	---	3.51	3.27	3.09	---	3.05	3.60	3.54	3.44	3.37
10	4.00	3.88	---	4.35	3.38	3.31	---	3.16	3.94	3.84	3.48	3.24
11	3.20	3.50	---	3.82	3.05	3.52	---	3.02	3.71	3.83	3.37	3.29
12	3.20	3.27	---	3.89	3.73	3.20	---	1.87	3.76	4.03	3.56	3.02
13	3.33	3.09	---	4.08	3.80	3.26	---	2.05	3.73	3.41	3.85	3.24
14	3.33	3.01	---	3.88	3.38	3.30	---	2.30	3.37	4.35	3.58	3.04
15	3.32	3.07	---	4.17	3.47	3.11	---	2.37	3.35	3.20	4.06	3.47
16	3.80	3.01	---	3.73	3.42	3.27	---	2.40	4.33	3.05	3.68	3.42
17	3.77	3.07	---	3.88	3.34	3.29	---	2.41	4.23	2.93	3.82	3.46
18	3.73	3.11	---	3.33	3.71	3.22	---	2.64	3.53	2.87	4.17	3.35
19	3.75	3.00	---	2.57	3.40	3.40	---	3.04	3.16	2.52	3.68	3.22
20	3.36	3.17	---	2.32	3.49	2.95	---	3.02	2.93	2.77	3.90	3.12
21	3.36	3.21	---	2.66	3.15	2.75	---	2.93	2.97	2.92	3.58	3.69
22	3.44	3.11	---	2.93	3.07	2.75	3.39	3.13	3.45	3.13	4.11	3.32
23	3.97	3.21	3.90	3.06	2.98	3.23	3.14	3.96	3.54	3.19	3.63	3.52
24	3.66	---	4.00	2.70	3.20	3.50	2.86	3.54	3.30	4.20	3.55	---
25	3.71	---	3.44	3.05	3.39	3.41	2.59	3.41	3.06	3.58	3.70	---
26	3.71	---	3.50	3.01	3.38	3.60	2.66	3.74	3.34	2.98	3.41	---
27	3.83	---	4.03	2.88	3.15	3.60	2.90	3.94	3.33	3.68	3.43	---
28	3.77	---	3.91	2.76	3.17	3.30	3.34	3.70	3.35	3.58	3.43	---
29	4.17	---	4.21	2.75	3.11	3.35	3.14	3.64	3.94	3.38	3.78	---
30	3.94	---	4.02	2.72	---	3.44	2.74	3.74	3.50	3.30	3.70	---
31	3.92	---	4.12	3.05	---	3.07	---	3.84	---	3.53	3.97	---
MEAN	3.63	3.45	3.90	3.45	3.31	3.27	3.17	2.99	3.59	3.44	3.64	3.43
MAX	4.17	4.13	4.21	4.35	3.80	3.80	3.58	3.96	4.33	4.35	4.17	3.96
MIN	3.20	3.00	3.44	2.32	2.90	2.75	2.59	1.87	2.93	2.52	3.26	3.02

WTR YR 1996 MEAN 3.42 HIGH 1.87 MAY 12 LOW 4.35 JAN 10, July 14

3-YEAR HYDROGRAPH
OCTOBER 1, 1993 TO SEPTEMBER 30, 1996

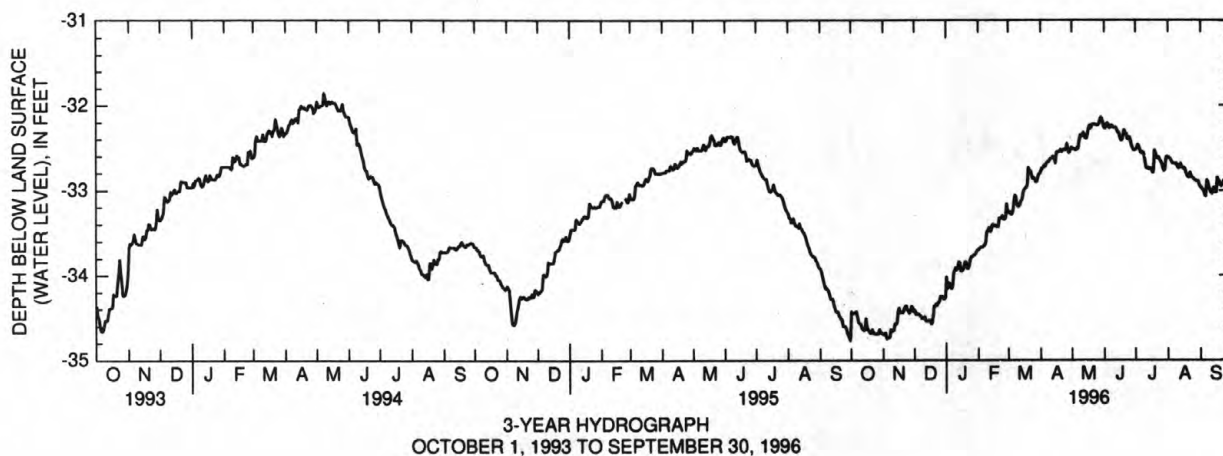
SOMERSET COUNTY

400008079142801. Local number, SO 2.

LOCATION.--Lat 40°00'08", long 79°14'28", Hydrologic Unit 05020006, at Laurel Hill State Park.**Owner:** Commonwealth of Pennsylvania.**AQUIFER.**--Shale and sandstone of Allegheny Group of Middle Pennsylvanian age.**WELL CHARACTERISTICS.**--Drilled artesian well, diameter 6 in to 4 in, depth 450 ft, cased to 311 ft, open hole.**INSTRUMENTATION.**--Continuous strip-chart recorder.**DATUM.**--Elevation of land-surface datum is 2,040 ft above sea level, from topographic map. Measuring point: Top of casing, 1.43 ft above land-surface datum.**REMARKS.**--Water levels affected by intermittent pumping.**PERIOD OF RECORD.**--April 1937 to current year.**EXTREMES FOR PERIOD OF RECORD.**--Highest water level, 27.42 ft below land-surface datum, Apr. 9, 1980; lowest, 50.33 ft below land-surface datum, May 31, 1987 (affected by pumping of nearby well).DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34.43	34.70	34.41	34.02	33.70	33.26	32.78	32.50	32.27	32.52	32.61	32.95
2	34.44	34.69	34.46	34.16	33.68	33.25	32.74	32.51	32.27	32.51	32.62	32.97
3	34.45	34.68	34.45	34.09	33.67	33.28	32.74	32.51	32.22	32.46	32.63	32.99
4	34.44	34.75	34.46	34.09	33.67	33.28	32.71	32.52	32.21	32.48	32.65	32.99
5	34.44	34.74	34.46	34.15	33.67	33.26	32.72	32.53	32.23	32.53	32.68	33.06
6	34.43	34.74	34.48	34.16	33.65	33.15	32.69	32.50	32.27	32.56	32.68	33.07
7	34.50	34.73	34.48	34.13	33.65	33.06	32.67	32.51	32.23	32.56	32.68	32.88
8	34.56	34.64	34.51	33.97	33.61	33.07	32.67	32.42	32.23	32.55	32.69	32.90
9	34.57	34.66	34.50	33.94	33.48	33.16	32.65	32.35	32.26	32.58	32.68	32.96
10	34.57	34.66	34.51	33.91	33.48	33.19	32.63	32.36	32.26	32.66	32.72	32.99
11	34.62	34.65	34.49	33.94	33.44	33.19	32.63	32.36	32.26	32.73	32.74	33.03
12	34.64	34.57	34.54	33.91	33.48	33.16	32.61	32.32	32.26	32.74	32.73	33.04
13	34.65	34.58	34.54	33.84	33.48	33.12	32.60	32.35	32.29	32.73	32.68	32.99
14	34.64	34.56	34.54	33.85	33.41	33.11	32.63	32.39	32.32	32.75	32.73	32.96
15	34.51	34.43	34.53	33.95	33.40	33.02	32.68	32.39	32.32	32.74	32.74	33.02
16	34.60	34.39	34.53	33.95	33.42	32.99	32.55	32.33	32.38	32.74	32.73	33.02
17	34.64	34.44	34.57	33.94	33.41	32.98	32.55	32.27	32.41	32.79	32.74	32.85
18	34.66	34.44	34.57	33.90	33.42	32.96	32.55	32.23	32.41	32.79	32.79	32.88
19	34.68	34.44	34.48	33.84	33.43	32.94	32.54	32.27	32.35	32.53	32.82	32.89
20	34.68	34.44	34.36	33.84	33.43	32.73	32.52	32.23	32.29	32.56	32.84	32.94
21	34.64	34.39	34.36	33.92	33.33	32.77	32.55	32.22	32.32	32.62	32.85	32.95
22	34.68	34.37	34.34	33.92	33.33	32.77	32.53	32.22	32.33	32.62	32.79	32.94
23	34.69	34.36	34.36	33.89	33.32	32.81	32.52	32.22	32.39	32.61	32.83	32.89
24	34.69	34.41	34.32	33.81	33.30	32.86	32.53	32.23	32.40	32.64	32.85	32.88
25	34.69	34.43	34.32	33.78	33.34	32.85	32.52	32.23	32.37	32.66	32.86	32.94
26	34.69	34.45	34.25	33.78	33.34	32.86	32.45	32.23	32.41	32.68	32.87	32.95
27	34.69	34.42	34.25	33.76	33.33	32.90	32.52	32.22	32.47	32.73	32.88	32.95
28	34.64	34.37	34.25	33.76	33.16	32.90	32.56	32.16	32.50	32.77	32.89	32.94
29	34.67	34.38	34.28	33.75	33.26	32.85	32.55	32.14	32.53	32.76	32.89	32.85
30	34.68	34.43	34.28	33.72	---	32.81	32.50	32.17	32.53	32.61	32.89	32.90
31	34.69	---	34.27	33.70	---	32.80	---	32.22	---	32.60	32.95	---
MEAN	34.60	34.53	34.42	33.92	33.46	33.01	32.60	32.33	32.33	32.64	32.77	32.95
MAX	34.69	34.75	34.57	34.16	33.70	33.28	32.78	32.53	32.53	32.79	32.95	33.07
MIN	34.43	34.36	34.25	33.70	33.16	32.73	32.45	32.14	32.21	32.46	32.61	32.85

WTR YR 1996 MEAN 33.30 HIGH 32.14 MAY 29 LOW 34.75 NOV 4



WARREN COUNTY

414159079213601. Local number, WR 50.

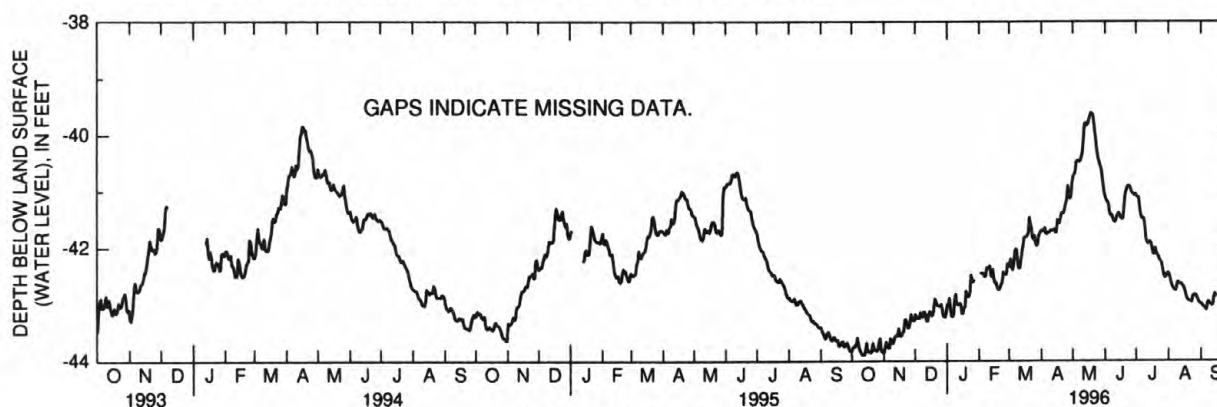
LOCATION.--Lat 41°41'59", long 79°21'36", Hydrologic Unit 05010003, at State Game Land Number 86.

Owner: U.S. Geological Survey.

