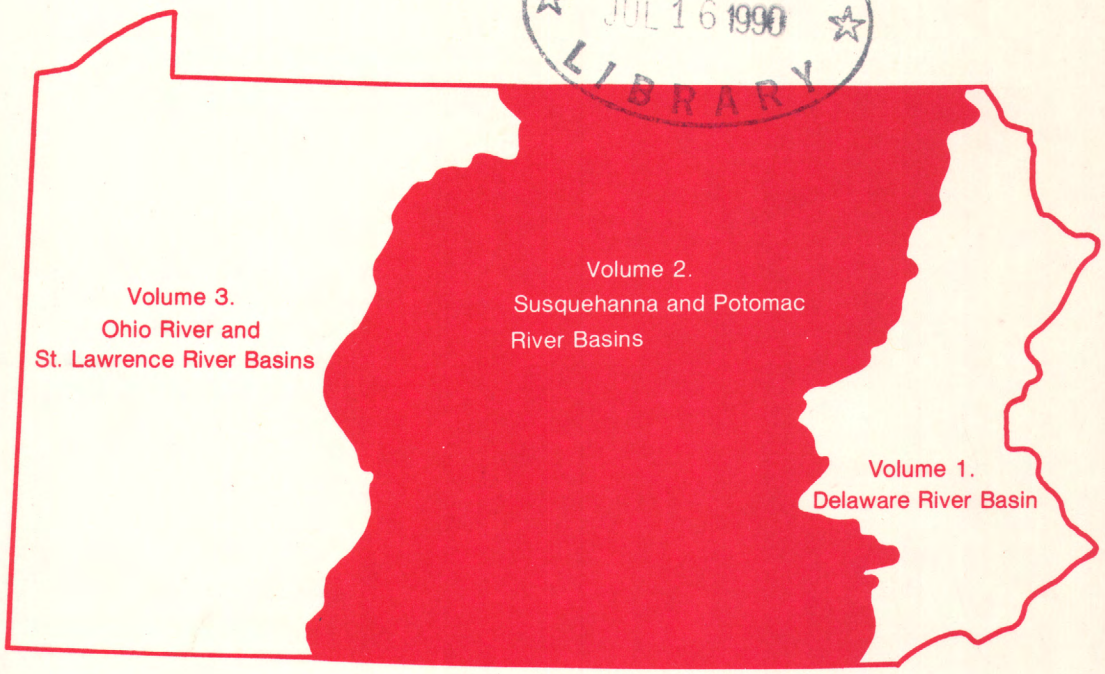
Water Resources Data Pennsylvania Water Year 1987

Volume 2. Susquehanna and Potomac River Basins



U.S. GEOLOGICAL SURVEY WATER DATA REPORT PA-87-2
Prepared in cooperation with the Pennsylvania Department of Environmental Resources, the U.S. Army Corps of Engineers, Baltimore District, The Susquehanna River Basin Commission, and with other State, municipal, and Federal agencies

October 1, 1978

FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

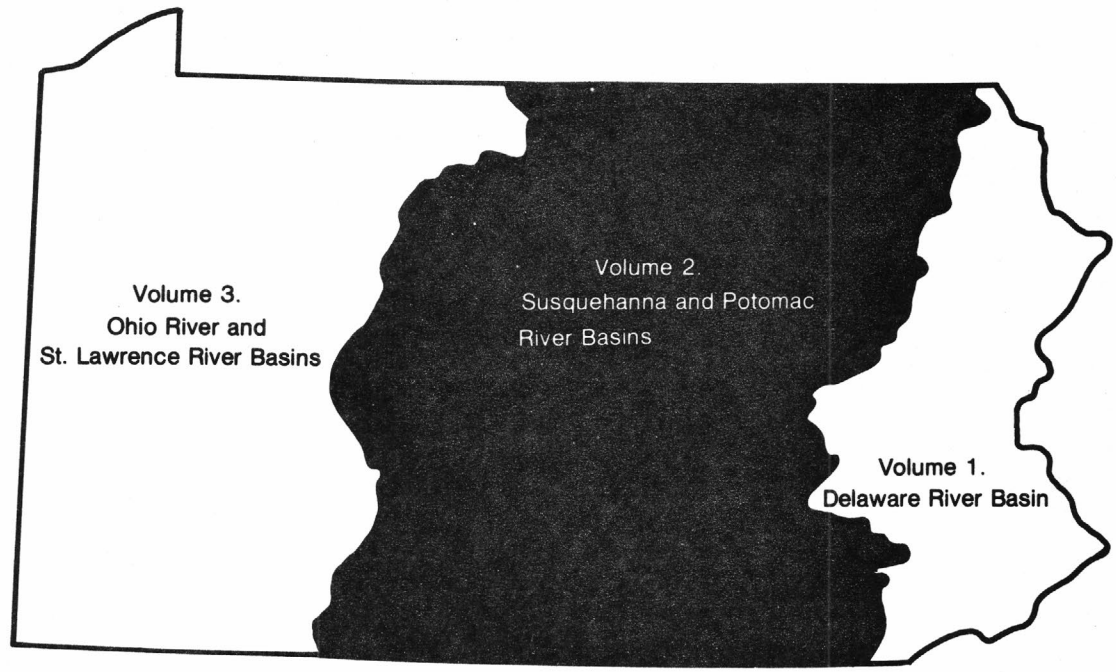
The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI).

Multiply inch-pound units	By	To obtain SI units
	Length	
inches (in)	2.54×10^{1}	millimeters (mm)
	2.54×10^{-2}	meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^{0}	kilometers (km)
	Area	
acres	4.047×10^{3}	square meters (m^2)
	4.047×10^{-1}	square hectometers (hm^2)
	4.047×10^{-3}	square kilometers (km^2)
square miles (mi^2)	2.590×10^{0}	square kilometers (km^2)
	Volume	
gallons (gal)	3.785×10^{0}	liters (L)
	3.785×10^{0}	cubic decimeters (dm^3)
	3.785×10^{-3}	cubic meters (m^3)
million gallons	3.785×10^{3}	cubic meters (m^3)
	3.785×10^{-3}	cubic hectometers (hm^3)
cubic feet (ft^3)	2.832×10^{1}	cubic decimeters (dm^3)
	2.832×10^{-2}	cubic meters (m^3)
cfs-days	2.447×10^{3}	cubic meters (m^3)
	2.447×10^{-3}	cubic hectometers (hm^3)
acre-feet (acre-ft)	1.233×10^{3}	cubic meters (m^3)
	1.233×10^{-3}	cubic hectometers (hm^3)
	1.233×10^{-6}	cubic kilometers (km^3)
	Flow	
cubic feet per second (ft^3/s)	2.832×10^{1}	liters per second (L/s)
	2.832×10^{1}	cubic decimeters per second (dm^3/s)
	2.832×10^{-2}	cubic meters per second (m^3/s)
gallons per minute (gal/min)	6.309×10^{-2}	liters per second (L/s)
	6.309×10^{-2}	cubic decimeters per second (dm^3/s)
	6.309×10^{-5}	cubic meters per second (m^3/s)
million gallons per day	4.381×10^{1}	cubic decimeters per second (dm^3/s)
	4.381×10^{-2}	cubic meters per second (m^3/s)
	Mass	
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons

Water Resources Data Pennsylvania Water Year 1987

Volume 2. Susquehanna and Potomac River Basins

by W.C. Loper, T.E. Behrendt, and W.P. Schaffstall



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT PA-87-2
Prepared in cooperation with the Pennsylvania Department of Environmental Resources, the U.S. Army Corps of Engineers, Baltimore District, The Susquehanna River Basin Commission, and with other State, municipal, and Federal agencies

DEPARTMENT OF THE INTERIOR

DONALD PAUL HODEL, SECRETARY

U.S. GEOLOGICAL SURVEY

Dallas L. Peck, Director

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Harrisburg, Pennsylvania 17108

1988

PREFACE

This volume of the annual hydrologic data 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, local, 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 and Potomac River Basins
Volume 3. Ohio and St. Lawrence River Basins

Volume 2 was prepared in cooperation with the Commonwealth of Pennsylvania and other agencies under the general supervision of David E. Click, District Chief, Pennsylvania District; David J. Wangsness, Subdistrict Chief, Harrisburg Subdistrict; Robert A. Hainly, Chief of Hydrologic Data Section, Harrisburg Subdistrict, and William P. Schaffstall, Chief, Williamsport Field 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:

G. E. Baumbach	R. W. Conger	J. V. Irvin	M. J. Langland
C. J. Beard	R. R. Durlin	M. S. Johnson	P. L. Lietman
A. E. Becher	J. T. Fisher	M. E. Jones	W. D. Pope
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D. C. Chichester	K. G. Guttormson	E. H. Koerkle	M. V. Truhlar

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7. Author(s) W.C. Loper, T.E. Behrendt, and W.P. Schaffstall			8. Performing Organization Rept. No. USGS-WDR-PA-87-2
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15. Supplementary Notes

Prepared in cooperation with the State of Pennsylvania and other agencies

16. Abstract (Limit: 200 words)

Water resources data for the 1987 water year for Pennsylvania consist of records of discharge and water quality of streams; contents and elevations of lakes and reservoirs; and water levels and water quality of ground-water wells. This report, Volume 2, includes records from the Susquehanna and Potomac River basins. Specifically, it contains: (1) Discharge records for 90 continuous record streamflow-gaging stations, 94 low flow and 11 crest-stage partial-record stations; (2) elevation and contents records for 13 lakes and reservoirs; (3) water-quality records for 19 streamflow-gaging stations, for 11 ungaged streamsites, and for 18 wells or springs; and (4) water-level records for 41 observation wells. Location of these sites are shown in figures 7-10. Additional water data were collected at various sites not involved in the systematic data-collection program and are published as miscellaneous measurements and analyses and represent 4 special study and miscellaneous streamflow sites and 25 ground-water quality sites. These data together with the data in Volumes 1 and 3, represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State, local, and Federal agencies in Pennsylvania.

17. Document Analysis a. Descriptors

*Pennsylvania, *Hydrologic data, *Groundwater, *Surface waters, *Water Quality, Gaging stations, Streamflow, Flow Rates, Lakes, Reservoirs, Chemical analysis, Sediments, Water Temperature, Water analysis, Water levels, Water wells, Data collections, Sites.

b. Identifiers/Open-Ended Terms

c. COSATI Field/Group

18. Availability Statement	19. Security Class (This Report)	21. No. of Pages
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(Formerly NTIS-35)
Department of Commerce

CONTENTS

ILLUSTRATIONS

[Letters after station name designates type of data: (d) discharge, (c) chemical, (t) water temperature, (s) sediment, (e) elevation, gage heights, or contents, (r) radiochemical.]

GROUND-WATER WELLS, BY COUNTY, FOR WHICH RECORDS ARE PUBLISHED

(Letter after local well number designates type of data: (l) water level, (c) chemical)

WATER RESOURCES DATA - PENNSYLVANIA, 1987

INTRODUCTION

The Water Resources Division of the U.S. Geological Survey, in cooperation with State and federal agencies, obtains 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, Volume 1, 2, and 3." Volume 1 contains data for the Delaware River Basin, Volume 2, the Susquehanna and Potomac River Basins, and Volume 3, the Ohio and St. Lawrence River Basins.

This report, Volume 2, specifically contains: (1) Discharge records for 90 continuous record streamflow-gaging stations, 11 crest-stage partial-record stations, and 4 special study and miscellaneous streamflow sites; (2) elevation and contents records for 13 lakes and reservoirs; (3) water-quality records for 19 streamflow-gaging stations, for 11 ungaged streamsites, and for 43 wells or springs; and (4) water-level records for 41 observation wells.

Publications similar to this report are published annually by the Geological Survey for all States. These official Survey reports have an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report PA-87-2." For archiving and general distribution, the reports for 1971-74 water years also are identified as water-data reports. These water-data reports are for sale in paper copy or in 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. Each volume contains 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 through 1970 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, 4. Data on chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title "Quality of Surface Waters of the United States," and ground-water levels for the 1935 through 1974 water years were published under the title "Ground-Water Levels in the United States." The above mentioned Water-Supply Papers may be consulted in the libraries of the principal cities of the United States and may be purchased from Distribution Branch, Text Products Section, U.S. Geological Survey, 604 South Pickett Street, Alexandria, VA 22304.

Additional information, including current prices, for ordering specific reports may be obtained from the District Chief at the address given on the back of title page or by contacting the Hydrologic Information Specialist, telephone (717) 782-3851.

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 through cooperative agreement with the Survey are listed below.

The Pennsylvania State Department of Environmental Resources, Arthur A. Davis, Secretary through the following:

Office of Resources Management, James R. Grace, Deputy Secretary;
  Bureau of Water Resources Management, John E. McSparran, Director;
  Bureau of Topographic and Geologic Survey, Donald M. Hoskins, Director;
Environmental Protection, Mark M. McClellan, Deputy Secretary;
  Bureau of Water Quality Management, Daniel B. Drawbaugh, Acting Director;
  Bureau of Mining and Reclamation, Ernest F. Giovannitti, Director.

Susquehanna River Basin Commission, Robert J. Bielo, Executive Director;

University Area Joint Authority, David A. Allison, Chairman;

Letort Regional Authority, Kenwood E. Giffhorn, Executive Director;

Lancaster County Planning Commission, John R. Ahlfeld, Planning Director;

City of Harrisburg, Stephen R. Reed, Mayor.

Federal Energy Regulatory Commission Licensees:
American Hydro Power Co.,
Philadelphia Electric Co.,
Susquehanna Electric Co.,
Safe Harbor Water Power Corp.

The following Federal agencies assisted in the data-collection program by providing funds or services:

Corps of Engineers, U.S. Army, in collecting records for 25 streamflow-gaging stations, 11 reservoir stations, and 4 crest-stage gages;
National Weather Service, NOAA, U.S. Department of Commerce;
Soil Conservation Service, U.S. Department of Agriculture.

The following organizations aided in collecting records: City of Lancaster, Hershey Foods Corporation, P.H. Glatfelter Co., Pennsylvania Gas and Water Co., and York Water Co.

SUMMARY OF HYDROLOGIC CONDITIONS

Surface Water

The Susquehanna River flows generally southward from southern New York to the Chesapeake Bay in Maryland. At the point where the River enters Maryland, it drains 27,215 mi² (square miles). The majority of this area--20,962 mi²--is located in central Pennsylvania. Streams in the basin are located in the Appalachian Plateau, Valley and Ridge, and Piedmont physiographic provinces. The underlying geology includes rocks of Precambrian to Triassic in age, and the predominant rock types are shale, sandstone, and limestone.

Precipitation and Streamflow

Total precipitation for the 1987 water year was 38.31 in. at the National Oceanic and Atmospheric Administration (NOAA) climatological station at Harrisburg, an amount 0.10 in. greater than normal. Although precipitation appeared normal, a disproportionate amount fell in early September. If this September rainfall, which amounted to 5.51 in. were excluded, precipitation in the basin would have been 15 percent below normal.

The largest departures from normal for September occurred in NOAA Geographic Divisions 3 and 4, where 190 and 215 percent of the normal precipitation fell. Figure 1 shows the locations of the six NOAA Divisions located in the Susquehanna River basin and compares September 1987 precipitation and average September precipitation for the last 15 years in each division.

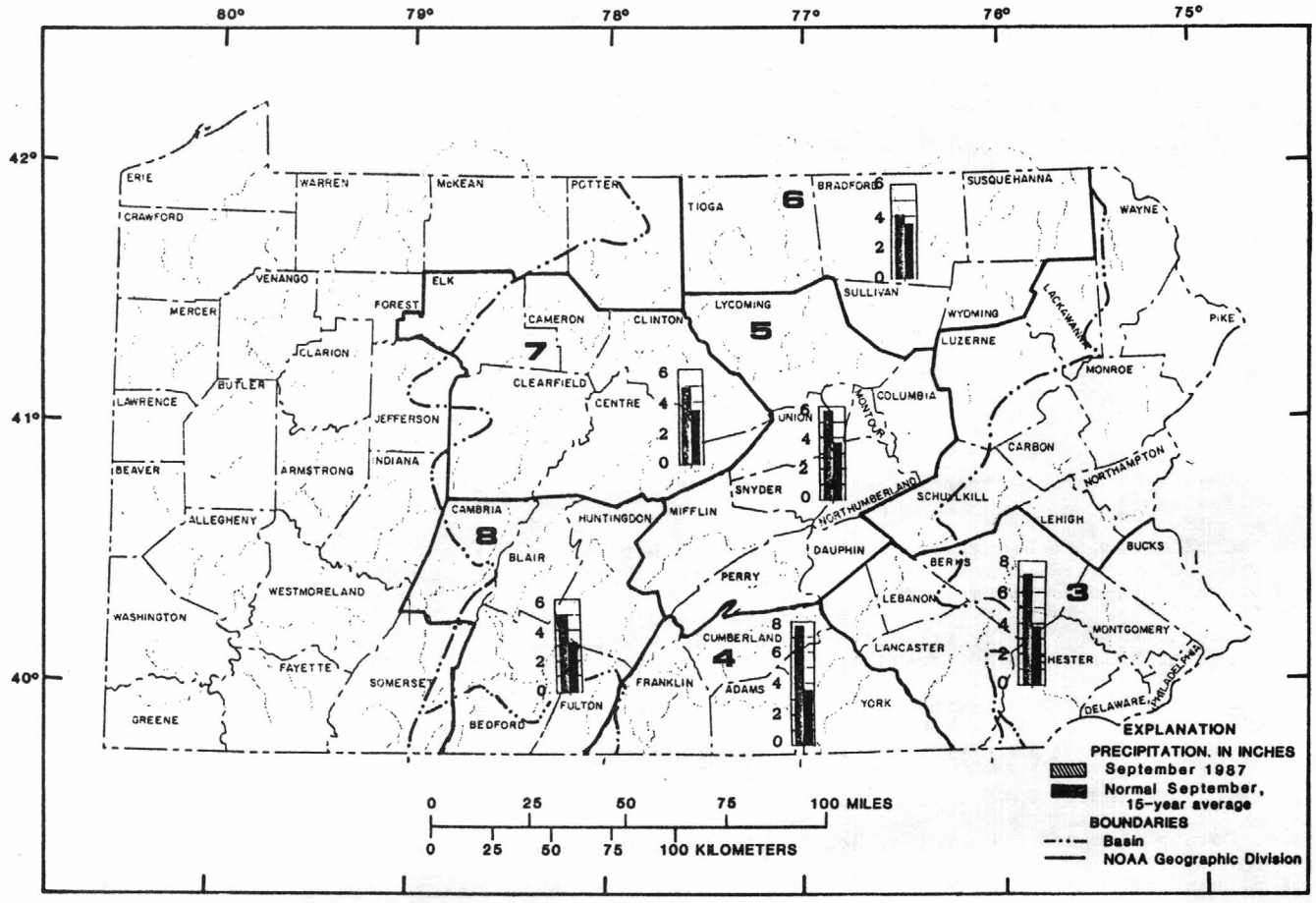


Figure 1.--Six NOAA Geographic Divisions in the Susquehanna River basin and the normal September and September 1987 precipitation amounts in each Division.

Figure 2 shows the departure from normal precipitation in inches for NOAA Divisions 3 through 8 by month for the 1987 water year. The largest departure from normal occurred in Region 6, Upper Susquehanna, with a deficit of 3.14 inches.

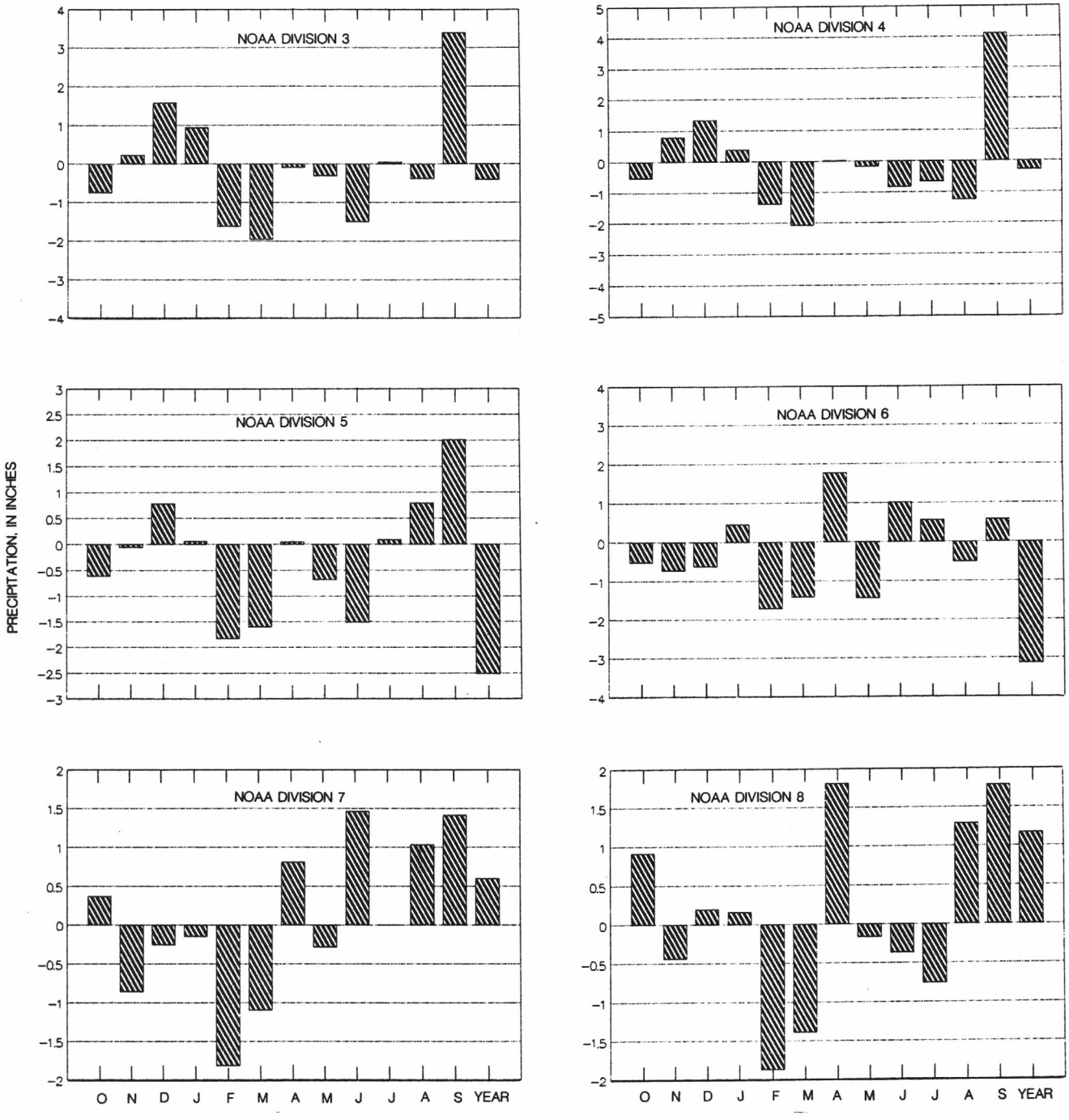


Figure 2.--Departure from normal precipitation by NOAA Divisions in the Susquehanna River basin for the 1987 water year.

As indicated by figure 2, a large amount of precipitation occurred basinwide during September. Most of the precipitation occurred in a 3 to 4 day period, with some areas recording most of the precipitation in 1 day. The most intense precipitation was recorded in Division 3 (Southeastern Piedmont) producing peak flows in several medium and small basins in southern Lancaster County. The following table shows six sites where maximum or near maximum discharges occurred and gives the flood frequency. Raingages near two streamflow stations, Little Conestoga Creek near Churchtown (01576085), and Little Conestoga Creek near Morgantown (0157608335), recorded 6.7 inches of rain in 6 hours during this event. Both streamflow stations recorded the highest peak discharges for the period of record (1982-87 and 1984-87, respectively).

Station Name and Number		Date of Peak	CFS	Flood Recurrence in years
01569800	Letort Spring Run near Carlisle	9/13	1,180	25
01571000	Paxton Creek near Penbrook	9/12	3,630	50
0157608335	Little Conestoga Creek, Site 3A, near Morgantown	9/8	620	75
01576085	Little Conestoga Creek near Churchtown	9/8	1,520	75
01576500	Conestoga River at Lancaster	9/9	20,500	25
01576320	Stony Run at Reamstown	9/8	1,200	100

Reservoirs

The following table lists the average annual storage contents and minimum storage contents, in acre-feet, for the eight major reservoirs in the basin. Stillwater Lake (01534180) and Foster Joseph Sayers Lake (01547480) had the largest departures from the 1971-80 mean, (-15.6 percent and -12.6 percent, respectively). All minimum contents were above the 1971-80 minimum contents.

	Mean contents (acre-feet)			Minimum contents (acre-feet)	
	1971-80	1987	Departure (percent)	1971-80	1987
Stillwater Lake (01534180)	680	574	-15.6	347	380
Curwensville Lake (01541180)	8,280	7,740	- 6.5	1,610	4,450
Glendale Lake (01541340)	25,500	25,680	+ 0.7	14,700	18,340
First Fork Sinnemahoning Reservoir (01543900)	2,210	2,300	+ 4.1	568	1,430
Kettle Creek Lake (01544800)	1,900	1,780	- 6.3	1,260	1,600
Foster Joseph Sayers Lake (01547480)	20,900	18,270	-12.6	4,960	6,060
Raystown Lake (01563100)	504,000	515,000	+ 2.2	425,000	496,100
DeHart Reservoir (01568400)	17,800	17,000	- 4.7	13,200	13,490

Collectively, the annual mean storage contents for the eight reservoirs was +1.2 percent above the normal 1971-80 volume.

Surface-Water Quality

Surface-water-quality data collected at four special network stations in 1987 were compared to data collected at these sites from 1975-85. In water year 1987, selected trace-element data were evaluated. Figure 3 shows the interquartile values at the four stations for dissolved iron, aluminum, lead, manganese, and sampled streamflow. The whisker and box plots indicate the 95th, 75th, 50th, 25th and 5th percentiles and mean values for the selected period of data collection. The values associated with each percentile are not expected to be exceeded by the percentage of sample values indicated by the percentile. For example, the value associated with the 75th percentile would be expected to be higher than 75 percent of the sample values. Conversely, the 75th-percentile value would be expected to be exceeded by only 25 percent of the sample values. The 50th-percentile value is the median of the sample values. In general, baseflow values are expected to fall within the limits of the 25th and 75th percentiles. The stations examined in Fig. 3 are:

01540500 Susquehanna River at Danville, Pa.
01545600 Young Womans Creek near Renovo, Pa.
01553500 West Branch Susquehanna River at Lewisburg, Pa.
01570500 Susquehanna River at Harrisburg, Pa.

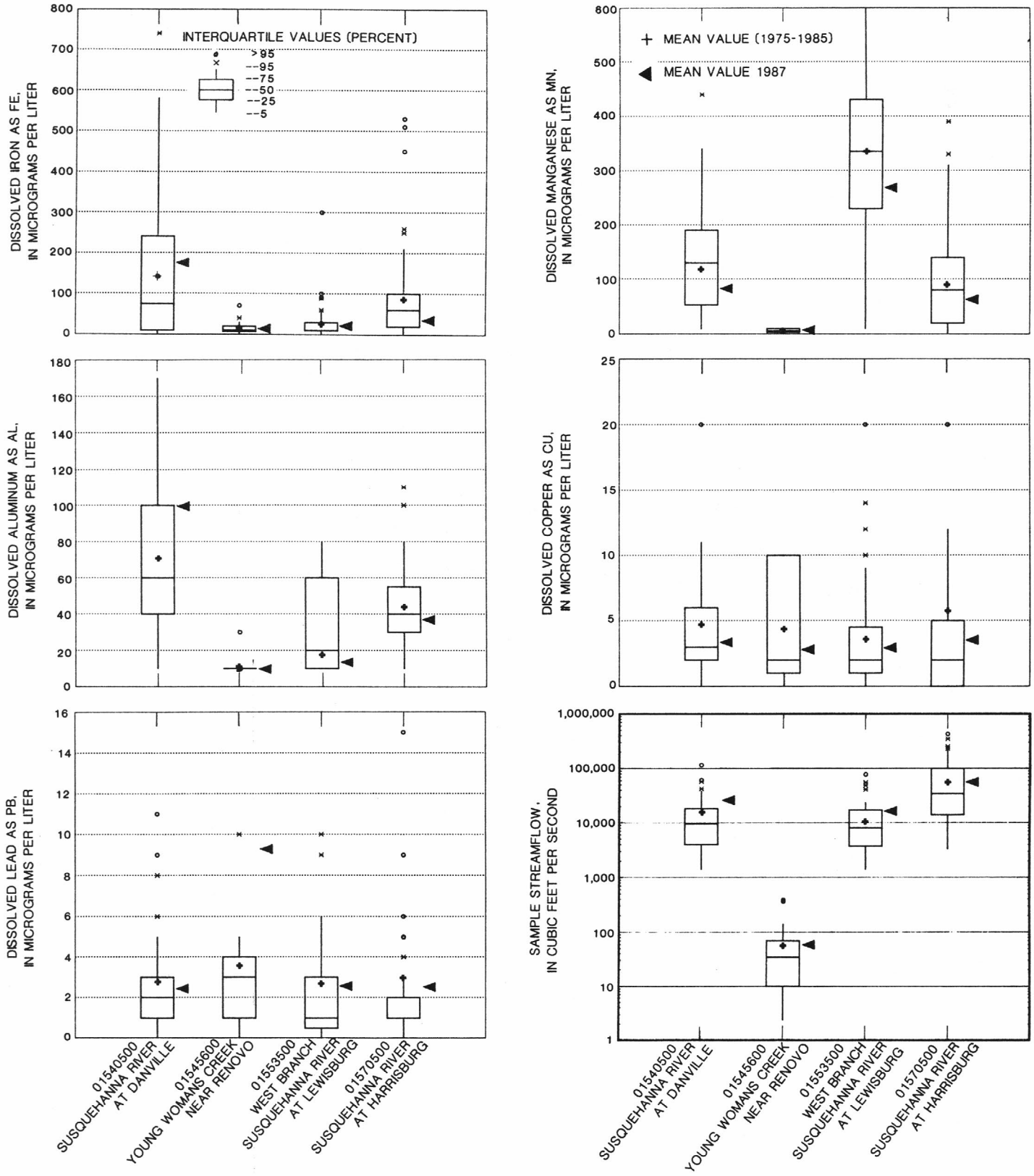


Figure 3.--Mean for 1987 water year and interquartile values for 1975-1985 of selected constituents at four water-quality stations.

For the purpose of this analysis, concentrations that were indicated as being less than the detection limit were set to a value equal to one-half of the detection limit. These values were then used to calculate mean concentrations for the samples collected in the 1987 water year. Fifteen of the 20 mean sample concentrations were less than the 1975-85 mean, partly because of the higher-than-average streamflows that were sampled. The constituents evaluated in this section generally exhibit an inverse relation between streamflow and concentration. Six of the 15 mean concentrations exceeded the median but were less than the mean concentration of samples collected during 1975-85. An additional 5 of the 15 mean concentrations were between the 25th percentile and the median. The mean concentrations for copper and manganese were less than the 1975-85 mean at all four stations. Mean sample concentrations for aluminum, iron, and lead were less than the mean at three of the four stations. The mean lead concentration sampled at Young Womans Creek was unexplainably high.

As indicated by figure 3, the mean of the streamflows sampled in 1987 at each of the four water-quality network stations was equal to or greater than both the mean and median streamflows sampled at each station for water years 1975-1985.