AQUIFER.--Shale of Venango Formation of Late Devonian age.**WELL CHARACTERISTICS.**--Drilled observation artesian well, diameter 6 in, depth 105 ft, cased to 46 ft, open hole.**INSTRUMENTATION.**--Satellite telemeter.**DATUM.**--Elevation of land-surface datum is 1,170 ft above sea level, from topographic map. Measuring point: Top of casing, 2.00 ft above land-surface datum.**REMARKS.**--Missing record Jan. 28 to Feb. 1, and Sept. 17-30. In addition to the daily maximum water level table shown below, daily minimum and mean water levels, since October 1987, are available from the District Office.**PERIOD OF RECORD.**--August 1972 to current year.**EXTREMES FOR PERIOD OF RECORD.**--The extremes shown are extremes of the daily maximum depth below land surface for the period of record indicated above. Highest water level, 39.23 ft below land-surface datum. Apr. 22, 1991; lowest, 45.42 ft below land-surface datum, Nov. 2, 1983.DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43.82	43.86	43.18	43.01	---	42.33	41.68	40.73	41.11	41.08	42.45	42.99
2	43.76	43.76	43.25	42.98	42.44	42.20	41.70	40.71	41.16	41.10	42.52	43.02
3	43.77	43.67	43.22	42.89	42.45	42.34	41.69	40.65	41.18	41.10	42.60	43.04
4	43.72	43.76	43.25	43.07	42.45	42.39	41.64	40.48	41.22	41.27	42.67	43.05
5	43.73	43.78	43.25	43.21	42.45	42.30	41.75	40.45	41.37	41.41	42.71	43.09
6	43.59	43.78	43.15	43.22	42.51	42.08	41.75	40.45	41.42	41.47	42.74	43.10
7	43.69	43.61	43.20	43.19	42.50	42.02	41.72	40.47	41.41	41.48	42.75	42.97
8	43.79	43.63	43.23	42.92	42.36	42.04	41.72	40.45	41.46	41.47	42.75	42.95
9	43.83	43.70	43.14	42.82	42.35	42.28	41.70	40.38	41.52	41.59	42.62	42.98
10	43.87	43.69	43.14	42.98	42.35	42.36	41.68	40.30	41.54	41.82	42.60	43.00
11	43.90	43.60	43.20	43.01	42.33	42.36	41.69	40.06	41.51	41.90	42.64	43.02
12	43.90	43.56	43.30	43.01	42.49	42.22	41.68	39.80	41.44	41.93	42.63	43.01
13	43.90	43.56	43.30	42.98	42.51	42.07	41.66	39.78	41.40	41.90	42.64	42.88
14	43.82	43.56	43.19	43.00	42.38	41.96	41.72	39.82	41.38	41.89	42.67	42.81
15	43.69	43.43	43.13	43.17	42.55	41.82	41.72	39.80	41.42	41.91	42.69	42.85
16	43.83	43.54	43.17	43.17	42.62	41.81	41.50	39.73	41.47	42.01	42.74	42.85
17	43.85	43.57	43.20	43.06	42.61	41.81	41.54	39.66	41.49	42.11	42.80	---
18	43.84	43.55	43.19	43.05	42.69	41.78	41.56	39.61	41.48	42.11	42.88	---
19	43.86	43.50	43.07	42.77	42.74	41.74	41.46	39.62	41.27	42.00	42.92	---
20	43.84	43.47	42.90	42.86	42.74	41.46	41.38	39.63	41.08	42.09	42.93	---
21	43.69	43.28	42.94	42.86	42.71	41.56	41.38	39.78	40.99	42.13	42.94	---
22	43.78	43.27	43.01	42.86	42.65	41.65	41.38	39.96	40.93	42.15	42.95	---
23	43.82	43.34	43.03	42.78	42.60	41.82	41.29	40.12	40.90	42.21	42.96	---
24	43.80	43.42	43.03	42.48	42.43	41.85	41.21	40.29	40.90	42.24	42.85	---
25	43.83	43.41	43.03	42.58	42.47	41.78	41.14	40.41	40.93	42.26	42.84	---
26	43.81	43.32	43.00	42.60	42.47	41.92	40.90	40.47	41.00	42.36	42.83	---
27	43.68	43.18	43.08	42.56	42.47	41.96	41.04	40.54	41.03	42.47	42.84	---
28	43.61	43.27	43.20	---	42.28	41.95	41.12	40.59	41.04	42.52	42.89	---
29	43.79	43.29	43.23	---	42.33	41.78	41.10	40.73	41.07	42.52	42.93	---
30	43.85	43.29	43.23	---	---	41.75	40.84	40.90	41.04	42.46	42.97	---
31	43.86	---	43.13	---	---	41.70	---	41.03	---	42.44	42.99	---
MEAN	43.79	43.52	43.15	42.93	42.50	41.97	41.48	40.24	41.24	41.92	42.77	42.98
MAX	43.90	43.86	43.30	43.22	42.74	42.39	41.75	41.03	41.54	42.52	42.99	43.10
MIN	43.59	43.18	42.90	42.48	42.28	41.46	40.84	39.61	40.90	41.08	42.45	42.81

WTR YR 1996 MEAN 42.34 HIGH 39.61 MAY 18 LOW 43.90 OCT 11,12,13

3-YEAR HYDROGRAPH
OCTOBER 1, 1993 TO SEPTEMBER 30, 1996

WASHINGTON COUNTY

400233080261301. Local number, WS 155.

LOCATION.--Lat 40°02'33", long 80°26'13", Hydrologic Unit 05030106, at State Game Land Number 245, near Good Intent.

Owner: U.S. Geological Survey.

AQUIFER.--Washington Formation of Early Permian age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in, depth 160 ft, cased to 19 ft, open hole.

INSTRUMENTATION.--Digital water-level recorder with 60-minute recording interval.

DATUM.--Elevation of land-surface datum is 1,110 ft above sea level, from topographic map. Measuring point: Top of casing, 2.00 ft above land-surface datum.

REMARKS.--Missing record Nov. 21 to Dec. 19. In addition to the daily maximum water level table shown below, daily minimum and mean water levels, since October 1987, are available from the District Office.

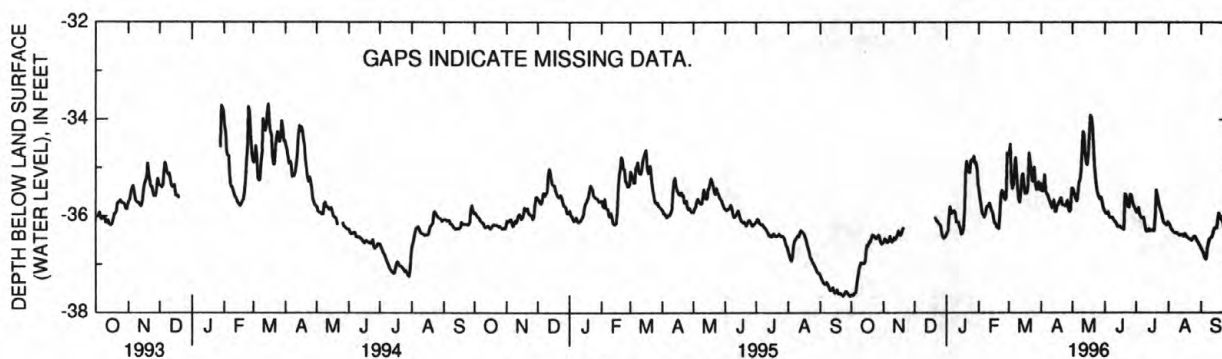
PERIOD OF RECORD.--July 1971 to current year.

EXTREMES FOR PERIOD OF RECORD.--The extremes shown are extremes of the daily maximum depth below land surface for the period of record indicated above. Highest water level, 32.25 ft below land-surface datum, Jan. 14, 1974; lowest, 39.01 ft below land-surface datum, July 11, 1971.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37.63	36.55	---	36.35	35.50	34.74	35.46	35.42	35.92	35.92	36.15	36.67
2	37.65	36.47	---	36.32	35.65	34.51	35.48	35.50	35.95	35.92	36.19	36.72
3	37.64	36.49	---	36.03	35.81	35.25	35.42	35.56	35.93	35.82	36.25	36.76
4	37.60	36.55	---	35.80	35.94	35.43	35.14	35.64	35.91	35.95	36.29	36.83
5	37.59	36.55	---	35.93	35.97	35.35	35.50	35.69	36.01	36.01	36.32	36.89
6	37.42	36.52	---	35.94	36.02	35.01	35.53	35.54	36.03	36.04	36.34	36.89
7	37.28	36.42	---	35.90	35.98	34.79	35.57	35.30	36.03	36.04	36.35	36.67
8	37.13	36.51	---	35.89	35.82	35.06	35.64	35.26	36.03	36.03	36.35	36.57
9	37.03	36.54	---	35.92	35.79	35.44	35.69	35.08	36.07	36.17	36.35	36.48
10	36.97	36.51	---	36.12	35.79	35.65	35.75	34.64	36.11	36.30	36.38	36.46
11	36.97	36.45	---	36.13	35.73	35.71	35.83	34.24	36.12	36.32	36.40	36.45
12	36.98	36.49	---	36.12	35.82	35.52	35.72	34.32	36.16	36.31	36.39	36.40
13	36.98	36.45	---	36.22	35.89	35.19	35.66	34.71	36.22	36.27	36.38	36.31
14	36.95	36.40	---	36.26	35.91	35.12	35.91	34.90	36.22	36.31	36.40	36.25
15	36.72	36.31	---	36.38	36.07	35.32	35.91	34.94	36.21	36.30	36.42	36.24
16	36.60	36.36	---	36.35	36.15	35.53	35.76	34.69	36.24	36.29	36.37	36.25
17	36.62	36.40	---	36.26	36.15	35.53	35.77	34.28	36.25	36.31	36.38	36.08
18	36.53	36.37	---	35.88	36.23	35.52	35.71	33.91	36.26	36.31	36.42	35.94
19	36.54	36.29	---	35.10	36.25	35.36	35.66	33.95	36.28	35.98	36.45	36.02
20	36.47	36.24	36.05	34.87	36.26	34.69	35.62	34.10	35.54	35.46	36.47	36.06
21	36.39	---	36.04	34.98	35.96	34.87	35.76	34.57	35.57	35.57	36.47	36.09
22	36.40	---	36.10	35.09	35.55	35.03	35.77	34.98	35.67	35.67	36.49	36.12
23	36.42	---	36.11	35.10	35.47	35.26	35.77	35.24	35.80	35.78	36.50	36.24
24	36.46	---	36.16	34.86	35.50	35.28	35.79	35.43	35.82	35.87	36.46	36.25
25	36.47	---	36.17	34.83	35.61	34.99	35.75	35.54	35.55	35.93	36.43	36.33
26	36.45	---	36.22	34.87	35.66	35.31	35.67	35.59	35.56	36.04	36.42	36.33
27	36.39	---	36.34	34.76	35.61	35.45	35.84	35.64	35.66	36.13	36.47	36.31
28	36.44	---	36.43	34.90	34.69	35.44	35.91	35.60	35.76	36.16	36.52	36.24
29	36.54	---	36.47	34.89	34.74	35.29	35.87	35.68	35.81	36.17	36.55	36.00
30	36.58	---	36.45	35.02	---	35.45	35.42	35.80	35.85	36.19	36.59	35.91
31	36.56	---	36.41	35.33	---	35.32	---	35.86	---	36.12	36.62	---
MEAN	36.85	36.44	36.25	35.63	35.78	35.24	35.68	35.08	35.95	36.05	36.41	36.36
MAX	37.65	36.55	36.47	36.38	36.26	35.71	35.91	35.86	36.28	36.32	36.62	36.89
MIN	36.39	36.24	36.04	34.76	34.69	34.51	35.14	33.91	35.54	35.46	36.15	35.91

WTR YR 1996 MEAN 35.95 HIGH 33.91 MAY 18 LOW 37.65 OCT 2



WESTMORELAND COUNTY

402138079031802. Local number, WE 300.

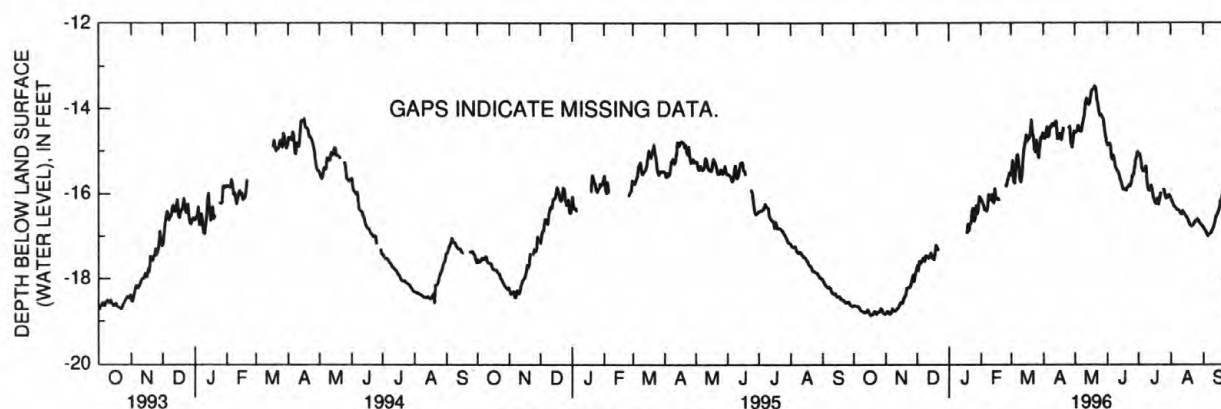
LOCATION.--Lat 40°21'38", long 79°03'18", Hydrologic Unit 05010007, at State Game Land Number 42.

Owner: U.S. Geological Survey.

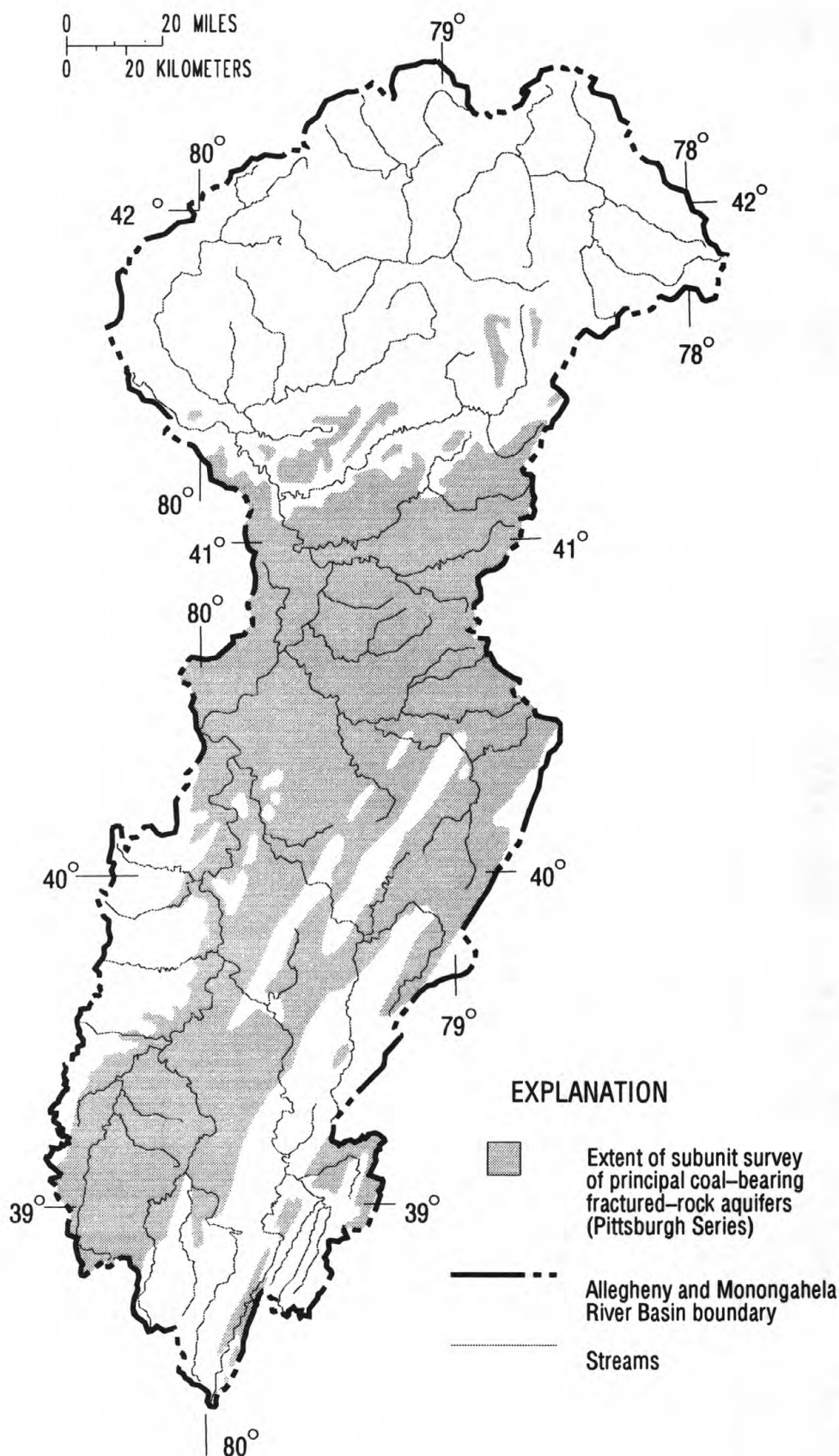
AQUIFER.--Shale of Clarion Formation of Middle Pennsylvanian age.**WELL CHARACTERISTICS.**--Drilled observation artesian well, diameter 6 in, depth 110 ft, cased to 22 ft, open hole.**INSTRUMENTATION.**--Continuous strip-chart recorder.**DATUM.**--Elevation of land-surface datum is 1,270 ft above sea level, from topographic map. Measuring point: Top of plywood cover, 3.05 ft above land-surface datum.**REMARKS.**--Missing record Dec. 23 to Jan. 17, Feb. 19-23, Apr. 21-24, and July 23-24.**PERIOD OF RECORD.**--February 1968 to current year.**EXTREMES FOR PERIOD OF RECORD.**--Highest water level, 13.46 ft below land-surface datum, May 20, 1996; lowest, 29.22 ft below land-surface datum, July 3, 1968.DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.62	18.82	17.69	---	16.13	15.48	14.61	14.55	14.85	15.06	16.12	16.80
2	18.63	18.76	17.81	---	16.20	15.21	14.70	14.55	14.85	15.06	16.18	16.85
3	18.64	18.78	17.59	---	16.26	15.70	14.62	14.51	14.81	15.17	16.25	16.88
4	18.64	18.82	17.65	---	16.38	15.75	14.42	14.39	14.85	15.39	16.30	16.94
5	18.64	18.83	17.60	---	16.38	15.42	14.66	14.48	15.12	15.46	16.32	16.99
6	18.68	18.80	17.55	---	16.41	15.11	14.63	14.53	15.19	15.46	16.35	16.94
7	18.72	18.70	17.51	---	16.30	15.08	14.40	14.53	15.10	15.41	16.38	16.94
8	18.75	18.74	17.59	---	16.01	15.30	14.43	14.37	15.25	15.34	16.38	16.92
9	18.76	18.76	17.46	---	16.13	15.64	14.35	14.24	15.38	15.68	16.41	16.86
10	18.78	18.75	17.46	---	16.13	15.72	14.34	14.14	15.43	15.90	16.46	16.82
11	18.79	18.72	17.49	---	16.01	15.56	14.40	13.86	15.46	15.92	16.48	16.74
12	18.79	18.70	17.51	---	16.18	15.19	14.30	13.75	15.51	15.85	16.40	16.62
13	18.78	18.67	17.50	---	16.22	14.92	14.29	13.82	15.63	15.80	16.44	16.52
14	18.72	18.60	17.39	---	15.87	14.80	14.70	13.90	15.69	15.92	16.48	16.48
15	18.75	18.55	17.46	---	16.11	14.61	14.70	13.88	15.80	16.08	16.52	16.40
16	18.83	18.56	17.52	---	16.12	14.76	14.58	13.68	15.89	16.14	16.56	16.35
17	18.86	18.57	17.55	---	16.10	14.68	14.71	13.56	15.88	16.23	16.60	16.17
18	18.83	18.44	17.42	16.94	16.16	14.70	14.73	13.55	15.89	16.22	16.68	16.16
19	18.84	18.43	17.21	16.71	---	14.58	14.54	13.52	15.92	16.10	16.73	16.00
20	18.80	18.36	17.25	16.87	---	14.26	14.44	13.46	15.84	16.25	16.76	15.91
21	18.76	18.21	17.31	16.71	---	14.57	---	13.52	15.84	16.12	16.76	15.84
22	18.81	18.23	17.33	16.70	---	14.67	---	13.77	15.78	15.96	16.72	15.68
23	18.83	18.19	---	16.41	---	14.95	---	13.89	15.81	---	16.68	15.89
24	18.78	18.20	---	16.34	15.79	15.01	---	14.08	15.74	---	16.64	15.88
25	18.78	18.11	---	16.64	15.82	14.74	14.46	14.16	15.55	15.88	16.64	15.97
26	18.77	18.01	---	16.56	15.69	15.05	14.41	14.13	15.55	16.00	16.59	15.97
27	18.70	17.91	---	16.28	15.62	15.15	14.78	14.20	15.40	16.10	16.63	15.86
28	18.72	18.06	---	16.47	15.50	14.92	14.90	14.22	15.21	16.10	16.68	15.78
29	18.80	17.89	---	16.34	15.56	14.67	14.77	14.42	15.12	16.04	16.71	15.85
30	18.82	17.81	---	16.06	---	14.69	14.52	14.62	15.01	16.02	16.74	15.89
31	18.83	---	---	16.10	---	14.56	---	14.76	---	16.06	16.76	---
MEAN	18.76	18.47	17.49	16.51	16.05	15.01	14.55	14.10	15.45	15.82	16.53	16.36
MAX	18.86	18.83	17.81	16.94	16.41	15.75	14.90	14.76	15.92	16.25	16.76	16.99
MIN	18.62	17.81	17.21	16.06	15.50	14.26	14.29	13.46	14.81	15.06	16.12	15.68

WTR YR 1996 MEAN 16.24 HIGH 13.46 MAY 20 LOW 18.86 OCT 17



GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES
ALLEGHENY AND MONONGAHELA RIVER BASIN NAWQA PROJECT
188 **SUBUNIT OF PITTSBURGH SERIES IN THE FRACTURED ROCK OF THE APPALACHIAN PLATEAU**
PHYSIOGRAPHIC PROVINCE



The following tables contain water-level and water-quality records from a network of 30 privately owned wells used to supply water to homes and businesses. The network was established as part of the National Water-Quality Assessment (NAWQA) project in the Allegheny and Monongahela River Basin.

The 30-site network was designed to represent a subarea of the Allegheny and Monongahela River Basin in the Appalachian Plateau Physiographic Province. The subarea is limited to areas underlain by the Pittsburgh Series rocks of upper Pennsylvanian and lower Permian Age. The Pittsburgh Series is comprised of the Monongahela, Conemaugh, and Allegheny formations. The network is located in the central and lower portions of the Allegheny and Monongahela River Basin and includes twelve counties in Pennsylvania, eight counties in West Virginia and one county in Maryland. The wells were sampled to assess the ground-water quality across the region. This sampling is termed a Study-Unit Survey for the NAWQA program.

Field parameters were measured and water samples collected for laboratory analysis of nutrients, major ions, trace elements, pesticides and Volatile Organic Compounds. Many of the measured concentrations were below detection limits in the samples taken from the 30 wells. A listing all of the pesticides (table 1) and VOCs (table 2) and their detection levels precede the water-quality table. The concentrations of VOCs and pesticides detected in one or more of the samples are included in the water-quality table. Only those compounds with at least one detected concentration are listed in the table. Some water-level records are also present.

The shaded portion of figure 6 shows the sampling subarea in the fractured rock of the Pittsburgh Series of the Appalachian Plateau Physiographic Province.