Ground Water

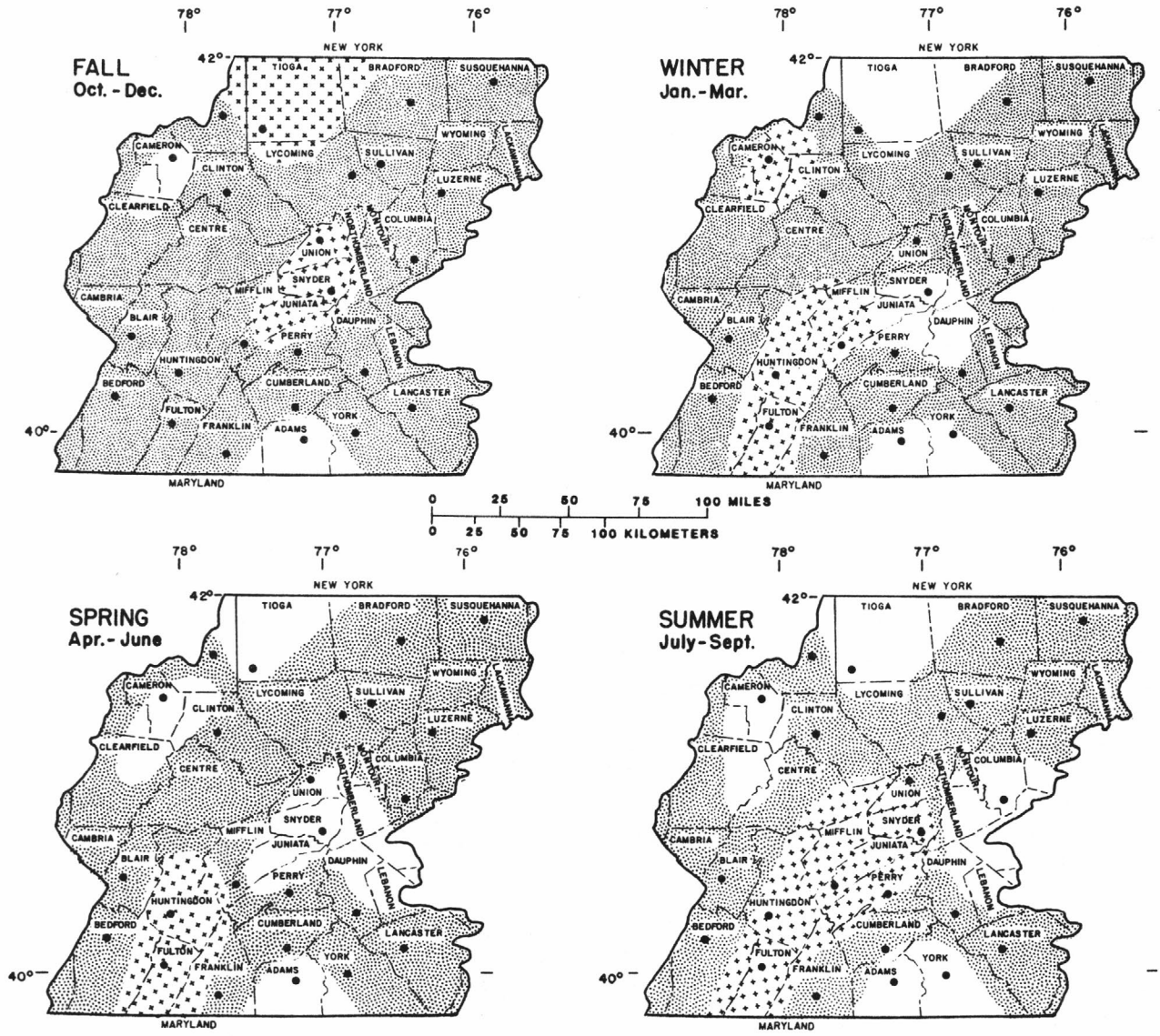
The geologic environment in which ground water occurs controls the availability of the water and its natural quality. Ground water is present in pores and fractures in rocks, and the amount available depends on the number, size, and degree of interconnection of the openings. The natural water quality depends on the mineralogic composition of the rocks. The geology and aquifers of Pennsylvania are complex and varied. Adjacent aquifers within one river basin are usually only slightly related. For this reason, changes in ground-water quantity or quality generally are related only to causal factors within that particular aquifer. In addition, because of the relative unrelatedness of adjacent aquifers, it is difficult to determine any basinwide trends or variations.

Ground-Water Conditions

The following table presents the highest, lowest and average maximum depth below land surface of water levels in seven observation wells in the Susquehanna River basin for their respective periods of record. The average annual maximum depth below land surface for the 1987 water year and the departure from average also is shown.

Well	County	Years of record	Depth Below Land Surface				Water level departure
			Highest	Lowest	Average	1987 WY	
DA-350	Dauphin	23	3.58	6.47	4.98	4.95	+0.03
FR-332	Franklin	12	20.08	33.63	29.00	28.50	+0.50
AD-146	Adams	19	11.03	13.80	12.32	12.08	+0.24
SU-34	Sullivan	21	17.77	29.79	26.45	26.73	-0.28
CM-13	Cameron	19	22.49	24.38	23.24	23.41	-0.17
HU-301	Huntingdon	18	50.45	53.89	52.79	54.04	-1.25
UN-51	Union	19	31.37	40.33	37.96	38.15	-0.19

Ground-water levels were normal or above normal in the Susquehanna River basin for each season of the 1987 water year, even though precipitation was below normal until September. Figure 4 shows the variations in water levels for each season. Water levels generally were much above normal and above normal for the entire year in most of the basin and normal in the south-central area. A dry winter produced normal water levels in the center and northern tip of the basin while the rest of the basin remained above or much above normal. By spring, water levels in the east-central, southern, and northwest sections of the basin also had declined to normal. A wet May and June raised water levels in the central section of the basin to above normal.



EXPLANATION

GROUND-WATER LEVELS

- NORMAL--Within one-half standard deviation of long-term mean water level.
- ABOVE NORMAL--One-half to one standard deviation above long-term water level.
- MUCH ABOVE NORMAL--More than one standard deviation above long-term water level.
- • OBSERVATION WELL

Figure 4.--Relationship between mean 1987 seasonal water levels and long-term mean water levels.

Ground-Water-Quality

Surface coal mining in Pennsylvania yielded 32 million tons of coal with a value of approximately $940 million in 1987. The disturbance of coal seams that have high sulfur and low calcium content generally produces acidic ground water and acid-mine drainage, even though mines are reclaimed to meet current regulations. Ground water in reclaimed surface-mine spoil is degraded by the accelerated weathering of iron-sulfide minerals such as pyrite. The oxidation of pyrite releases iron and sulfuric acid. The acidic ground water dissolves and transports aluminum, manganese, lead, copper, zinc, and other potentially toxic metals in the mine spoil and bedrock. The U.S. Geological Survey and the Pennsylvania Department of Environmental Resources, with the aid of private mining companies, are conducting research on the effects of innovative reclamation methods at two surface coal mines on water quality.

In figure 5, two related measures of water quality, pH and acidity, are summarized for different methods of reclamation. Normal, undisturbed ground water in the coal-bearing zones have been found to be near neutral with a pH of about 6.0 and have acidity less than 200 mg/L (milligrams per liter) (as $CaCO_3$). In contrast, the ground water in legally reclaimed, untreated mine spoil has been found to be highly acidic (1790 to 2530 mg/L) with a very low pH (2.9 to 3.3). However, ground water in experimentally treated mine spoil has been found to have intermediate acidity (390 to 1320 mg/L) and pH (3.2 to 5.7)(Cravotta, 1988).

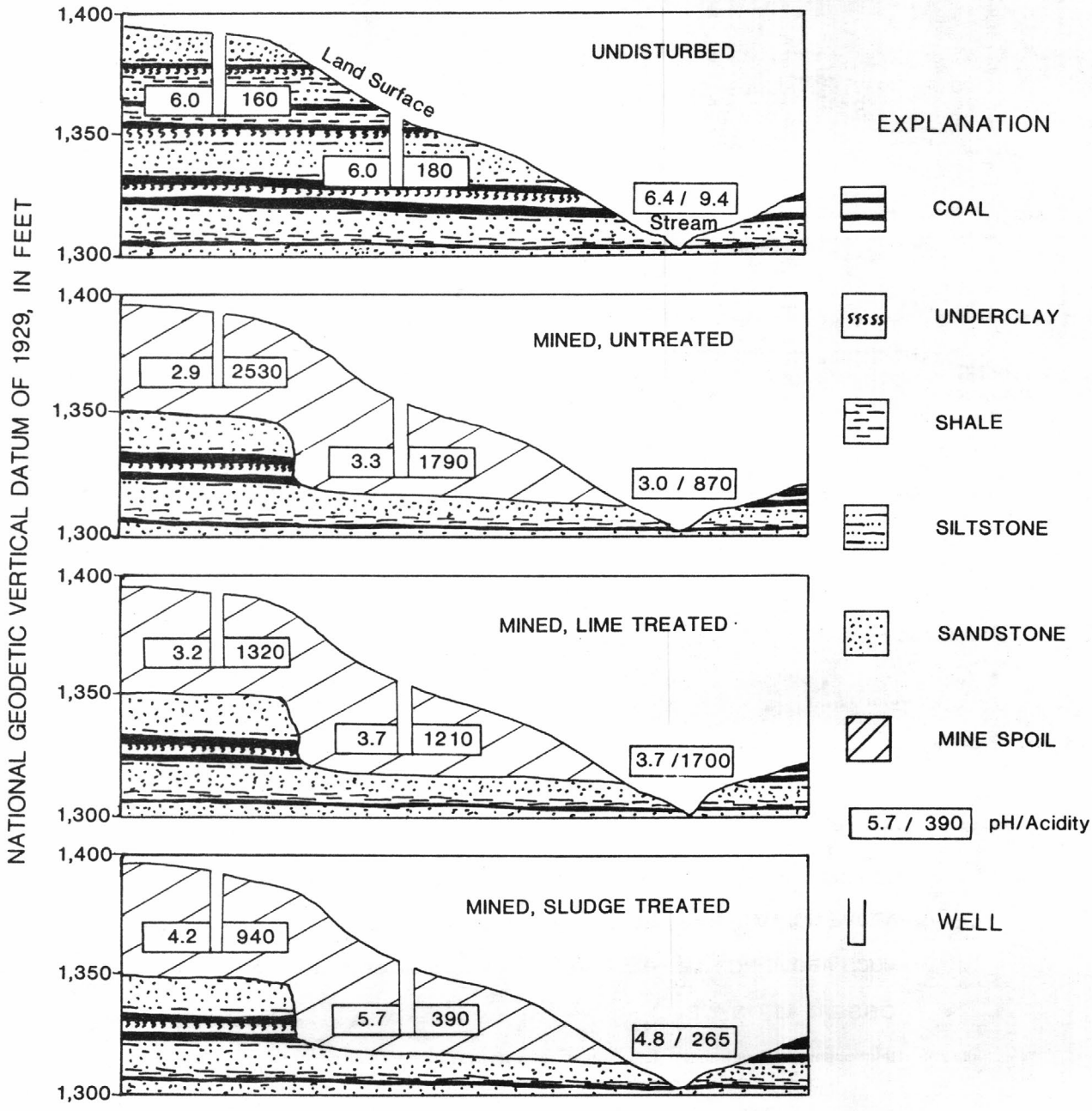


Figure 5.--Schematic geologic cross section of coal-bearing rocks showing pH and acidity of ground water affected by different methods of reclamation.

The median concentrations of dissolved iron, manganese, aluminum, lead, and copper (in micrograms per liter) in ground-water samples collected from undisturbed bedrock (below the surface coal mines) and reclaimed mine-spoil for the above studies during the 1987 water year are reported below:

Sample source	Iron	Manganese	Aluminum	Lead	Copper
Undisturbed bedrock	96,300	41,300	165	<20	<10
Mined, untreated	243,500	85,100	28,300	<20	26
Mined, lime treated	54,000	36,000	71,000	23	79
Mined, sludge treated	125,000	40,600	243	<20	27

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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 which 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 the activities of man.

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

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).

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

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

EXPLANATION OF THE RECORDS

The surface-water and ground-water records in this report are for the 1987 water year that began October 1, 1986, and ended September 30, 1987. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and content data for lakes and reservoirs, water-quality data for surface and ground water, and ground-water-level data. The location of these stations and wells are shown in figures 7-10. 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 taken.

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 indention in a list of stations in the front of the report. Each indention represents one rank. This downstream order and system of indention show which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

The station-identification number is assigned in downstream order. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. A station number can be from 8 to 15 digits and normally appears to the left of the station name. For example, an 8-digit number for a station such as 01570500, includes a 2-digit part number "01" plus a 6-digit downstream order number "570500." The part number designates major river basins; for example, part "01" is the North Atlantic Slope basin.

Latitude-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 with a 1-second grid. See figure 6 below.

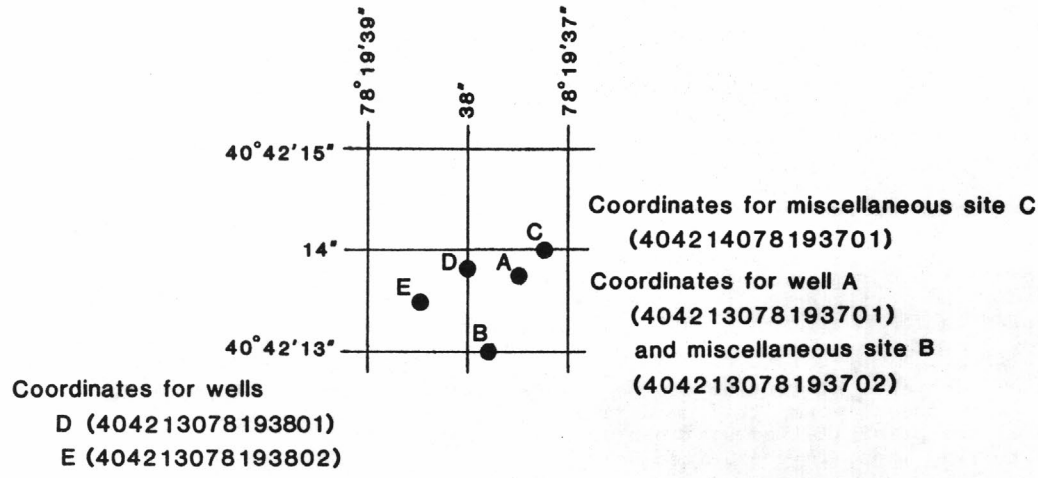

Figure 6.--System for numbering wells and miscellaneous sites (latitude and longitude).

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 or mean daily discharges may be computed for any time, or any period of time, during the period of record. Because daily mean discharges and end-of-day contents 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 7, 8, 10.

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 relationships 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, 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 adapted by the Geological Survey as a result of experience accumulated since 1880. These methods are described in standard textbooks, in Water-Supply Paper 2175, and in U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter A6.

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

Daily mean discharges are computed by applying the daily mean stages (gage heights) to the stage-discharge curves or tables. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is determined by the shifting-control method, in which correction factors based on the individual discharge measurements and notes of the personnel making the measurements are applied to the gage heights before the discharges are determined from the 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 in computing discharge.

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

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

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

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

DRAINAGE AREA.--Drainage areas are measured using the most accurate maps available. Because the type 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 there are published records for the station or for an equivalent station. An equivalent station is one that was in operation at a time that the present station was not, and whose location was such that records from it can reasonably be considered equivalent with records from the present station.

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

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

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

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

AVERAGE DISCHARGE.--The discharge value given is the arithmetic mean of the water-year mean discharges. It is computed only for stations having at least 5 water years of complete record, and only water years of complete record are included in the computation. It is not computed for stations where diversions, storage, or other water-use practices cause the value to be meaningless. If water developments significantly altering flow at a station are put into use after the station has been in operation for a period of years, a new average is computed as soon as 5 water years of record have accumulated following the development. The median of yearly mean discharges also is given under this heading for stations having 10 or more water years of record, if the median differs from the average given by more than 10 percent.

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

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

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

REVISIONS.--If a critical error in published records is discovered, a revision is included in the first report 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 to determine if the published records were ever revised after the station was discontinued. Of course, if the data were obtained by computer retrieval, the data would be current and there would be no need to check because any published revision of data is always accompanied by revision of the corresponding data in computer storage.

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

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

Identifying Estimated Daily Discharge

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

Accuracy of the Records

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

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

Daily mean discharges in this report are given to the nearest hundredth of a cubic foot per second for values less than 1 ft^3/s; to the nearest tenth between 1.0 and 10 ft^3/s; to whole numbers between 10 and 1,000 ft^3/s; and to 3 significant figures for more than 1,000 ft^3/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 observations of water temperatures, discharge measurements, gage-height records, and rating tables is on file in the district office. 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 district office (telephone number: 717-782-3851).

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. Location of stations for which records on the quality of surface water appear in this report are shown in figures 7, 8.

Arrangement of Records

Water-quality records collected at a surface-water daily record station are published immediately following that record, regardless of the frequency of sample collection. Station number and name are the same for both records. Where a surface-water daily record station is not available or where the water quality differs significantly from that at 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

In obtaining water-quality data, a major concern needs to be assuring that the data obtained represent the in situ quality of the water. To assure this, certain measurements, such as water temperature, pH, and dissolved oxygen, need to be made onsite when the samples are taken. To assure that measurements made in the laboratory also represent the in situ water, carefully prescribed procedures need to be followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in 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," Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4. All of these 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 obtained for the National Stream Quality Accounting Network (see definitions) are obtained from at least several verticals. Whether samples are obtained from the centroid of flow or from several verticals, depends on flow conditions and other factors which 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 recorded at 15, 30, or 60 minute intervals for each day. More detailed records (hourly values) may be obtained from the U.S.Geological Survey District Office whose address is given on the back of the title page of this report.

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

Sediment

Suspended-sediment concentrations are determined from samples collected by hand or by pumping samplers. Samples are collected by hand using depth-integrating samplers at single or multiple verticals in the cross section. Samples are collected by pumping samplers using 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 based on 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 times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided-day method. For periods when no samples were collected, daily 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.

Laboratory Measurements

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

Data Presentation

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

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

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

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

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

INSTRUMENTATION.--Information on instrumentation is given only if a water-quality monitor, temperature 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 parameters measured daily or more frequently. None are given for parameters measured weekly or 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:

PRINTED OUTPUT	REMARK
E	Estimated value
>	Actual value is known to be greater than the value shown
<	Actual value is known to be less than the value shown
K	Results based on colony count outside the 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

Records of Ground-Water Levels

Ground-water level data from a basic network of observation wells and from ground-water projects are published herein. Location of observation wells in the basic network are shown in figures 7, 10. The location of observation wells for projects are shown in figure 9.

Data Collection and Computation

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

Tables of water-level data are presented by counties arranged in alphabetical order. The prime identification number for a given well is the 15-digit number that appears in the upper left corner of the table. 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 or from the graph or punched tape of a water-stage recorder. 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 are given to a tenth of a foot or a larger unit.

Data Presentation

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

LOCATION.--This paragraph follows the well-identification number and reports the latitude and longitude (given in degrees, minutes, and seconds); the hydrologic-unit number; 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 and/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 used, allowing the user to better evaluate the reported water-level extremes by knowing whether they are based on weekly, monthly, 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) National Geodetic Vertical Datum of 1929 (NGVD of 1929); it is reported with a precision depending on the method of determination.

REMARKS.--This entry describes factors that may influence the water level in a well or the measurement of the water level. It should identify wells that also are water-quality observation wells, and may be used to acknowledge the assitance 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 water levels of the period of published record, with respect to land-surface datum, and the dates of their occurrence.

A table of water levels follows the station description for each well. Water levels are reported in feet below land-surface datum. Wells equipped with recording gages have water levels reported for each day. Missing records are indicated by dashes in place of the water level.

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. The location of ground-water-quality stations are shown in figures 9, 10.

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 earlier years.

Most methods for collecting and analyzing water samples are described in the "U.S. Geological Survey 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 obtained by trained personnel.

A variety of sampling techniques are 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 is 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 National WATer Data STOrage and REtrieval system (WATSTORE) was established for handling water data collected through the activities of the U.S. Geological Survey and to provide for more effective and efficient means of releasing the data to the public. The system is operated and maintained on the central computer facilities of the Survey at its National Center in Reston, Virginia.

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

General inquiries about WATSTORE may be directed to:

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

DEFINITION OF TERMS

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

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

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

Algae are mostly aquatic single-celled, colonial, or 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.

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.

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°C ± 1.0°C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal coliform bacteria are bacteria that are present in the 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 hours when incubated at 44.5°C ± 0.2°C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal streptococcal bacteria are bacteria found also in 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°C ± 1.0°C on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

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

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

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

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

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

Organic mass or volatile mass of the living substance is the difference between the dry mass and 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, approximately 1.9835 acre-feet, about 646,000 gallons or 2,447 cubic meters.

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

Chlorophyll refers to the green pigments of plants. Chlorophyll a and b are the two most common 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 or 0.02832 cubic meters per second.

Cubic feet per second per square mile [$(ft^3/s)/mi^2$][1] is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming that the runoff is distributed uniformly in time and area.

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

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

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

Dissolved refers to that material in a representative water sample which passes through a 0.45 um 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.

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

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

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

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

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

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is 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 57 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 (ug/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 (UG/L, ug/L) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

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

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

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.

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:

Classification	Size (mm)	Method of analysis
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 ($1x10^{-12}$) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields 3.7×10^{10} radioactive disintegrations per second. A picocurie yields 2.22 dpm (disintegrations per minute).

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

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

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

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

Green algae have chlorophyll pigments similar in color to those of higher green plants. Some forms produce 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 of volume per unit time [mg C/(m^2.time)] for periphyton and macrophytes and [mg C/(m^3.time)] for phytoplankton are units for expressing primary productivity. They define the amount of carbon dioxide consumed as measured by radioactive carbon (carbon 14). The carbon 14 method is of greater sensitivity than the oxygen light and dark bottle method, and is preferred for use in unenriched waters. Unit time may be either the hour or day, depending on the incubation period.

Milligrams of oxygen per area or volume per unit time [mgO /(m^2.time)] for periphyton and macrophytes and [mgO /(m^3.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.

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

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

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

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

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

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

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

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) x discharge (ft^3/s) x 0.0027.

Suspended-sediment load is 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 ($7\ Q_{10}$) 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 genrally 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.

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

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

Substrate is the physical surface upon which an organism lives.

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

Artificial substrate is a device which is purposely placed in a stream or lake for colonization of organisms. The artificial substrate simplifies the community structure by standardizing the substrate from which each sample is taken. Examples of artificial 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 plexiglass strips for periphyton collection.

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

Surficial bed material is 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-micrometer filter.

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45 um 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 um 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.

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

WDR is used as an abbreviation for "Water-Data Report" in the REVISED RECORDS paragraph to refer to a State 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.

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

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

1-D1. *Water temperature--influential factors, field measurement, and data presentation,* by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.

1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents,* by W. W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.

2-D1. *Application of surface geophysics to ground-water investigations,* by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.

2-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.

3-A1. *General field and office procedures for indirect discharge measurements,* by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages.

3-A2. *Measurement of peak discharge by the slope-area method,* by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.

3-A3. *Measurement of peak discharge at culverts by indirect methods,* by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages.

3-A4. *Measurement of peak discharge at width contractions by indirect methods,* by H. F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 Pages.

3-A5. *Measurement of peak discharge at dams by indirect methods,* by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages.

3-A6. *General procedure for gaging streams,* by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages.

3-A7. *Stage measurements at gaging stations,* by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages.

3-A8. *Discharge measurements at gaging stations,* by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages.

3-A9. *Measurement of time of travel and dispersion in streams by dye tracing,* by E. F. Hubbard, F. A. Kilpatrick, L. A. Martens, and J. F. Wilson, Jr.: USGS--TWRI Book 3, Chapter A9. 1982. 44 pages.

3-A10. *Discharge ratings at gaging stations,* by E. J. Kennedy: USGS--TWRI Book 3, Chapter A10. 1984. 59 pages.

3-A11. *Measurement of discharge by moving-boat method,* by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages.

3-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-B1. *Aquifer-test design, observation, and data analysis,* by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages.

3-B2. *Introduction to ground-water hydraulics, a programed text for self-instruction,* by G. D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.

3-B3. *Type curves for selected problems of flow to wells in confined aquifers,* by J. E. Reed: USGS-TWRI Book 3, Chapter B3. 1980. 106 pages.

3-C1. *Fluvial sediment concepts* by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.

3-C2. *Field methods for measurement of fluvial sediment*. by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages.

3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages.

4-A1. *Some statistical tools in hydrology*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages.

4-A2. *Frequency curves*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages.

4-B1. *Low-flow investigations*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages.

4-B2. *Storage analyses for water supply*, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages.

4-B3. *Regional analyses of streamflow characteristics*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages.

4-D1. *Computation of rate and volume of stream depletion by wells* by C. T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages.

5-A1. *Methods for determination of inorganic substances in water and fluvial sediments* by M. W. Skougstad and others, editors: USGS--TWRI Book 5, Chapter A1. 1979. 626 pages.

5-A2. *Determination of minor elements in water by emission spectroscopy*. by P. R. Barnett and E. C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages.

5-A3. *Methods for analysis of organic substances in water*, by D. F. Goerlitz and Eugene Brown: USGS--TWRI Book 5, Chapter A3. 1972. 40 pages.

5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples*. edited by P. E. Greeson, T. A. Ehlke, G. A. Irwin, B. W. Lium, and K. V. Slack: USGS--TWRI Book 5, Chapter A4. 1977. 332 pages.

5-A5. *Methods for determination of radioactive substances in water and fluvial sediments*. by L. L. Thatcher, V. J. Janzer, and K. W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages.

5-A6. *Quality assurance practices for the chemical and biological analyses of water and fluvial sedments*, by L. C. Friedman and D. E. Erdmann: USGS--TWRI Book 5, Chapter A6. 1982. 181 pages.

5-C1. *Laboratory theory and methods for sediment analysis*, by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages.

7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P. C. Trescott, G. F. Pinder, and S. P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages.

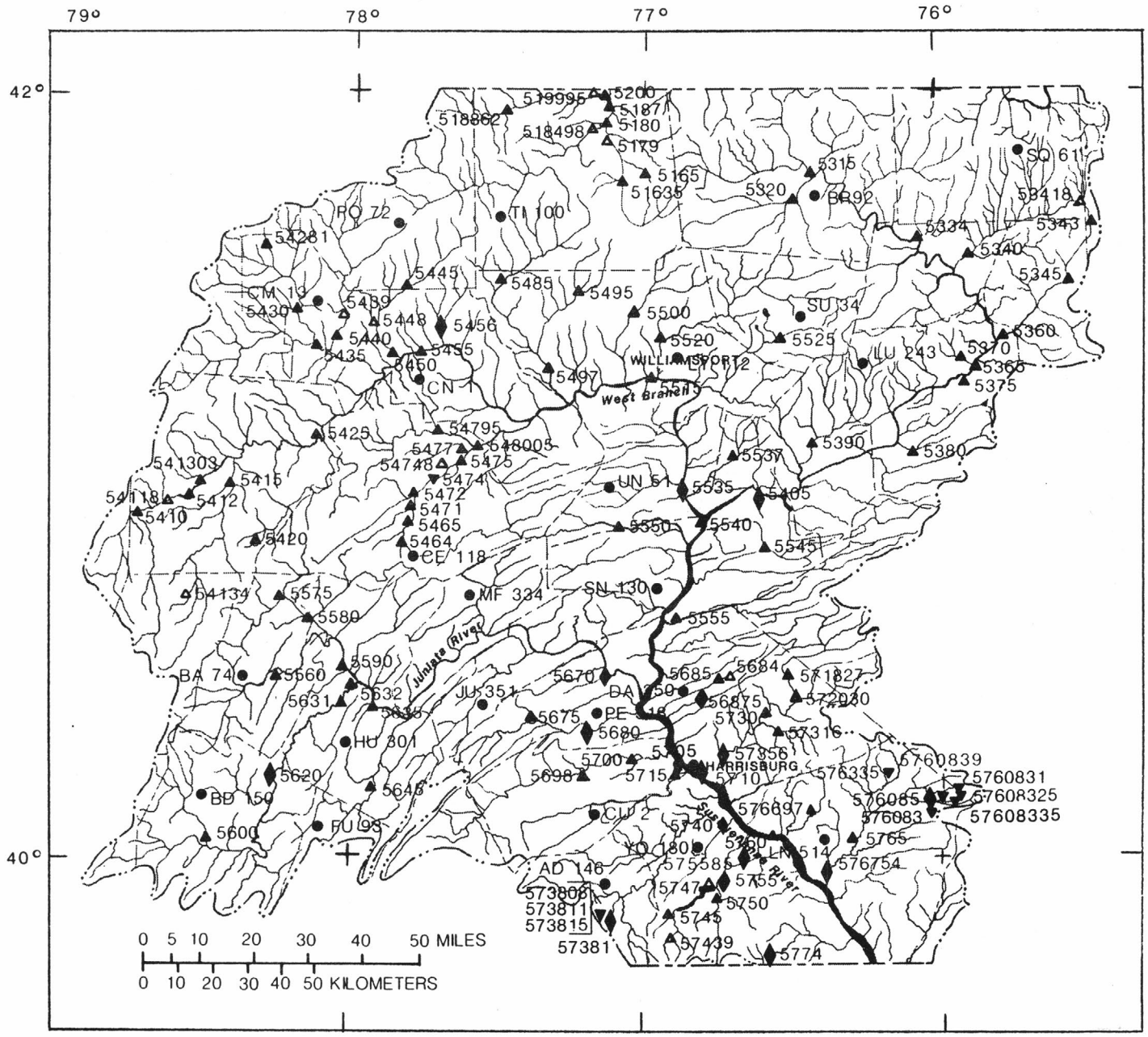
7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L. F. Konikow and J. D. Bredehoeft: USGS--TWRI Book 7, Chapter C2. 1978. 90 pages.

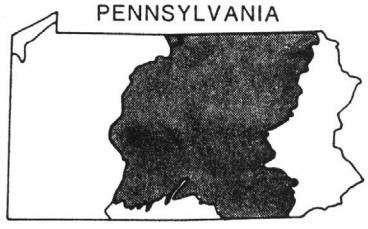
7-C3. *A model for simulation of flow in singular and interconnected channels* by R. W. Schaffrannek, R. A. Baltzer, and D. E. Goldberg: USGS--TWRI Book 7, Chapter C3. 1981. 110 pages.

8-A1. *Methods of measuring water levels in deep wells*. by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages

8-A2. *Installation and service manual for U.S. Geological Survey manometers* by J. D. Craig: USGS--TWRI Book 8, Chapter A2. 1983. 57 pages.

8-B2. *Calibration and maintenance of vertical-axis type current meters*. by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages.