Figure 6. Location and extent of the study-unit survey in the Fractured Rock of the Appalachian Plateau Physiographic Province

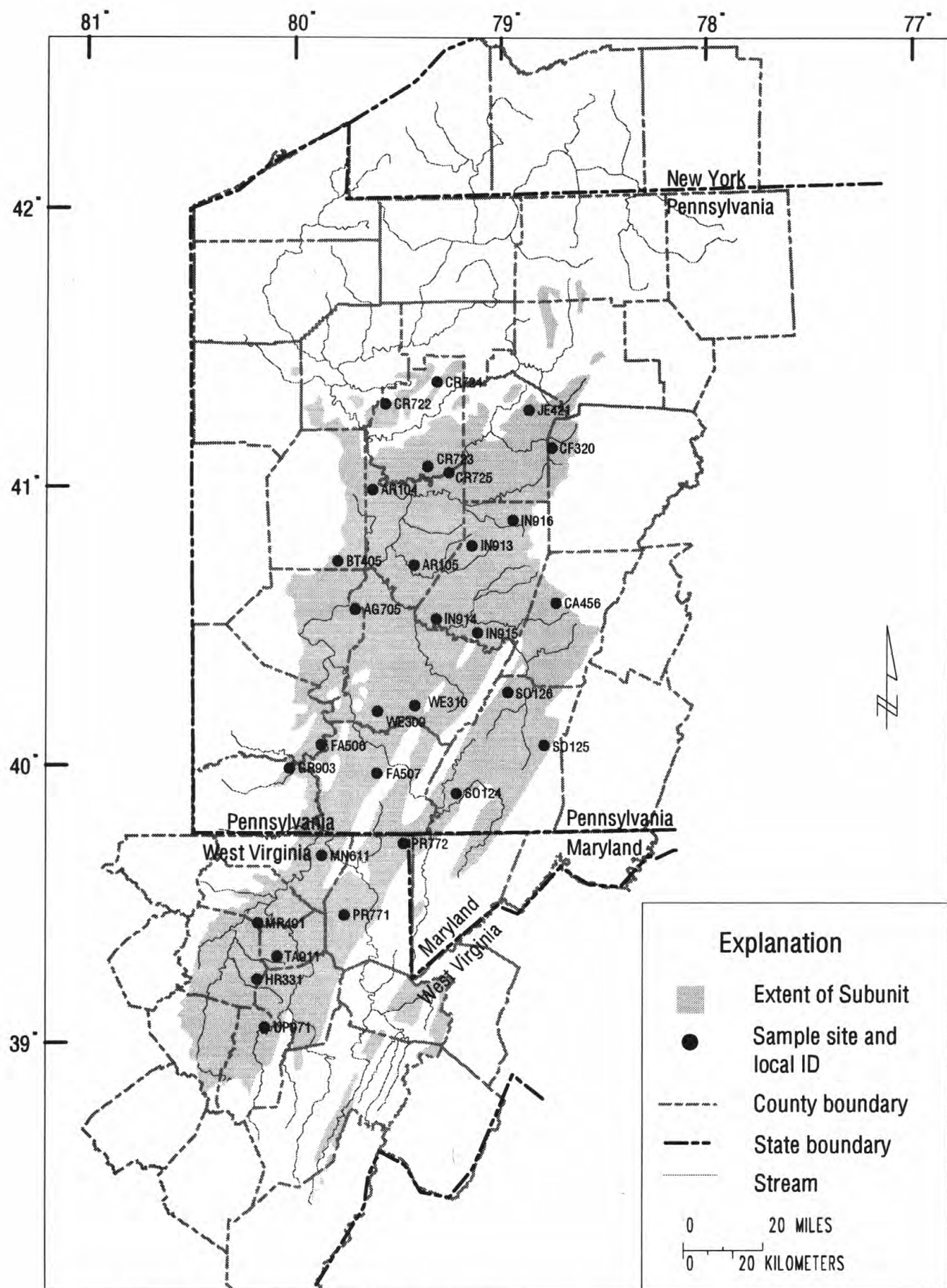


Figure 7. Location and cell number of wells sampled in the subunit of Pittsburgh Series Fractured Rock of the Appalachian Plateau Physiographic Province. [Number at sample location corresponds to site name in following tables.]

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES

ALLEGHENY AND MONONGAHELA RIVER BASIN NAWQA PROJECT

SUBUNIT OF THE PITTSBURGH SERIES IN THE FRACTURED ROCK OF THE APPALACHIAN PLATEAU PHYSIOGRAPHIC PROVINCE

This table contains water level records and well characteristics for a network of thirty privately-owned wells used to supply water for domestic use. The network of wells was established as part of the National Water-Quality Assessment (NAWQA) project in the Allegheny and Monongahela River Basin.

The wells were sampled to assess the status of ground-water quality in areas underlain by a subarea of the Appalachian Plateau Physiographic Province limited to the Pittsburgh Series fractured rock. This sampling is termed a Study Unit Survey for the NAWQA program.

Explanation of column headings- SITE IDENTIFIER: 15 digit unique identifier based on site latitude (first six digits), longitude (digits 7-13), and a two digit sequence number suffix. LOCATION: Name of 1:24000 U.S. Geological Survey topographic quadrangle. ELEVATION OF LAND SURFACE: Land-surface at well site, in feet above sea level. AQUIFER CODE: 317WBRG, Waynesburg Formation; 321CNMG, Conemaugh Formation; 321CSLM, Casselman Formation; 321GLNS, Glenshaw Formation; 321MNGL, Monongahela Group; 324ALGN, Allegheny Group. SOURCE OF DEPTH DATA: D, Driller; O, Owner. WATER LEVEL METHOD: T, electric tape.

SITE IDENTIFIER	LOCAL ID	LOCATION	ELEV. OF LAND SURFACE DATUM (FEET ABOVE NGVD) (72000)	DEPTH OF WELL (TOTAL FEET) (72008)	SOURCE OF DEPTH DATA	AQUIFER CODE	DATE	DEPTH BELOW LAND SURFACE (WATER LEVEL FEET) (72019)	WATER-LEVEL METHOD
PENNSYLVANIA									
ALLEGHENY COUNTY									
403148079443301	AG705	New Kensington East	1020	215.00	O	321MNGL	07-17-96	36.45	T
ARMSTRONG COUNTY									
405729079391701	AR104	Chicora	1265	60.00	D	324ALGN	--	--	--
404108079273001	AR105	Whitesburg	1160	110.00	O	321CNMG	07-15-96	64.77	T
BUTLER COUNTY									
404211079493101	BT405	Curtisville	1235	110.00	D	321CNMG	07-15-96	47.02	T
CAMBRIA COUNTY									
403237078463101	CA456	Colver	2250	72.00	O	321GLNS	--	--	--
CLARION COUNTY									
411550079352401	CR722	Kossuth	1530	58.00	O	324ALGN	--	--	--
410220079231701	CR723	Sligo	1250	80.00	O	324ALGN	07-11-96	11.30	T
412029079202201	CR724	Lucinda	1610	120.00	D	324ALGN	07-23-96	11.03	T
410057079170501	CR725	New Bethlehem	1125	30.00	O	324ALGN	07-11-96	11.13	T
CLEARFIELD COUNTY									
410557078465901	CF320	Du Bois	1510	110.00	D	321CNMG	07-16-96	17.87	T
FAYETTE COUNTY									
400247079543401	FA506	Fayette City	1180	175.00	D	317WBRG	--	--	--
395634079384101	FA507	Uniontown	1240	65.00	O	321GLNS	07-02-96	1.17	T
GREENE COUNTY									
395746080033701	GR903	Mather	880	125.00	D	321MNGL	08-27-96	43.50	T
INDIANA COUNTY									
404510079104101	IN913	Plumville	1150	123.00	D	321GLNS	07-16-96	6.75	T
402934079211401	IN914	Blairsville	1200	60.00	O	321GLNS	07-17-96	21.85	T
402629079092301	IN915	Bolivar	1910	95.00	O	324ALGN	--	--	--
405035078584001	IN916	Rochester Mills	1380	165.00	D	324ALGN	07-11-96	17.87	T
JEFFERSON COUNTY									
411407078533301	JE421	Hazen	1700	75.00	O	324ALGN	--	--	--
SOMERSET COUNTY									
395200079160101	SO124	Confluence	2120	75.00	O	321CSLM	07-02-96	35.85	T
400208078503901	SO125	Central City	2410	85.00	O	321GLNS	07-22-96	17.76	T
401337079005201	SO126	Boswell	1610	114.00	D	321GLNS	07-03-96	43.13	T
WESTMORELAND COUNTY									
400953079382101	WE309	Smithton	1320	55.00	D	321CSLM	07-02-96	24.20	T
401102079273801	WE310	Mammoth	1230	250.00	O	321GLNS	08-03-96	46.00	T
WEST VIRGINIA									
HARRISON COUNTY									
391221080130301	HR331	Brownston	1060	160.00	D	321MNGL	07-10-96	18.57	T
MARION COUNTY									
392428080124401	MR491	Fairmont West	965	94.00	O	321MNGL	07-22-96	10.99	T
MONONGALIA COUNTY									
393901079543601	MN611	Morgantown North	1020	65.00	O	321MNGL	--	--	--
PRESTON COUNTY									
392605079481601	PR771	Newburg	1530	90.00	O	324ALGN	07-18-96	23.71	T
394128079312101	PR772	Brandonville	2090	135.00	D	324ALGN	07-22-96	19.27	T
TAYLOR COUNTY									
391714080071901	TA911	Grafton	1122	100.00	O	321MNGL	07-10-96	14.96	T
UPSHUR COUNTY									
390158080105501	UP971	Century	1495	110.00	D	321CNMG	07-10-96	20.32	T

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES

ALLEGHENY AND MONONGAHELA RIVER BASIN NAWQA PROJECT

SUBUNIT OF PITTSBURGH SERIES IN THE FRACTURED ROCK OF THE APPALACHIAN PLATEAU PHYSIOGRAPHIC PROVINCE--Continued

TABLE 1.--PESTICIDE SCHEDULE FOR GROUND-WATER WELLS.

REMARKS.--Water from each of the 30 wells in this study was tested for pesticides. The table below lists the 47 pesticides on this schedule, the unit of measure (micrograms per liter, $\mu\text{G/L}$) the U.S. Geological Survey National Water Information System parameter code, and the method detection level. This pesticide schedule includes selected pesticides and metabolites that are efficiently partitioned from a water sample by solid-phase extraction and are sufficiently volatile and thermally stable for analysis by gas chromatography.

Samples are filtered through a glass-fiber membrane filter with openings that are 0.7 microns in size to remove sediment and microorganisms. Therefore, this schedule is suitable for compounds dissolved in water. Each sample was analyzed for all of the compounds in this schedule. **Pesticide compounds measured at or above the method detection limit (MDL) in one or more samples are listed in the water-quality table following the schedule list.** The MDL provides an index to indicate where measurement uncertainty is increased. When an analyte is detected and all criteria for a positive result are met, the concentration is reported. If the concentration is less than the MDL, an 'E' code will be reported with the value. If the analyte is qualitatively identified as present, but the quantitative determination is substantially more uncertain, the NWQL will identify the result with an 'E' code even though the measured value is greater than the MDL. A value reported with an 'E' code should be used with caution. When no analyte is detected in a sample, the default reporting value is the MDL preceded by a less than sign (<).

ACETOCHLOR ($\mu\text{G/L}$) (49260)	ALACHLOR ($\mu\text{G/L}$) (46342)	ALPHA BHC ($\mu\text{G/L}$) (34253)	ATRAZINE ($\mu\text{G/L}$) (39632)	BENFLURALIN ($\mu\text{G/L}$) (82673)	BUTYLATE ($\mu\text{G/L}$) (04028)
0.002	0.002	0.002	0.001	0.002	0.002
CARBARYL ($\mu\text{G/L}$) (82680)	CARBOFURAN ($\mu\text{G/L}$) (82674)	CHLOR- PYRIFOS ($\mu\text{G/L}$) (38933)	CYANAZINE ($\mu\text{G/L}$) (04041)	DCPA ($\mu\text{G/L}$) (82682)	DESETHYL ATRAZINE ($\mu\text{G/L}$) (04040)
0.003	0.003	0.004	0.004	0.002	0.002
DIAZINON ($\mu\text{G/L}$) (39572)	DIELDRIN ($\mu\text{G/L}$) (39381)	DIETHYL- ANILINE-2,6 ($\mu\text{G/L}$) (82660)	DISULFOTON ($\mu\text{G/L}$) (82677)	EPTC ($\mu\text{G/L}$) (82668)	ETHAL- FLURALIN ($\mu\text{G/L}$) (82663)
0.002	0.001	0.003	0.017	0.002	0.004
ETHOPROP ($\mu\text{G/L}$) (82672)	FONOFOS ($\mu\text{G/L}$) (04095)	LINDANE ($\mu\text{G/L}$) (39341)	LINURON ($\mu\text{G/L}$) (82666)	MALATHION ($\mu\text{G/L}$) (39532)	METHYL- AZINPHOS ($\mu\text{G/L}$) (82686)
0.003	0.003	0.004	0.002	0.005	0.001
METHYL- PARATHION ($\mu\text{G/L}$) (82667)	METOLACHLOR ($\mu\text{G/L}$) (39415)	METRIBUZIN ($\mu\text{G/L}$) (82630)	MOLINATE ($\mu\text{G/L}$) (82671)	NAPROP- AMIDE ($\mu\text{G/L}$) (82684)	P,P-DDE ($\mu\text{G/L}$) (34653)
0.006	0.002	0.004	0.004	0.003	0.006
ETHYL- PARATHION ($\mu\text{G/L}$) (39542)	PEBULATE ($\mu\text{G/L}$) (82669)	PENDI- METHALIN ($\mu\text{G/L}$) (82683)	CIS- PERMETHRIN ($\mu\text{G/L}$) (82687)	PHORATE ($\mu\text{G/L}$) (82664)	PROMETON ($\mu\text{G/L}$) (04037)
0.004	0.004	0.004	0.005	0.002	0.018
PRONAMIDE ($\mu\text{G/L}$) (82676)	PROPACHLOR ($\mu\text{G/L}$) (04024)	PROPANIL ($\mu\text{G/L}$) (82679)	PROPARGITE ($\mu\text{G/L}$) (82685)	SIMAZINE ($\mu\text{G/L}$) (04035)	TEBUTHIURON ($\mu\text{G/L}$) (82670)
0.003	0.007	0.004	0.013	0.005	0.010
TERBACIL ($\mu\text{G/L}$) (82665)	TERBUFOS ($\mu\text{G/L}$) (82675)	THIOBENCARB ($\mu\text{G/L}$) (82681)	TRIALATE ($\mu\text{G/L}$) (82678)	TRIFLURALIN ($\mu\text{G/L}$) (82661)	
0.007	0.013	0.002	0.001	0.002	