STUDY LOCATION

EXPLANATION

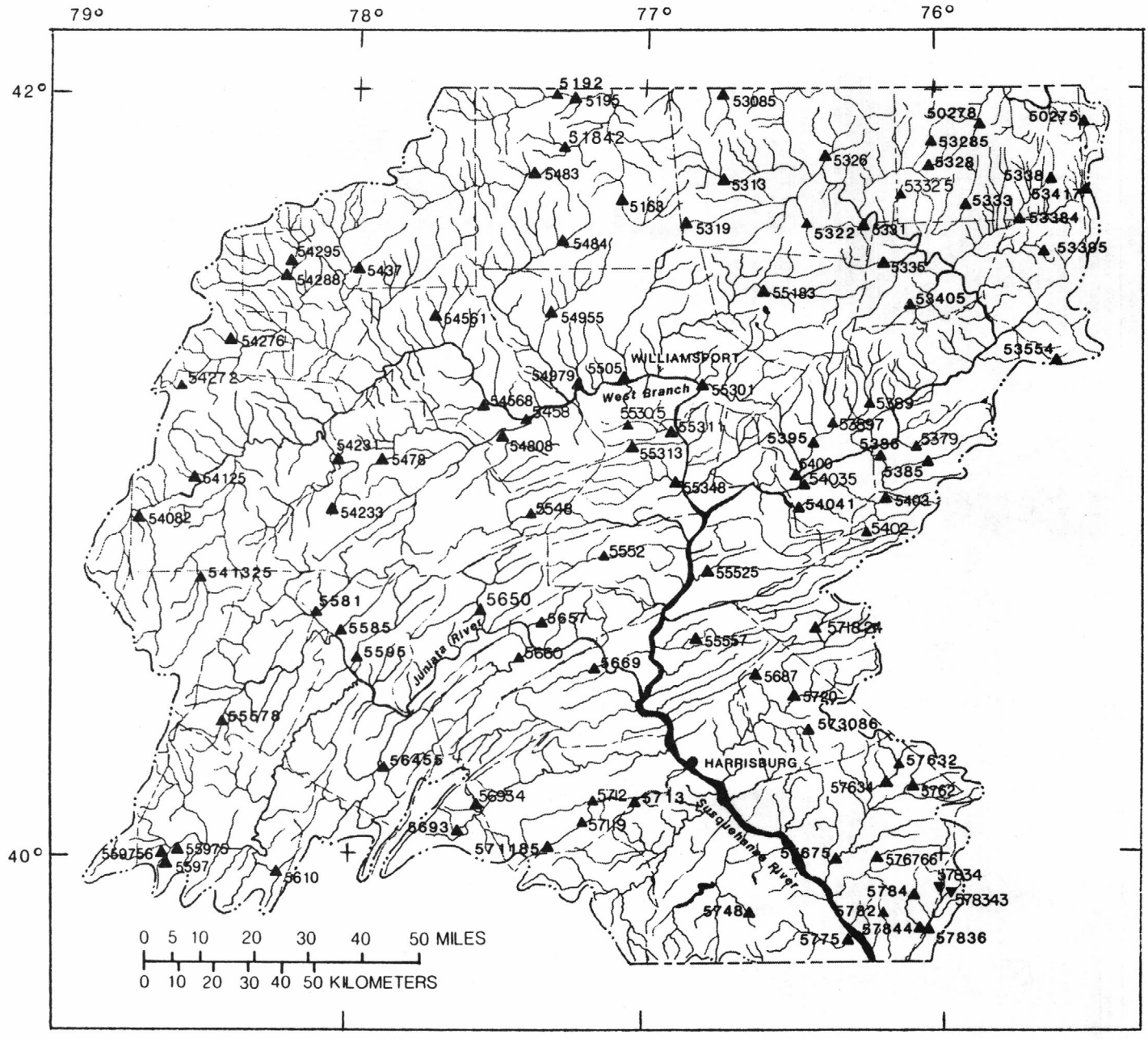
- ▲ 5745 Streamflow station and number
- ▼ 576335 Water-quality station and number
- ◆ 5774 Streamflow and water-quality station and number
- ● AD 146 Observation well and number
- △ 57439 Lake and number

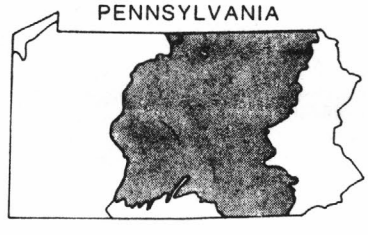
NOTE - Downstream station numbers abbreviated: First two digits (part number), and last two digits (if zeros) are omitted.

EXAMPLE - Station number 01573560 is shown as 57356, station number 01570500 is shown as 5705.

Figure 7.--Location of continuous data-collection stations and network observation wells.

SUSQUEHANNA RIVER BASIN





STUDY LOCATION

EXPLANATION

▲ 5782 Streamflow station and number

▼ 578343 Water-quality station and number

NOTE - Downstream station numbers abbreviated: First two digits (part number), and last two digits (if zeros) are omitted.

EXAMPLE

Station number 01569340 shown as 56934, station number 01578200 shown as 5782.

Figure 8.--Location of partial-record data-collection stations.

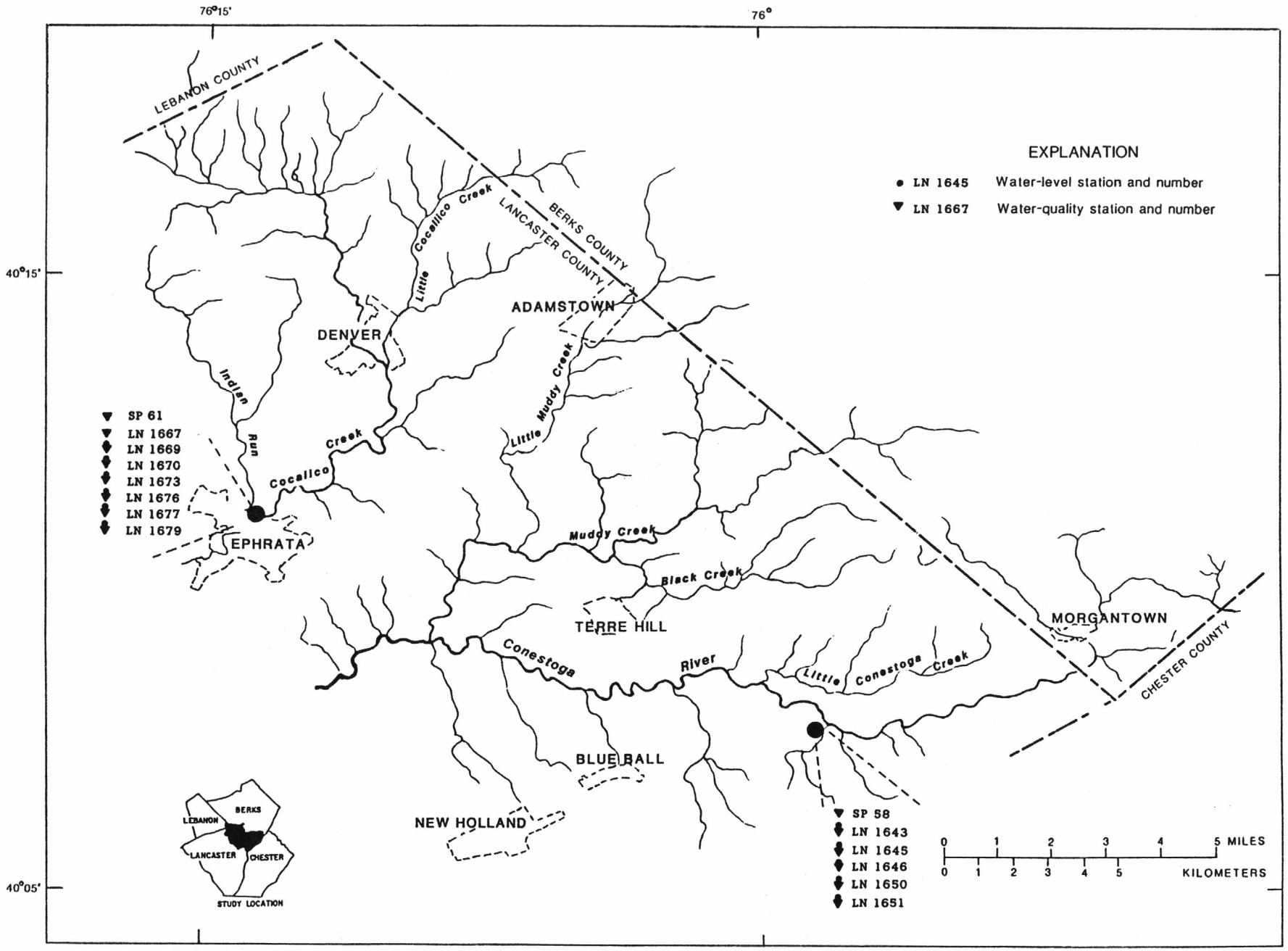
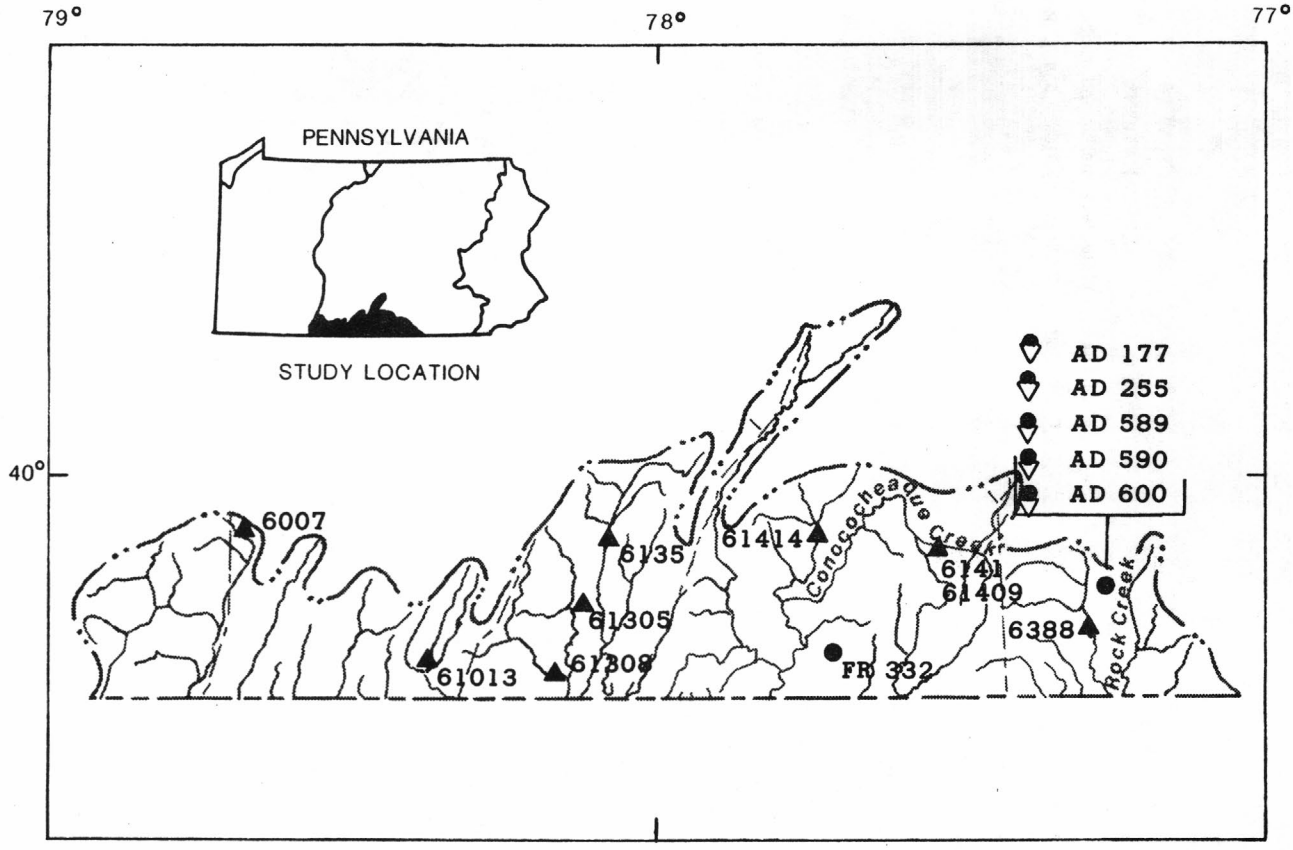


Figure 9.--Location of water-level and quality of ground-water data-collection stations in northern Lancaster County.

POTOMAC RIVER BASIN



EXPLANATION

▲ **61305** Streamflow station and number

▽ **AD 177** Water-quality station and number

● **FR 332** Observation well and local number

NOTE - Downstream station numbers abbreviated: First two digits (part number), and last two digits (if zeros) are omitted.

EXAMPLE - Station number 01613050 is shown as 61305, station number 01601000 is shown as 6010.

Figure 10.--Location of continuous and partial-record data-collection stations, Potomac River basin.

NORTH ATLANTIC SLOPE BASINS

SUSQUEHANNA RIVER BASIN

CHEMUNG RIVER BASIN

01516350 TIOGA RIVER NEAR MANSFIELD, PA

LOCATION.--Lat 41°47'34", long 77°04'44", Tioga County, Hydrologic Unit 02050104, on left bank 0.6 mi downstream from Slate Creek and 1.0 mi south of Mansfield.

DRAINAGE AREA.--153 mi^2.

PERIOD OF RECORD.--July 1976 to current year.

REVISED RECORDS.--WDR PA-84-2: 1980-83 (P).

GAGE.--Water-stage recorder. Datum of gage is 1,121.28 ft above National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--11 years, 209 ft^3/s, 18.60 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,490 ft^3/s, Feb. 14, 1984, gage height, 14.68 ft, from rating curve extended above 6,000 ft^3/s; maximum gage height, 16.17 ft, May 14, 1978; minimum daily discharge, 9.6 ft^3/s, Sept. 20, 1983.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in September 1975 reached an approximate stage of 20.13 ft, from flood-marks, approximate discharge, 18,000 ft^3/s.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 26	1930	3,840	12.48	Apr. 6	2130	3,980	12.54
Apr. 4	1745	*6,800	*13.68				

Minimum discharge, 14 ft^3/s, Aug. 25, 26, gage height, 7.82 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	44	331	163	e71	e400	501	e100	e80	41	26	21
2	56	45	331	158	e76	e600	422	e83	e140	201	25	20
3	63	45	1790	157	e76	327	382	e170	e100	298	26	19
4	240	44	832	130	e74	250	2690	e300	e210	143	25	18
5	148	45	551	e120	e69	215	2110	207	e110	91	24	17
6	101	88	428	e130	e64	251	1970	e160	e66	70	25	18
7	79	98	364	e120	e62	519	2280	e140	e62	74	23	19
8	67	163	324	121	e68	922	1010	e120	e66	254	23	22
9	61	522	326	111	e64	983	695	e110	e120	258	22	24
10	58	327	395	106	e58	504	515	e100	62	240	25	21
11	53	246	291	106	e64	376	412	e88	49	148	23	19
12	50	211	249	101	e62	333	418	e78	51	346	21	33
13	50	191	196	96	e54	292	564	e70	103	120	20	110
14	63	148	149	95	e52	242	412	e61	90	110	18	90
15	77	132	182	269	e43	215	342	e60	61	100	18	47
16	61	125	166	256	e42	187	305	e55	47	77	17	36
17	56	125	156	129	e45	167	294	e50	40	64	17	40
18	53	136	226	133	e47	155	296	e46	37	56	16	72
19	50	146	223	123	e46	153	254	e60	34	50	15	83
20	48	133	171	e120	e44	155	224	e90	34	47	15	85
21	47	391	148	e120	e43	151	e160	e54	45	45	15	70
22	45	279	116	e110	e45	145	e130	e54	71	39	16	55
23	44	248	118	e110	e54	151	e120	e48	132	35	16	58
24	43	473	122	e100	e52	167	e230	e44	69	33	15	47
25	41	398	582	e90	e47	193	e220	e42	49	31	14	43
26	45	1460	383	e90	e52	333	e170	e41	45	50	14	38
27	54	1740	287	e88	e58	253	e130	e40	70	47	47	34
28	59	800	253	e88	e70	226	e140	e39	60	35	47	32
29	54	561	228	e84	---	203	e170	e37	46	30	43	29
30	50	428	212	e80	---	222	e130	e34	42	28	30	65
31	46	---	189	e76	---	609	---	e35	---	27	24	---
TOTAL	2008	9792	10319	3780	1602	9899	17696	2616	2191	3188	705	1285
MEAN	64.8	326	333	122	57.2	319	590	84.4	73.0	103	22.7	42.8
MAX	240	1740	1790	269	76	983	2690	300	210	346	47	110
MIN	41	44	116	76	42	145	120	34	34	27	14	17
CFSM	.42	2.13	2.18	.80	.37	2.09	3.86	.55	.48	.67	.15	.28
IN.	.49	2.38	2.51	.92	.39	2.41	4.30	.64	.53	.78	.17	.31

01516500 COREY CREEK NEAR MAINESBURG, PA

LOCATION.--Lat 41°47'27", long 77°00'54", Tioga County, Hydrologic Unit 02050104, on right bank 30 ft upstream from township bridge, 500 ft upstream from small tributary, 1.1 mi west of Mainesburg, 3.5 mi east of Mansfield, and 4.2 mi upstream from mouth.

DRAINAGE AREA.--12.2 mi^2.

PERIOD OF RECORD.--May 1954 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,337.50 ft above National Geodetic Vertical Datum of 1929. Prior to June 28, 1954, nonrecording gage at site 30 ft downstream at same datum.

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

AVERAGE DISCHARGE.--33 years, 12.5 ft^3/s, 13.85 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,580 ft^3/s, June 23, 1972, gage height, 10.44 ft, from flood-mark, from rating curve extended above 490 ft^3/s on basis of slope-area measurements at gage height 7.88 ft and at peak flow; no flow on many days.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 280 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 3	0315	332	4.05	Apr. 6	1815	329	4.02
Mar. 1	--	Unknown	ice jam	July 9	2000	317	3.97
Apr. 4	1815	*1,180	*6.37				

Minimum daily discharge, 0.83 ft^3/s, Aug. 19, 21, 25, 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	1.3	15	e8.8	e7.4	e190	27	4.6	3.1	1.4	1.6	1.2
2	1.7	1.4	20	e8.8	e7.8	107	26	3.9	8.0	6.2	1.6	1.2
3	2.3	1.6	146	e8.4	e7.8	47	22	12	3.7	5.0	1.7	1.2
4	11	1.6	45	e8.0	e7.6	45	356	14	17	2.6	1.6	1.1
5	6.1	1.6	29	e8.0	e6.9	29	152	12	6.1	1.8	1.5	1.1
6	3.6	3.6	22	e9.0	e6.4	32	182	11	3.7	1.5	1.6	1.2
7	2.7	2.8	19	e9.0	e6.3	52	138	9.6	4.6	12	1.5	1.4
8	2.2	6.1	16	e8.0	e7.0	65	65	8.2	4.7	59	1.4	1.5
9	1.9	19	18	7.1	e6.4	61	41	7.4	9.9	85	1.5	1.5
10	1.8	8.0	20	6.3	e6.0	44	28	6.5	4.6	46	1.6	1.4
11	1.6	5.7	13	6.0	e6.6	46	23	5.5	3.5	26	1.5	1.3
12	1.6	5.6	11	7.2	e6.0	30	26	5.5	4.6	55	1.4	1.7
13	1.7	5.3	e9.6	5.2	e5.6	16	36	4.8	16	17	1.2	6.1
14	2.1	4.2	e8.6	11	e5.1	17	22	4.0	12	15	1.1	2.7
15	2.0	3.4	e10	38	e4.0	13	17	4.2	6.0	11	1.1	1.8
16	1.7	3.7	6.6	25	e3.6	10	15	3.6	4.0	7.3	1.0	1.6
17	1.6	3.4	6.5	31	e3.7	9.8	15	3.0	3.3	5.1	.93	1.8
18	1.6	3.7	14	19	e3.8	7.5	14	2.9	2.7	3.9	.87	3.2
19	1.5	4.7	12	11	e3.7	6.3	11	4.1	2.4	3.4	.83	3.5
20	1.3	6.0	8.0	e11	e3.5	5.8	8.7	6.3	2.2	3.5	.88	3.1
21	1.3	22	6.9	e10	e3.5	5.4	6.9	3.4	2.7	2.9	.83	2.4
22	1.3	12	e6.6	e10	e3.7	5.4	6.0	3.6	2.8	2.4	.90	1.9
23	1.3	12	6.2	e9.6	e4.3	5.3	5.2	3.3	3.2	2.4	.99	1.7
24	1.3	42	5.7	e9.4	e4.1	5.5	12	2.8	2.6	2.2	.91	1.6
25	1.2	23	46	e9.2	e4.3	7.6	10	2.6	2.2	2.2	.83	1.7
26	1.6	75	20	e9.0	e3.8	17	6.5	2.6	2.0	8.7	.83	1.6
27	1.8	65	15	e8.8	e3.5	11	5.5	2.5	2.6	3.1	3.3	1.4
28	1.7	35	14	e8.8	e3.3	9.9	6.0	2.3	1.7	2.3	2.6	1.4
29	1.6	25	12	e8.5	---	9.1	6.8	2.1	1.4	1.9	2.2	1.4
30	1.6	18	11	e8.2	---	11	5.4	1.7	1.4	1.7	1.5	3.3
31	1.6	---	9.0	e7.8	---	39	---	1.9	---	1.7	1.3	---
TOTAL	68.2	421.7	601.7	345.1	145.7	959.6	1295.0	161.9	144.7	399.2	42.60	58.0
MEAN	2.20	14.1	19.4	11.1	5.20	31.0	43.2	5.22	4.82	12.9	1.37	1.93
MAX	11	75	146	38	7.8	190	356	14	17	85	3.3	6.1
MIN	1.2	1.3	5.7	5.2	3.3	5.3	5.2	1.7	1.4	1.4	.83	1.1
CFSM	.18	1.15	1.59	.91	.43	2.54	3.54	.43	.40	1.06	.11	.16
IN.	.21	1.29	1.83	1.05	.44	2.93	3.95	.49	.44	1.22	.13	.18

CAL YR 1986 TOTAL 4727.28 MEAN 13.0 MAX 309 MIN .23 CFSM 1.06 IN. 14.41
WTR YR 1987 TOTAL 4643.34 MEAN 12.7 MAX 356 MIN .83 CFSM 1.04 IN. 14.16

e Estimated

01518000 TIOGA RIVER AT TIOGA, PA

LOCATION.--Lat 41°54'30", long 77°07'47", Tioga County, Hydrologic Unit 02050104, on left bank 130 ft upstream from highway bridge at Tioga, 0.8 mi upstream from Crooked Creek, and 0.9 mi downstream from Tioga Dam.

DRAINAGE AREA.--282 mi^2.

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

REVISIONS.--WSP 871: 1938.

GAGE.--Water-stage recorder. Datum of gage is 1,021.0 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 9, 1953, at site 20 ft upstream at datum 2.11 ft higher. Sept. 9, 1953, to Aug. 10, 1954, at site 130 ft downstream at present datum.

REMARKS.--No estimated daily discharges. Records good. Discharges include flow diverted from Crooked Creek into Tioga River since Oct. 1, 1977. Flow regulated since November 1979 by Tioga Dam (station 01517900). Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 59,000 ft^3/s, June 22, 1972, gage height, 19.70 ft, from floodmark, from rating curve extended above 8,000 ft^3/s on basis of slope-area and contracted-opening measurement at gage height 15.47 ft, and slope-area measurement of peak flow; no flow Mar. 6, 1979, Aug. 29, 1980, result of shutoff at Tioga Dam.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,620 ft^3/s, Apr. 7, gage height, 6.36 ft; minimum daily, 38 ft^3/s, Sept. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69	80	689	410	213	498	1280	811	84	94	69	46
2	69	80	751	412	240	1250	784	318	105	545	69	42
3	69	80	3010	361	255	941	920	326	132	1040	63	46
4	228	80	2460	313	255	400	699	540	1510	426	59	46
5	324	80	974	270	255	400	998	546	522	127	58	44
6	238	94	878	249	255	400	4380	459	562	127	58	42
7	137	153	675	284	207	1070	4800	291	393	128	55	40
8	81	195	675	311	139	2500	5290	193	267	577	52	38
9	81	650	675	291	166	2460	4980	105	186	1110	52	49
10	81	662	654	247	177	1650	2110	105	186	1270	52	49
11	80	434	419	246	171	670	632	99	186	519	52	48
12	80	434	245	246	171	602	753	90	186	953	52	47
13	80	434	284	246	171	776	1020	90	167	1120	52	47
14	81	315	276	246	171	645	847	89	288	530	52	47
15	81	210	280	305	171	414	739	131	362	172	52	47
16	81	210	315	421	171	415	713	154	287	152	52	47
17	81	250	370	421	171	400	710	132	222	152	52	46
18	81	280	603	421	158	396	709	101	127	152	52	230
19	81	280	670	421	135	318	609	96	127	130	52	280
20	81	184	404	395	135	265	523	105	105	86	53	176
21	81	466	386	371	135	265	434	119	69	87	53	171
22	81	1060	305	368	135	269	434	126	162	85	52	168
23	81	589	234	368	135	294	428	125	232	78	52	166
24	81	429	235	364	135	337	338	125	232	69	52	134
25	81	1590	972	319	135	382	345	117	167	69	52	68
26	81	2490	897	235	135	525	448	97	124	69	51	62
27	81	3790	725	232	135	703	446	81	81	69	52	62
28	81	2080	537	234	135	540	606	87	56	69	52	60
29	81	1310	498	207	---	443	904	93	69	69	52	58
30	81	951	480	204	---	517	1110	94	94	69	51	56
31	81	---	427	204	---	1140	---	88	---	69	51	---
TOTAL	3075	19940	21003	9622	4867	21885	38989	5933	7290	10212	1678	2462
MEAN	99.2	665	678	310	174	706	1300	191	243	329	54.1	82.1
MAX	324	3790	3010	421	255	2500	5290	811	1510	1270	69	280
MIN	69	80	234	204	135	265	338	81	56	69	51	38
CFSM	.35	2.36	2.40	1.10	.62	2.50	4.61	.68	.86	1.17	.19	.29
IN.	.41	2.63	2.77	1.27	.64	2.89	5.14	.78	.96	1.35	.22	.32

CAL YR 1986 TOTAL 176495 MEAN 484 MAX 5350 MIN 48 CFSM 1.71 IN. 23.28
WTR YR 1987 TOTAL 146956 MEAN 403 MAX 5290 MIN 38 CFSM 1.43 IN. 19.39

01518700 TIOGA RIVER AT TIOGA JUNCTION, PA

LOCATION.--Lat 41°57'09", long 77°06'56", Tioga County, Hydrologic Unit 02050104, on left bank 0.3 mi upstream from bridge at Tioga Junction, 3.3 mi downstream from Crooked Creek, and 5.0 mi downstream from Tioga and Hammond Dams.

DRAINAGE AREA.--446 mi².

PERIOD OF RECORD.--July 1976 to current year.

GAGE.--Water-stage recorder. Datum of gage is 990.43 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated since November 1979 by Tioga Dam (01517900) and Hammond Dam (station 01518498). Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite and landline telemeters at station.

AVERAGE DISCHARGE.--11 years, 528 ft³/s, 16.02 in/yr, adjusted for storage since November 1979.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,900 ft³/s, Feb. 25, 1977, gage height, 16.70 ft, from rating curve extended above 4,000 ft³/s; minimum daily, 16 ft³/s, Aug. 26, 27, 28, 1980.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of September 1975 reached a stage of about 22.1 ft, from floodmarks, discharge, about 48,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,220 ft³/s, Apr. 7, gage height, 13.18 ft; minimum daily, 42 ft³/s, Sept. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	84	97	774	430	242	623	1560	908	92	113	80	55
2	83	97	837	429	271	1540	911	349	139	459	81	46
3	87	97	3350	391	289	1160	1070	372	156	1080	76	53
4	259	97	2780	e330	286	466	1460	581	1620	472	69	50
5	361	98	1130	e290	278	455	1280	567	542	150	70	47
6	272	120	1010	273	271	473	4820	495	571	146	70	47
7	176	180	766	305	240	1160	5320	322	396	149	66	43
8	102	227	763	337	166	2880	5870	232	301	542	60	42
9	100	683	779	320	188	2780	5530	134	208	1060	61	51
10	99	719	771	271	e190	1940	2640	131	204	1230	61	56
11	98	464	501	272	189	807	741	123	201	637	60	55
12	97	456	306	269	191	651	856	111	202	1120	60	56
13	98	455	336	269	196	856	1220	108	191	1190	59	57
14	99	358	322	268	203	728	1020	106	260	571	58	56
15	99	240	328	380	196	446	824	145	356	233	58	55
16	99	239	363	511	e190	442	804	169	282	182	58	56
17	98	271	417	465	e190	420	795	151	242	175	58	58
18	97	304	678	460	177	414	787	119	140	172	58	194
19	97	307	737	455	163	351	669	116	140	156	60	295
20	97	225	447	427	158	289	568	124	127	108	58	187
21	97	484	424	393	156	289	470	135	87	106	58	182
22	97	1090	348	387	152	292	464	141	154	103	58	178
23	97	648	271	390	155	313	453	136	240	97	58	175
24	97	557	284	e390	153	353	441	135	239	82	58	156
25	97	1720	1150	e330	157	402	423	130	191	81	58	78
26	98	2780	1010	e290	154	562	503	113	141	84	58	73
27	99	4250	781	285	150	755	488	93	106	82	66	70
28	100	2310	599	e280	149	597	648	97	67	82	72	67
29	99	1490	532	236	---	469	978	103	76	81	65	64
30	100	1090	521	235	---	534	1200	104	113	83	60	65
31	98	---	456	236	---	1250	---	98	---	81	58	---
TOTAL	3681	22153	23771	10604	5500	24697	44813	6648	7784	10907	1950	2667
MEAN	119	738	767	342	196	797	1494	214	259	352	62.9	88.9
MAX	361	4250	3350	511	289	2880	5870	908	1620	1230	81	295
MIN	83	97	271	235	149	289	423	93	67	81	58	42
MEAN‡	131	770	762	325	163	817	1459	248	264	351	50.7	98.0
CFSM‡	.29	1.73	1.71	.73	.37	1.83	3.27	.56	.59	.79	.11	.22
IN.‡	.33	1.93	1.97	.84	.39	2.11	3.65	.65	.66	.91	.13	.25

CAL YR 1986 TOTAL 201954 MEAN 553 MAX 5850 MIN 60 MEAN‡ 553 CFSM‡ 1.25 IN.‡ 16.83
WTR YR 1987 TOTAL 165175 MEAN 453 MAX 5870 MIN 42 MEAN‡ 454 CFSM‡ 1.02 IN.‡ 13.82

e Estimated
‡ Adjusted for change in contents in Tioga and Hammond Lakes.

01518862 COWANESQUE RIVER AT WESTFIELD, PA

LOCATION.--Lat 41°55'23", long 77°31'56", Tioga County, Hydrologic Unit 02050104, on left bank 800 ft downstream from Mill Creek, at Westfield, and 0.5 mi upstream from bridge on State Highway 49.

DRAINAGE AREA.--90.6 mi^2.

PERIOD OF RECORD.--August 1983 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,337.58 ft above National Geodetic Vertical Datum of 1929.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,050 ft^3/s, Aug. 13, 1984, gage height, 8.47 ft, from flood-marks, from rating curve extended above 1,000 ft^3/s; minimum, 1.2 ft^3/s, Aug. 23, 24, 25, 1983, gage height, 1.10 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,900 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 7	Unknown	ice jam	*6.82	July 2	1300	*1,930	4.73

Minimum daily discharge, 3.8 ft^3/s, Aug. 25, 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	16	112	55	e26	194	352	103	20	47	8.5	10
2	13	15	119	54	e28	241	356	93	82	631	7.0	8.6
3	28	14	403	e50	e28	e120	285	140	48	312	8.1	8.1
4	205	14	270	e48	e28	e100	412	141	171	150	7.6	7.6
5	97	14	201	e51	e26	e91	590	105	69	91	6.7	7.3
6	56	32	169	e62	e24	214	725	95	49	63	6.8	7.3
7	40	28	146	e54	e23	542	666	89	47	68	6.7	9.0
8	30	36	140	49	e25	561	493	80	47	188	6.4	16
9	24	77	163	42	e24	357	363	72	57	101	6.3	17
10	21	50	228	39	e22	205	277	61	40	64	7.1	12
11	18	42	131	37	e24	e180	227	51	31	50	6.9	9.9
12	17	44	110	e35	e23	e150	226	53	33	67	6.0	111
13	16	47	e88	34	e21	136	257	43	47	54	5.0	158
14	22	40	e62	63	e20	113	186	37	37	37	5.7	61
15	21	39	e72	153	e16	97	162	44	26	36	e5.3	38
16	18	37	e73	e70	e16	82	146	37	20	26	e5.2	29
17	16	34	70	e49	e17	72	135	30	17	21	e4.7	54
18	16	32	78	e50	e18	64	130	28	15	18	e4.5	235
19	14	46	75	e46	e17	58	110	31	13	15	e4.2	220
20	13	67	61	e45	e16	56	94	34	13	13	e3.9	120
21	12	96	51	e45	e16	55	80	29	18	12	e4.2	82
22	12	71	e47	e41	e17	53	71	26	34	10	e4.8	92
23	11	79	e45	e42	e20	50	63	24	65	8.7	e5.6	63
24	11	268	47	e38	e19	54	179	21	32	8.0	5.2	48
25	11	173	235	e34	e18	63	146	19	21	8.2	3.8	39
26	15	424	120	e34	e20	154	111	18	20	26	3.8	28
27	17	325	97	e33	e22	106	98	18	30	17	24	22
28	18	229	87	e33	e25	109	169	17	19	11	38	18
29	17	181	79	e32	---	101	140	15	16	9.1	25	15
30	19	144	73	e30	---	147	117	16	79	8.1	15	22
31	17	---	65	e28	---	547	---	37	---	10	12	---
TOTAL	858	2714	3717	1476	599	5072	7366	1607	1216	2180.1	264.0	1567.8
MEAN	27.7	90.5	120	47.6	21.4	164	246	51.8	40.5	70.3	8.52	52.3
MAX	205	424	403	153	28	561	725	141	171	631	38	235
MIN	11	14	45	28	16	50	63	15	13	8.0	3.8	7.3
CFSM	.31	.99	1.32	.53	.24	1.81	2.71	.57	.45	.78	.09	.58
IN.	.35	1.11	1.53	.61	.25	2.08	3.02	.66	.50	.90	.11	.64

CAL YR 1986 TOTAL 31984.3 MEAN 87.6 MAX 1550 MIN 2.3 CFSM .97 IN. 13.13
WTR YR 1987 TOTAL 28636.8 MEAN 78.5 MAX 725 MIN 3.8 CFSM .87 IN. 11.76

e Estimated

01520000 COWANESQUE RIVER NEAR LAWRENCEVILLE, PA

LOCATION.--Lat 41°59'48", long 77°08'25", Tioga County, Hydrologic Unit 02050104, on left bank 0.5 mi downstream from Cowanesque Dam, 0.8 mi upstream from highway bridge on U.S. Route 15 in Lawrenceville, and 1.4 mi upstream from mouth.