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES

ALLEGHENY AND MONONGAHELA RIVER BASIN NAWQA PROJECT

SUBUNIT OF PITTSBURGH SERIES IN THE FRACTURED ROCK OF THE APPALACHIAN PLATEAU PHYSIOGRAPHIC PROVINCE--Continued

TABLE 2.--VOLATILE ORGANIC COMPOUNDS SCHEDULE FOR GROUND-WATER WELLS

REMARKS.-- Water from each of the 30 wells in this study was tested for Volatile Organic Compounds. The table below lists the compounds on the schedule, the unit of measure (micrograms per liter, $\mu\text{G/L}$). The U.S. Geological Survey National Water Information System parameter code, and the reporting level. Each sample was analyzed for all of the compounds in this schedule. Compounds measured at or above the reporting level for one or more wells are listed in the water-quality table following the schedule lists. The MDL provides an index to indicate where measurement uncertainty is increased. When an analyte is detected and all criteria for a positive result are met, the concentration is reported. If the concentration is less than the MDL, an 'E' code will be reported with the value. If the analyte is qualitatively identified as present, but the quantitative determination is substantially more uncertain, the NWQL will identify the result with an 'E' code even though the measured value is greater than the MDL. A value reported with an 'E' code should be used with caution. When no analyte is detected in a sample, the default reporting value is the MDL preceded by a less than sign (<).

ACETATE VINYL ($\mu\text{G/L}$) (77057)	ACETONE ($\mu\text{G/L}$) (81552)	ACROLEIN ($\mu\text{G/L}$) (34210)	ACRYLO- NITRILE ($\mu\text{G/L}$) (34215)	BENZENE ($\mu\text{G/L}$) (34030)	BENZENE BROMO- ($\mu\text{G/L}$) (81555)
5.00	5.00	2.00	2.00	0.050	0.050
BENZENE CHLORO- ($\mu\text{G/L}$) (34301)	BENZENE O-DI- CHLORO- ($\mu\text{G/L}$) (34536)	BENZENE 1,3-DI- CHLORO- ($\mu\text{G/L}$) (34566)	BENZENE 1,4-DI- CHLORO- ($\mu\text{G/L}$) (34571)	BENZENE 1,2,3- TRICHLORO- ($\mu\text{G/L}$) (77613)	BENZENE 1,2,4- TRICHLORO- ($\mu\text{G/L}$) (34551)
0.050	0.050	0.050	0.050	0.200	0.200
BENZENE 1,2,3- TRIMETHYL- ($\mu\text{G/L}$) (77221)	BENZENE 1,2,4- TRIMETHYL- ($\mu\text{G/L}$) (77222)	BENZENE 1,3,5- TRIMETHYL- ($\mu\text{G/L}$) (77226)	BENZENE ETHYL- ($\mu\text{G/L}$) (34371)	BENZENE N-PROPYL- ($\mu\text{G/L}$) (77224)	BENZENE ISOPROPYL- ($\mu\text{G/L}$) (77223)
0.050	0.050	0.050	0.050	0.050	0.050
BENZENE N-BUTYL- ($\mu\text{G/L}$) (77342)	BENZENE SEC-BUTYL- ($\mu\text{G/L}$) (77350)	BENZENE TERT-BUTYL- ($\mu\text{G/L}$) (77353)	2-BUTENE TRANS-1,4- DICHLORO- ($\mu\text{G/L}$) (73547)	CARBON DISULFIDE ($\mu\text{G/L}$) (77041)	ETHANE 1,2- DIBROMO- ($\mu\text{G/L}$) (77651)
0.050	0.050	0.050	5.00	0.050	0.100
ETHANE CHLORO- ($\mu\text{G/L}$) (34311)	ETHANE 1,1- DICHLORO- ($\mu\text{G/L}$) (34496)	ETHANE 1,2- DICHLORO- ($\mu\text{G/L}$) (32103)	ETHANE 1,1,1- TRICHLORO- ($\mu\text{G/L}$) (34506)	ETHANE 1,1,2- TRICHLORO- ($\mu\text{G/L}$) (34511)	ETHANE, 1,1,1,2- TETRACHLORO- ($\mu\text{G/L}$) (77562)
0.100	0.050	0.050	0.050	0.100	0.050
ETHANE 1,1,2,2- TETRACHLORO- ($\mu\text{G/L}$) (34516)	ETHANE HEXACHLORO- ($\mu\text{G/L}$) (34396)	ETHENE BROMO- ($\mu\text{G/L}$) (50002)	ETHENE CHLORO- ($\mu\text{G/L}$) (34423)	ETHENE 1,1- DICHLORO- ($\mu\text{G/L}$) (34501)	ETHENE CIS-1,2- DICHLORO- ($\mu\text{G/L}$) (77093)
0.100	0.050	0.100	0.100	0.100	0.050
ETHENE TRANS-1,2- DICHLORO- ($\mu\text{G/L}$) (34546)	ETHENE TRICHLORO- ($\mu\text{G/L}$) (39180)	ETHENE TETRACHLORO- ($\mu\text{G/L}$) (34475)	ETHER DI- ISOPROPYL- ($\mu\text{G/L}$) (81577)	ETHER ETHYL- ($\mu\text{G/L}$) (81576)	ETHER METHYL- TERT-BUTYL- ($\mu\text{G/L}$) (78032)
0.050	0.050	0.050	0.100	0.100	0.100

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES

ALLEGHENY AND MONONGAHELA RIVER BASIN NAWQA PROJECT

SUBUNIT OF PITTSBURGH SERIES IN THE FRACTURED ROCK OF THE APPALACHIAN PLATEAU PHYSIOGRAPHIC PROVINCE--Continued

TABLE 2.--VOLATILE ORGANIC COMPOUNDS SCHEDULE FOR GROUND-WATER WELLS--Continued

ETHER ETHYL- TERT-BUTYL- ($\mu\text{G/L}$) (50004)	ETHER TERT- PENTYL- METHYL- ($\mu\text{G/L}$) (50005)	FREON-113 ($\mu\text{G/L}$) (77652)	FURAN TETRAHYDRO- ($\mu\text{G/L}$) (81607)	HEXACHLORO- BUTADIENE ($\mu\text{G/L}$) (39702)	2-HEXANONE ($\mu\text{G/L}$) (77103)
0.100	0.100	0.050	5.00	0.200	5.00
ISODURENE ($\mu\text{G/L}$) (50000)	METHACRYLATE METHYL- ($\mu\text{G/L}$) (81597)	METHACRYLATE ETHYL- ($\mu\text{G/L}$) (73570)	METHANE BROMO- ($\mu\text{G/L}$) (34413)	METHANE CHLORO- ($\mu\text{G/L}$) (34418)	METHANE CHLORO- BROMO- ($\mu\text{G/L}$) (77297)
0.050	1.00	1.00	0.100	0.200	0.100
METHANE CHLORO- DIBROMO- ($\mu\text{G/L}$) (32105)	METHANE DIBROMO- ($\mu\text{G/L}$) (30217)	METHANE DICHLORO- BROMO- ($\mu\text{G/L}$) (32101)	METHANE DIFLUORO- DICHLORO- ($\mu\text{G/L}$) (34668)	METHANE IODO- ($\mu\text{G/L}$) (77424)	METHANE TETRACHLORO- ($\mu\text{G/L}$) (32102)
0.100	0.100	0.100	0.200	0.050	0.050
METHANE TRIBROMO- ($\mu\text{G/L}$) (32104)	METHANE TRICHLORO- ($\mu\text{G/L}$) (32106)	METHANE FLUORO- TRICHLORO- ($\mu\text{G/L}$) (34488)	METHYL ACRYLATE ($\mu\text{G/L}$) (49991)	METHACRYLO- NITRITE ($\mu\text{G/L}$) (81593)	METHYL- ETHYL- KETONE ($\mu\text{G/L}$) (81595)
0.200	0.050	0.100	2.00	2.00	5.00
METHYL- ISOBUTYL- KETONE ($\mu\text{G/L}$) (78133)	NAPHTHALENE ($\mu\text{G/L}$) (34696)	PREHNITENE ($\mu\text{G/L}$) (49999)	PROPANE 1,2- DICHLORO- ($\mu\text{G/L}$) (34541)	PROPANE 2,2- DICHLORO- ($\mu\text{G/L}$) (77170)	PROPANE 1,3- DICHLORO- ($\mu\text{G/L}$) (77173)
5.00	0.200	0.050	0.050	0.050	0.050
PROPANE 1,2,3- TRICHLORO- ($\mu\text{G/L}$) (77443)	PROPANE CHLORO- DIBROMO- ($\mu\text{G/L}$) (82625)	PROPENE 3-CHLORO- ($\mu\text{G/L}$) (78109)	PROPENE 1,1- DICHLORO- ($\mu\text{G/L}$) (77168)	PROPENE CIS-1,3- DICHLORO- ($\mu\text{G/L}$) (34704)	PROPENE TRANS-1,3- DICHLORO- ($\mu\text{G/L}$) (34699)
0.200	0.500	0.100	0.050	0.100	0.100
STYRENE ($\mu\text{G/L}$) (77128)	TOLUENE ($\mu\text{G/L}$) (34010)	TOLUENE O-CHLORO- ($\mu\text{G/L}$) (77275)	TOLUENE P-CHLORO- ($\mu\text{G/L}$) (77277)	TOLUENE O-ETHYL- ($\mu\text{G/L}$) (77220)	TOLUENE P-ISOPROPYL- ($\mu\text{G/L}$) (77356)
0.050	0.050	0.050	0.050	0.050	0.050
VINYL- CHLORIDE ($\mu\text{G/L}$) (39175)	XYLENE O- ($\mu\text{G/L}$) (77135)	XYLENE M- and P- ($\mu\text{G/L}$) (85795)			
0.100	0.050	0.050			

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES

ALLEGHENY AND MONONGAHELA RIVER BASIN NAWQA PROJECT

SUBUNIT OF PITTSBURGH SERIES IN THE FRACTURED ROCK OF THE APPALACHIAN PLATEAU PHYSIOGRAPHIC PROVINCE--Continued

REMARKS.--Explanation of the column headings--**SITE IDENTIFIER:** 15-digit unique identifier based on site latitude (first six digits), longitude (digits seven through thirteen), and a 2-digit sequence number suffix; **DEG°C:** degrees Celsius; **NTU:** nephelometric turbidity units; **µS/CM:** microsiemens per centimeter at 25 degrees Celsius; **MG/L:** milligrams per liter; **PCI/L:** Picocurie per liter; **µG/L:** micrograms per liter; **2 SIGMA:** counting statistics that represents error in the reported radon value caused by variation in sample counting, background radiation, volume of sample, and decay since sample was collected; **DISS:** dissolved; **REC:** recoverable; **WH TOT IT:** alkalinity, as determined by incremental titration of unfiltered water; **DIS TOT IT:** alkalinity as determined by incremental titration of filtered water.

WATER QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

SITE IDENTIFIER	LOCAL ID	DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (µS/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)
PENNSYLVANIA									
ALLEGHENY COUNTY									
403148079443301	AG705	07-25-96	0800	1060	7.4	14.5	2.5	1.5	430
ARMSTRONG COUNTY									
405729079391701	AR104	08-08-96	0800	255	6.7	13.5	2.5	0.1	110
404108079273001	AR105	07-17-96	0800	302	7.0	15.5	0.0	5.2	130
BUTLER COUNTY									
404211079493101	BT405	08-06-96	0800	321	7.2	14.5	9.8	2.8	130
CAMBRIA COUNTY									
403237078463101	CA456	08-20-96	0800	222	6.8	13.0	3.5	0.1	110
CLARION COUNTY									
411550079352401	CR722	07-29-96	0800	179	6.1	16.0	3.9	0.8	68
410220079231701	CR723	07-15-96	0800	241	6.6	12.5	5.8	0.1	130
412029079202201	CR724	07-30-96	0800	91	4.8	14.5	0.38	5.7	29
410057079170501	CR725	07-16-96	0800	323	4.9	13.0	0.15	1.4	130
CLEARFIELD COUNTY									
410557078465901	CF320	07-24-96	0800	132	5.7	11.5	0.16	5.4	39
FAYETTE COUNTY									
400247079543401	FA506	08-22-96	0800	476	6.4	19.5	1.2	3.1	190
395634079384101	FA507	07-10-96	0800	220	7.2	15.0	18	0.2	91
GREENE COUNTY									
395746080033701	GR903	08-27-96	0800	918	7.5	16.5	57	8.6	100
INDIANA COUNTY									
404510079104101	IN913	07-22-96	0800	219	7.5	14.0	0.87	0.1	90
402934079211401	IN914	08-01-96	1300	486	6.8	13.5	2.0	5.8	220
402629079092301	IN915	08-01-96	0800	78	4.8	11.5	0.70	7.3	26
405035078584001	IN916	07-18-96	0800	836	7.1	15.0	0.92	0.1	2
JEFFERSON COUNTY									
411407078533301	JE421	07-31-96	0800	234	7.3	14.5	8.6	0.7	110
SOMERSET COUNTY									
395200079160101	SO124	07-11-96	0800	241	5.3	14.0	0.0	5.5	51
400208078503901	SO125	08-07-96	0800	474	7.4	15.5	10	0.2	210
401337079005201	SO126	08-05-96	0800	285	9.2	13.0	0.60	0.5	43
WESTMORELAND COUNTY									
400953079382101	WE309	07-09-96	0800	384	7.2	15.5	0.0	0.3	200
401102079273801	WE310	08-26-96	0800	332	7.6	14.0	4.0	0.2	75
WEST VIRGINIA									
HARRISON COUNTY									
391221080130301	HR331	08-14-96	0800	331	7.6	14.5	1.5	0.1	130
MARION COUNTY									
392428080124401	MR491	08-15-96	0800	2260	8.5	17.0	2.2	0.0	20
MONONGALIA COUNTY									
393901079543601	MN611	08-13-96	0800	647	7.3	13.5	1.4	3.5	330
PRESTON COUNTY									
392605079481601	PR771	08-15-96	1300	1230	6.6	13.5	14	0.4	710
394128079312101	PR772	08-21-96	0800	134	6.9	14.0	0.60	0.2	59
TAYLOR COUNTY									
391714080071901	TA911	08-14-96	1300	799	9.3	14.5	0.30	2.5	5
UPSHUR COUNTY									
390158080105501	UP971	08-19-96	0800	590	7.9	15.0	0.50	0.1	81

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES

ALLEGHENY AND MONONGAHELA RIVER BASIN NAWQA PROJECT

SUBUNIT OF PITTSBURGH SERIES IN THE FRACTURED ROCK OF THE APPALACHIAN PLATEAU PHYSIOGRAPHIC PROVINCE--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

LOCAL ID	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)	ALKA- LINITY WAT WH TOT IT FIELD MG/L AS CACO3 (00419)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	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)
PENNSYLVANIA									
ALLEGHENY COUNTY									
AG705	130	26	120	1.7	188	184	420	45	0.70
ARMSTRONG COUNTY									
AR104	31	8.1	3.9	1.9	96	95	13	16	0.10
AR105	34	11	7.5	1.2	101	97	18	20	0.20
BUTLER COUNTY									
BT405	35	11	17	1.3	157	160	10	2.9	0.20
CAMBRIA COUNTY									
CA456	32	7.5	0.50	0.70	83	84	18	7.8	0.10
CLARION COUNTY									
CR722	16	6.7	4.5	1.9	55	53	38	10	0.10
CR723	39	8.5	2.2	1.6	86	86	39	19	0.20
CR724	5.0	3.9	0.80	1.5	2	2	19	2.2	<0.10
CR725	27	16	3.9	2.1	5	5	120	8.1	0.20
CLEARFIELD COUNTY									
CF320	9.3	3.8	13	1.1	9	8	19	23	<0.10
FAYETTE COUNTY									
FA506	48	16	16	1.9	86	91	77	42	<0.10
FA507	25	7.0	6.8	1.0	96	99	14	2.2	0.20
GREENE COUNTY									
GR903	29	7.7	170	1.7	340	332	90	32	0.70
INDIANA COUNTY									
IN913	24	7.3	20	1.1	114	114	18	2.9	0.20
IN914	63	15	7.7	2.1	116	120	23	24	0.20
IN915	4.7	3.5	1.2	0.90	3	3	14	5.9	<0.10
IN916	0.57	0.12	170	0.80	140	137	240	7.6	0.20
JEFFERSON COUNTY									
JE421	33	5.6	2.4	1.1	89	93	4.0	15	0.20
SOMERSET COUNTY									
SO124	13	4.4	23	1.3	98	95	4.9	47	<0.10
SO125	67	10	0.90	1.0	101	100	7.7	78	0.20
SO126	12	3.1	80	0.50	219	201	3.9	1.4	0.60
WESTMORELAND COUNTY									
WE309	66	9.3	1.8	1.9	171	168	19	14	0.20
WE310	23	4.2	80	1.4	177	177	23	43	0.40
WEST VIRGINIA									
HARRISON COUNTY									
HR331	42	7.2	18	1.1	146	148	25	1.3	0.20
MARION COUNTY									
MR491	5.5	1.4	480	1.4	346	352	0.20	480	2.2
MONONGALIA COUNTY									
MN611	100	19	8.5	1.3	214	214	110	13	0.20
PRESTON COUNTY									
PR771	200	51	2.0	4.1	112	112	630	0.40	0.20
PR772	15	5.2	0.50	1.0	65	62	1.7	3.1	0.20
TAYLOR COUNTY									
TA911	1.5	0.30	180	0.40	291	288	100	6.2	1.1
UPSHUR COUNTY									
UP971	24	5.0	140	1.4	315	338	77	1.1	0.70

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES

ALLEGHENY AND MONONGAHELA RIVER BASIN NAWQA PROJECT

SUBUNIT OF PITTSBURGH SERIES IN THE FRACTURED ROCK OF THE APPALACHIAN PLATEAU PHYSIOGRAPHIC PROVINCE--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

LOCAL ID	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C 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 DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
PENNSYLVANIA									
ALLEGHENY COUNTY									
AG705	0.080	11	890	<0.010	0.170	0.070	<0.20	<0.010	0.010
ARMSTRONG COUNTY									
AR104	0.040	11	144	0.010	0.050	0.180	<0.20	<0.010	0.010
AR105	0.030	12	171	<0.010	0.150	0.020	<0.20	<0.010	0.010
BUTLER COUNTY									
BT405	0.030	16	194	<0.010	<0.050	0.280	0.30	<0.010	0.010
CAMBRIA COUNTY									
CA456	0.030	6.5	118	0.010	0.080	0.030	<0.20	<0.010	0.010
CLARION COUNTY									
CR722	0.090	11	108	<0.010	0.100	0.100	<0.20	0.020	0.020
CR723	0.060	7.4	180	0.010	<0.050	0.110	<0.20	<0.010	0.020
CR724	0.010	6.4	46	0.010	3.10	0.020	<0.20	<0.010	<0.010
CR725	0.030	6.7	208	<0.010	3.10	0.030	0.20	<0.010	0.010
CLEARFIELD COUNTY									
CF320	0.030	8.8	90	<0.010	1.70	0.040	<0.20	<0.010	0.010
FAYETTE COUNTY									
FA506	0.030	17	288	<0.010	0.130	0.050	<0.20	<0.010	<0.010
FA507	0.020	8.8	128	<0.010	<0.050	0.070	<0.20	<0.010	0.010
GREENE COUNTY									
GR903	0.26	8.3	603	0.020	0.820	0.120	<0.20	<0.010	0.030
INDIANA COUNTY									
IN913	0.030	7.6	146	0.010	0.090	0.210	<0.20	<0.010	<0.010
IN914	0.040	9.6	270	0.010	14.0	0.030	<0.20	0.090	0.120
IN915	0.020	5.9	34	<0.010	1.20	<0.015	<0.20	0.020	0.010
IN916	0.020	7.3	527	<0.010	0.080	0.110	<0.20	0.080	0.120
JEFFERSON COUNTY									
JE421	0.050	9.5	124	0.010	0.090	<0.015	<0.20	0.020	0.010
SOMERSET COUNTY									
SO124	0.060	7.2	180	1.10	5.40	0.030	<0.20	<0.010	<0.010
SO125	0.090	7.8	364	0.010	0.090	0.080	<0.20	<0.010	0.010
SO126	0.030	11	254	0.010	0.140	0.160	<0.20	<0.010	0.030
WESTMORELAND COUNTY									
WE309	0.050	13	260	0.010	0.750	0.030	<0.20	0.020	0.020
WE310	0.050	8.8	286	<0.010	<0.050	0.330	0.30	0.050	0.040
WEST VIRGINIA									
HARRISON COUNTY									
HR331	0.020	9.2	192	0.010	0.070	0.400	0.30	<0.010	<0.010
MARION COUNTY									
MR491	3.3	7.9	1200	0.010	0.070	0.640	0.50	<0.010	0.030
MONONGALIA COUNTY									
MN611	0.080	13	402	0.010	0.070	0.190	<0.20	0.040	0.020
PRESTON COUNTY									
PR771	<0.010	14	1020	0.010	0.070	0.090	<0.20	<0.010	<0.010
PR772	0.030	8.6	72	<0.010	<0.050	0.050	<0.20	<0.010	<0.010
TAYLOR COUNTY									
TA911	0.080	7.8	487	0.010	0.080	0.210	<0.20	<0.010	0.040
UPSHUR COUNTY									
UP971	0.050	8.2	450	0.010	0.060	0.480	0.50	<0.010	0.010

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES

ALLEGHENY AND MONONGAHELA RIVER BASIN NAWQA PROJECT

JBUNIT OF PITTSBURGH SERIES IN THE FRACTURED ROCK OF THE APPALACHIAN PLATEAU PHYSIOGRAPHIC PROVINCE--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