DRAINAGE AREA.--298 mi^2.

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

REVISED RECORDS.--WDR PA-72-1: 1971(M).

GAGE.--Water-stage recorder. Datum of gage is 983.96 ft above National Geodetic Vertical Datum of 1929. Prior to July 1976 at site 1.1 mi upstream at datum 14.07 ft higher.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since December 1979 by Cowanesque Dam (station 01519995). Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite and landline telemeters at station.

AVERAGE DISCHARGE.--36 years, 293 ft^3/s, 13.31 in/yr, adjusted for storage since December 1979.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 43,700 ft^3/s, Sept. 26, 1975, gage height, 18.13 ft, site and datum then in use, from floodmark, from rating curve extended above 6,000 ft^3/s on basis of slope-area measurement of peak flow; minimum discharge before construction of Cowanesque Dam, 0.8 ft^3/s, Aug. 31, Sept. 1, 27, 1964; no flow Aug. 22, 1978, during dam construction.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,520 ft^3/s, Apr. 6, gage height, 10.80 ft; minimum daily, 11 ft^3/s, Aug. 22-26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	78	33	291	207	104	310	1250	246	66	142	24	23
2	189	33	289	186	98	1270	1070	235	166	843	24	23
3	188	33	1810	144	127	579	871	246	188	822	28	23
4	683	33	1270	101	129	313	473	424	391	288	28	23
5	512	33	597	136	98	272	1020	295	265	180	23	23
6	327	34	453	100	98	338	3300	228	74	153	23	23
7	271	35	413	171	98	1330	2660	211	118	111	23	23
8	248	35	414	171	96	1930	2630	192	133	233	23	29
9	221	35	410	135	90	1580	2480	171	100	260	23	31
10	170	36	779	139	85	608	2210	153	90	153	21	30
11	90	36	421	135	73	418	935	132	75	105	19	29
12	113	36	301	124	81	404	521	110	68	146	19	121
13	113	36	232	120	79	436	743	114	72	295	19	519
14	112	36	170	120	67	267	544	115	80	219	19	375
15	141	36	224	462	67	266	395	105	82	116	19	104
16	131	36	265	527	54	217	402	94	53	76	19	90
17	49	36	203	199	45	174	376	88	38	65	19	91
18	44	38	260	210	50	189	369	67	28	55	19	498
19	47	40	269	235	56	189	316	65	27	45	17	1140
20	45	40	208	170	53	176	268	77	26	40	15	514
21	37	89	188	162	45	166	257	80	28	38	14	336
22	33	214	115	167	45	151	209	80	49	31	11	264
23	35	198	87	104	56	153	194	70	109	24	11	281
24	38	656	161	97	66	162	374	59	110	22	11	213
25	33	751	576	98	62	188	638	49	62	22	11	162
26	33	1200	514	125	56	363	313	54	52	22	11	86
27	48	1460	309	147	52	306	261	51	47	37	12	64
28	56	630	301	114	52	276	336	52	42	40	16	64
29	44	503	273	98	---	277	413	47	41	25	21	77
30	36	434	220	108	---	330	308	41	103	24	23	121
31	33	---	221	113	---	1240	---	42	---	24	23	---
TOTAL	4198	6845	12244	5125	2082	14878	26136	3993	2783	4656	588	5400
MEAN	135	228	395	165	74.4	480	871	129	92.8	150	19.0	180
MAX	683	1460	1810	527	129	1930	3300	424	391	843	28	1140
MIN	33	33	87	97	45	151	194	41	26	22	11	23
MEAN‡	79.9	288	395	164	73.9	488	864	130	92.6	150	19.5	180
CFSM‡	.27	.97	1.33	.55	.25	1.64	2.90	.44	.31	.50	.07	.60
IN.‡	.31	1.08	1.53	.63	.26	1.89	3.24	.51	.35	.58	.08	.67

CAL YR 1986 TOTAL 102446 MEAN 281 MAX 2990 MIN 20 MEAN‡ 282 CFSM‡ .95 IN.‡ 12.79
WTR YR 1987 TOTAL 88928 MEAN 244 MAX 3300 MIN 11 MEAN‡ 244 CFSM‡ .82 IN.‡ 11.13

‡ Adjusted for change in contents in Cowanesque Lake.

RESERVOIRS IN CHEMUNG RIVER BASIN

01517900 TIOGA LAKE.--Lat 41°53'57", long 77°08'21", Tioga County, Hydrologic Unit 02050104, at Tioga Dam on Tioga River, 0.8 mi south of Tioga, and 1.7 mi upstream from Crooked Creek. DRAINAGE AREA, 280 mi². PERIOD OF RECORD, November 1979 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--Reservoir is formed by rolled earth and rockfill dam. Flood flows are routed to Hammond Lake through a connecting channel with weir at elevation 1,101.0 ft and to Hammond Dam spillway with crest at elevation 1,131.0 ft. Storage began in November 1979. Capacity at elevation 1,131.0 ft is 62,000 acre-ft. Recreation lake elevation is 1,081.0 ft, capacity 9,500 acre-ft. Reservoir is used for flood control and recreation. Figures given herein represent total contents. Flow is regulated by two service gates and low-flow by-pass system. U.S. Army Corps of Engineers satellite and landline telemeters at station.

COOPERATION.--Records provided by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 32,560 acre-ft, Feb. 16, 1984, elevation, 1,109.34 ft; minimum, 2,210 acre-ft, Oct. 25, 1980, elevation, 1,060.05 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 21,950 acre-ft, Apr. 5, elevation, 1,099.05 ft; minimum, 7,370 acre-ft, May 6, elevation, 1,076.12 ft.

01518498 HAMMOND LAKE.--Lat 41°53'56", long 77°08'52", Tioga County, Hydrologic Unit 02050104, at Hammond Dam on Crooked Creek, 3.0 mi upstream from mouth, and 0.8 mi southwest of Tioga. DRAINAGE AREA, 122 mi². PERIOD OF RECORD, November 1979 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--Reservoir is formed by rolled earth and rockfill dam with concrete chute spillway with uncontrolled weir at elevation 1,131.0 ft. Storage began in November 1979. Capacity at elevation 1,131.0 ft is 63,000 acre-ft. Recreation lake elevation is 1,086.0 ft, capacity 8,850 acre-ft. Reservoir is used for flood control and recreation. Figures given herein represent total contents. Flow is regulated by two gates through a connecting channel that discharges into Tioga Lake, and a low-flow outlet to Crooked Creek. U.S. Army Corps of Engineers satellite and landline telemeters at station.

COOPERATION.--Records provided by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 30,620 acre-ft, Feb. 16, 1984, elevation, 1,109.34 ft; minimum, 2,430 acre-ft, Oct. 24, 1980, elevation, 1,074.00 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 16,650 acre-ft, Apr. 7, elevation, 1,096.06 ft; minimum, 8,060 acre-ft, May 3, elevation, 1,084.94 ft.

01519995 COWANESQUE LAKE.--Lat 41°59'05", long 77°09'05", Tioga County, Hydrologic Unit 02050104, at Cowanesque Dam on Cowanesque River, 1.8 mi southwest of Lawrenceville, and 2.5 mi upstream from mouth. DRAINAGE AREA, 298 mi². PERIOD OF RECORD, December 1979 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--Reservoir is formed by rolled earth and rockfill dam with concrete chute spillway with uncontrolled weir at elevation 1,117.0 ft. Storage began in December 1979. Capacity at elevation 1,117.0 ft is 89,110 acre-ft. Recreation lake elevation is 1,045.0 ft, capacity 7,330 acre-ft. Reservoir is used for flood control control and recreation. Figures given herein represent total contents. Flow is regulated by two service gates and low-flow by-pass system. U.S. Army Corps of Engineers satellite and landline telemeters at station.

COOPERATION.--Records provided by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 32,110 acre-ft, Feb. 16, 1984, elevation, 1,079.57 ft; minimum, 65 acre-ft, June 23, 1980, elevation, 1,011.50 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 18,060 acre-ft, Apr. 6, elevation, 1,064.20 ft; minimum, 3,860 acre-ft, Oct. 25, elevation, 1,035.16 ft.

Reservoirs in Chemung River basin--Continued

MONTHEND ELEVATION, IN FEET NGVD, AND CONTENTS AT 2400, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (equivalent in ft³/s/day)	Elevation (feet)	Contents (acre-feet)	Change in contents (equivalent in ft³/s/day)
	01517900 Tioga Lake			01518498 Hammond Lake		
Sept. 30.....	1,080.80	9,410	--	1,085.42	8,410	--
Oct. 31.....	1,081.47	9,730	+ 5.2	1,086.00	8,850	+ 7.2
Nov. 30.....	1,082.36	10,170	+ 7.4	1,088.15	10,300	+24.4
Dec. 31.....	1,083.18	10,590	+ 6.8	1,087.13	9,560	-12.0
CAL YR 1986.....	--	--	- 0.3	--	--	- 0.1
Jan. 31.....	1,081.26	9,630	-15.6	1,087.06	9,500	- 1.0
Feb. 28.....	1,078.97	8,590	-18.7	1,085.83	8,720	-14.0
Mar. 31.....	1,080.77	9,400	+13.2	1,086.55	9,190	+ 7.6
Apr. 30.....	1.077.63	8,000	-23.5	1,085.52	8,490	-11.8
May 31.....	1,081.03	9,510	+24.6	1,086.40	9,090	+ 9.8
June 30.....	1,081.70	9,840	+ 5.5	1,086.39	9,090	0
July 31.....	1,081.35	9,670	- 2.8	1,086.55	9,190	+ 1.6
Aug. 31.....	1,080.05	9,070	- 9.8	1,086.31	9,040	- 2.4
Sept. 30.....	1,081.49	9,740	+11.3	1,086.10	8,910	- 2.2
WTR YR 1987.....	--	--	+ 0.5	--	--	+ 0.7

	01519995 Cowanesque Lake		
Sept. 30.....	1,045.01	7,330	--
Oct. 31.....	1,035.46	3,940	-55.1
Nov. 30.....	1,045.35	7,480	+59.5
Dec. 31.....	1,045.32	7,460	- 0.3
CAL YR 1986.....	--	--	+ 0.5
Jan. 31.....	1,045.18	7,410	- 0.8
Feb. 28.....	1,045.12	7,380	- 0.5
Mar. 31.....	1,046.20	7,840	+ 7.5
Apr. 30.....	1,045.16	7,400	- 7.4
May 31.....	1,045.36	7,480	+ 1.3
June 30.....	1,045.33	7,470	- 0.2
July 31.....	1,045.30	7,460	- 0.2
Aug. 31.....	1,045.39	7,490	+ 0.5
Sept. 30.....	1,045.30	7,460	- 0.5
WTR YR 1987.....	--	--	+ 0.2

01531500 SUSQUEHANNA RIVER AT TOWANDA, PA

LOCATION.--Lat 41°45'55", long 76°26'28", Bradford County, Hydrologic Unit 02050106, on right bank at Bridge Street in Towanda, and 1.8 mi upstream from Towanda Creek.

DRAINAGE AREA.--7,797 mi².

PERIOD OF RECORD.--October 1913 to current year. Monthly discharge only for some periods, published in WSP 1302. Gage-height records collected at same site since October 1892 are contained in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 756: Drainage area. WSP 1302: 1922, 1929.

GAGE.--Water-stage recorder. Datum of gage is 694.38 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 18, 1938, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow slightly regulated by 7 flood-control reservoirs, which have a combined capacity of 356,800 acre-ft. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter and National Weather Service landline telemeter at station.

AVERAGE DISCHARGE.--74 years, 10,580 ft³/s, 18.47 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 320,000 ft³/s, June 24, 1972, gage height, 33.43 ft from flood-marks, from rating curve extended above 180,000 ft³/s; minimum, 334 ft³/s, Sept. 23, 24, 1964; minimum gage height, -0.56 ft, Aug. 17, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 68,000 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 27	1630	*76,300	*14.26	Apr. 5	1430	75,500	14.16

Minimum discharge, 856 ft³/s, Aug. 24, gage height, -0.11 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3420	e5100	28200	11200	e5600	3930	31400	9380	3250	2330	1610	2070
2	4140	e4700	23900	e10000	e5800	15900	28000	8630	4380	2670	1530	1940
3	5830	e4600	26700	e9000	6120	25400	25700	7580	5490	6620	1480	1750
4	7880	e4600	36700	e8000	6170	24000	37000	7410	5390	9200	1630	1610
5	14600	e4500	33400	e7000	e5800	20400	72700	7260	7070	6590	1670	1470
6	14000	e6000	26800	e7200	e5400	17500	61500	6600	6090	5050	1610	1420
7	11400	8080	22600	e7400	e5200	19700	63700	6140	5250	4130	1630	1350
8	9280	9340	20200	e7400	e5200	38200	54800	5680	4690	7120	1530	1350
9	7570	16100	18900	e7200	e5000	53400	45400	5400	4550	7490	1440	1410
10	6970	23100	21000	e7000	e4500	42400	38600	5060	4180	6540	1370	1560
11	6310	21300	22500	e6400	e4500	29300	29900	4750	3660	5920	1370	2110
12	5560	17500	20400	e6600	e4300	22900	24100	4370	3250	6190	1740	3020
13	5180	16300	17100	e6600	e4100	20100	33000	4030	3180	5150	2270	3350
14	5090	14800	13700	e6200	e3900	17700	39100	3770	3150	5020	2070	16200
15	5350	12700	12300	e7600	e3800	15400	34600	3570	3060	4540	1700	13300
16	5750	10900	12000	e12000	e3600	13900	28300	3410	3130	5720	1470	9740
17	5850	10500	12200	e12000	e3400	12800	23600	3370	2730	5750	1320	7120
18	5510	10600	12400	e10000	e3400	11500	21200	3180	2430	4640	1220	6980
19	5040	11200	15200	e9000	e3400	10900	18900	3120	2130	3560	1160	12700
20	4770	11100	14400	e8400	e3300	11200	16500	3100	1790	2950	1150	13700
21	4620	17100	12700	e8000	e3300	11500	14400	3080	1730	2650	1060	11800
22	4410	28300	11400	e7000	e3200	11200	12700	3010	1780	2380	987	9740
23	4240	25800	9890	e6000	e3300	12000	11400	3020	1880	2180	1010	9150
24	4130	23500	9100	e5400	e3300	14600	10600	3480	4300	2020	895	8280
25	4150	28900	15700	e5200	e3300	18500	12900	5350	4650	1840	898	7140
26	4260	33500	22600	e5200	e3400	26300	12400	4290	4060	1850	881	6310
27	4630	70500	20900	e5000	e3300	31200	10700	3640	3270	2910	1080	5500
28	e5400	58500	17600	e5000	3310	30600	9270	3320	2710	2700	1440	4800
29	e5900	44000	15000	e5200	---	27400	9440	3580	2380	2240	1950	4260
30	e6000	34900	13200	e5400	---	24300	10100	3440	2250	1980	2320	3950
31	e5400	---	12200	e5400	---	22900	---	3410	---	1750	2260	---
TOTAL	192640	588020	570890	229000	118900	657030	841910	145430	107860	131680	45751	175080
MEAN	6214	19600	18420	7387	4246	21190	28060	4691	3595	4248	1476	5836
MAX	14600	70500	36700	12000	6170	53400	72700	9380	7070	9200	2320	16200
MIN	3420	4500	9100	5000	3200	3930	9270	3010	1730	1750	881	1350
CFSM	.80	2.51	2.36	.95	.54	2.72	3.60	.60	.46	.54	.19	.75
IN.	.92	2.81	2.72	1.09	.57	3.13	4.02	.69	.51	.63	.22	.84

CAL YR 1986 TOTAL 4609100 MEAN 12630 MAX 115000 MIN 1400 CFSM 1.62 IN. 21.99
WTR YR 1987 TOTAL 3804190 MEAN 10420 MAX 72700 MIN 881 CFSM 1.34 IN. 18.15

e Estimated

01532000 TOWANDA CREEK NEAR MONROETON, PA

LOCATION.--Lat 41°42'25", long 76°29'06", Bradford County, Hydrologic Unit 02050106, on left bank 0.8 mi southwest of Monroeton and 1.0 mi upstream from South Branch Towanda Creek.

DRAINAGE AREA.--215 mi².

PERIOD OF RECORD.--February 1914 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 756: Drainage area. WSP 1051: 1943-44(M). WSP 1302: 1922(M), 1924, 1925-26(M), 1928, 1929(M), 1930-31. WSP 1432: 1921(M), 1932(M), 1933, 1934-35(M), 1936, 1938(M), 1940. WDR PA-78-2: 1972(M).

GAGE.--Water-stage recorder. Datum of gage is 765.53 ft above National Geodetic Vertical Datum of 1929. Nonrecording gage Aug. 27, 1976, to Oct. 20, 1977, at present site and datum. Nonrecording gage Sept. 26, 1975, to Aug. 26, 1976, at bridge 0.6 mi downstream at datum 11.82 ft lower. Water-stage recorder Oct. 1, 1942, to Sept. 25, 1975, 0.6 mi downstream at datum 11.82 ft lower. Prior to Oct. 1, 1942, nonrecording gage at present site at datum 8.62 ft higher.

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

AVERAGE DISCHARGE.--73 years, 287 ft³/s, 18.06 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 74,000 ft³/s, June 22, 1972, gage height, 15.3 ft in gage well, 16.9 ft from floodmark, site and datum then in use; minimum observed, 0.7 ft³/s, Sept. 15, 17, 21, 22, 1932.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,300 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 26	2115	4,500	10.68	July 8	0315	6,760	11.57
Apr. 4	1745	*14,000	*13.60				

Minimum discharge, 4.4 ft³/s, Aug. 26, 27, gage height, 6.26 ft.

REVISIONS.--Revised figures of discharge for water years 1978 and 1979, superseding those published in the reports for 1978 and 1979 are given below.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	47	425	235	e86	e200	737	172	58	31	18	17
2	87	47	378	213	e94	e900	529	156	715	71	17	15
3	112	47	2260	239	e96	729	477	190	296	258	18	15
4	420	46	1090	e170	e94	501	5540	461	286	127	17	13
5	253	47	680	e158	e90	420	3030	288	223	76	16	11
6	165	88	514	e178	e87	472	2060	246	154	57	16	11
7	122	113	427	e178	e86	1170	2340	219	131	64	16	13
8	99	325	372	171	e88	1920	1270	195	123	1720	14	16
9	87	796	396	156	e85	1780	856	179	134	657	15	28
10	78	451	540	151	e79	846	629	160	108	360	20	22
11	71	343	384	157	e84	571	491	140	86	207	19	17
12	66	308	324	149	e80	471	513	130	86	143	16	18
13	63	283	255	141	e73	396	889	120	135	110	13	150
14	74	213	186	139	e69	322	607	106	139	90	11	151
15	87	187	228	559	e58	276	485	111	90	81	9.8	73
16	74	178	200	599	e57	238	419	107	69	69	8.8	51
17	67	189	191	285	e60	210	395	93	58	58	8.0	45
18	63	208	268	e230	e63	195	394	85	52	51	7.3	58
19	58	225	321	e170	e62	190	328	100	47	46	6.5	90
20	54	470	232	e150	e60	190	281	142	42	42	5.9	96
21	52	1140	197	e150	e58	184	245	133	41	41	5.4	88
22	50	666	157	e132	e60	181	216	110	48	35	5.5	68
23	48	653	159	e132	e67	193	193	101	86	31	5.7	57
24	46	1050	156	e120	e65	210	232	96	64	28	5.6	51
25	44	765	1440	e112	e64	238	389	86	49	25	5.2	46
26	52	1810	804	e111	e67	476	266	79	42	32	4.8	40
27	63	2540	555	e106	e76	363	227	74	40	36	25	38
28	63	1170	449	e106	e80	305	208	73	41	28	45	33
29	59	779	378	e102	---	265	223	67	35	23	42	30
30	56	572	330	e95	---	236	196	60	32	21	31	35
31	51	---	285	e90	---	639	---	55	---	19	22	---
TOTAL	2734	15756	14581	5684	2088	15287	24665	4334	3510	4637	469.5	1396
MEAN	88.2	525	470	183	74.6	493	822	140	117	150	15.1	46.5
MAX	420	2540	2260	599	96	1920	5540	461	715	1720	45	151
MIN	44	46	156	90	57	181	193	55	32	19	4.8	11
CFSM	.41	2.44	2.19	.85	.35	2.29	3.82	.65	.54	.70	.07	.22
IN.	.47	2.73	2.52	.98	.36	2.65	4.27	.75	.61	.80	.08	.24

CAL YR 1986 TOTAL 114295.8 MEAN 313 MAX 9630 MIN 9.8 CFSM 1.46 IN. 19.78
WTR YR 1987 TOTAL 95141.4 MEAN 261 MAX 5540 MIN 4.8 CFSM 1.21 IN. 16.46

e Estimated

01532000 TOWANDA CREEK NEAR MONROETON, PA--Continued

EXTREMES FOR 1978 WATER YEAR.--Peak discharges greater than base discharge of 4,300 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Jan. 9	0430	*18,600	*14.56	Mar. 27	1345	8,170	12.04
Jan. 26	1115	6,930	11.63	May 14	1715	6,680	11.54
Mar. 21	2330	5,420	11.07				

Minimum daily discharge, 19 ft³/s, Aug. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e200	143	933	e230	e450	e98	1890	161	166	e62	e68	e220
2	e1200	131	685	e200	e380	e96	2170	152	381	e60	e52	e100
3	e580	127	503	e180	e300	e94	1230	139	1020	e60	e46	e60
4	e430	198	431	e170	e270	e94	1040	125	617	e120	e110	e49
5	e310	429	344	e150	e240	e92	1800	209	388	e100	e86	e42
6	e300	282	404	e140	e230	e90	1250	265	284	e76	e180	e38
7	e290	974	334	e130	e230	e90	1610	214	278	e62	e230	e35
8	e220	2000	284	e600	e220	e90	1420	191	843	e56	e280	e32
9	e260	1230	e210	8610	e210	e88	957	241	677	e52	e200	e44
10	e370	1080	e210	2220	e200	e86	727	253	435	e58	e140	e50
11	e280	2100	e200	1390	e190	e86	663	215	314	e52	e110	e42
12	e250	1060	e190	e900	e180	e100	853	194	248	e46	e100	e45
13	e210	736	e190	e680	e180	e130	621	187	361	e42	e140	e40
14	e190	549	e700	e520	e170	e1500	480	2740	264	e40	e100	e37
15	e2600	453	1960	e420	e160	2550	381	2460	205	e39	e72	e34
16	e1400	372	1130	e370	e150	1470	327	1600	173	e39	e57	e34
17	e3000	374	819	e320	e140	853	287	2150	167	e47	e47	e31
18	e1700	406	972	e290	e130	584	253	1290	149	e52	e40	e40
19	e1200	289	955	e260	e130	740	262	1150	162	e41	e35	e150
20	e2000	239	715	e250	e120	993	503	727	136	e35	e32	e150
21	e1400	219	801	e240	e120	2680	727	665	120	e32	e29	e110
22	1120	206	693	e230	e110	3190	482	495	155	e45	e26	e200
23	755	183	544	e220	e110	2620	386	386	115	e37	e24	e130
24	537	184	467	e210	e110	1920	337	932	92	e32	e22	e80
25	410	170	1640	e300	e100	1110	292	775	80	e28	e21	e61
26	325	196	892	e4000	e100	1260	259	494	75	e25	e29	e54
27	332	163	e500	e2800	e100	4850	233	381	74	e22	e25	e49
28	283	144	e370	e1400	e99	2880	210	312	114	e25	e23	e44
29	221	132	e330	e900	---	2190	189	260	80	e32	e21	e41
30	188	145	e290	e660	---	1670	175	221	67	e42	e19	e38
31	162	---	e260	e540	---	1370	---	194	---	e84	e170	---
TOTAL	22723	14914	18956	29530	5129	35664	22014	19778	8240	1543	2534	2080
MEAN	733	497	611	953	183	1150	734	638	275	49.8	81.7	69.3
MAX	3000	2100	1960	8610	450	4850	2170	2740	1020	120	280	220
MIN	162	127	190	130	99	86	175	125	67	22	19	31
CFSM	3.41	2.31	2.84	4.43	.85	5.35	3.41	2.97	1.28	.23	.38	.32
IN.	3.93	2.58	3.28	5.11	.89	6.17	3.81	3.42	1.43	.27	.44	.36

CAL YR 1977 TOTAL 126133 MEAN 346 MAX 3000 MIN 21 CFSM 1.61 IN. 21.82
WTR YR 1978 TOTAL 183105 MEAN 502 MAX 8610 MIN 19 CFSM 2.33 IN. 31.69

e Estimated

01532000 TOWANDA CREEK NEAR MONROETON, PA--Continued

EXTREMES FOR 1979 WATER YEAR.--Peak discharges greater than base discharge of 4,300 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Jan. 2	0915	6,700	11.55	Mar. 6	0200	*18,500	*14.54
Jan. 25	0215	7,800	11.92				

Minimum discharge, 16 ft³/s, Aug. 10, 23, 24, gage height, 6.17 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	139	162	e1000	228	819	254	166	255	48	23	22
2	34	126	148	3970	e200	1050	247	151	216	41	25	20
3	35	116	138	1410	e170	894	266	145	187	41	34	22
4	41	110	171	686	e150	1770	243	175	152	38	32	21
5	64	102	223	e400	e130	8890	406	155	129	36	25	19
6	104	93	179	e360	e120	8540	327	139	120	33	22	247
7	79	90	161	e330	e110	1990	266	125	111	30	21	203
8	59	107	171	e670	e110	1270	246	113	97	28	19	84
9	52	101	958	412	e100	936	570	103	87	27	18	50
10	49	90	606	e270	e100	885	813	96	76	25	17	40
11	44	83	426	e200	e95	916	684	107	145	25	20	35
12	41	86	363	e180	e92	650	553	92	143	24	32	31
13	43	79	331	e160	e90	527	497	83	93	23	41	28
14	221	76	300	e170	e87	583	478	80	72	22	32	42
15	261	77	248	e170	e84	535	502	74	61	22	26	206
16	168	75	222	e150	e82	414	437	76	51	38	23	91
17	131	75	216	e130	e80	389	414	62	45	48	21	55
18	111	409	195	e120	e78	367	348	54	42	35	20	43
19	101	297	159	e96	e76	325	303	51	42	30	22	39
20	109	224	232	e90	e76	303	259	63	39	26	21	35
21	105	196	265	e140	e100	286	227	58	36	24	19	37
22	92	179	222	e290	e130	275	205	71	40	22	18	108
23	85	178	e180	e220	e200	269	188	71	114	21	17	93
24	83	254	e150	e1400	e300	324	170	922	73	22	18	57
25	78	246	e140	3890	e500	499	159	1730	48	22	49	45
26	77	202	e130	1110	e1600	448	150	1440	41	22	37	41
27	354	178	e120	705	734	343	196	905	37	27	36	37
28	263	184	e120	542	520	283	299	679	35	26	41	37
29	196	180	e110	422	---	284	215	508	36	23	33	82
30	166	167	e120	335	---	302	183	434	49	23	27	91
31	150	---	e150	278	---	282	---	325	---	23	25	---
TOTAL	3430	4519	7316	20306	6342	35648	10105	9253	2672	895	814	1961
MEAN	111	151	236	655	226	1150	337	298	89.1	28.9	26.3	65.4
MAX	354	409	958	3970	1600	8890	813	1730	255	48	49	247
MIN	34	75	110	90	76	269	150	51	35	21	17	19
CFSM	.51	.70	1.10	3.05	1.05	5.35	1.57	1.39	.41	.13	.12	.30
IN.	.59	.78	1.27	3.51	1.10	6.17	1.75	1.60	.46	.15	.14	.34

CAL YR 1978 TOTAL 141777 MEAN 388 MAX 8610 MIN 19 CFSM 1.81 IN. 24.53
WTR YR 1979 TOTAL 103261 MEAN 283 MAX 8890 MIN 17 CFSM 1.32 IN. 17.87

e Estimated

01533400 SUSQUEHANNA RIVER AT MESHOPPEN, PA

LOCATION.--Lat 41°36'26", long 76°03'02", Wyoming County, Hydrologic Unit 02050106, on right bank 0.7 mi south of Meshoppen, 0.7 mi downstream from Meshoppen Creek, 2.3 mi upstream from bridge on State Highway 87, and 2.4 mi upstream from Mehoopany Creek.

DRAINAGE AREA.--8,720 mi².

PERIOD OF RECORD.--October 1976 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 640 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow slightly regulated by 7 flood-control reservoirs, which have a combined capacity of 356,800 acre-ft. Several measurements of water temperature were made during the year. National Weather Service satellite and landline telemeter at station.

AVERAGE DISCHARGE.--11 years, 12,060 ft³/s, 18.78 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 207,000 ft³/s, Mar. 6, 1979, gage height, 35.06 ft; minimum, 731 ft³/s, Aug. 24, 25, 1985, gage height, 7.23 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1972 reached a stage of 43.51 ft, from floodmark information by local resident, discharge, about 331,000 ft³/s, from rating curve extended above 220,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 70,000 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 27	2300	87,300	24.12	Apr. 5	2000	*88,200	*24.21

Minimum discharge, 1,100 ft³/s, Aug. 25, 26, gage height, 7.31 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3300	5370	30200	10900	e5700	e4000	31300	9950	3800	2550	2020	2490
2	3350	5270	24200	e9800	e6000	13100	31200	9480	4640	2760	1890	2310
3	4780	5040	26400	e9100	e6100	28000	27400	8410	6440	3990	1820	2180
4	6870	4950	36200	e8400	e6100	27100	37700	8670	6200	9360	1790	2010
5	11700	5000	37300	e7600	e6000	22600	85200	8230	6960	7490	1940	1890
6	14200	5100	28800	e7500	e5700	19200	77100	7610	7370	5780	1940	1750
7	11600	6170	22500	e7600	e5500	19700	74300	6860	5960	4880	1900	1700
8	9810	8160	19300	e7600	e5400	39600	67600	6320	5420	8100	1880	1720
9	7920	13200	17800	e7400	e5200	63400	54800	5920	5090	11600	1800	1870
10	7000	21200	19100	e7100	e4900	55100	45600	5610	4960	8280	1750	1850
11	6440	21400	21300	e6700	e4600	36400	35900	5340	4540	6970	1660	1970
12	5780	16900	19900	e6700	e4500	26100	27100	5030	4160	6620	1710	2680
13	5260	15100	16700	e6800	e4200	21700	32700	4800	3920	6050	2100	4540
14	5100	13800	13500	e6700	e4100	19400	44900	4510	4030	5420	2500	11100
15	5120	12200	11800	e7000	e3900	16800	40500	4360	3780	5180	2180	14700
16	5450	10400	11000	11800	e3700	15000	32800	4190	3590	5000	1900	11500
17	5680	9810	11200	e11000	e3500	13900	26600	4020	3380	6200	1700	8370
18	5570	9810	11200	e10100	e3500	12700	23200	3820	2930	5340	1560	6800
19	5140	10400	13300	e9400	e3500	11800	20500	3710	2670	4520	1450	9370
20	4820	10600	13900	e8900	e3400	11800	18100	3710	2360	3710	1400	14300
21	4670	17300	12200	e8300	e3400	12100	15700	3770	2100	3130	1370	12500
22	4520	27100	11100	e7400	e3300	12000	13800	3610	2100	2870	1290	10700
23	4340	28500	9710	e6600	e3300	12200	12400	3530	2420	2580	1220	9330
24	4200	23500	8870	e5700	e3400	13900	11300	3450	2880	2420	1220	8850
25	4090	28100	13400	e5400	e3400	17000	12700	4770	5000	2250	1120	7690
26	4200	33400	22000	e5300	e3500	24000	13600	4990	4620	2190	1120	6730
27	4330	74600	21600	e5200	e3400	31700	11800	4360	4150	2410	1290	5930
28	4750	75100	18100	e5200	e3400	32600	10400	3890	3350	3370	1590	5300
29	5180	52400	15300	e5300	---	29300	9420	3990	2850	2740	2110	4810
30	5720	40200	13200	e5400	---	25500	10600	4080	2560	2430	2470	4550
31	5560	---	11900	e5600	---	23200	---	3790	---	2190	2630	---
TOTAL	186450	610080	562980	233500	122600	710900	956220	164780	124230	148380	54320	181490
MEAN	6015	20340	18160	7532	4379	22930	31870	5315	4141	4786	1752	6050
MAX	14200	75100	37300	11800	6100	63400	85200	9950	7370	11600	2630	14700
MIN	3300	4950	8870	5200	3300	4000	9420	3450	2100	2190	1120	1700
CFSM	.69	2.33	2.08	.86	.50	2.63	3.66	.61	.47	.55	.20	.69
IN.	.80	2.60	2.40	.99	.52	3.03	4.08	.70	.53	.63	.23	.77

CAL YR 1986 TOTAL 4865340 MEAN 13330 MAX 142000 MIN 1450 CFSM 1.53 IN. 20.76
WTR YR 1987 TOTAL 4055930 MEAN 11110 MAX 85200 MIN 1120 CFSM 1.27 IN. 17.30

e Estimated.