LOCAL ID	ALUM- INUM, DIS- SOLVED (µG/L AS AL) (01106)	ANTI- MONY, DIS- SOLVED (µG/L AS SB) (01095)	ARSENIC DIS- SOLVED (µG/L AS AS) (01000)	BARIUM, DIS- SOLVED (µG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (µG/L AS BE) (01010)	CADMIUM DIS- SOLVED (µG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (µG/L AS CR) (01030)	COBALT, DIS- SOLVED (µG/L AS CO) (01035)	COPPER, DIS- SOLVED (µG/L AS CU) (01040)	IRON, DIS- SOLVED (µG/L AS FE) (01046)
PENNSYLVANIA										
ALLEGHENY COUNTY										
AG705	4.0	<1.0	<1	21	<1.0	<1.0	3.0	<1.0	3.0	7.0
ARMSTRONG COUNTY										
AR104	2.0	<1.0	<1	231	<1.0	<1.0	2.0	<1.0	<1.0	3100
AR105	5.0	<1.0	<1	173	<1.0	<1.0	1.0	<1.0	2.0	<3.0
BUTLER COUNTY										
BT405	3.0	<1.0	<1	350	<1.0	<1.0	3.0	<1.0	2.0	100
CAMBRIA COUNTY										
CA456	3.0	<1.0	<1	121	<1.0	<1.0	<1.0	1.0	<1.0	850
CLARION COUNTY										
CR722	7.0	<1.0	3	47	<1.0	<1.0	1.0	12	1.0	14000
CR723	4.0	<1.0	<1	179	<1.0	<1.0	1.0	<1.0	<1.0	3700
CR724	361	<1.0	<1	148	<1.0	<1.0	<1.0	7.0	15	10
CR725	681	<1.0	<1	26	<1.0	<1.0	2.0	24	18	14
CLEARFIELD COUNTY										
CF320	11	<1.0	<1	44	<1.0	<1.0	<1.0	<1.0	136	6.0
FAYETTE COUNTY										
FA506	3.0	<1.0	<1	47	<1.0	<1.0	<1.0	<1.0	11	14
FA507	4.0	<1.0	<1	23	<1.0	<1.0	<1.0	<1.0	<1.0	130
GREENE COUNTY										
GR903	6.0	<1.0	<1	74	<1.0	<1.0	4.0	2.0	5.0	5.0
INDIANA COUNTY										
IN913	3.0	<1.0	<1	80	<1.0	<1.0	1.0	<1.0	<1.0	290
IN914	3.0	<1.0	<1	173	<1.0	<1.0	2.0	<1.0	12	<3.0
IN915	34	<1.0	<1	50	<1.0	<1.0	<1.0	<1.0	77	7.0
IN916	3.0	<1.0	<1	<1.0	<1.0	<1.0	2.0	<1.0	1.0	24
JEFFERSON COUNTY										
JE421	4.0	<1.0	<1	250	<1.0	<1.0	1.0	<1.0	<1.0	4600
SOMERSET COUNTY										
SO124	79	<1.0	<1	43	<1.0	<1.0	<1.0	<1.0	4.0	4.0
SO125	3.0	<1.0	<1	534	<1.0	<1.0	2.0	<1.0	<1.0	730
SO126	4.0	<1.0	<1	100	<1.0	<1.0	3.0	<1.0	<1.0	12
WESTMORELAND COUNTY										
WE309	3.0	<1.0	<1	130	<1.0	<1.0	1.0	<1.0	<1.0	8.0
WE310	4.0	<1.0	<1	121	<1.0	<1.0	2.0	<1.0	<1.0	80
WEST VIRGINIA										
HARRISON COUNTY										
HR331	3.0	<1.0	<1	175	<1.0	<1.0	<1.0	<1.0	<1.0	120
MARION COUNTY										
MR491	4.0	<1.0	<1	498	<1.0	<1.0	3.0	<1.0	<1.0	20
MONONGALIA COUNTY										
MN611	3.0	<1.0	<1	76	<1.0	<1.0	3.0	<1.0	<1.0	1300
PRESTON COUNTY										
PR771	75	<1.0	<1	22	<1.0	<1.0	2.0	113	3.0	15000
PR772	3.0	1.0	1	172	<1.0	<1.0	<1.0	<1.0	<1.0	4700
TAYLOR COUNTY										
TA911	6.0	<1.0	<1	55	<1.0	<1.0	6.0	<1.0	1.0	<3.0
UPSHUR COUNTY										
UP971	4.0	<1.0	<1	69	<1.0	<1.0	1.0	<1.0	<1.0	200

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES

ALLEGHENY AND MONONGAHELA RIVER BASIN NAWQA PROJECT

SUBUNIT OF PITTSBURGH SERIES IN THE FRACTURED ROCK OF THE APPALACHIAN PLATEAU PHYSIOGRAPHIC PROVINCE--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

LOCAL ID	LEAD, DIS- SOLVED (µG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (µG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (µG/L AS MO) (01060)	NICKEL, DIS- SOLVED (µG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (µG/L AS SE) (01145)	SILVER, DIS- SOLVED (µG/L AS AG) (01075)	ZINC, DIS- SOLVED (µG/L AS ZN) (01090)	URANIUM NATURAL DIS- SOLVED (µG/L AS U) (22703)	RADON 222 TOTAL (PCI/L) (82303)	RN-222 2 SIGMA WATER, WHOLE, TOTAL, (PCI/L) (76002)
PENNSYLVANIA										
ALLEGHENY COUNTY										
AG705	<1.0	3.0	<1.0	3.0	<1	<1.0	5.0	<1.0	220	19
ARMSTRONG COUNTY										
AR104	<1.0	229	<1.0	1.0	<1	<1.0	5.0	<1.0	69	17
AR105	<1.0	<1.0	<1.0	1.0	<1	<1.0	85	<1.0	530	24
BUTLER COUNTY										
BT405	<1.0	140	<1.0	2.0	<1	<1.0	2.0	<1.0	290	20
CAMBRIA COUNTY										
CA456	<1.0	315	<1.0	1.0	<1	<1.0	1.0	<1.0	<64	16
CLARION COUNTY										
CR722	<1.0	767	<1.0	14	<1	<1.0	33	<1.0	85	17
CR723	<1.0	593	<1.0	1.0	<1	<1.0	1.0	<1.0	55	17
CR724	2.0	152	<1.0	19	<1	<1.0	56	<1.0	880	30
CR725	<1.0	879	<1.0	68	2	<1.0	191	<1.0	1400	35
CLEARFIELD COUNTY										
CF320	3.0	17	<1.0	4.0	<1	<1.0	7.0	<1.0	820	28
FAYETTE COUNTY										
FA506	<1.0	31	<1.0	3.0	<1	<1.0	13	<1.0	110	16
FA507	<1.0	827	<1.0	<1.0	<1	<1.0	8.0	<1.0	700	28
GREENE COUNTY										
GR903	<1.0	83	<1.0	2.0	<1	<1.0	14	<1.0	120	17
INDIANA COUNTY										
IN913	<1.0	89	<1.0	<1.0	<1	<1.0	4.0	<1.0	380	21
IN914	<1.0	<1.0	<1.0	2.0	<1	<1.0	3.0	<1.0	1000	42
IN915	1.0	32	<1.0	11	<1	<1.0	36	<1.0	980	42
IN916	<1.0	<1.0	<1.0	<1.0	<1	<1.0	1.0	<1.0	180	18
JEFFERSON COUNTY										
JE421	<1.0	486	<1.0	<1.0	<1	<1.0	5.0	<1.0	320	22
SOMERSET COUNTY										
SO124	<1.0	49	2.0	2.0	<1	<1.0	8.0	<1.0	1300	34
SO125	<1.0	358	<1.0	2.0	<1	<1.0	2.0	<1.0	110	18
SO126	<1.0	4.0	<1.0	<1.0	<1	<1.0	<1.0	<1.0	860	50
WESTMORELAND COUNTY										
WE309	<1.0	120	<1.0	2.0	<1	<1.0	2.0	<1.0	2300	43
WE310	<1.0	137	<1.0	2.0	<1	<1.0	<1.0	<1.0	220	21
WEST VIRGINIA										
HARRISON COUNTY										
HR331	<1.0	47	2.0	<1.0	<1	<1.0	2.0	<1.0	1100	51
MARION COUNTY										
MR491	<1.0	4.0	40	<1.0	<1	<1.0	1.0	<1.0	1100	44
MONONGALIA COUNTY										
MN611	<1.0	257	<1.0	5.0	<1	<1.0	2.0	<1.0	140	17
PRESTON COUNTY										
PR771	<1.0	92	<1.0	130	<1	<1.0	127	<1.0	2300	58
PR772	<1.0	461	<1.0	1.0	<1	<1.0	9.0	<1.0	180	18
TAYLOR COUNTY										
TA911	<1.0	1.0	3.0	<1.0	<1	<1.0	3.0	<1.0	1000	50
UPSHUR COUNTY										
UP971	<1.0	17	<1.0	<1.0	<1	<1.0	<1.0	<1.0	270	23

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES

ALLEGHENY AND MONONGAHELA RIVER BASIN NAWQA PROJECT

SUBUNIT OF PITTSBURGH SERIES IN THE FRACTURED ROCK OF THE APPALACHIAN PLATEAU PHYSIOGRAPHIC PROVINCE--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

LOCAL ID	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	ATRA- ZINE, WATER, DISS, REC (µG/L) (39632)	DEETHYL ATRA- ZINE, WATER, DISS, REC (µG/L) (04040)	DI- AZINON, DIS- SOLVED (µG/L) (39572)	METO- LACHLOR WATER DISSOLV (µG/L) (39415)	METRI- BUZIN WATER DISSOLV (µG/L) (82630)	BENZENE TOTAL (µG/L) (34030)	CHLORO- BENZENE TOTAL (µG/L) (34301)	BENZENE 123-TRI METHYL- WATER UNFLTRD RECOVER (µG/L) (77221)
PENNSYLVANIA									
ALLEGHENY COUNTY									
AG705	0.90	<0.001	<0.002	<0.002	<0.002	<0.004	<0.050	<0.050	<0.050
ARMSTRONG COUNTY									
AR104	0.80	<0.001	<0.002	<0.002	<0.002	<0.004	<0.050	<0.050	<0.050
AR105	1.0	<0.001	<0.002	<0.002	<0.002	<0.004	<0.050	<0.050	<0.050
BUTLER COUNTY									
BT405	1.2	<0.001	<0.002	<0.002	0.002	<0.004	<0.050	<0.050	<0.050
CAMBRIA COUNTY									
CA456	2.5	<0.001	<0.002	<0.002	<0.002	<0.004	<0.050	<0.050	E0.002
CLARION COUNTY									
CR722	1.6	<0.001	<0.002	<0.002	<0.002	<0.004	<0.050	<0.050	<0.050
CR723	0.20	<0.001	<0.002	<0.002	<0.002	<0.004	<0.050	<0.050	<0.050
CR724	0.70	<0.001	<0.002	<0.002	<0.002	<0.004	<0.050	<0.050	<0.050
CR725	2.4	<0.001	<0.002	0.004	<0.002	<0.004	<0.050	<0.050	<0.050
CLEARFIELD COUNTY									
CF320	1.3	<0.001	<0.002	<0.002	<0.002	<0.004	<0.050	<0.050	<0.050
FAYETTE COUNTY									
FA506	0.60	<0.001	<0.002	E0.003	<0.002	<0.004	<0.050	<0.050	<0.050
FA507	0.40	<0.001	<0.002	0.005	<0.002	<0.004	<0.050	<0.050	<0.050
GREENE COUNTY									
GR903	1.2	<0.001	<0.002	<0.002	<0.002	<0.004	<0.050	<0.050	<0.050
INDIANA COUNTY									
IN913	0.90	<0.001	<0.002	<0.002	<0.002	<0.004	<0.050	<0.050	<0.050
IN914	0.60	0.013	E0.005	<0.002	E0.002	<0.004	<0.050	<0.050	<0.050
IN915	0.50	<0.001	<0.002	<0.002	<0.002	<0.004	<0.050	<0.050	<0.050
IN916	1.1	<0.001	<0.002	E0.003	<0.002	<0.004	<0.050	<0.050	<0.050
JEFFERSON COUNTY									
JE421	3.9	<0.001	<0.002	<0.002	<0.002	<0.004	<0.050	<0.050	<0.050
SOMERSET COUNTY									
SO124	1.0	0.170	E0.052	<0.002	<0.002	<0.004	<0.050	<0.050	<0.050
SO125	0.60	<0.001	<0.002	<0.002	<0.002	<0.004	<0.050	<0.050	<0.050
SO126	1.4	<0.001	<0.002	0.004	<0.002	0.016	<0.050	<0.050	<0.050
WESTMORELAND COUNTY									
WE309	0.40	<0.001	<0.002	0.007	<0.002	0.015	E0.050	<0.050	<0.050
WE310	0.40	<0.001	<0.002	<0.002	<0.002	<0.004	E0.020	<0.050	<0.050
WEST VIRGINIA									
HARRISON COUNTY									
HR331	1.1	--	--	--	--	--	<0.050	<0.050	<0.050
MARION COUNTY									
MR491	1.4	<0.001	<0.002	<0.002	<0.002	<0.004	<0.050	<0.050	<0.050
MONONGALIA COUNTY									
MN611	0.60	<0.001	<0.002	<0.002	<0.002	<0.004	<0.050	<0.050	<0.050
PRESTON COUNTY									
PR771	2.0	<0.001	<0.002	<0.002	<0.002	<0.004	<0.050	<0.050	<0.050
PR772	0.20	<0.001	<0.002	<0.002	<0.002	<0.004	<0.050	E0.004	<0.050
TAYLOR COUNTY									
TA911	0.60	--	--	--	--	--	<0.050	<0.050	<0.050
UPSHUR COUNTY									
UP971	0.60	<0.001	<0.002	<0.002	<0.002	<0.004	<0.050	<0.050	<0.050

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES

ALLEGHENY AND MONONGAHELA RIVER BASIN NAWQA PROJECT

SUBUNIT OF PITTSBURGH SERIES IN THE FRACTURED ROCK OF THE APPALACHIAN PLATEAU PHYSIOGRAPHIC PROVINCE--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