01534000 TUNKHANNOCK CREEK NEAR TUNKHANNOCK, PA

LOCATION.--Lat 41°33'30", long 75°53'42", Wyoming County, Hydrologic Unit 02050106, on left bank 300 ft upstream from bridge on U.S. Highway 6 at Dixon, 3.0 mi northeast of Tunkhannock, and 4.0 mi upstream from mouth.

DRAINAGE AREA.--383 mi².

PERIOD OF RECORD.--February 1914 to current year. Monthly discharge only for some periods, published in WSP 1302. Prior to October 1965, published as "at Dixon".

REVISED RECORDS.--WSP 756: Drainage area. WSP 1051: 1921(M), 1932, 1934-35(M), 1936, 1938(M), 1939-40, 1942-44, 1945(M). WSP 1302: 1922, 1923(M), 1924-25, 1927-28. WSP 1432: 1919(M), 1920, 1933, 1934(P). WDR PA-85-2: 1954(P), 1955(M), 1956(P), 1957(M), 1958-64(P), 1967-71(P), 1977(M), 1978(P), 1981(M), 1982-84(P).

GAGE.--Water-stage recorder. Datum of gage is 610.50 ft above National Geodetic Vertical Datum of 1929 (Pennsylvania Department of Transportation benchmark). Prior to Aug. 10, 1938, nonrecording gage at same site and datum.

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

AVERAGE DISCHARGE.--73 years, 541 ft³/s, 19.18 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,200 ft³/s, Apr. 5, 1947, gage height, 13.96 ft, from rating curve extended above 14,000 ft³/s on basis of contracted-opening measurement of peak flow; maximum gage height, 15.77 ft, Mar. 15, 1986; minimum discharge, 6.2 ft³/s, Sept. 24, 1964, gage height, 0.98 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,700 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 21	0645	9,030	8.91	Apr. 5	0015	*11,900	*10.13
Nov. 27	0245	6,850	7.84				

Minimum discharge, 36 ft³/s, Aug. 26, 27, gage height, 0.71 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	97	180	975	e440	e330	e220	1040	288	187	99	84	274
2	226	178	883	e420	e320	e900	726	263	624	138	91	202
3	311	175	1450	e400	e320	1510	732	278	490	309	164	153
4	1760	172	1190	e390	e310	1170	4830	636	430	197	141	127
5	752	169	902	e400	e310	1040	5500	438	450	147	114	110
6	453	233	776	e390	e320	919	2590	372	324	120	106	102
7	330	267	714	e380	e330	1140	2410	335	269	112	101	107
8	265	472	680	e360	e310	2570	1810	302	265	565	91	639
9	226	2860	684	357	e290	3210	1370	274	247	1440	86	2290
10	208	1700	1020	353	e280	1740	1110	259	210	744	99	850
11	186	1090	790	394	e270	1250	934	239	179	460	100	488
12	171	968	674	384	e250	1080	968	226	179	321	86	393
13	172	894	e500	361	e250	929	2090	224	229	280	75	3070
14	270	634	e430	330	e240	794	1440	208	302	279	67	2500
15	366	565	e450	398	e230	737	1140	210	231	852	60	1140
16	280	529	e460	588	e220	701	984	213	175	412	56	792
17	237	602	e440	e420	e220	633	888	192	150	283	52	740
18	217	700	588	e400	e210	596	813	173	130	219	49	802
19	200	864	812	e390	e220	616	712	196	120	183	46	851
20	187	831	644	e370	e210	642	631	214	112	159	43	676
21	175	5820	562	e360	e210	581	556	220	113	148	41	589
22	168	2340	486	e350	e200	582	504	192	132	142	41	505
23	163	1630	439	e340	e200	675	450	174	239	128	40	437
24	162	1700	447	e330	e190	707	403	749	256	112	39	389
25	155	1470	945	e330	e190	720	459	437	177	102	38	344
26	211	2500	977	e320	e190	845	399	332	143	147	37	296
27	324	4440	748	e320	e190	770	353	287	130	198	90	216
28	266	2060	657	e310	e200	668	321	256	123	138	243	198
29	223	1530	606	e320	---	584	338	238	110	107	510	176
30	202	1210	566	e340	---	522	321	210	100	92	300	236
31	190	---	e480	e330	---	694	---	189	---	87	184	---
TOTAL	9153	38783	21975	11575	7010	29745	36822	8824	6826	8720	3274	19692
MEAN	295	1293	709	373	250	960	1227	285	228	281	106	656
MAX	1760	5820	1450	588	330	3210	5500	749	624	1440	510	3070
MIN	97	169	430	310	190	220	321	173	100	87	37	102
CFSM	.77	3.38	1.85	.97	.65	2.51	3.20	.74	.59	.73	.28	1.71
IN.	.89	3.77	2.13	1.12	.68	2.89	3.58	.86	.66	.85	.32	1.91

CAL YR 1986 TOTAL 244988 MEAN 671 MAX 20500 MIN 51 CFSM 1.75 IN. 23.80
WTR YR 1987 TOTAL 202399 MEAN 555 MAX 5820 MIN 37 CFSM 1.45 IN. 19.66

e Estimated

01534180 STILLWATER LAKE NEAR FOREST CITY, PA

LOCATION.--Lat 41°41'46", long 75°29'10", Susquehanna County, Hydrologic Unit 02050107, at Stillwater Dam on Lackawanna River, 0.3 mi downstream from confluence of East and West Branches, 1.4 mi south of Union Dale, and 3.5 mi north of Forest City.

DRAINAGE AREA.--37.1 mi².

PERIOD OF RECORD.--December 1959 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--Reservoir formed by an earthfill dam, rock faced, with ungated concrete spillway at elevation 1,621.00 ft. Storage began in December 1959. Capacity at elevation 1,621.00 ft is 12,000 acre-ft. Reservoir is used for flood control and municipal water supply. Figures given herein represent total contents. Flood storage is regulated by power-operated slide gate; water supply storage is regulated by a weir formed by stop logs. U.S. Army Corps of Engineers satellite and landline telemeters at station.

COOPERATION.--Records provided by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 6,470 acre-ft, Mar. 16, 1986, elevation, 1,605.61 ft; minimum, 242 acre-ft, Sept. 10, 1960, elevation, 1,568.85 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 3,470 acre-ft, Apr. 5, elevation, 1,593.57 ft; minimum, 380 acre-ft, Aug. 26, elevation, 1,572.44 ft.

MONTHEND ELEVATION, IN FEET NGVD, AND CONTENTS AT 2400, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (equivalent in ft³/s/day)
Sept. 30	1,572.88	421	--
Oct. 31	1,573.20	451	+ 0.5
Nov. 30	1,576.98	857	+ 6.8
Dec. 31	1,573.59	488	- 6.0
CAL YR 1986	--	--	+ 0.06
Jan. 31	1,573.21	452	- 0.6
Feb. 28	1,572.90	423	- 0.5
Mar. 31	1,578.66	1,060	+10.4
Apr. 30	1,578.03	986	- 1.2
May 31	1,573.12	444	- 8.8
June 30	1,572.80	413	- 0.5
July 31	1,572.68	402	- 0.2
Aug. 31	1,573.27	457	+ 0.9
Sept. 30	1,573.25	455	- 0.03
WTR YR 1987	--	--	+ 0.05

01534300 LACKAWANNA RIVER NEAR FOREST CITY, PA

LOCATION.--Lat 41°40'47", long 75°28'20", Susquehanna County, Hydrologic Unit 02050107, on left bank 1,600 ft upstream from bridge on State Highway 171, 1.3 mi downstream from Stillwater Dam, 1.6 mi below confluence of East and West Branches, and 2.2 mi north of Forest City.

DRAINAGE AREA.--38.8 mi².

PERIOD OF RECORD.--October 1958 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,551.28 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 11, 1958, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Records good except those for estimated daily discharges, which are fair. Flow regulated since December 1959 by Stillwater Dam (station 01534180). Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--29 years, 72.1 ft³/s, 25.24 in/yr, adjusted for storage since December 1959.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,390 ft³/s, Jan. 22, 1959, gage height, 6.41 ft, from rating curve extended above 930 ft³/s; no flow part of each day July 21, 22, 1978, result of shutoff at Stillwater Dam.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 779 ft³/s, Apr. 5, gage height, 4.64 ft; minimum daily, 4.4 ft³/s, Aug. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	30	218	51	36	30	238	42	31	17	11	36
2	37	28	144	55	35	68	185	42	108	28	12	29
3	56	28	158	52	35	92	155	35	188	65	19	24
4	81	27	187	57	34	96	84	38	197	56	21	19
5	84	26	182	48	e33	98	315	44	149	40	18	16
6	149	31	163	46	32	92	706	52	105	28	17	15
7	191	37	133	46	32	78	562	56	79	24	16	15
8	132	49	102	44	31	114	554	63	67	43	14	33
9	62	80	92	43	32	174	397	184	60	55	12	169
10	58	195	105	42	e30	243	210	87	53	46	15	270
11	54	299	115	48	29	240	171	45	52	38	15	176
12	46	267	111	49	29	206	106	34	46	30	13	101
13	35	230	94	47	e30	150	199	28	46	24	12	105
14	40	174	64	44	e28	104	203	24	50	24	10	349
15	46	106	62	49	e28	90	157	24	44	36	8.9	333
16	48	78	63	66	e27	82	120	23	37	37	8.0	237
17	47	64	60	66	26	76	81	22	30	29	7.4	158
18	44	63	62	55	24	72	96	22	25	24	7.0	113
19	41	68	64	54	24	77	105	25	24	20	6.3	116
20	37	107	59	53	24	91	96	26	22	18	5.8	109
21	35	181	54	50	e23	87	80	27	21	17	5.2	101
22	33	169	46	44	e22	87	65	25	20	16	5.4	78
23	32	236	44	47	22	122	52	31	24	14	5.4	59
24	31	278	45	e44	e23	195	46	105	26	13	4.8	50
25	30	265	81	e42	e23	269	43	102	23	12	4.5	44
26	32	245	114	e41	e22	306	42	81	20	18	4.4	39
27	43	212	113	e42	e22	313	44	61	23	24	10	35
28	55	501	100	e40	21	203	43	48	21	20	29	32
29	51	527	80	37	---	199	47	38	19	16	75	29
30	42	356	68	36	---	226	52	31	18	13	71	31
31	34	---	60	36	---	137	---	28	---	12	47	---
TOTAL	1723	4957	3043	1474	777	4417	5254	1493	1628	857	510.1	2921
MEAN	55.6	165	98.2	47.5	27.7	142	175	48.2	54.3	27.6	16.5	97.4
MAX	191	527	218	66	36	313	706	184	197	65	75	349
MIN	17	26	44	36	21	30	42	22	18	12	4.4	15
MEAN‡	56.1	172	92.2	46.9	27.2	152	174	39.4	53.8	27.4	17.4	97.4
CFSM‡	1.45	4.43	2.38	1.21	.70	3.92	4.48	1.02	1.39	.71	.45	2.51
IN.‡	1.67	4.94	2.74	1.40	.73	4.52	5.00	1.18	1.55	.82	.52	2.80

CAL YR 1986 TOTAL 30563.7 MEAN 83.7 MAX 858 MIN 7.3 MEAN‡ 83.8 CFSM‡ 2.16 IN.‡ 29.33
WTR YR 1987 TOTAL 29054.1 MEAN 79.6 MAX 706 MIN 4.4 MEAN‡ 79.6 CFSM‡ 2.05 IN.‡ 27.87

e Estimated
‡ Adjusted for change in contents in Stillwater Lake.

01534500 LACKAWANNA RIVER AT ARCHBALD, PA

LOCATION.--Lat 41°30'16", long 75°32'33", Lackawanna County, Hydrologic Unit 02050107, on right bank in Archbald, 0.5 mi upstream from White Oak Run and Gilmartin Street bridge.

DRAINAGE AREA.--108 mi^2.

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for some periods, published in WSP 1302.

GAGE.--Water-stage recorder. Datum of gage is 889.33 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Regulation at low flow by mine pumps upstream from station. Flow regulated since December 1959 by Stillwater Dam (station 01534180) about 17 mi upstream. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite and landline telemeters at station.

AVERAGE DISCHARGE.--48 years, 204 ft^3/s, 25.65 in/yr, adjusted for storage since December 1959.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,510 ft^3/s, May 22, 1942, gage height, 10.58 ft, from rating curve extended above 1,900 ft^3/s on basis of slope-area measurement of peak flow; minimum, 3.0 ft^3/s, Oct. 9, 11, 1943; minimum gage height, 1.08 ft, Oct. 18, 1941.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,870 ft^3/s, Apr. 4, gage height, 6.30 ft, from rating curve extended as explained above; minimum, 29 ft^3/s, Aug. 26, gage height, 1.77 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	87	446	171	112	130	485	164	121	56	61	246
2	80	83	354	176	112	270	450	160	229	89	106	153
3	130	79	509	173	110	267	379	181	277	130	120	127
4	333	78	465	154	109	249	1420	259	314	114	92	106
5	217	76	412	146	102	233	1100	218	265	91	76	94
6	221	88	370	143	101	222	1400	223	198	73	80	85
7	275	103	326	147	102	260	1180	217	169	74	71	89
8	229	169	282	139	99	471	998	204	159	173	65	347
9	135	333	268	132	95	619	791	299	146	186	61	1220
10	127	374	309	130	90	552	526	234	127	151	66	668
11	117	476	287	142	93	531	467	171	119	130	62	489
12	107	434	265	139	89	468	415	150	126	111	58	378
13	94	381	235	135	87	389	533	136	137	110	54	1060
14	133	308	188	126	84	317	500	123	161	405	51	885
15	132	230	186	143	73	284	422	119	125	439	49	702
16	120	192	182	177	73	264	382	110	109	307	43	555
17	117	189	173	150	76	246	331	102	96	234	41	463
18	112	201	188	146	78	235	332	98	84	188	42	421
19	104	208	192	149	74	251	317	114	78	154	39	447
20	98	223	171	145	73	272	294	116	75	134	38	409
21	94	615	158	141	72	258	263	112	78	127	36	367
22	88	459	138	120	71	273	241	100	85	116	37	325
23	84	454	135	136	74	365	212	112	84	98	34	281
24	81	566	135	114	72	467	200	376	89	88	32	252
25	78	530	303	108	71	576	218	267	74	81	32	229
26	102	736	329	121	69	652	190	232	67	112	32	206
27	113	774	289	113	68	615	175	206	77	101	85	187
28	124	826	263	111	68	510	178	178	66	87	104	173
29	114	832	235	115	---	415	188	154	60	77	242	161
30	106	622	211	116	---	463	188	132	58	70	170	171
31	94	---	192	117	---	421	---	122	---	66	165	---
TOTAL	4004	10726	8196	4275	2397	11545	14775	5389	3853	4372	2244	11296
MEAN	129	358	264	138	85.6	372	492	174	128	141	72.4	377
MAX	333	832	509	177	112	652	1420	376	314	439	242	1220
MIN	45	76	135	108	68	130	175	98	58	56	32	85
MEAN‡	130	365	258	137	85.1	382	491	165	128	141	73.3	377
CFSM‡	1.20	3.38	2.39	1.27	.79	3.54	4.55	1.53	1.18	1.31	.68	3.49
IN.‡	1.38	3.77	2.76	1.46	.82	4.08	5.08	1.76	1.32	1.51	.78	3.89

CAL YR 1986 TOTAL 87439 MEAN 240 MAX 3250 MIN 27 MEAN‡ 240 CFSM‡ 2.22 IN.‡ 30.13
WTR YR 1987 TOTAL 83072 MEAN 228 MAX 1420 MIN 32 MEAN‡ 228 CFSM‡ 2.11 IN.‡ 28.62

‡ Adjusted for change in contents in Stillwater Lake.

01536000 LACKAWANNA RIVER AT OLD FORGE, PA

LOCATION.--Lat 41°21'33", long 75°44'41", Lackawanna County, Hydrologic Unit 02050107, on right bank 150 ft upstream from Delaware, Lackawanna, and Western Railroad bridge in Old Forge, and 0.5 mi upstream from St. Johns Creek.

DRAINAGE AREA.--332 mi².

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

REVISED RECORDS.--WSP 1432: 1939(M), 1940, 1945.

GAGE.--Water-stage recorder. Datum of gage is 595.26 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1974, water-stage recorder at same site and datum. Oct. 1, 1974, to Aug. 17, 1975, nonrecording gage at site 150 ft upstream at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated since December 1959 by Stillwater Dam (station 01534180) about 33 mi upstream. Several measurements of water temperature were made during the year. National Weather Service satellite and landline telemeters at station.

AVERAGE DISCHARGE.--49 years, 493 ft³/s, 20.16 in/yr, adjusted for storage since December 1959.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,000 ft³/s, Aug. 19, 1955, gage height, 20.05 ft, from floodmark, from rating curve extended above 3,800 ft³/s on basis of slope-area measurements at gage heights 15.30 ft, 16.49 ft, and at peak flow; minimum, 20 ft³/s, Sept. 21, 1964, gage height, 1.28 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,700 ft³/s, Apr. 4, gage height, 8.94 ft, from rating curve extended as explained above; minimum, 46 ft³/s, Aug. 25, gage height, 2.15 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	90	149	936	388	241	348	1110	332	240	94	101	394
2	112	141	763	407	246	816	929	314	324	240	150	255
3	215	137	1260	404	245	754	773	422	340	339	250	193
4	677	132	1140	351	248	591	4410	813	386	259	150	148
5	420	142	904	325	228	490	3810	551	354	185	118	127
6	329	189	773	312	e220	448	3240	496	287	135	119	116
7	364	210	678	320	e230	573	2930	456	258	124	109	207
8	336	321	590	307	226	1410	2340	407	248	766	98	903
9	267	602	584	287	208	2090	1880	442	230	1520	100	3190
10	236	621	720	284	172	1530	1330	413	190	658	117	1420
11	203	772	620	303	192	1240	1120	341	165	417	101	985
12	187	722	541	291	179	1020	1100	307	210	323	96	707
13	171	642	466	278	175	833	1410	287	237	376	88	3180
14	269	490	382	265	153	666	1220	263	345	1300	79	2770
15	299	399	381	319	125	562	986	262	250	1750	74	1360
16	257	356	372	440	136	506	873	250	186	905	69	1250
17	e230	347	358	366	139	451	756	222	146	561	67	1360
18	e220	364	446	339	142	415	752	200	122	401	68	1560
19	e200	430	524	344	132	417	666	264	111	336	64	2020
20	e180	422	417	343	126	446	581	279	104	306	67	1370
21	e170	1900	378	317	123	421	499	260	127	284	60	1140
22	e160	1290	340	284	123	410	446	226	279	274	60	915
23	e150	1020	324	309	139	521	395	206	287	228	58	729
24	137	1190	331	259	128	683	393	1080	241	189	56	610
25	128	1210	946	219	119	864	505	521	173	172	55	530
26	217	1480	955	269	116	1030	405	403	142	243	55	438
27	239	2110	744	260	117	942	364	363	149	240	357	390
28	229	1710	641	258	115	813	353	341	116	169	234	365
29	215	1630	557	259	---	587	379	308	104	133	474	342
30	195	1270	486	252	---	650	361	267	96	117	265	367
31	166	---	433	254	---	843	---	247	---	113	206	---
TOTAL	7268	22398	18990	9613	4743	23370	36316	11543	6447	13157	3965	29341
MEAN	234	747	613	310	169	754	1211	372	215	424	128	978
MAX	677	2110	1260	440	248	2090	4410	1080	386	1750	474	3190
MIN	90	132	324	219	115	348	353	200	96	94	55	116
MEAN‡	234	754	607	309	168	764	1210	363	214	424	129	978
CFSM‡	.70	2.27	1.83	.93	.51	2.30	3.64	1.09	.64	1.28	.39	2.95
IN.‡	.81	2.53	2.11	1.07	.53	2.65	4.06	1.26	.71	1.48	.45	3.29

CAL YR 1986 TOTAL 213606 MEAN 585 MAX 9150 MIN 67 MEAN‡ 585 CFSM‡ 1.76 IN.‡ 23.94
WTR YR 1987 TOTAL 187151 MEAN 513 MAX 4410 MIN 55 MEAN‡ 513 CFSM‡ 1.54 IN.‡ 20.97

e Estimated
‡ Adjusted for change in contents in Stillwater Lake.

01536500 SUSQUEHANNA RIVER AT WILKES-BARRE, PA

LOCATION.--Lat 41°15'03", long 75°52'52", Luzerne County, Hydrologic Unit 02050107, on left bank at foot of West Union Street, 800 ft downstream from North Street bridge in Wilkes-Barre, and 1.6 mi upstream from Toby Creek.

DRAINAGE AREA.--9,960 mi², approximately.

PERIOD OF RECORD.--April 1899 to current year. Monthly discharge only for some periods, published in WSP 1302. Gage-height records collected at same site since November 1890, contained in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 109: 1900-1905. WSP 351: Drainage area. WSP 781: 1902(M). WSP 1302: 1916. WSP 1432: 1901-5, 1907, 1909, 1913, 1937(M). WDR PA-86-2: 1960(M) 1964(M) 1975(M) 1979(M).

GAGE.--Water-stage recorder. Datum of gage is 512.07 ft above National Geodetic Vertical Datum of 1929. See WSP 1722 for history of changes prior to Mar. 23, 1949.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow slightly regulated by 8 flood-control reservoirs, which have a combined capacity of 368,800 acre-ft. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter and National Weather Service landline telemeter at station.

AVERAGE DISCHARGE.--88 years, 13,370 ft³/s, 18.23 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 345,000 ft³/s, June 24, 1972, from slope-area measurement of peak flow near West Pittston and adjusted for flow from intervening area, gage height, 40.91 ft, from floodmark; minimum, 528 ft³/s, Sept. 27, 1964, gage height, -1.78 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known prior to 1899, 33.1 ft, Mar. 18, 1865, from floodmarks, discharge, about 232,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 82,000 ft³/s and maximum(*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 28	0800	89,700	18.20	Apr. 5	1730	*98,500	*19.22

Minimum discharge, 1,220 ft³/s, Aug. 26, 27, gage height, -0.24 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4100	5600	36300	12700	e5700	e4000	30100	11500	4230	2780	2310	3540
2	3820	5480	28800	11900	e6000	e8000	35700	10800	4510	3080	2170	3210
3	4350	5300	27500	11300	e6200	e23000	30800	10200	6910	3760	2240	2810
4	7860	5080	35500	e9500	e6100	31500	38100	10900	7400	6510	2010	2540
5	10300	5050	41100	e8600	e5900	27000	89300	10500	7560	9620	1920	2300
6	14800	5230	34400	e8100	e5800	23600	91800	9710	8490	7230	2030	2140
7	13600	5530	26900	e7900	e5600	21600	79500	8830	7460	5700	2060	2130
8	11400	7610	22500	e8100	e5400	34300	76700	8100	6460	6350	2060	3420
9	9460	12200	20200	e8300	e5200	61200	60300	7480	5900	15300	2060	8710
10	7840	21500	20400	e7900	e4900	63000	50000	7070	5470	12500	2060	5970
11	7150	24200	22900	e7600	e4800	44900	42100	6510	5130	9430	2050	4130
12	6530	21000	22700	e7500	e4700	32600	32900	6080	4730	7780	1980	3690
13	5820	17600	19900	e7200	e4500	26100	33600	5650	4430	7800	1810	10000
14	5610	16000	16300	e7100	e4400	22900	45300	5300	4650	7080	1990	15000
15	5710	14200	13400	e7100	e4300	19900	44500	5020	4450	8350	2420	19900
16	5690	12400	12700	e9000	e4100	17700	38400	4800	4070	6720	2370	16000
17	5950	11100	12200	14800	e4000	16100	31500	4570	3870	6510	2120	13000
18	6060	11000	12500	13100	e3900	14800	27000	4420	3590	6860	1890	11100
19	5740	11700	13900	11400	e3900	13600	24000	4330	3190	5670	1730	11300
20	5240	12100	15700	e9500	e3900	13300	21200	4410	2890	4710	1630	15700
21	4940	22000	14400	e8600	e4000	13500	18500	4400	2610	4000	1520	16000
22	4790	28900	12800	e7800	e4000	13500	16400	4360	2620	3560	1500	13800
23	4580	33200	11500	e7200	e4100	13500	14600	4190	2710	3230	1460	11900
24	4360	28400	10300	e6700	e4000	14600	13300	5380	3040	2910	1350	11000
25	4180	29200	12000	e6100	e4100	17400	13200	5000	3830	2720	1310	9970
26	4270	34000	22100	e5800	e3900	22600	15200	6260	5140	2710	1260	8650
27	4540	61900	24800	e5500	e3800	31900	13900	5560	4670	2670	1760	7640
28	4740	85100	21700	e5300	e3900	34800	12400	4870	4110	2910	1830	6730
29	5150	59800	18300	e5200	---	32500	11100	4640	3500	3520	2710	5940
30	5570	46500	15700	e5300	---	28700	11200	4690	3070	2910	3190	5560
31	5910	---	13900	e5600	---	26000	---	4440	---	2580	3220	---
TOTAL	200060	658880	633300	257700	131100	768100	1062600	199970	140690	177460	62020	253780
MEAN	6454	21960	20430	8313	4682	24780	35420	6451	4690	5725	2001	8459
MAX	14800	85100	41100	14800	6200	63000	91800	11500	8490	15300	3220	19900
MIN	3820	5050	10300	5200	3800	4000	11100	4190	2610	2580	1260	2130
CFSM	.65	2.21	2.05	.83	.47	2.49	3.56	.65	.47	.57	.20	.85
IN.	.75	2.46	2.37	.96	.49	2.87	3.97	.75	.53	.66	.23	.95

CAL YR 1986 TOTAL 5580640 MEAN 15290 MAX 169000 MIN 1760 CFSM 1.54 IN. 20.84
WTR YR 1987 TOTAL 4545660 MEAN 12450 MAX 91800 MIN 1260 CFSM 1.25 IN. 16.98

e Estimated

01537000 TOBY CREEK AT LUZERNE, PA

LOCATION.--Lat 41°16'57", long 75°53'46", Luzerne County, Hydrologic Unit 02050107, on left bank at Luzerne, 150 ft upstream from bridge on U.S. Highway 309, 0.5 mi upstream from inlet works of flood basin, and 2.5 mi upstream from mouth.

DRAINAGE AREA.--32.4 mi^2.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 574.60 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Slight regulation by Huntsville Reservoir 5.9 mi upstream, usable capacity 5,900 acre-ft. Diversion from reservoir for municipal supply. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--46 years, 45.6 ft^3/s, 19.11 in/yr, adjusted for diversion.

COOPERATION.--Records of diversion provided by Pennsylvania Gas and Water Co.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,390 ft^3/s, June 22, 1972, gage height, 6.07 ft in gage well, 7.59 ft from floodmarks, from rating curve extended above 1,200 ft^3/s on basis of slope-area measurement of peak flow; minimum, 0.1 ft^3/s, Sept. 12, 1944; minimum daily, 0.5 ft^3/s, Sept. 20, Oct. 8, 1946.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,940 ft^3/s, July 9, gage height, 4.42 ft, from rating curve extended as explained above; minimum daily, 6.8 ft^3/s, June 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	13	105	32	e21	114	49	27	17	9.0	13	28
2	13	13	105	33	23	132	38	26	23	36	17	17
3	36	12	153	32	25	96	41	51	15	58	16	15
4	63	12	119	28	24	75	383	73	17	22	14	14
5	25	13	105	26	24	64	269	45	14	15	14	13
6	18	25	98	25	23	63	199	39	12	12	16	15
7	16	19	88	25	24	98	184	33	13	13	13	26
8	15	45	63	23	25	151	133	31	12	171	13	207
9	15	64	63	22	22	160	103	29	12	522	15	155
10	14	41	66	23	25	104	84	28	10	255	17	69
11	12	35	48	24	e20	76	72	25	9.1	118	14	46
12	12	38	40	22	e18	66	109	25	14	83	13	54
13	13	35	34	21	e17	58	162	22	14	61	12	363
14	32	27	29	20	e16	52	118	20	15	104	11	178
15	39	25	28	26	e16	50	102	25	10	90	11	103
16	37	27	28	35	e15	49	89	20	8.2	57	10	85
17	37	30	28	e26	e14	56	85	19	8.7	38	9.1	113
18	36	31	61	e24	e15	69	77	17	8.7	28	9.2	125
19	35	41	57	e22	20	68	66	24	7.9	22	11	168
20	34	89	40	e21	18	67	57	26	6.8	21	12	131
21	33	274	36	e19	21	66	50	22	17	17	11	103
22	33	123	31	e18	19	65	45	18	56	15	12	85
23	33	101	29	e17	19	62	39	16	38	14	11	76
24	27	104	35	e16	18	60	41	23	20	13	11	63
25	13	91	103	e16	18	56	50	17	13	19	10	53
26	21	236	57	e15	17	40	38	16	11	52	11	43
27	20	251	47	e14	17	29	33	15	11	25	67	38
28	17	159	46	e15	17	27	32	15	11	17	27	33
29	14	131	41	e16	---	26	32	15	9.7	16	76	30
30	14	117	39	e18	---	25	30	12	8.4	15	22	35
31	13	---	35	e20	---	55	---	13	---	14	27	---
TOTAL	751	2222	1857	694	551	2179	2810	787	442.5	1952.0	545.3	2484
MEAN	24.2	74.1	59.9	22.4	19.7	70.3	93.7	25.4	14.7	63.0	17.6	82.8
MAX	63	274	153	35	25	160	383	73	56	522	76	363
MIN	11	12	28	14	14	25	30	12	6.8	9.0	9.1	13
(†)	6.33	6.60	5.74	5.28	5.91	5.49	4.82	5.08	5.74	5.71	5.27	5.14
MEAN‡	30.5	80.7	65.6	27.7	25.6	75.8	98.5	30.5	20.4	68.7	22.9	87.9
CFSM‡	.94	2.49	2.02	.85	.79	2.34	3.04	.94	.63	2.12	.71	2.71
IN.‡	1.08	2.78	2.33	.98	.82	2.70	3.39	1.08	.70	2.44	.82	3.02

CAL YR 1986 TOTAL 17261.7 MEAN 47.3 MAX 1200 MIN 7.6 MEAN‡ 52.6 CFSM‡ 1.62 IN.‡ 22.03
WTR YR 1987 TOTAL 17274.8 MEAN 47.3 MAX 522 MIN 6.8 MEAN‡ 52.9 CFSM‡ 1.63 IN.‡ 22.18

e Estimated
† Diversion for municipal supply, equivalent in cubic feet per second.
‡ Adjusted for diversion.