LOCAL ID	BENZENE 124-TRI METHYL UNFILT RECOVER ($\mu\text{G/L}$) (77222)	CARBON DI. SULFIDE WATER WHOLE TOTAL ($\mu\text{G/L}$) (77041)	1,1,1- TRI- CHLORO- ETHANE TOTAL ($\mu\text{G/L}$) (34506)	METHYL- ENE CHLO- RIDE TOTAL ($\mu\text{G/L}$) (34423)	CIS-1,2 -DI- CHLORO- ETHENE WATER TOTAL ($\mu\text{G/L}$) (77093)	TRI- CHLORO- ETHYL- ENE TOTAL ($\mu\text{G/L}$) (39180)	TETRA- CHLORO- ETHYL- ENE TOTAL ($\mu\text{G/L}$) (34475)	METHYL TERT- BUTYL ETHER WAT UNF REC ($\mu\text{G/L}$) (78032)	FURAN TETRA- HYDRO- WATER UNFLTRD RECOVER ($\mu\text{G/L}$) (81607)
PENNSYLVANIA									
ALLEGHENY COUNTY									
AG705	<0.050	<0.050	<0.050	<0.100	<0.050	<0.050	<0.050	<0.100	<5.00
ARMSTRONG COUNTY									
AR104	<0.050	<0.050	<0.050	<0.100	<0.050	<0.050	<0.050	<0.100	1.40
AR105	E0.020	<0.050	<0.050	<0.100	<0.050	<0.050	<0.050	<0.100	<5.00
BUTLER COUNTY									
BT405	<0.050	E0.040	<0.050	<0.060	<0.050	<0.050	<0.050	<0.100	2.10
CAMBRIA COUNTY									
CA456	E0.010	E0.010	<0.050	E0.010	<0.050	<0.050	<0.050	<0.100	<5.00
CLARION COUNTY									
CR722	<0.050	<0.050	<0.050	<0.100	<0.050	<0.050	<0.050	<0.100	<5.00
CR723	<0.050	<0.050	<0.050	<0.100	<0.050	<0.050	<0.050	<0.100	<5.00
CR724	E0.020	<0.050	<0.050	<0.100	<0.050	<0.050	<0.050	<0.100	<5.00
CR725	<0.050	<0.050	E0.030	<0.100	<0.050	<0.050	<0.050	<0.100	<5.00
CLEARFIELD COUNTY									
CF320	<0.050	<0.050	<0.050	<0.100	<0.050	<0.050	<0.050	0.290	<5.00
FAYETTE COUNTY									
FA506	E0.008	<0.050	<0.050	E0.009	<0.050	<0.050	<0.050	<0.100	<5.00
FA507	E0.020	<0.050	<0.050	<0.100	<0.050	<0.050	<0.050	<0.100	<5.00
GREENE COUNTY									
GR903	<0.050	E0.010	E0.080	<0.100	<0.050	<0.050	<0.050	<0.100	<5.00
INDIANA COUNTY									
IN913	<0.050	E0.010	<0.050	E0.070	<0.050	<0.050	<0.050	<0.100	<5.00
IN914	E0.020	<0.050	<0.050	<0.100	<0.050	<0.050	<0.050	<0.100	<5.00
IN915	E0.030	<0.050	E0.060	<0.100	<0.050	<0.050	<0.050	<0.100	<5.00
IN916	E0.040	<0.050	<0.050	<0.100	<0.050	<0.050	<0.050	<0.100	<5.00
JEFFERSON COUNTY									
JE421	<0.050	<0.050	<0.050	<0.100	<0.050	<0.050	<0.050	<0.100	<5.00
SOMERSET COUNTY									
SO124	<0.050	<0.050	<0.050	<0.100	0.100	0.170	E0.040	<0.100	<5.00
SO125	<0.050	<0.050	<0.050	E0.090	<0.050	<0.050	<0.050	<0.100	<5.00
SO126	<0.050	<0.050	<0.050	E0.060	<0.050	<0.050	<0.050	<0.100	<5.00
WESTMORELAND COUNTY									
WE309	E0.020	<0.050	<0.050	<0.100	<0.050	<0.050	<0.050	<0.100	<5.00
WE310	E0.010	<0.050	<0.050	<0.100	<0.050	<0.050	<0.050	<0.100	<5.00
WEST VIRGINIA									
HARRISON COUNTY									
HR331	<0.050	<0.050	<0.050	<0.100	<0.050	<0.050	<0.050	<0.100	<5.00
MARION COUNTY									
MR491	<0.050	E0.020	<0.050	<0.100	<0.050	<0.050	<0.050	<0.100	<5.00
MONONGALIA COUNTY									
MN611	E0.040	E0.040	<0.050	<0.100	<0.050	<0.050	<0.050	<0.100	<5.00
PRESTON COUNTY									
PR771	<0.050	E0.020	<0.050	<0.100	<0.050	<0.050	<0.050	<0.100	<5.00
PR772	<0.050	E0.010	<0.050	E0.009	<0.050	<0.050	<0.050	<0.100	<5.00
TAYLOR COUNTY									
TA911	<0.050	<0.050	<0.050	<0.100	<0.050	<0.050	<0.050	<0.100	<5.00
UPSHUR COUNTY									
UP971	<0.050	E0.050	<0.050	<0.100	<0.050	<0.050	<0.050	<0.100	<5.00

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES

ALLEGHENY AND MONONGAHELA RIVER BASIN NAWQA PROJECT

SUBUNIT OF PITTSBURGH SERIES IN THE FRACTURED ROCK OF THE APPALACHIAN PLATEAU PHYSIOGRAPHIC PROVINCE--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

LOCAL ID	METHYL- CHLO- RIDE TOTAL ($\mu\text{G/L}$) (34418)	CHLORO- DI- BROMO- METHANE TOTAL ($\mu\text{G/L}$) (32105)	DI- CHLORO- BROMO- METHANE TOTAL ($\mu\text{G/L}$) (32101)	DI- CHLORO- DI- FLUORO- METHANE TOTAL ($\mu\text{G/L}$) (34668)	METHYL IODIDE WATER UNFLTRD RECOVER ($\mu\text{G/L}$) (77424)	BROMO- FORM TOTAL ($\mu\text{G/L}$) (32104)	CHLORO- FORM TOTAL ($\mu\text{G/L}$) (32106)	METHYL- ETHYL- KETONE WATER WHOLE TOTAL ($\mu\text{G/L}$) (81595)	STYRENE TOTAL ($\mu\text{G/L}$) (77128)
PENNSYLVANIA									
ALLEGHENY COUNTY									
AG705	<0.270	<0.100	<0.100	<0.200	<0.050	<0.200	E0.040	<5.00	<0.050
ARMSTRONG COUNTY									
AR104	<0.200	<0.100	<0.100	<0.200	<0.050	<0.200	<0.050	<5.00	<0.050
AR105	<0.260	E0.030	E0.050	<0.200	<0.050	<0.200	0.200	1.10	<0.050
BUTLER COUNTY									
BT405	E0.040	<0.100	<0.100	<0.200	<0.050	<0.200	0.200	<5.00	<0.050
CAMBRIA COUNTY									
CA456	E0.010	<0.100	<0.100	<0.200	<0.050	<0.200	0.120	<5.00	E0.005
CLARION COUNTY									
CR722	<0.200	<0.100	<0.100	<0.200	<0.050	<0.200	E0.030	<5.00	<0.050
CR723	<0.200	<0.100	<0.100	<0.200	<0.050	<0.200	<0.050	<5.00	<0.050
CR724	<0.200	<0.100	<0.100	<0.200	<0.050	<0.200	<0.050	<5.00	<0.050
CR725	<0.200	<0.100	<0.100	<0.200	<0.050	<0.200	E0.080	<5.00	<0.050
CLEARFIELD COUNTY									
CF320	<0.260	<0.100	<0.100	<0.200	<0.050	<0.200	E0.020	<5.00	<0.050
FAYETTE COUNTY									
FA506	<0.200	<0.100	<0.100	<0.200	E0.009	<0.200	<0.050	<5.00	<0.050
FA507	<0.200	<0.100	<0.100	<0.200	<0.050	<0.200	<0.050	<5.00	<0.050
GREENE COUNTY									
GR903	<0.200	<0.100	<0.100	<0.200	<0.050	<0.200	<0.050	<5.00	<0.050
INDIANA COUNTY									
IN913	<0.290	<0.100	<0.100	<0.200	<0.050	<0.200	E0.020	<5.00	<0.050
IN914	<0.200	<0.100	<0.100	<0.200	<0.050	<0.200	E0.010	<5.00	<0.050
IN915	<0.200	<0.100	<0.100	<0.200	<0.050	<0.200	<0.050	<5.00	<0.050
IN916	<0.270	<0.100	<0.100	<0.200	<0.050	<0.200	0.820	6.70	<0.050
JEFFERSON COUNTY									
JE421	<0.200	<0.100	<0.100	<0.200	<0.050	<0.200	<0.050	<5.00	<0.050
SOMERSET COUNTY									
SO124	<0.200	<0.100	<0.100	<0.200	<0.050	<0.200	<0.050	<5.00	<0.050
SO125	E0.030	<0.100	<0.100	<0.200	<0.050	<0.200	<0.050	<5.00	<0.050
SO126	<0.200	<0.100	<0.100	<0.200	<0.050	<0.200	<0.050	<5.00	<0.050
WESTMORELAND COUNTY									
WE309	<0.200	<0.100	<0.100	<0.200	<0.050	<0.200	<0.050	<5.00	<0.050
WE310	<0.200	<0.100	<0.100	<0.200	<0.050	<0.200	<0.050	<5.00	<0.050
WEST VIRGINIA									
HARRISON COUNTY									
HR331	<0.200	<0.100	<0.100	<0.200	<0.050	<0.200	<0.050	<5.00	<0.050
MARION COUNTY									
MR491	<0.200	<0.100	<0.100	<0.200	E0.009	E0.007	<0.050	<5.00	<0.050
MONONGALIA COUNTY									
MN611	<0.200	<0.100	<0.100	<0.200	<0.050	<0.200	<0.050	<5.00	<0.050
PRESTON COUNTY									
PR771	E0.030	<0.100	<0.100	<0.200	<0.050	<0.200	<0.150	1.60	<0.050
PR772	<0.200	<0.100	<0.100	<0.200	<0.050	<0.200	<0.050	<5.00	<0.050
TAYLOR COUNTY									
TA911	<0.200	<0.100	<0.100	0.180	<0.050	<0.200	E0.080	<5.00	<0.050
UPSHUR COUNTY									
UP971	<0.200	<0.100	<0.100	<0.200	<0.050	<0.200	E0.009	<5.00	<0.050

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CONVERSION FACTORS AND VERTICAL DATUM

Multiply	By	To obtain
<i>Length</i>		
inch (in.)	2.54×10^1	millimeter
	2.54×10^{-2}	meter
foot (ft)	3.048×10^{-1}	meter
mile (mi)	1.609×10^0	kilometer
<i>Area</i>		
acre	4.047×10^3	square meter
	4.047×10^{-1}	square hectometer
	4.047×10^{-3}	square kilometer
square mile (mi ²)	2.590×10^0	square kilometer
<i>Volume</i>		
gallon (gal)	3.785×10^0	liter
	3.785×10^0	cubic decimeter
	3.785×10^{-3}	cubic meter
million gallons (Mgal)	3.785×10^3	cubic meter
	3.785×10^{-3}	cubic hectometer
cubic foot (ft ³)	2.832×10^1	cubic decimeter
	2.832×10^{-2}	cubic meter
cubic-foot-per-second day [(ft ³ /s) d]	2.447×10^3	cubic meter
	2.447×10^{-3}	cubic hectometer
acre-foot (acre-ft)	1.233×10^3	cubic meter
	1.233×10^{-3}	cubic hectometer
	1.233×10^{-6}	cubic kilometer
<i>Flow</i>		
cubic foot per second (ft ³ /s)	2.832×10^1	liter per second
	2.832×10^1	cubic decimeter per second
	2.832×10^{-2}	cubic meter per second
gallon per minute (gal/min)	6.309×10^{-2}	liter per second
	6.309×10^{-2}	cubic decimeter per second
	6.309×10^{-5}	cubic meter per second
million gallons per day (Mgal/d)	4.381×10^1	cubic decimeter per second
	4.381×10^{-2}	cubic meter per second
<i>Mass</i>		
ton (short)	9.072×10^{-1}	megagram or metric ton

Sea level: In this report “sea level” refers to the National Geodetic Vertical Datum of 1929 (NGVD of 1929)—a geodetic datum derived from a general adjustment for the first-order level nets of both the United States and Canada, formerly called Sea Level Datum of 1929.

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