01537500 SOLOMON CREEK AT WILKES-BARRE, PA

LOCATION.--Lat 41°13'39", long 75°54'17", Luzerne County, Hydrologic Unit 02050107, on right bank at southwest city limits of Wilkes-Barre, 20 ft downstream from Central Railroad of Pennsylvania bridge, 0.4 mi downstream from Spring Run, and 3.4 mi upstream from mouth.

DRAINAGE AREA.--15.7 mi².

PERIOD OF RECORD.--March 1940 to current year. Monthly discharge only for March 1940, published in WSP 1302.

REVISED RECORDS.--WSP 1272: Drainage area. WSP 1382: 1940, 1942, 1944(P), 1945-47, 1949(M), 1951-52, 1953-54(M).

GAGE.--Water-stage recorder and broad-crested weir. Datum of gage is 548.31 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Some regulation by mine pumps upstream from station. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--47 years, 18.9 ft³/s, 16.35 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,450 ft³/s, Aug. 18, 1955, gage height, 9.83 ft, from rating curve extended above 570 ft³/s on basis of computation of peak flow through culvert; no flow Sept. 4-13, 15-20, 1983.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 16, 1933, reached a stage of 11.4 ft, from floodmark, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 320 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 4	1500	*340	*3.53	No other peak greater than base discharge.			

Minimum discharge, 0.27 ft³/s, June 18, 19, 20, 21, 29, 30, July 1, gage height, 0.94 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	1.4	18	12	e5.0	27	e13	14	2.6	.62	.72	12
2	1.3	1.2	17	12	6.7	43	e11	13	2.6	9.9	.89	4.7
3	7.0	1.4	36	11	6.6	37	22	17	2.0	13	1.2	4.8
4	8.3	1.3	22	12	6.1	32	150	21	2.1	1.8	.96	3.8
5	1.9	1.4	20	9.9	5.8	26	113	17	2.1	1.2	.73	3.5
6	1.6	2.3	18	9.7	5.3	23	90	16	1.6	.92	1.0	5.4
7	1.7	1.9	16	8.4	6.1	28	80	16	1.5	.74	.84	22
8	1.9	8.3	15	7.7	6.0	44	63	15	1.5	31	.80	97
9	1.8	13	18	6.8	5.3	47	52	14	1.5	14	.74	83
10	1.7	11	17	6.7	5.5	40	44	13	1.0	14	2.5	41
11	1.4	13	15	6.9	5.3	37	40	12	.90	10	.88	31
12	1.7	14	15	6.2	5.8	24	46	10	1.5	8.1	.54	29
13	1.7	13	13	6.7	4.6	20	51	8.9	1.9	6.4	.44	151
14	5.1	12	18	6.3	4.7	18	43	7.9	1.5	22	.42	102
15	1.6	11	11	9.6	3.3	15	40	9.0	1.1	17	.42	61
16	1.1	11	11	13	3.6	13	35	7.0	.86	13	.48	45
17	1.2	9.8	9.7	14	4.1	12	33	5.7	.48	9.0	.45	41
18	1.2	10	21	12	3.9	11	29	8.8	.32	7.1	.46	53
19	1.4	13	17	e10	3.5	10	24	14	.28	5.6	.47	60
20	1.2	19	15	e9.5	3.5	9.3	22	14	.27	5.1	.48	47
21	1.4	52	14	e9.0	4.1	e8.8	20	12	3.9	4.6	.46	39
22	2.2	37	13	e8.0	3.8	e8.2	18	10	6.6	4.4	.47	37
23	2.2	31	12	e6.5	4.3	e7.8	17	10	5.6	2.9	.44	34
24	2.7	33	14	e5.5	4.1	e7.6	17	12	1.6	2.4	.45	27
25	2.5	27	29	e5.0	3.9	e12	21	8.2	.60	1.9	.47	23
26	5.0	38	20	e4.5	4.4	e11	17	5.0	.41	5.4	.49	19
27	3.3	46	19	e4.5	4.0	e10	17	4.7	.36	2.3	19	16
28	3.0	37	18	e4.0	4.6	e9.2	17	4.3	.32	1.5	7.6	13
29	2.5	32	16	e4.0	---	e8.4	16	3.8	.29	1.2	7.0	11
30	2.8	24	15	e4.2	---	e7.8	15	3.3	.29	1.0	3.2	15
31	1.8	---	14	e4.5	---	e15	---	2.8	---	.84	6.6	---
TOTAL	75.3	526.0	526.7	250.1	133.9	622.1	1176	329.4	47.58	218.92	61.60	1131.2
MEAN	2.43	17.5	17.0	8.07	4.78	20.1	39.2	10.6	1.59	7.06	1.99	37.7
MAX	8.3	52	36	14	6.7	47	150	21	6.6	31	19	151
MIN	1.1	1.2	9.7	4.0	3.3	7.6	11	2.8	.27	.62	.42	3.5
CFSM	.15	1.12	1.08	.51	.30	1.28	2.50	.68	.10	.45	.13	2.40
IN.	.18	1.25	1.25	.59	.32	1.47	2.79	.78	.11	.52	.15	2.68

CAL YR 1986 TOTAL 5063.61 MEAN 13.9 MAX 578 MIN .11 CFSM .88 IN. 12.00
WTR YR 1987 TOTAL 5098.80 MEAN 14.0 MAX 151 MIN .27 CFSM .89 IN. 12.08

e Estimated

01538000 WAPWALLOPEN CREEK NEAR WAPWALLOPEN, PA

LOCATION.--Lat 41°03'33", long 76°05'38", Luzerne County, Hydrologic Unit 02050107, on left bank 100 ft upstream from Harts Bridge, 2.2 mi southeast of Wapwallopen, and 3.7 mi upstream from mouth.

DRAINAGE AREA.--43.8 mi^2.

PERIOD OF RECORD.--October 1919 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 1302: 1926(M), 1929(M), 1938(M). WSP 1432: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 752.41 ft above National Geodetic Vertical Datum of 1929 (Penn Central Railroad benchmark). Prior to Mar. 15, 1930, nonrecording gage at same site and datum.

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

AVERAGE DISCHARGE.--68 years, 64.7 ft^3/s, 20.06 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,410 ft^3/s, June 22, 1972, gage height, 11.04 ft, from rating curve extended above 1,400 ft^3/s on basis of contracted-opening measurement of peak flow; minimum, 1.1 ft^3/s, Aug. 4, 1955, gage height, 0.44 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 580 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 4	1900	1,080	5.50	Sept. 13	1300	975	5.22
July 8	1030	606	4.10	Sept. 18	2330	621	4.15
Sept. 8	2230	*1,350	*6.18				

Minimum discharge, 7.3 ft^3/s, Aug. 25, gage height, 1.04 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	15	71	64	e39	e150	127	53	21	12	14	84
2	17	17	69	68	e37	372	83	50	20	78	13	36
3	19	16	168	63	e36	266	89	57	19	170	17	28
4	43	16	113	e60	e36	121	533	118	22	46	16	23
5	26	17	87	e56	e35	91	427	74	22	29	16	20
6	19	28	77	e52	e34	86	349	64	19	23	21	22
7	17	26	71	e48	e33	112	312	59	18	20	15	35
8	16	39	67	47	e32	176	233	54	18	275	14	332
9	15	54	79	44	e31	195	185	51	18	239	13	445
10	15	41	108	43	e30	145	154	48	16	100	33	163
11	14	35	80	45	e31	120	133	45	15	79	19	100
12	14	41	71	43	e35	105	155	42	16	60	15	92
13	15	39	63	40	e37	96	206	40	18	49	13	695
14	28	32	e57	39	e31	85	148	37	19	103	12	405
15	28	29	e54	42	e28	78	127	39	16	141	11	228
16	21	29	e52	62	e26	71	115	36	14	69	10	160
17	18	28	e50	50	e26	64	114	33	12	55	9.9	204
18	17	28	91	e44	e27	59	111	31	12	43	9.4	299
19	16	36	124	e42	e27	57	92	40	12	35	9.3	362
20	16	38	80	e40	e26	54	82	44	12	30	15	232
21	16	239	69	e39	e28	52	75	40	12	28	11	171
22	15	115	61	e38	e29	49	69	35	18	24	11	129
23	15	86	e56	e37	e30	47	63	31	22	22	12	112
24	15	93	e55	e36	e30	44	73	29	18	20	9.4	91
25	15	82	217	e37	e31	43	112	27	14	19	8.5	77
26	19	111	135	e39	e30	46	76	26	13	23	8.6	66
27	22	181	108	e40	e32	42	65	26	12	22	35	57
28	19	118	96	e41	e32	40	62	25	12	18	65	51
29	18	100	85	e42	---	38	63	25	11	16	98	46
30	17	84	79	e42	---	37	58	23	10	15	35	50
31	16	---	72	e40	---	115	---	21	---	15	24	---
TOTAL	578	1813	2665	1423	879	3056	4491	1323	481	1878	613.1	4815
MEAN	18.6	60.4	86.0	45.9	31.4	98.6	150	42.7	16.0	60.6	19.8	160
MAX	43	239	217	68	39	372	533	118	22	275	98	695
MIN	14	15	50	36	26	37	58	21	10	12	8.5	20
CFSM	.43	1.38	1.96	1.05	.72	2.25	3.42	.97	.37	1.38	.45	3.66
IN.	.49	1.54	2.26	1.21	.75	2.60	3.81	1.12	.41	1.60	.52	4.09

CAL YR 1986 TOTAL 23208.0 MEAN 63.6 MAX 1070 MIN 11 CFSM 1.45 IN. 19.71
WTR YR 1987 TOTAL 24015.1 MEAN 65.8 MAX 695 MIN 8.5 CFSM 1.50 IN. 20.40

e Estimated

01539000 FISHING CREEK NEAR BLOOMSBURG, PA

LOCATION.--Lat 41°04'41", long 76°25'53", Columbia County, Hydrologic Unit 02050107, on left bank 25 ft downstream from highway bridge, 0.8 mi downstream from Green Creek, 0.9 mi west of Orangeville, and 5.5 mi north of Bloomsburg.

DRAINAGE AREA.--274 mi^2.

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

REVISED RECORDS.--WSP 1202: 1939-42, 1948(P), 1950.

GAGE.--Water-stage recorder. Datum of gage is 543.84 ft above National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--49 years, 480 ft^3/s, 23.79 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,900 ft^3/s, June 22, 1972, gage height, 15.18 ft, from floodmark in gage shelter, from rating curve extended above 9,500 ft^3/s on basis of contracted-opening measurement at gage height 12.08 ft; minimum, 7.6 ft^3/s, July 19, 1939, gage height 1.71 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 4	2200	4,070	6.31	Sept. 13	1130	*5,720	*7.28

Minimum discharge, 35 ft^3/s, Aug. 25, 26, 27, gage height, 1.48 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	119	150	885	504	e210	179	1170	212	125	91	81	204
2	109	147	788	e460	205	1290	883	200	206	276	77	162
3	117	142	1370	e410	215	1450	806	208	184	1270	89	140
4	631	137	1160	e380	214	1040	2180	468	179	486	88	119
5	497	139	965	349	201	824	3140	323	183	297	81	104
6	345	220	823	341	189	763	2210	277	158	220	83	101
7	271	241	728	335	191	962	1850	255	143	191	77	129
8	233	404	656	306	193	1560	1530	238	142	922	72	511
9	213	1270	770	282	191	1960	1260	224	142	892	71	1020
10	196	1210	1130	274	171	1560	1010	212	124	911	113	571
11	175	915	921	282	181	1180	833	201	108	767	93	380
12	157	780	825	268	176	938	851	190	112	717	73	370
13	155	688	712	250	175	773	1190	182	148	563	64	4350
14	244	559	568	233	164	646	906	173	141	436	59	2950
15	326	486	548	247	e160	545	806	179	118	370	55	1620
16	248	453	502	326	e150	470	733	177	103	297	51	1100
17	223	437	460	276	e150	416	676	163	91	249	49	970
18	208	441	706	e240	e140	380	641	152	83	214	45	1400
19	191	705	879	e220	e140	360	532	191	78	192	42	1960
20	180	668	702	e210	e140	347	463	212	73	174	43	1570
21	172	2880	618	e200	e140	331	410	198	70	162	41	1240
22	162	1830	530	e190	e140	318	374	189	96	146	44	968
23	153	1330	469	e190	e130	321	341	174	300	132	47	829
24	145	1150	452	e180	e130	335	325	166	165	122	40	674
25	137	1000	1400	e180	e130	376	339	155	127	122	36	549
26	162	1640	1290	e180	e140	647	298	144	104	135	35	445
27	235	3280	1060	e180	142	553	271	141	96	131	153	374
28	216	2010	886	e270	142	481	250	155	89	112	233	327
29	192	1450	752	e260	---	431	245	142	80	101	488	328
30	176	1120	667	e240	---	390	233	128	75	93	257	395
31	161	---	596	e230	---	808	---	122	---	87	172	---
TOTAL	6749	27882	24818	8493	4650	22634	26756	6151	3843	10878	2952	25860
MEAN	218	929	801	274	166	730	892	198	128	351	95.2	862
MAX	631	3280	1400	504	215	1960	3140	468	300	1270	488	4350
MIN	109	137	452	180	130	179	233	122	70	87	35	101
CFSM	.79	3.39	2.92	1.00	.61	2.66	3.25	.72	.47	1.28	.35	3.15
IN.	.92	3.79	3.37	1.15	.63	3.07	3.63	.84	.52	1.48	.40	3.51

CAL YR 1986 TOTAL 186299 MEAN 510 MAX 11000 MIN 46 CFSM 1.86 IN. 25.29
WTR YR 1987 TOTAL 171666 MEAN 470 MAX 4350 MIN 35 CFSM 1.72 IN. 23.31

e Estimated

01540500 SUSQUEHANNA RIVER AT DANVILLE, PA
(National stream-quality accounting network station)

LOCATION.--Lat 40°57'29", long 76°37'10", Montour County, Hydrologic Unit 02050107, on right bank 200 ft upstream from Mill Street Bridge at Danville and 0.8 mi upstream from Mahoning Creek.

DRAINAGE AREA.--11,220 mi², approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1899 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 756: Drainage area. WSP 1302: 1904, 1914-17, 1923. WSP 1432: 1900-03, 1905-06, 1908-10, 1912-13, 1933.

GAGE.--Water-stage recorder. Datum of gage is 431.29 ft above National Geodetic Vertical Datum of 1929. Prior to June 29, 1939, nonrecording gage at or near Mill Street Bridge at same datum. Since Oct. 1, 1971, water-stage recorder for Susquehanna River at Sunbury (station 01553990), used as an auxiliary gage.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow slightly regulated by 8 flood-control reservoirs, which have a combined capacity of 368,800 acre-ft. National Weather Service satellite telemeter at station.

AVERAGE DISCHARGE.--88 years, 15,320 ft³/s, 18.54 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 363,000 ft³/s, June 25, 1972, from rating curve extended above 250,000 ft³/s; maximum gage height, 32.32 ft, June 24, 1972 (backwater from West Branch Susquehanna River); minimum discharge, 508 ft³/s, Sept. 27, 1964, gage height, 1.51 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 18, 1865, reached a stage of 28 ft, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 104,000 ft³/s, Apr. 6, gage height, 16.74 ft; minimum, 1,590 ft³/s, Aug. 26, 27, gage height, 2.22 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4870	6420	44600	16100	e7000	e5500	31400	13200	5060	3390	3000	4280
2	4610	6130	35300	15000	e7200	e12000	38300	12700	4980	3730	2770	4410
3	4350	5990	32100	e13000	e7600	e22000	36300	12200	5370	7070	2670	3840
4	5850	5780	36600	e12000	e7600	36600	38000	12800	7980	5910	2700	3370
5	10200	5600	43800	e11000	e7400	33600	83300	13200	8140	8680	2710	3050
6	13200	5900	41700	e10000	e7200	28900	103000	12000	8360	9850	2630	2870
7	16400	6140	33600	e9800	e7000	25900	90200	11100	9190	7640	2580	2930
8	14000	6860	27700	e10000	e6700	30500	86900	10100	7830	9670	2540	4240
9	12000	11600	24400	e10000	e6500	57900	74400	9290	6910	12700	2510	12900
10	9970	20500	24400	e9800	e6200	73700	61000	8660	6280	19600	3560	13700
11	8410	27000	25500	e9500	e6000	59400	50900	8150	5800	14300	2920	8610
12	7700	26300	26600	e9200	e5800	42100	41300	7550	5550	11300	2540	6540
13	7070	21800	24900	e9000	e5600	32700	36600	7030	5270	9470	2330	22600
14	6650	19200	20900	e8900	e5500	27800	45000	6550	5020	9190	2230	30900
15	6730	17400	17400	e8800	e5300	24700	50900	6240	5040	9490	2470	25600
16	6580	15500	15500	e10000	e5100	21600	45400	5980	4780	9450	2860	24600
17	6500	13600	14500	14300	e4900	19500	37900	5650	4350	7590	2640	20400
18	6750	12800	14900	16900	e4800	17900	32400	5430	4120	7570	2350	19200
19	6730	13900	17200	e14000	e4800	16500	28700	5410	3830	7420	2140	22100
20	6340	14400	18300	e12000	e4900	15400	25500	5540	3460	6230	1980	20100
21	5840	24500	18500	e11000	e5000	15300	22700	5510	3230	5270	1900	22900
22	5530	34500	16400	e9700	e5000	15500	20000	5400	3220	4540	1860	20200
23	5350	37200	14800	e8900	e5000	15300	17700	5300	3950	4050	1860	17400
24	5120	35900	13400	e8200	e4800	15500	16200	5140	3590	3710	1750	15200
25	4870	32000	16000	e7600	e4700	17300	15700	5890	3520	3390	1680	13900
26	4800	36500	22000	e7100	e4700	21400	16400	5940	4260	3430	1610	12200
27	5050	56000	29400	e6800	e4600	29600	17000	6700	5380	3510	1680	10600
28	5270	90100	27900	e6600	e4700	36000	15200	6350	4900	3220	2580	9380
29	5390	76800	23700	e6500	---	35900	13700	5670	4330	3310	3790	8320
30	5750	57100	20500	e6600	---	32300	12600	5370	3810	3820	4210	7720
31	6110	---	17900	e6800	---	29700	---	e5330	---	3320	4010	---
TOTAL	223990	743420	760400	315100	161600	868000	1204600	241380	157510	221820	79060	394060
MEAN	7225	24780	24530	10160	5771	28000	40150	7786	5250	7155	2550	13140
MAX	16400	90100	44600	16900	7600	73700	103000	13200	9190	19600	4210	30900
MIN	4350	5600	13400	6500	4600	5500	12600	5140	3220	3220	1610	2870
CFSM	.64	2.21	2.19	.91	.51	2.50	3.58	.69	.47	.64	.23	1.17
IN.	.74	2.46	2.52	1.04	.54	2.88	3.99	.80	.52	.74	.26	1.31

CAL YR 1986 TOTAL 6340540 MEAN 17370 MAX 170000 MIN 2200 CFSM 1.55 IN. 21.02
WTR YR 1987 TOTAL 5370940 MEAN 14710 MAX 103000 MIN 1610 CFSM 1.31 IN. 17.81

e Estimated

01540500 SUSQUEHANNA RIVER AT DANVILLE, PA.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1946-53, 1957 to current year.

REMARKS.--Agency collection codes: 42011 - Susquehanna River Basin Commission, 1028 - U.S. Geological Survey.
Agency analyzing codes: 9813 - Pa. Department of Environmental Resources, 80020 - U.S. Geological Survey.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TURBIDITY (FTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)
NOV											
18...	1200	1028	80020	12700	195	7.60	3.2	762	12.6	99	510
APR											
08...	1215	1028	80020	88100	123	7.20	30	757	11.2	98	730
MAY											
28...	1215	1028	80020	6300	310	7.90	3.2	770	10.0	102	--
SEP											
03...	1300	1028	80020	3800	330	7.10	5.1	771	10.2	110	2300

DATE	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS TOTAL (MG/L AS CACO3)	HARDNESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE IT-FLD (MG/L AS HCO3)	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3
NOV											
18...	K2	76	31	22	5.1	7.3	17	0.4	1.5	55	44
APR											
08...	K8300	44	20	13	2.8	4.7	18	0.3	1.5	29	24
MAY											
28...	--	110	49	30	7.8	12	19	0.5	1.6	71	58
SEP											
03...	K6	110	61	27	9.6	16	24	0.7	2.4	56	46

DATE	ALKALINITY LAB (MG/L AS CACO3)	ALKALINITY, CARBONATE IT-FLD (MG/L - CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)
NOV											
18...	44	44	2.2	31	12	<0.10	4.3	124	114	0.17	4250
APR											
08...	25	24	2.9	19	7.5	<0.10	4.8	93	73	0.13	22100
MAY											
28...	59	58	1.4	47	17	<0.10	1.9	157	156	0.21	2670
SEP											
03...	41	46	7.1	66	24	0.10	4.3	176	180	0.24	1810

(K) Results based on non-ideal colony count.

01540500 SUSQUEHANNA RIVER AT DANVILLE, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	NITROGEN, NITRATE DISSOLVED (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)
OCT									
08...	1045	42011	9813	14000	267	--	11.0	--	--
NOV									
05...	0900	42011	9813	5570	298	--	--	--	--
18...	1200	1028	80020	12700	195	7.60	5.0	--	<0.010
21...	2145	42011	9813	31000	175	--	--	--	--
22...	1600	42011	9813	33800	155	--	--	--	--
23...	1630	42011	9813	38100	180	--	--	--	--
24...	1400	42011	9813	35600	165	--	4.0	--	--
25...	1445	42011	9813	31600	155	7.60	5.0	--	--
DEC									
16...	1010	42011	9813	15600	145	7.30	1.5	--	--
JAN									
14...	1145	42011	9813	9470	245	7.40	4.5	--	--
FEB									
18...	1130	42011	9813	4800	275	7.10	3.0	--	--
MAR									
19...	1100	42011	9813	16500	200	7.30	6.0	--	--
30...	1610	42011	9813	31600	132	8.05	11.5	--	--
APR									
03...	2200	42011	9813	34200	200	8.22	6.0	--	--
04...	0500	42011	9813	34000	210	8.40	6.0	--	--
04...	1700	42011	9813	39100	210	--	9.0	--	--
05...	0430	42011	9813	65900	130	7.40	6.5	--	--
05...	1620	42011	9813	95200	112	7.70	8.5	--	--
05...	2230	42011	9813	102000	112	7.70	6.0	--	--
06...	0520	42011	9813	115000	110	7.75	6.0	--	--
06...	1100	42011	9813	114000	115	7.70	--	--	--
06...	1730	42011	9813	102000	115	7.55	--	--	--
07...	1220	42011	9813	89000	108	7.40	8.0	--	--
08...	1030	42011	9813	88400	135	7.75	8.5	--	--
08...	1215	1028	80020	88100	123	7.20	9.0	--	<0.010
09...	1000	42011	9813	75600	150	7.80	7.0	--	--
10...	1015	42011	9813	61700	145	7.70	8.5	--	--
13...	1200	42011	9813	36100	155	7.70	12.5	--	--
28...	1100	42011	9813	15200	220	7.80	14.5	--	--
MAY									
19...	1015	42011	9813	5400	280	7.90	20.0	--	--
28...	1215	1028	80020	6300	310	7.90	17.0	0.690	0.010
JUN									
08...	1050	42011	9813	7890	215	8.40	26.0	--	--
JUL									
07...	1045	42011	9813	1770	260	8.10	25.5	--	--
AUG									
04...	1200	42011	9813	2740	350	8.70	28.0	--	--
SEP									
03...	1300	1028	80020	3800	330	7.10	19.5	--	<0.010
03...	1310	42011	9813	3800	330	7.10	19.5	--	--
08...	1514	42011	9813	4410	319	7.70	22.0	--	--
08...	2100	42011	9813	5470	345	7.60	22.0	--	--
09...	0215	42011	9813	8500	255	7.30	21.0	--	--
09...	1130	42011	9813	14000	312	7.40	25.0	--	--
10...	0140	42011	9813	15900	300	7.50	22.0	--	--
10...	1040	42011	9813	14200	370	6.70	22.0	--	--
11...	1015	42011	9813	8710	255	7.10	22.0	--	--
12...	1400	42011	9813	6380	230	--	21.0	--	--

01540500 SUSQUEHANNA RIVER AT DANVILLE, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)
OCT									
08...	0.740	0.740	0.050	0.050	0.83	0.32	0.88	0.37	1.6
NOV									
05...	0.760	0.760	0.065	0.065	0.44	0.39	0.51	0.46	1.3
18...	--	0.700	[a]0.100	[a]0.140	0.60	--	0.70	--	--
21...	0.960	0.960	0.115	0.115	0.60	0.36	0.72	0.48	1.7
22...	0.900	0.900	0.080	0.065	0.62	0.25	0.70	0.32	1.6
23...	0.880	0.880	0.085	0.075	0.30	0.12	0.38	0.20	1.3
24...	0.780	0.780	0.070	0.070	0.41	0.41	0.48	0.48	1.3
25...	0.780	0.780	0.060	0.060	0.52	0.20	0.58	0.26	1.4
DEC									
16...	1.04	1.04	0.090	0.090	0.43	0.43	0.52	0.52	1.6
JAN									
14...	1.14	1.14	0.010	0.010	0.23	0.17	0.24	0.18	1.4
FEB									
18...	1.20	1.20	0.090	0.090	0.17	0.15	0.26	0.24	1.5
MAR									
19...	1.18	1.18	0.055	0.055	0.32	0.28	0.38	0.34	1.6
30...	0.800	0.800	0.080	0.080	0.33	0.30	0.41	0.38	1.2
APR									
03...	0.800	0.800	0.085	0.085	0.54	0.51	0.63	0.60	1.4
04...	0.780	0.780	0.085	0.085	0.25	0.25	0.34	0.34	1.1
04...	0.860	0.860	0.100	0.100	0.34	0.28	0.44	0.38	1.3
05...	0.860	0.860	0.090	0.075	0.77	0.17	0.86	0.24	1.7
05...	0.740	0.740	0.090	0.090	0.74	0.59	0.83	0.68	1.6
05...	0.740	0.740	0.075	0.075	0.77	0.53	0.85	0.61	1.6
06...	0.800	0.800	0.080	0.075	0.57	0.36	0.65	0.44	1.4
06...	0.780	0.780	0.140	0.120	0.71	0.43	0.85	0.55	1.6
06...	0.720	0.720	0.160	0.140	0.55	0.49	0.71	0.63	1.4
07...	0.740	0.740	0.130	--	0.29	--	0.42	0.40	1.2
08...	0.800	0.800	0.150	0.140	0.76	0.47	0.91	0.61	1.7
08...	--	0.870	[a]0.070	[a]0.120	0.63	--	0.70	--	--
09...	0.800	0.800	0.130	0.110	0.52	0.52	0.65	0.63	1.4
10...	0.800	0.800	0.050	0.050	0.65	0.46	0.70	0.51	1.5
13...	0.920	0.920	0.050	0.050	0.95	0.28	1.0	0.33	1.9
28...	0.520	0.520	0.020	0.020	0.50	0.30	0.52	0.32	1.0
MAY									
19...	0.580	0.580	0.075	0.075	1.3	1.1	1.4	1.2	2.0
28...	--	0.700	<0.010	0.010	--	--	1.1	--	--
JUN									
08...	0.660	0.660	0.015	0.015	0.49	0.35	0.51	0.37	1.2
JUL									
07...	0.840	0.820	0.060	0.060	0.48	0.38	0.54	0.44	1.4
AUG									
04...	0.240	0.240	0.020	0.010	0.52	0.25	0.54	0.26	0.78
SEP									
03...	--	0.520	[a]0.010	[a]0.020	0.99	--	1.0	--	--
03...	0.560	--	0.015	0.010	1.1	0.49	1.1	0.50	1.7
08...	0.820	0.820	0.100	0.085	0.88	0.43	0.98	0.52	1.8
08...	0.860	0.860	[a]0.080	[a]0.120	0.72	0.42	0.80	0.54	1.7
09...	1.04	1.04	0.095	0.095	1.1	0.33	1.2	0.42	2.3
09...	1.08	1.08	0.125	0.125	1.1	0.39	1.2	0.52	2.3
10...	0.900	0.900	0.105	0.105	0.91	0.50	1.0	0.61	1.9
10...	0.860	0.860	0.100	0.095	0.72	0.35	0.82	0.45	1.7
11...	0.840	0.840	0.085	0.080	0.57	0.24	0.66	0.32	1.5
12...	0.860	0.860	0.075	0.065	0.47	0.31	0.55	0.38	1.4

(a) Results within limits of analytical precision.

01540500 SUSQUEHANNA RIVER AT DANVILLE, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORGANIC TOTAL (MG/L AS P)	PHOS-PHOROUS ORGANIC DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT									
08...	0.170	0.040	0.019	0.17	0.02	5.3	39	1480	--
NOV									
05...	0.060	0.030	0.012	0.06	0.02	6.7	4	56	--
18...	0.060	0.040	0.020	0.06	0.02	--	12	411	96
21...	0.090	0.030	<0.002	0.09	0.03	4.0	79	6640	--
22...	0.060	0.030	<0.002	0.06	0.03	3.5	88	8070	--
23...	0.090	0.030	<0.002	0.09	0.03	2.8	54	5580	--
24...	0.060	0.030	<0.002	0.06	0.03	6.0	80	7670	--
25...	0.070	0.030	<0.002	0.07	0.03	3.6	39	3370	--
DEC									
16...	0.050	0.020	0.010	0.05	0.01	3.7	1	55	--
JAN									
14...	0.060	0.020	0.009	0.06	0.01	3.9	6	166	--
FEB									
18...	0.070	0.030	0.006	0.07	0.02	6.7	7	92	--
MAR									
19...	0.050	0.030	0.008	0.05	0.02	4.5	10	454	--
30...	0.100	0.060	0.004	0.10	0.06	9.6	46	3900	--
APR									
03...	0.100	0.030	0.003	0.10	0.03	5.4	37	3420	--
04...	0.090	0.030	0.006	0.09	0.02	5.0	37	3360	--
04...	0.100	0.030	0.006	0.10	0.02	5.6	70	7390	--
05...	0.310	0.030	0.004	0.31	0.03	5.4	177	31400	--
05...	0.420	0.030	0.002	0.42	0.03	6.1	341	87600	--
05...	0.340	0.040	0.003	0.34	0.04	4.6	354	97600	--
06...	0.380	0.040	0.004	0.38	0.04	--	464	144000	--
06...	0.120	0.030	0.002	0.12	0.03	4.8	425	131000	--
06...	0.100	0.030	0.002	0.10	0.03	4.9	353	97300	--
07...	0.120	0.030	0.004	0.12	0.03	4.6	277	66500	--
08...	0.080	0.030	0.002	0.08	0.03	5.3	151	36100	--
08...	0.130	0.080	0.040	0.13	0.04	--	167	39700	--
09...	0.020	0.020	0.003	0.02	0.02	5.0	121	24600	--
10...	0.090	0.040	0.003	0.09	0.04	5.2	91	15100	--
13...	0.100	0.040	0.003	0.10	0.04	5.6	46	4480	--
28...	0.050	0.030	0.002	0.05	0.03	2.9	29	1190	--
MAY									
19...	0.060	<0.010	<0.020	0.06	--	3.9	18	268	--
28...	0.070	0.010	<0.010	0.07	0.01	--	15	255	91
JUN									
08...	0.150	0.080	0.026	0.15	0.05	3.8	17	369	--
JUL									
07...	0.200	0.050	0.007	0.20	0.04	3.0	24	114	--
AUG									
04...	0.080	0.040	0.002	0.08	0.04	3.6	9	67	--
SEP									
03...	0.120	<0.010	<0.010	0.12	--	--	28	287	93
03...	0.110	0.020	0.007	0.11	0.01	2.6	--	--	--
08...	0.110	0.020	0.006	0.11	0.01	2.0	24	286	--
08...	0.130	0.020	0.005	0.13	0.01	2.9	36	532	--
09...	0.180	0.030	0.006	0.18	0.02	2.6	90	2070	--
09...	0.390	0.030	0.005	0.39	0.02	4.9	182	6880	--
10...	0.250	0.030	0.006	0.25	0.02	3.3	87	3730	--
10...	0.200	0.030	0.007	0.20	0.02	3.0	77	2950	--
11...	0.150	0.030	0.009	0.15	0.02	3.4	53	1250	--
12...	0.130	0.030	0.010	0.13	0.02	2.5	29	500	--

01540500 SUSQUEHANNA RIVER AT DANVILLE, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAMFLOW, INSTANTANEOUS (CFS)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)
NOV												
18...	1200	1028	80020	12700	20	<1	26	<0.5	<1	<1	<3	5
APR												
08...	1215	1028	80020	88100	260	<1	29	<0.5	<1	<1	3	<1
MAY												
28...	1215	1028	80020	6300	40	<1	27	<0.5	<1	<1	<3	3
SEP												
03...	1300	1028	80020	3800	80	1	25	<0.5	<1	<1	<3	4

DATE	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)
NOV												
18...	--	<5	5	110	<0.1	<10	4	<1	10	77	<6	12
APR												
08...	430	<5	8	110	--	<10	3	<1	<1.0	40	<6	21
MAY												
28...	44	<5	8	34	<0.1	<10	7	<1	<1.0	130	<6	6
SEP												
03...	81	<5	5	100	--	<10	7	1	<1.0	150	<6	6

01541000 WEST BRANCH SUSQUEHANNA RIVER AT BOWER, PA

LOCATION.--Lat 40°53'49", long 78°40'38", Clearfield County, Hydrologic Unit 02050201, on right bank at downstream side of highway bridge at Bower, 4.6 mi downstream from Chest Creek and Mahaffey.

DRAINAGE AREA.--315 mi².

PERIOD OF RECORD.--October 1913 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 726: Drainage area: WSP 1302: 1914-17, 1918(M), 1922-23, 1924(M), 1925-29, 1930-31(M), 1933(M).

GAGE.--Water-stage recorder. Datum of gage is 1,207.14 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 17, 1929, nonrecording gage at same site and datum.

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

AVERAGE DISCHARGE.--74 years, 559 ft³/s, 24.04 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,500 ft³/s, Mar. 18, 1936, gage height, 19.74 ft, from floodmark in gage shelter, from rating curve extended above 7,200 ft³/s on basis of slope-area measurement of peak flow; minimum, 14 ft³/s, Aug. 29, 1939; minimum daily, 16 ft³/s, Sept. 29, Oct. 1, 6, 13, 1930, Aug. 29, Aug. 31 to Sept. 2, 1939.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known prior to 1913, about 18.5 ft, May 13, 1889, discharge, about 27,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,400 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 4	1330	5,420	10.55	Apr. 5	0615	*6,120	*10.98
Nov. 9	1530	5,230	10.43	July 7	1130	5,150	10.38
Nov. 26	2030	5,800	10.79				

Minimum discharge, 71 ft³/s, Aug. 21, 22, gage height, 4.20 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	576	220	816	407	e200	e600	1710	634	235	350	96	183
2	380	211	884	403	e250	e1700	1560	565	235	1120	97	151
3	839	201	2010	384	e380	1220	1450	831	219	1020	191	129
4	4200	204	1710	332	e320	888	2040	1920	215	564	137	115
5	2520	262	1240	273	e270	691	5130	1280	188	407	133	105
6	1330	515	979	e300	e270	672	3440	1030	170	409	181	123
7	843	430	821	352	e260	1030	3080	852	155	3390	129	177
8	606	857	727	348	e250	1790	2320	724	150	1400	97	254
9	472	3910	1120	302	e240	1960	1610	615	183	910	113	314
10	394	2570	1800	288	e210	1440	1190	533	165	670	418	205
11	323	1640	1250	296	e200	1010	957	469	145	547	227	161
12	275	1790	1020	280	e220	819	889	424	192	441	137	406
13	289	1290	832	262	e210	691	979	379	821	361	113	322
14	553	964	624	250	e200	594	770	337	469	338	104	232
15	568	805	617	530	e170	554	700	495	291	334	99	182
16	397	718	533	1000	e160	516	702	426	224	260	93	168
17	336	623	485	728	e160	471	656	330	191	229	89	278
18	294	562	540	612	e180	445	640	325	167	198	96	874
19	258	1130	586	617	e170	428	565	1120	150	182	97	865
20	232	872	469	768	e170	419	515	831	187	165	85	942
21	215	2070	413	578	e160	410	469	654	343	156	78	641
22	203	1450	356	e450	e160	392	440	528	855	146	91	481
23	193	1130	329	e400	e210	379	626	449	646	139	149	427
24	184	1000	368	e310	e190	370	1130	388	413	129	106	341
25	165	868	1030	e270	e180	380	1110	336	288	125	90	285
26	240	2680	937	e260	e170	722	846	305	258	120	85	241
27	304	3760	727	e250	e170	574	724	429	262	119	101	209
28	364	1960	631	e230	e170	504	1080	352	207	111	117	186
29	325	1380	550	e230	---	459	862	293	180	106	583	171
30	271	1040	498	e230	---	622	734	281	172	103	267	287
31	242	---	455	e210	---	1850	---	245	---	97	174	---
TOTAL	18391	37112	25357	12150	5900	24600	38924	18380	8376	14646	4573	9455
MEAN	593	1237	818	392	211	794	1297	593	279	472	148	315
MAX	4200	3910	2010	1000	380	1960	5130	1920	855	3390	583	942
MIN	165	201	329	210	160	370	440	245	145	97	78	105
CFSM	1.88	3.93	2.60	1.24	.67	2.52	4.12	1.88	.89	1.50	.47	1.00
IN.	2.17	4.38	2.99	1.43	.70	2.91	4.60	2.17	.99	1.73	.54	1.12

CAL YR 1986 TOTAL 241337 MEAN 661 MAX 6190 MIN 65 CFSM 2.10 IN. 28.50
WTR YR 1987 TOTAL 217864 MEAN 597 MAX 5130 MIN 78 CFSM 1.89 IN. 25.73

e Estimated

01541200 WEST BRANCH SUSQUEHANNA RIVER AT CURWENSVILLE, PA

LOCATION.--Lat 40°57'41", long 78°31'10", Clearfield County, Hydrologic Unit 02050201, on left bank 30 ft downstream from bridge on State Highway 453, 0.8 mi downstream from Curwensville Dam, 1.1 mi south of Curwensville, and 1.8 mi upstream from Anderson Creek.

DRAINAGE AREA.--367 mi².

PERIOD OF RECORD.--October 1955 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,124.52 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 24, 1956, nonrecording gage and crest-stage gage 30 ft upstream at same datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since November 1965 by Curwensville Dam (station 01541180). Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--32 years, 660 ft³/s, 24.44 in/yr, adjusted for storage since November 1965.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,700 ft³/s, Mar. 10, 1964, gage height, 14.19 ft; no flow at times; minimum daily, 19 ft³/s, Aug. 16, 17, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,230 ft³/s, Apr. 6, gage height, 7.21 ft; minimum daily, 73 ft³/s, Aug. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	339	264	2080	552	292	457	2500	538	227	199	115	239
2	571	262	1110	386	360	1940	1970	418	193	1300	117	163
3	793	262	1660	386	463	1750	1860	553	188	1600	146	163
4	3290	262	2110	383	591	1290	1890	1570	193	857	254	161
5	3500	262	1800	379	564	972	3300	1630	205	574	313	133
6	2770	455	1290	274	443	756	4130	1220	224	457	205	120
7	1330	602	1280	296	399	830	4050	954	220	3120	158	120
8	917	608	1070	333	399	1380	3670	849	216	2880	160	143
9	656	1510	1190	369	399	2360	2540	752	183	1350	158	286
10	544	3310	1720	386	399	2450	1600	597	170	883	131	344
11	484	3130	1810	386	394	1570	1230	439	170	748	110	225
12	411	2940	1420	386	365	1050	970	404	170	643	167	290
13	201	2040	1260	354	309	880	847	454	1040	456	187	459
14	455	1540	832	307	286	735	912	418	988	426	159	377
15	823	1310	571	324	286	627	907	338	327	370	139	226
16	685	747	662	710	277	584	997	400	277	350	111	177
17	498	748	705	983	254	490	768	433	244	253	93	256
18	405	811	705	962	240	462	683	432	192	134	86	888
19	277	1240	705	918	240	440	784	870	164	95	85	1120
20	276	1560	639	900	240	439	561	1240	302	125	83	1130
21	276	2020	513	821	240	439	391	821	438	196	80	956
22	276	2090	439	637	240	439	358	604	1040	209	80	594
23	276	1610	335	383	240	363	456	525	866	208	73	521
24	276	1390	301	336	270	322	762	424	549	207	127	402
25	243	1370	635	380	286	367	1220	351	373	160	125	344
26	224	1620	1110	380	281	709	1190	302	317	116	108	339
27	446	2230	1230	352	281	816	866	330	316	115	108	296
28	535	2830	1120	306	265	576	870	363	258	115	109	157
29	441	3130	804	291	---	482	884	339	154	115	148	105
30	385	2860	671	293	---	585	771	289	155	114	413	199
31	299	---	661	291	---	1500	---	286	---	114	490	---
TOTAL	22902	45013	32438	14444	9303	28060	43937	19143	10359	18489	4838	10933
MEAN	739	1500	1046	466	332	905	1465	618	345	596	156	364
MAX	3500	3310	2110	983	591	2450	4130	1630	1040	3120	490	1130
MIN	201	262	301	274	240	322	358	286	154	95	73	105
MEAN‡	747	1461	1006	471	326	928	1477	660	346	602	154	365
CFSM‡	2.04	3.98	2.74	1.28	.89	2.53	4.02	1.80	.94	1.64	.42	.99
IN.‡	2.35	4.44	3.16	1.48	.93	2.92	4.49	2.08	1.05	1.89	.48	1.10

CAL YR 1986 TOTAL 286883 MEAN 786 MAX 4450 MIN 41 MEAN‡ 785 CFSM‡ 2.14 IN.‡ 29.02
WTR YR 1987 TOTAL 259859 MEAN 712 MAX 4130 MIN 73 MEAN‡ 713 CFSM‡ 1.94 IN.‡ 26.37

‡ Adjusted for change in contents in Curwensville Lake.

01541303 WEST BRANCH SUSQUEHANNA RIVER AT HYDE, PA

LOCATION.--Lat 41°00'16", long 78°27'25", Clearfield County, Hydrologic Unit 02050201, on right bank 60 ft downstream from bridge on Legislative Route 17098, at intersection with State Highway 879 at Hyde.

DRAINAGE AREA.--474 mi².

PERIOD OF RECORD.--October 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,093.90 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated since November 1965 by Curwensville Dam (station 01541180) located about 5 mi upstream. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite and landline telemeters at station.

AVERAGE DISCHARGE.--9 years, 905 ft³/s, 25.94 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,360 ft³/s, Feb. 13, 1984, gage height, 10.82 ft from rating curve extended above 6,000 ft³/s; maximum gage height, 11.45 ft, Feb. 18, 1981, (backwater from ice); minimum daily discharge, 46 ft³/s, Sept. 14, 1982.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 10, 1964, reached a stage of 18.1 ft, from floodmarks, discharge, 19,400 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,190 ft³/s, Nov. 26, gage height, 8.99 ft; minimum daily, 137 ft³/s, Aug. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	552	372	2680	716	e400	425	3420	696	280	335	153	278
2	697	373	1570	544	e500	2270	2830	542	247	1570	154	195
3	1140	369	2460	534	e600	2100	2550	686	244	2220	194	192
4	4190	369	2980	519	e700	1350	2810	1890	245	1100	227	191
5	4580	387	2520	556	e760	1060	4310	2040	248	616	321	179
6	3660	569	1730	471	e720	749	4900	1440	262	535	253	166
7	1890	735	1630	404	626	943	4770	1100	259	3600	186	169
8	1270	835	1390	451	512	1800	4380	893	254	3580	183	192
9	836	2250	1590	472	e500	3130	3310	779	241	1710	182	277
10	719	4040	2330	493	e500	3170	2040	613	231	974	184	330
11	615	3780	2340	483	507	2120	1530	485	229	752	175	275
12	576	3520	1860	474	502	1320	1250	419	253	654	186	320
13	363	2620	1540	443	380	1050	1080	454	1160	462	219	457
14	628	1870	1140	397	315	869	1090	436	1420	439	194	387
15	979	1640	787	437	e330	714	1060	392	375	401	181	258
16	875	967	835	806	e330	671	1090	402	331	353	164	199
17	610	938	858	1090	e320	567	918	423	294	295	147	249
18	549	1060	887	1010	e300	536	738	417	265	209	141	861
19	403	1560	882	978	e300	513	830	653	233	163	140	1300
20	396	1980	792	946	e290	512	672	1270	337	161	139	1360
21	391	2620	665	870	e280	513	495	768	443	203	137	1190
22	385	2730	578	763	e270	507	453	553	1100	216	147	719
23	379	2120	491	575	264	462	508	465	1090	213	143	594
24	375	1850	453	e480	281	413	940	418	583	211	155	503
25	349	1800	916	e500	306	448	1380	359	427	201	173	424
26	349	3180	1420	e520	304	837	1390	335	378	160	155	410
27	492	4330	1470	e480	300	936	970	348	419	157	158	383
28	647	3920	1310	e440	296	688	1100	365	369	156	172	289
29	534	3960	1010	e400	---	574	1050	353	259	154	196	228
30	490	3500	812	e400	---	746	899	312	256	154	325	317
31	414	---	786	e400	---	2310	---	307	---	153	450	---
TOTAL	30333	60244	42712	18052	11693	34303	54763	20613	12732	22107	5934	12892
MEAN	978	2008	1378	582	418	1107	1825	665	424	713	191	430
MAX	4580	4330	2980	1090	760	3170	4900	2040	1420	3600	450	1360
MIN	349	369	453	397	264	413	453	307	229	153	137	166
MEAN‡	986	1969	1338	587	412	1130	1837	707	425	719	189	431
CFSM‡	2.08	4.15	2.82	1.24	.87	2.38	3.88	1.49	.90	1.52	.40	.91
IN.‡	2.40	4.63	3.25	1.43	.91	2.74	4.33	1.72	1.00	1.75	.46	1.02

CAL YR 1986 TOTAL 388551 MEAN 1065 MAX 5300 MIN 189 MEAN‡ 1064 CFSM‡ 2.24 IN.‡ 30.46
WTR YR 1987 TOTAL 326378 MEAN 894 MAX 4900 MIN 137 MEAN‡ 895 CFSM‡ 1.89 IN.‡ 25.64

e Estimated
‡ Adjusted for change in contents in Curwensville Lake.

01541500 CLEARFIELD CREEK AT DIMELING, PA

LOCATION.--Lat 40°58'18", long 78°24'22", Clearfield County, Hydrologic Unit 02050201, on right bank at downstream side of highway bridge at Dimeling, 600 ft downstream from Little Clearfield Creek, and 4 mi southeast of Clearfield.

DRAINAGE AREA.--371 mi².

PERIOD OF RECORD.--October 1913 to current year. Monthly discharges only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 756: Drainage area. WSP 891: 1936-39. WSP 1302: 1915-17, 1918-19(M). WSP 1502: 1939.

GAGE.--Water-stage recorder. Datum of gage is 1,146.08 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 17, 1928, nonrecording gage and Oct. 17, 1928, to Oct. 25, 1967, water-stage recorder at site 200 ft upstream at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated since December 1960 by Glendale Dam (station 01541340) about 25 mi upstream. Several measurements of water temperature were made during the year. National Weather Service satellite telemeter at station.

AVERAGE DISCHARGE.--74 years, 581 ft³/s, 21.32 in/yr, adjusted for storage since December 1960.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,600 ft³/s, Mar. 18, 1936, gage height, 18.49 ft, from floodmark in gage shelter, from rating curve extended above 15,000 ft³/s; minimum, 6.0 ft³/s, Oct. 1, 9, 1925; minimum daily, 7.1 ft³/s, Oct 1, 1925.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,900 ft³/s, July 7, gage height, 9.59 ft; minimum daily, 103 ft³/s, Aug. 21.

REVISIONS.--The maximum discharge for the water year 1986 has been revised to 6,560 ft³/s, Nov. 17, 1985, gage height, 9.36 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	407	437	900	469	e260	e1000	2300	526	314	312	127	172
2	315	431	834	466	e300	e2300	1680	486	284	1450	121	155
3	603	424	1540	457	e400	1190	1540	686	262	1790	173	139
4	1980	503	1480	e380	e350	892	2110	1870	274	979	190	124
5	1690	577	1110	e310	e330	709	6200	1440	241	690	218	116
6	1110	786	924	e310	e320	683	4870	1140	209	596	274	124
7	784	716	802	e410	e320	954	4720	967	192	4680	208	155
8	615	e660	722	401	e330	1840	3830	825	179	1960	156	229
9	505	e2500	849	367	e310	2390	2680	699	192	1250	146	363
10	432	e2100	1350	347	e270	1900	1910	613	189	913	396	262
11	373	e1600	1030	342	e270	1370	1530	541	165	708	343	206
12	332	e1400	873	327	e280	1110	1330	488	187	569	200	313
13	313	e1300	758	321	e260	936	1350	434	1470	485	153	251
14	436	e900	590	319	e240	791	1100	392	1070	430	135	212
15	486	e720	607	422	e210	706	943	452	502	415	125	174
16	387	e640	540	802	e240	652	879	478	366	348	119	160
17	335	e580	499	698	e230	588	840	377	303	302	114	254
18	303	e560	527	590	e230	539	925	335	260	273	110	814
19	273	e900	616	583	e230	511	779	529	225	249	110	729
20	251	e800	527	621	e220	496	684	787	246	230	109	564
21	241	e1500	464	552	e220	486	620	648	391	214	103	471
22	231	e1300	e410	e440	e230	466	568	497	535	203	121	419
23	222	e1100	e340	e420	e260	445	667	427	417	192	131	344
24	214	e920	e380	e360	e250	431	792	375	398	180	133	303
25	208	e920	e700	e320	e240	433	865	339	296	171	119	273
26	236	1570	874	e320	e230	596	669	317	322	165	110	243
27	252	3600	712	e310	e220	561	575	367	376	156	119	219
28	578	1910	637	e300	e220	496	698	356	308	149	142	203
29	515	1420	584	e300	---	458	700	305	251	139	339	192
30	468	1120	544	e300	---	527	591	306	242	133	287	247
31	441	---	509	e280	---	1640	---	354	---	131	181	---
TOTAL	15536	33894	23232	12844	7470	28096	48945	18356	10666	20462	5312	8430
MEAN	501	1130	749	414	267	906	1631	592	356	660	171	281
MAX	1980	3600	1540	802	400	2390	6200	1870	1470	4680	396	814
MIN	208	424	340	280	210	431	568	305	165	131	103	116
MEAN‡	461	1118	802	423	264	908	1629	581	362	648	173	285
CFSM‡	1.24	3.01	2.16	1.14	.71	2.45	4.39	1.57	.98	1.75	.47	.77
IN.‡	1.43	3.36	2.49	1.31	.74	2.82	4.90	1.81	1.09	2.02	.54	.86

CAL YR 1986 TOTAL 243773 MEAN 668 MAX 5000 MIN 54 MEAN‡ 668 CFSM‡ 1.80 IN.‡ 24.43
WTR YR 1987 TOTAL 233243 MEAN 639 MAX 6200 MIN 103 MEAN‡ 639 CFSM‡ 1.72 IN.‡ 23.37

e Estimated
‡ Adjusted for change in contents in Glendale Lake.

01542000 MOSHANNON CREEK AT OSCEOLA MILLS, PA

LOCATION.--Lat 40°50'58", long 78°16'05", Clearfield County, Hydrologic Unit 02050201, on left bank 10 ft upstream from Penn Central Railroad bridge at Osceola Mills and 0.1 mi downstream from Trout Run.

DRAINAGE AREA.--68.8 mi².

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

REVISED RECORDS.--WSP 1232: 1941-46, 1948, 1950-51, Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,446.98 ft above National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--47 years, 111 ft³/s, 21.86 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,120 ft³/s, June 23, 1972, gage height 14.25 ft, from rating curve extended above 1,800 ft³/s on basis of contracted-opening measurements at gage heights 7.58 ft, 9.00 ft, and 14.25 ft; minimum, 1.0 ft³/s, Jan. 30, 1981, result of freezeup; minimum daily, 3.6 ft³/s, Oct. 17, 24, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 9	0945	660	3.47	June 13	1700	786	3.88
Nov. 26	2145	699	3.60	July 2	1215	696	3.59
Apr. 5	0015	*1,150	*4.96	July 7	0830	867	4.12

Minimum discharge, 27 ft³/s, Feb. 16, gage height, 0.37 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77	41	216	105	e62	131	385	91	76	230	45	37
2	52	41	256	109	e68	179	362	90	75	554	47	30
3	80	40	352	101	81	128	311	164	85	317	68	28
4	167	43	261	92	75	112	580	229	87	214	47	27
5	150	53	230	88	66	106	941	173	68	177	86	27
6	108	77	208	88	63	113	851	164	61	190	57	36
7	95	59	192	89	62	173	820	158	59	605	43	35
8	86	107	182	85	61	268	679	146	58	296	39	69
9	80	450	209	80	58	360	550	134	68	202	99	60
10	75	252	201	78	60	337	433	126	54	163	137	37
11	68	250	165	76	55	282	349	116	50	140	55	34
12	65	245	155	73	56	239	310	109	71	117	44	56
13	71	203	144	70	53	203	274	102	396	107	39	39
14	99	167	131	70	52	175	228	93	256	107	36	34
15	79	154	129	101	48	164	201	115	254	97	35	32
16	66	147	122	118	e45	148	183	94	285	85	34	33
17	63	135	120	92	e43	135	182	85	274	78	33	85
18	59	145	134	88	47	126	165	87	311	73	34	129
19	56	197	125	97	47	119	146	119	207	68	33	73
20	54	176	110	94	47	113	135	147	215	63	33	62
21	52	326	102	87	46	109	128	114	185	61	33	56
22	51	239	93	e76	46	106	121	105	161	57	47	48
23	49	216	88	e78	48	103	117	101	146	56	38	44
24	48	205	103	e78	45	101	129	96	127	54	33	42
25	47	183	200	e74	45	106	116	92	116	53	31	39
26	54	390	145	e72	44	124	106	91	142	55	33	36
27	52	484	132	e68	44	114	99	99	155	51	40	35
28	54	381	128	e66	45	110	125	87	119	48	48	33
29	48	324	121	e66	---	104	105	82	105	47	93	33
30	45	265	119	e66	---	167	96	78	118	46	39	57
31	42	---	113	e64	---	402	---	94	---	46	33	---
TOTAL	2192	5995	4986	2589	1512	5157	9227	3581	4384	4457	1512	1386
MEAN	70.7	200	161	83.5	54.0	166	308	116	146	144	48.8	46.2
MAX	167	484	352	118	81	402	941	229	396	605	137	129
MIN	42	40	88	64	43	101	96	78	50	46	31	27
CFSM	1.03	2.90	2.34	1.21	.78	2.42	4.47	1.68	2.12	2.09	.71	.67
IN.	1.19	3.24	2.70	1.40	.82	2.79	4.99	1.94	2.37	2.41	.82	.75

CAL YR 1986 TOTAL 43354 MEAN 119 MAX 1010 MIN 26 CFSM 1.73 IN. 23.44
WTR YR 1987 TOTAL 46978 MEAN 129 MAX 941 MIN 27 CFSM 1.87 IN. 25.40

e Estimated

01542500 WEST BRANCH SUSQUEHANNA RIVER AT KARTHAUS, PA

LOCATION.--Lat 41°07'03", long 78°06'33", Clearfield County, Hydrologic Unit 02050201, on left bank 900 ft upstream from bridge on State Highway 879 at Karthaus, 1,000 ft upstream from Mosquito Creek, and 3.3 mi downstream from Moshannon Creek. Records include flow of Mosquito Creek.

DRAINAGE AREA.--1,462 mi², includes that of Mosquito Creek.

PERIOD OF RECORD.--February 1940 to current year. October 1918 to September 1920 (gage heights only) in reports of Water Supply Commission of Pennsylvania.

GAGE.--Water-stage recorder. Datum of gage is 830.59 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 30, 1920, nonrecording gage at site 900 ft downstream at datum 20.88 ft lower. Feb. 21 to Sept. 30, 1940, nonrecording gage at site 900 ft downstream at present datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated since December 1960 by Glendale Dam (station 01541340) about 70 mi upstream and since November 1965 by Curwensville Dam (station 01541180) about 50 mi upstream. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter and National Weather Service landline telemeter at station.

AVERAGE DISCHARGE.--47 years, 2,509 ft³/s, 23.36 in/yr, adjusted for storage since December 1960.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 84,300 ft³/s, June 23, 1972, gage height 18.57 ft, from rating curve extended above 50,000 ft³/s; minimum, 100 ft³/s, Sept. 26, 27, 1964, gage height, 0.43 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, about 24.5 ft, Mar. 18, 1936, from floodmarks at highway bridge, discharge, about 135,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 16,400 ft³/s, Apr. 6, gage height, 8.65 ft; minimum daily, 379 ft³/s, Aug. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1050	1210	6280	2170	1200	1110	8540	2460	1170	1220	517	935
2	1620	1190	4940	2020	1220	3580	7690	2130	1080	3160	506	718
3	1660	1180	5630	1840	1380	5290	6830	2220	990	7520	690	562
4	6070	1180	7180	1670	1540	3850	6980	4660	997	4940	764	524
5	8490	1280	6250	1470	1580	3180	13200	5760	976	3270	755	500
6	6730	1650	5090	1370	1410	2590	14900	4620	893	2580	948	503
7	4560	2150	4490	1380	1320	2840	13400	3920	869	6610	857	508
8	3080	2450	4160	1490	1280	4830	12000	3340	853	8650	675	683
9	2490	6450	3910	1440	1220	7650	9830	3020	1010	5410	609	865
10	2100	9700	5140	1400	1100	8200	7180	2620	854	3600	731	1000
11	1710	7950	5260	1400	1160	6770	5890	2230	767	2850	895	906
12	1580	7420	4740	1350	1230	4970	4950	1910	847	2350	768	1130
13	1450	6770	3980	1300	1100	4100	4600	1740	1410	2000	615	1290
14	1500	4950	3570	1220	1040	3510	4150	1660	5050	1710	624	1210
15	2250	4330	2910	1250	969	3080	3640	1640	2280	1660	552	1000
16	2320	3570	2710	1840	844	2810	3450	1630	1490	1460	514	856
17	1830	3080	2580	2590	e840	2500	3400	1560	1230	1300	471	859
18	1590	3200	2640	2420	950	2260	3000	1440	1110	1140	437	1880
19	1390	3630	2830	2340	887	2100	2920	1480	997	985	403	3480
20	1190	4580	2650	2360	820	2020	2730	2610	919	854	383	3370
21	1140	5890	2340	2260	809	1970	2300	2770	1270	799	379	3210
22	1100	7000	2070	1970	828	1930	2030	2060	1890	806	429	2530
23	1070	5690	1900	1670	855	1870	1960	1670	2860	818	513	2000
24	1030	5120	1720	1280	860	1710	2410	1530	1900	787	458	1780
25	993	4950	2590	1070	860	1660	3290	1350	1460	753	412	1490
26	994	6450	3530	e1300	880	2060	3370	1250	1300	734	465	1300
27	1060	13900	3510	e1300	880	2730	2810	1210	1890	655	520	1200
28	1330	10400	3240	e1250	888	2400	2860	1280	1650	602	704	1080
29	1790	8940	2980	1250	---	2080	3060	1240	1350	559	740	925
30	1550	7510	2490	1240	---	2090	2810	1150	1130	552	843	965
31	1430	---	2330	1210	---	4640	---	1160	---	533	918	---
TOTAL	68147	153770	115640	50120	29950	102380	166180	69320	42492	70867	19095	39259
MEAN	2198	5126	3730	1617	1070	3303	5539	2236	1416	2286	616	1309
MAX	8490	13900	7180	2590	1580	8200	14900	5760	5050	8650	948	3480
MIN	993	1180	1720	1070	809	1110	1960	1150	767	533	379	500
MEAN‡	2166	5075	3744	1631	1062	3328	5549	2267	1423	2280	616	1314
CFSM‡	1.48	3.47	2.56	1.12	.73	2.28	3.80	1.55	.97	1.56	.42	.90
IN.‡	1.71	3.87	2.95	1.29	.76	2.63	4.24	1.79	1.08	1.80	.48	1.00

CAL YR 1986 TOTAL 1041150 MEAN 2852 MAX 15100 MIN 329 MEAN‡ 2851 CFSM‡ 1.95 IN.‡ 26.48
WTR YR 1987 TOTAL 927220 MEAN 2540 MAX 14900 MIN 379 MEAN‡ 2541 CFSM‡ 1.74 IN.‡ 23.60

e Estimated
‡ Adjusted for change in contents in Curwensville and Glendale Lakes.

01542810 WALDY RUN NEAR EMPORIUM, PA

LOCATION.--Lat 41°34'44", long 78°17'34", Cameron County, Hydrologic Unit 02050202, on left bank 15 ft downstream from highway bridge at North Creek Chapel, 0.1 mi upstream from mouth, and 5.5 mi northwest of Emporium.

DRAINAGE AREA.--5.24 mi².

PERIOD OF RECORD.--Occasional discharge measurements and annual maximum, water years 1963-64. August 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,263.62 ft above National Geodetic Vertical Datum of 1929. July 25, 1963, to Aug. 27, 1964, crest-stage gage at same site and datum.

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

AVERAGE DISCHARGE.--23 years, 8.61 ft³/s, 22.31 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 828 ft³/s, Sept. 28, 1967, gage height, 6.32 ft, from rating curve extended above 80 ft³/s on basis of slope-area measurements at gage heights 5.09 ft, 5.86 ft, and at peak flow; no flow Sept. 14-19, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Sept. 12	0445	*131	*4.54	No other peak greater than base discharge.			

Minimum discharge, 0.22 ft³/s, Aug. 17, 21, gage height, 3.22 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.2	6.5	9.7	5.3	e1.8	13	e52	9.6	2.6	7.4	.58	.76
2	7.1	6.0	9.9	e4.6	e1.8	30	e43	7.9	2.7	52	.67	.66
3	14	5.4	30	e4.0	e1.9	22	e28	8.4	2.2	50	1.0	.61
4	41	4.8	32	e3.4	e1.8	14	e26	9.8	3.0	22	.66	.51
5	23	4.7	19	e2.8	e1.6	10	e68	11	2.0	11	.64	.45
6	14	5.9	13	e2.9	e1.5	8.8	e46	10	1.8	7.5	.57	.91
7	9.4	6.1	10	e2.9	e1.6	14	e36	8.5	1.8	5.6	.48	1.1
8	6.9	8.0	8.9	3.0	e1.7	48	e28	6.7	1.7	6.3	.45	5.0
9	5.6	12	10	2.7	e1.5	61	e19	5.4	1.7	5.4	.54	3.5
10	4.4	15	22	2.6	e1.3	31	e13	4.6	1.3	5.2	.63	2.3
11	3.7	14	22	2.6	e1.4	18	9.8	3.9	1.1	4.5	.46	4.0
12	3.3	11	16	2.6	e1.5	12	9.2	4.5	2.8	3.7	.41	94
13	4.0	9.7	12	2.4	e1.4	9.3	9.5	3.2	7.1	3.1	.37	84
14	6.6	7.8	e8.6	e2.5	e1.3	7.3	10	2.8	8.0	3.1	.33	32
15	7.9	7.2	e6.8	e2.8	e1.1	6.1	11	4.8	6.4	2.4	.30	15
16	7.9	6.9	6.2	e3.2	e1.0	5.1	9.7	4.3	4.5	2.0	.29	9.0
17	6.9	6.4	5.4	e3.1	e1.1	4.6	8.6	4.1	3.3	1.7	.25	11
18	5.7	6.9	5.6	e2.9	e1.2	4.3	7.0	4.0	2.6	1.5	.76	22
19	4.8	9.4	5.0	e2.8	e1.2	4.1	5.9	3.5	2.2	1.4	.36	25
20	4.4	10	4.3	e2.7	e1.2	4.1	5.1	3.3	2.0	1.3	.28	38
21	4.1	11	e3.6	e2.6	e1.1	4.0	4.7	2.8	1.9	1.1	.23	33
22	3.8	11	e3.4	e2.5	e1.2	4.0	4.4	3.6	3.6	.99	1.7	21
23	3.5	11	e3.3	e2.3	e1.4	4.0	4.9	3.8	2.6	.97	.63	19
24	3.2	14	e3.8	e2.0	e1.2	4.1	18	4.0	1.9	.89	.41	14
25	2.9	21	9.5	e1.8	e1.1	6.3	36	3.9	1.6	.87	.35	9.5
26	4.0	34	12	e1.7	e1.1	19	22	3.8	3.0	.87	.35	6.7
27	5.2	65	12	e1.6	e1.2	19	15	4.2	2.9	.73	7.7	5.2
28	7.6	32	10	e1.5	e1.3	15	15	3.5	2.7	.68	2.6	4.1
29	9.4	18	8.4	e1.6	---	12	14	3.3	2.3	.61	1.7	3.5
30	9.1	13	7.4	e1.7	---	e16	12	3.1	7.8	.64	1.1	3.9
31	7.4	---	6.3	e1.7	---	e70	---	2.8	---	.69	.85	---
TOTAL	248.0	393.7	336.1	82.8	38.5	500.1	590.8	159.1	91.1	206.14	27.65	469.70
MEAN	8.00	13.1	10.8	2.67	1.37	16.1	19.7	5.13	3.04	6.65	.89	15.7
MAX	41	65	32	5.3	1.9	70	68	11	8.0	52	7.7	94
MIN	2.9	4.7	3.3	1.5	1.0	4.0	4.4	2.8	1.1	.61	.23	.45
CFSM	1.53	2.50	2.07	.51	.26	3.08	3.76	.98	.58	1.27	.17	2.99
IN.	1.76	2.79	2.39	.59	.27	3.55	4.19	1.13	.65	1.46	.20	3.33

CAL YR 1986 TOTAL 3291.54 MEAN 9.02 MAX 111 MIN .39 CFSM 1.72 IN. 23.37
WTR YR 1987 TOTAL 3143.65 MEAN 8.61 MAX 94 MIN .23 CFSM 1.64 IN. 22.32

e Estimated

01543000 DRIFTWOOD BRANCH SINNEMAHONING CREEK AT STERLING RUN, PA

LOCATION.--Lat 41°24'48", long 78°11'50", Cameron County, Hydrologic Unit 02050202, on downstream side of second pier from left bank of highway bridge at village of Sterling Run and 300 ft upstream from Sterling Run.

DRAINAGE AREA.--272 mi².

PERIOD OF RECORD.--October 1913 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 1272: Drainage area. WSP 1502: 1933(M), 1934-38, 1939(M).

GAGE.--Water-stage recorder. Datum of gage is 894.84 ft above National Geodetic Vertical Datum of 1929. Oct. 1, 1913, to Sept. 30, 1931, nonrecording gage and Oct. 1, 1931, to Sept. 30, 1932, water-stage recorder at present site and datum. Oct. 1, 1932, to Sept. 30, 1942, nonrecording gage at site 800 ft upstream at same datum.

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

AVERAGE DISCHARGE.--74 years, 450 ft³/s, 22.41 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 47,800 ft³/s, July 18, 1942, gage height, 14.70 ft, from floodmarks at highway bridge, from rating curve extended above 11,000 ft³/s on basis of slope-area measurement of peak flow; minimum observed, 0.4 ft³/s, Sept. 12, 13, 14, 1930.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,700 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Sept. 12	0900	*3,380	*3.45				

Minimum discharge, 15 ft³/s, Aug. 18, 19, gage height, -0.58 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	294	295	814	336	e135	e290	2420	827	170	285	43	59
2	318	270	747	e290	e140	e640	1870	717	175	1390	37	57
3	420	253	1410	e260	e145	e860	1550	709	150	2100	66	51
4	1470	239	1530	e220	e140	e660	1520	926	294	1320	70	46
5	1040	232	1210	e180	e135	e540	2560	866	253	829	50	39
6	781	363	965	e180	e120	e500	2230	840	199	609	45	35
7	490	313	840	e190	e125	e600	1890	743	171	785	40	63
8	318	430	743	e200	e130	e1000	1570	607	165	645	34	293
9	253	850	739	e180	e115	e1700	1250	470	229	563	32	275
10	212	945	976	e170	e100	1440	1040	353	166	461	45	165
11	180	876	995	e170	e105	1180	903	307	138	365	51	120
12	160	799	956	e160	e110	951	820	378	190	319	36	2220
13	174	713	839	e150	e105	811	872	287	967	281	30	2310
14	e260	568	e660	e140	e96	661	758	242	788	262	26	1400
15	e320	489	e560	e170	e88	528	734	319	462	e241	22	884
16	e320	439	485	e220	e80	394	704	267	301	172	21	644
17	305	393	386	e210	e84	327	648	235	234	138	18	730
18	274	413	396	e205	e88	293	566	219	188	119	17	1530
19	242	732	394	e200	e90	285	445	284	160	110	20	1710
20	223	667	316	e195	e88	273	352	266	145	96	20	1950
21	206	787	e250	e190	e80	263	315	245	141	87	19	1780
22	193	768	e210	e185	e85	254	284	226	222	76	49	1340
23	183	756	e200	e180	e94	246	269	315	262	69	91	1100
24	172	882	e220	e165	e88	239	990	251	177	63	43	870
25	158	1050	e540	e155	e80	253	1590	232	147	59	29	722
26	188	1520	756	e145	e80	915	1330	215	201	65	25	559
27	250	2770	737	e135	e86	887	1080	261	291	86	481	420
28	364	1870	687	e120	e120	821	1130	222	233	61	226	342
29	357	1300	602	e125	---	723	1020	195	192	51	159	291
30	356	1010	520	e130	---	926	950	176	317	47	97	292
31	320	---	426	e135	---	2520	---	194	---	45	70	---
TOTAL	10801	22992	21109	5691	2932	21980	33660	12394	7728	11799	2012	22297
MEAN	348	766	681	184	105	709	1122	400	258	381	64.9	743
MAX	1470	2770	1530	336	145	2520	2560	926	967	2100	481	2310
MIN	158	232	200	120	80	239	269	176	138	45	17	35
CFSM	1.28	2.82	2.50	.67	.38	2.61	4.12	1.47	.95	1.40	.24	2.73
IN.	1.48	3.14	2.89	.78	.40	3.01	4.60	1.70	1.06	1.61	.28	3.05

CAL YR 1986 TOTAL 158435 MEAN 434 MAX 3420 MIN 23 CFSM 1.60 IN. 21.67
WTR YR 1987 TOTAL 175395 MEAN 481 MAX 2770 MIN 17 CFSM 1.77 IN. 23.99

e Estimated

01543500 SINNEMAHONING CREEK AT SINNEMAHONING, PA

LOCATION.--Lat 41°19'02", long 78°06'12", Cameron County, Hydrologic Unit 02050202, on left bank 0.2 mi upstream from Grove Run and 0.7 mi upstream from Penn Central Railroad bridge at Sinnemahoning.

DRAINAGE AREA.--685 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 769.36 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those 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 and National Weather Service landline telemeter at station.

AVERAGE DISCHARGE.--49 years, 1,140 ft³/s, 22.54 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 60,800 ft³/s, June 23, 1972, gage height, 21.78 ft, from rating curve extended above 31,000 ft³/s on basis of slope-area measurement at gage height 21.58 ft; minimum, 1.2 ft³/s, Sept. 4, 1939, gage height, 1.18 ft; minimum daily, 1.4 ft³/s, Sept. 3, 1939.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 21.94 ft, Mar. 18, 1936, from floodmark, discharge, 61,200 ft³/s, from rating curve extended as explained above.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 8,400 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 27	0200	*12,200	*8.64	Mar. 31	1800	8,480	7.15

Minimum discharge, 62 ft³/s, Aug. 21, 22, gage height, 1.67 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	366	418	2090	937	e400	e700	6600	1540	404	705	112	208
2	450	396	1830	919	e380	e2700	5030	1320	350	3060	102	187
3	502	381	3610	855	e450	2580	4060	1370	322	6740	214	161
4	2260	362	4400	700	e450	1890	3880	2330	574	4160	239	145
5	1560	357	3470	e560	e380	1480	7260	1960	564	2570	154	125
6	1020	559	2660	e540	e330	1330	6220	1810	401	1720	135	127
7	718	615	2140	e540	e360	1550	5210	1590	347	1800	121	183
8	547	640	1840	e540	e350	3430	4070	1330	337	1350	102	857
9	443	1860	1820	e520	e330	5310	3080	1090	676	1160	100	867
10	379	2020	2700	519	e270	4130	2370	923	445	969	430	509
11	322	1710	2610	507	e270	2930	1890	797	345	780	242	368
12	286	1480	2430	491	e330	2260	1660	783	434	631	157	3170
13	292	1340	2020	457	e300	1810	1750	693	1530	528	122	3860
14	485	1060	1540	405	e260	1470	1400	567	1480	472	101	2350
15	652	917	1450	536	e220	1240	1290	641	967	501	88	1360
16	515	883	1190	910	e210	1060	1220	589	708	390	79	1020
17	459	853	1040	e760	e200	906	1140	500	537	335	71	1220
18	417	849	1040	e700	e240	818	1030	464	426	292	68	2990
19	366	1530	1100	e740	e230	770	893	758	364	262	65	4120
20	336	1330	903	e720	e200	734	792	752	323	238	69	5260
21	316	1740	798	e660	e190	708	718	715	355	217	64	4440
22	300	1730	690	e620	e220	697	665	627	621	195	143	3190
23	283	1630	650	e560	e250	675	628	672	1090	176	285	2490
24	267	1980	706	e520	e240	650	2110	572	649	164	145	1840
25	247	2590	1570	e500	e200	644	3620	513	469	156	96	1470
26	268	4510	1740	e490	e190	1700	2930	466	558	172	80	1110
27	389	10300	1620	e470	e250	1670	2290	511	1210	243	785	885
28	525	6150	1500	e460	e300	1520	2480	466	776	166	726	728
29	528	3980	1350	e450	---	1360	2100	403	611	134	549	620
30	506	2800	1210	e440	---	1590	1840	360	654	120	321	888
31	460	---	1080	e420	---	6040	---	442	---	114	230	---
TOTAL	16464	56970	54797	18446	8000	56352	80226	27554	18527	30520	6195	46748
MEAN	531	1899	1768	595	286	1818	2674	889	618	985	200	1558
MAX	2260	10300	4400	937	450	6040	7260	2330	1530	6740	785	5260
MIN	247	357	650	405	190	644	628	360	322	114	64	125
CFSM	.78	2.77	2.58	.87	.42	2.65	3.90	1.30	.90	1.44	.29	2.27
IN.	.89	3.09	2.98	1.00	.43	3.06	4.36	1.50	1.01	1.66	.34	2.54

CAL YR 1986 TOTAL 434833 MEAN 1191 MAX 10300 MIN 56 CFSM 1.74 IN. 23.61
WTR YR 1987 TOTAL 420799 MEAN 1153 MAX 10300 MIN 64 CFSM 1.68 IN. 22.85

e Estimated

01544000 FIRST FORK SINNEMAHONING CREEK NEAR SINNEMAHONING, PA

LOCATION.--Lat 41°24'06", long 78°01'28", Cameron County, Hydrologic Unit 02050202, on right bank 350 ft downstream from Woodrock Run, 1,500 ft upstream from Roaring Run, 0.8 mi downstream from George B. Stevenson Dam (First Fork Sinnemahoning Creek Reservoir), and 7.5 mi northeast of Sinnemahoning.

DRAINAGE AREA.--245 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 878.71 ft above National Geodetic Vertical Datum of 1929. Prior to Apr. 1, 1954, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated since Jan. 31, 1956 by George B. Stevenson Dam (station 01543900). Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--34 years, 392 ft³/s, 21.73 in/yr, adjusted for storage since January 1956.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,200 ft³/s, Mar. 1, 1956, gage height, 6.60 ft; minimum daily, 0.10 ft³/s, Aug. 8, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,790 ft³/s, Nov. 27, gage height, 3.39 ft; minimum daily, 18 ft³/s, Aug. 19-21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	176	139	718	303	147	143	2090	525	165	153	64	64
2	283	162	642	293	143	628	1680	457	176	813	55	58
3	316	163	862	288	159	868	1310	477	201	2080	50	28
4	887	145	1270	207	146	742	1170	569	266	1360	49	20
5	771	133	1130	153	122	452	2090	580	302	848	40	19
6	489	211	924	158	105	407	2260	603	247	555	35	38
7	321	221	743	239	105	423	1870	549	246	435	35	58
8	286	216	621	243	118	924	1470	446	213	539	37	159
9	230	716	522	160	122	2200	1080	374	196	558	45	138
10	192	1240	626	169	103	1960	862	294	167	519	45	103
11	150	965	686	161	84	1190	708	265	129	404	45	83
12	135	725	753	161	103	908	575	284	142	346	41	727
13	132	575	675	161	136	669	548	240	939	280	29	701
14	181	427	493	123	108	544	488	188	891	231	29	491
15	224	339	465	162	e81	430	503	208	611	211	24	348
16	207	348	394	228	e78	330	514	240	397	188	19	234
17	193	316	346	248	77	300	473	195	326	141	19	252
18	198	308	335	282	99	281	398	194	255	136	19	804
19	183	444	331	295	92	246	361	213	201	122	18	1280
20	152	431	271	306	75	246	319	185	165	110	18	1510
21	143	535	250	253	75	246	284	180	165	94	18	1490
22	143	589	215	188	74	230	259	174	183	84	30	1490
23	134	618	197	204	86	223	241	227	178	80	46	865
24	116	669	249	e160	101	225	351	236	116	72	43	627
25	113	886	321	e130	85	232	550	244	89	72	38	482
26	97	1510	386	170	76	434	647	241	138	72	23	388
27	110	3470	425	203	76	488	642	218	184	62	280	289
28	93	2770	422	166	102	526	643	213	125	56	170	245
29	82	1630	408	146	---	483	585	174	97	48	82	210
30	83	1020	357	154	---	510	580	154	108	32	76	286
31	108	---	327	159	---	1220	---	157	---	41	56	---
TOTAL	6928	21921	16364	6273	2878	18708	25551	9304	7618	10742	1578	13487
MEAN	223	731	528	202	103	603	852	300	254	347	50.9	450
MAX	887	3470	1270	306	159	2200	2260	603	939	2080	280	1510
MIN	82	133	197	123	74	143	241	154	89	32	18	19
MEAN‡	226	730	530	201	103	606	850	300	255	347	50.6	450
CFSM‡	.92	2.98	2.16	.82	.42	2.47	3.47	1.22	1.04	1.42	.21	1.84
IN.‡	1.06	3.32	2.49	.95	.44	2.85	3.87	1.41	1.16	1.64	.24	2.05

CAL YR 1986 TOTAL 158578 MEAN 434 MAX 4560 MIN 7.8 MEAN‡ 434 CFSM‡ 1.78 IN.‡ 24.06
WTR YR 1987 TOTAL 141352 MEAN 387 MAX 3470 MIN 18 MEAN‡ 387 CFSM‡ 1.58 IN.‡ 21.48

e Estimated
‡ Adjusted for change in contents in First Fork Sinnemahoning Creek Reservoir.

01544500 KETTLE CREEK AT CROSS FORK, PA

LOCATION.--Lat 41°28'33", long 77°49'34", Clinton County, Hydrologic Unit 02050203, on right bank just upstream from abutment of former highway bridge, 0.2 mi downstream from Potter-Clinton County line, and 0.7 mi southeast of Cross Fork.

DRAINAGE AREA.--136 mi².

PERIOD OF RECORD.--October 1940 to current year. Monthly discharge only for October, November 1940, published in WSP 1302.

GAGE.--Water-stage recorder. Datum of gage is 1,027.12 ft above National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--47 years, 226 ft³/s, 22.54 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,300 ft³/s, June 23, 1972, gage height, 11.76 ft, from floodmark in gage well, from rating curve extended above 9,200 ft³/s on basis of slope-area measurement of peak flow; minimum daily, 1.2 ft³/s, Sept. 2-4, 1971; minimum gage height, -0.32 ft, Aug. 23, 24, 1974.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, about 14.0 ft, Mar. 18, 1936, from information by local residents, discharge, about 20,000 ft³/s, from rating curve extended as explained above.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,400 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 27	0100	*3,680	*5.95	No other peak greater than base discharge.			

Minimum discharge, 12 ft³/s, Aug. 21, 22, gage height, 0.36 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	56	541	195	e81	155	1000	270	60	43	34	28
2	92	58	466	194	e78	366	937	253	67	251	30	24
3	142	59	660	175	e89	387	761	246	62	487	36	22
4	507	59	777	e139	e83	320	685	355	93	410	30	19
5	302	63	746	e120	e75	251	1210	375	77	290	28	18
6	211	103	616	e119	e67	218	1440	385	70	214	29	21
7	162	92	502	e110	e70	246	1380	351	74	180	26	28
8	129	141	415	e108	e70	610	1200	301	68	231	24	43
9	105	722	372	105	e62	1160	911	254	71	179	24	40
10	87	853	372	101	e54	1030	677	217	58	170	33	28
11	73	669	355	100	e55	764	524	189	51	153	25	24
12	66	505	368	96	e67	579	441	171	81	136	21	124
13	72	387	335	87	e63	447	445	144	150	132	19	125
14	98	301	285	82	e55	354	407	125	122	201	18	101
15	89	257	263	96	e45	285	424	130	105	176	17	70
16	80	230	229	125	e42	232	415	108	89	155	16	59
17	78	209	203	118	e41	199	385	98	75	132	15	107
18	73	213	207	137	e41	178	334	96	65	111	15	238
19	67	244	191	143	e40	166	280	100	58	95	14	466
20	67	230	167	143	e40	158	239	98	53	81	15	566
21	65	286	153	127	e38	153	210	86	51	70	13	524
22	64	291	138	e101	e43	149	192	86	55	61	24	417
23	60	303	130	e99	e49	143	175	114	55	54	24	327
24	57	365	137	e109	e46	144	208	92	44	50	16	253
25	52	499	230	e108	e40	158	244	86	38	46	13	202
26	63	1420	259	e107	e44	211	251	83	60	45	13	165
27	65	3080	284	e103	e52	230	262	83	72	41	193	140
28	69	1760	286	e100	e64	238	299	78	45	37	88	117
29	62	1100	270	e97	---	225	295	70	38	34	63	102
30	60	747	250	e91	---	270	288	66	47	35	38	174
31	57	---	220	e87	---	623	---	66	---	51	30	---
TOTAL	3218	15302	10427	3622	1594	10649	16519	5176	2054	4351	984	4572
MEAN	104	510	336	117	56.9	344	551	167	68.5	140	31.7	152
MAX	507	3080	777	195	89	1160	1440	385	150	487	193	566
MIN	44	56	130	82	38	143	175	66	38	34	13	18
CFSM	.76	3.75	2.47	.86	.42	2.53	4.05	1.23	.50	1.03	.23	1.12
IN.	.88	4.19	2.85	.99	.44	2.91	4.52	1.42	.56	1.19	.27	1.25

CAL YR 1986 TOTAL 91395 MEAN 250 MAX 3080 MIN 10 CFSM 1.84 IN. 25.00
WTR YR 1987 TOTAL 78468 MEAN 215 MAX 3080 MIN 13 CFSM 1.58 IN. 21.46

e Estimated

01545000 KETTLE CREEK NEAR WESTPORT, PA

LOCATION.--Lat 41°19'12", long 77°52'27", Clinton County, Hydrologic Unit 02050203, on left bank 0.4 mi upstream from Short Bend, 3.5 mi upstream from mouth and Westport, and 5.0 mi downstream from Alvin R. Bush Dam (Kettle Creek Lake).

DRAINAGE AREA.--233 mi^2.

PERIOD OF RECORD.--October 1954 to current year.

GAGE.--Water-stage recorder. Datum of gage is 728.24 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 14, 1956, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated since February 1962 by Alvin R. Bush Dam (station 01544800). Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--33 years, 371 ft^3/s, 21.59 in/yr, adjusted for storage since February 1962.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,970 ft^3/s, Mar. 8, 1956, gage height, 10.48 ft; maximum gage height, 13.31 ft, Jan. 22, 1959 (backwater from ice); minimum discharge, 3.0 ft^3/s, Dec. 6, 1964, gage height, 1.12 ft; minimum daily, 4.4 ft^3/s, Nov. 3, 6, 12, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,340 ft^3/s, Nov. 27, gage height, 7.73 ft; minimum daily, 12 ft^3/s, Aug. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	101	842	331	e155	157	1450	436	126	100	57	52
2	72	100	685	314	e160	395	1400	396	124	370	58	51
3	145	100	860	309	e170	538	1170	404	125	1090	64	40
4	695	102	1080	e220	e158	e430	1040	602	132	879	78	30
5	509	107	1090	e170	e130	e370	1750	629	141	585	57	17
6	365	139	954	e160	e110	e340	2010	638	128	373	43	22
7	268	170	729	e230	e110	381	1790	565	125	321	46	32
8	219	186	598	e200	e110	744	1550	488	129	317	45	89
9	176	886	570	e170	e110	1760	1140	402	131	302	45	86
10	165	1400	589	e170	e90	1610	927	348	119	260	46	65
11	126	1040	578	e170	e90	1140	732	295	104	243	49	54
12	108	723	595	e150	e115	878	617	270	115	212	40	118
13	126	627	574	e140	e100	667	615	250	267	191	26	193
14	157	470	447	e140	e90	543	547	212	292	224	28	159
15	168	386	417	158	e80	468	586	215	242	246	28	130
16	149	356	394	198	e70	361	586	187	187	203	27	110
17	143	332	337	e210	e75	319	557	166	155	174	25	114
18	143	330	312	e215	e100	293	477	166	133	148	23	294
19	123	469	323	e220	e100	263	403	197	122	147	23	531
20	114	409	276	e220	e70	253	364	178	101	117	18	789
21	120	517	239	e215	e50	245	315	157	106	107	12	773
22	119	549	236	e170	e70	232	302	152	113	107	21	607
23	115	548	205	e180	e100	222	291	198	120	100	25	479
24	109	590	214	e165	e90	221	338	196	86	86	34	390
25	105	762	347	e140	e80	231	457	178	76	80	35	296
26	105	1580	399	e165	e65	294	488	176	98	83	30	240
27	123	4250	454	e160	e80	324	490	173	184	82	244	215
28	114	3310	454	e155	e100	346	552	162	114	68	224	200
29	107	1610	447	e155	---	331	507	145	77	60	107	159
30	101	1150	388	e155	---	372	463	133	77	53	82	214
31	102	---	359	e155	---	849	---	142	---	45	45	---
TOTAL	5204	23299	15992	5910	2828	15577	23914	8856	4049	7373	1685	6549
MEAN	168	777	516	191	101	502	797	286	135	238	54.4	218
MAX	695	4250	1090	331	170	1760	2010	638	292	1090	244	789
MIN	13	100	205	140	50	157	291	133	76	45	12	17
MEAN‡	166	777	516	191	101	503	796	286	135	239	53.4	219
CFSM‡	.71	3.33	2.21	.82	.43	2.16	3.42	1.23	.58	1.03	.23	.94
IN.‡	.82	3.72	2.55	.95	.45	2.49	3.82	1.42	.65	1.19	.27	1.05

CAL YR 1986 TOTAL 141394 MEAN 387 MAX 4250 MIN 4.9 MEAN‡ 387 CFSM‡ 1.66 IN.‡ 22.57
WTR YR 1987 TOTAL 121236 MEAN 332 MAX 4250 MIN 12 MEAN‡ 332 CFSM‡ 1.42 IN.‡ 19.38

e Estimated
‡ Adjusted for change in contents in Kettle Creek Lake.

01545500 WEST BRANCH SUSQUEHANNA RIVER AT RENOVO, PA

LOCATION.--Lat 41°19'28", long 77°45'03", Clinton County, Hydrologic Unit 02050203, on right bank at abandoned Eighth Street bridge abutment at South Renovo and 1.0 mi upstream from Paddy Run.

DRAINAGE AREA.--2,975 mi².

PERIOD OF RECORD.--October 1907 to current year. Monthly discharge only for some periods, published in WSP 1302. Gage height records collected July 1895 to December 1903 and October 1905 to September 1974 are contained in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 756: Drainage area. WSP 1302: 1908-10, 1912-13, 1914-15(M). WSP 2103: 1968 (monthly mean).

GAGE.--Water-stage recorder. Datum of gage is 634.19 ft above National Geodetic Vertical Datum of 1929. Prior to Mar. 17, 1930, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow slightly regulated by 4 flood-control reservoirs which have a combined capacity of 316,000 acre-ft. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite and landline telemeters at station.

AVERAGE DISCHARGE.--80 years, 4,975 ft³/s, 22.68 in/yr, adjusted for storage 1961-75.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 236,000 ft³/s, Mar. 18, 1936, gage height, 29.39 ft, from floodmark in gage shelter, from rating curve extended above 87,000 ft³/s on basis of slope-area measurement of peak flow; minimum, 80 ft³/s, Dec. 6, 1908, gage height, -1.10 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known prior to 1895, 27.3 ft, June 1, 1889, from floodmark, discharge, about 211,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 40,400 ft³/s, Nov. 27, gage height, 11.31 ft; minimum, 494 ft³/s, Aug. 21, 22, gage height, -0.01 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1150	1930	11800	4700	e2400	1850	20500	5890	2220	2680	795	1430
2	1990	1780	9410	4480	e2300	5680	18100	5280	2110	4530	795	1310
3	2480	1780	11300	4200	e2400	10200	15400	5020	1950	19100	809	1020
4	7160	1770	15300	3770	2740	8310	14100	8090	2410	14500	1240	828
5	11800	1750	13700	3150	2730	6550	25500	9880	2750	9500	1130	752
6	9560	2180	11300	2770	2540	5620	29100	8920	2240	6740	1110	728
7	6950	3010	9300	2960	2360	5620	25600	7800	1980	7430	1230	750
8	4710	3330	8220	3290	2310	9410	22300	6730	1890	12700	1040	1200
9	3730	8970	7540	3060	2260	17700	17800	5870	2190	9200	882	2320
10	2990	16000	9150	2840	1980	18600	13400	5230	2150	6770	1170	1970
11	2540	13600	10100	2810	1930	14400	10700	4630	1690	5390	1400	1760
12	2180	11600	9430	2710	2190	10800	9000	4070	1610	4560	1240	3630
13	2070	10600	8290	2620	2060	8690	8570	3850	3510	3920	981	6430
14	2110	8250	6870	2490	1920	7220	7650	3420	7380	3470	814	5160
15	2990	12	6030	2380	e1600	6310	6860	3290	6180	3310	786	3670
16	3260	12	5430	3310	e1500	5550	6610	3400	3960	3010	707	2820
17	2940	12	5020	4340	e1500	4980	6390	3060	3100	2570	650	2540
18	2470	12	4770	4510	e1800	4540	5920	2870	2580	2250	590	5140
19	2280	12	5090	4520	1670	4220	5470	3140	2270	1950	544	9560
20	1900	12	4810	4580	1460	4000	5100	3730	1900	1670	513	11600
21	1750	13	4290	4340	1380	3890	4630	4630	1890	1480	496	11100
22	1690	13	3850	3830	1390	3800	4170	3910	2760	1360	583	9000
23	1630	13	3400	e3200	1510	3670	3890	3520	4530	1330	875	6900
24	1540	13	3230	e2800	1510	3510	4700	3250	3920	1300	853	5460
25	1460	13	4520	e2200	1460	3360	8310	2960	2830	1220	677	4520
26	1430	13	6420	e2700	1450	4330	8140	2700	2450	1200	600	3650
27	1510	14	6770	e2700	1480	5600	7230	2580	4360	1240	1160	3100
28	1710	13	6520	e2600	1530	5480	6950	2570	3810	1090	2630	2690
29	2310	19200	6070	e2500	---	5000	7070	2490	3100	949	1980	2310
30	2290	14900	5540	e2500	---	4830	6490	2240	2540	863	1580	2370
31	2130	---	5040	e2400	---	11300	---	2140	---	819	1400	---
TOTAL	96710	120827	228510	101260	53360	215020	335650	137160	88260	138101	31260	115718
MEAN	3120	4028	7371	3266	1906	6936	11190	4425	2942	4455	1008	3857
MAX	11800	19200	15300	4700	2740	18600	29100	9880	7380	19100	2630	11600
MIN	1150	12	3230	2200	1380	1850	3890	2140	1610	819	496	728
CFSM	1.05	1.35	2.48	1.10	.64	2.33	3.76	1.49	.99	1.50	.34	1.30
IN.	1.21	1.51	2.86	1.27	.67	2.69	4.20	1.72	1.10	1.73	.39	1.45

CAL YR 1986 TOTAL 1811830 MEAN 4964 MAX 34900 MIN 12 CFSM 1.67 IN. 22.66
WTR YR 1987 TOTAL 1661840 MEAN 4553 MAX 29100 MIN 12 CFSM 1.53 IN. 20.78

e Estimated

01545600 YOUNG WOMANS CREEK NEAR RENOVO, PA
(Hydrologic bench-mark station and radiochemical program)

LOCATION.--Lat 41°23'22", long 77°41'28", Clinton County, Hydrologic Unit 02050203, on left bank 0.3 mi downstream from Laurelly Fork, 1.5 mi upstream from Left Branch Young Womans Creek, 3.7 mi upstream from mouth, and 5.0 mi northeast of Renovo.

DRAINAGE AREA.--46.2 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1964 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 780 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair.

AVERAGE DISCHARGE.--22 years, 74.9 ft³/s, 22.00 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,370 ft³/s, June 23, 1972, gage height, 7.98 ft, from rating curve extended above 1,000 ft³/s on basis of slope-area measurement of peak flow; minimum, 1.1 ft³/s, Sept. 6, 7, 1971, gage height, 1.47 ft; minimum gage height, 1.45 ft, Aug. 30, 31, Sept. 1, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 460 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 27	0430	*629	*3.51	No other peak greater than base discharge.			

Minimum daily discharge, 3.4 ft³/s, Aug. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	27	184	70	e27	47	244	75	24	15	14	12
2	28	27	161	71	e26	79	236	71	23	79	13	9.8
3	41	27	201	65	e30	72	208	86	23	115	15	9.1
4	153	27	198	58	e29	64	218	108	32	80	12	7.8
5	124	30	188	e56	e26	60	303	112	23	65	11	7.0
6	104	51	168	e52	e25	59	323	115	21	53	11	9.1
7	86	46	149	50	e26	76	310	109	22	48	10	11
8	72	72	130	46	e26	138	274	99	21	41	9.2	14
9	62	228	127	44	e23	235	229	89	22	35	9.6	13
10	54	251	132	43	e20	246	189	80	19	31	13	9.7
11	47	216	126	43	e20	211	158	72	17	28	9.6	8.5
12	42	179	125	41	e22	175	141	66	24	42	8.1	19
13	43	149	116	39	e21	146	127	58	35	42	6.7	19
14	57	121	104	36	e19	123	109	53	27	65	5.9	15
15	51	106	98	42	e16	105	104	51	23	56	5.3	12
16	45	96	89	48	e15	92	100	45	21	48	4.9	13
17	43	89	81	44	e14	81	100	42	18	41	4.4	19
18	41	92	84	44	e14	73	92	41	17	35	4.0	47
19	38	103	77	47	e14	68	83	44	16	30	3.8	69
20	37	97	69	46	e14	65	77	43	16	27	4.2	95
21	36	115	63	43	e14	63	71	38	16	24	3.4	87
22	35	114	58	e37	e15	61	68	37	18	22	9.6	77
23	33	113	54	e37	e16	60	65	41	17	20	7.0	66
24	31	131	56	e36	e15	60	79	34	15	20	4.3	57
25	29	152	96	e35	e14	66	76	31	14	18	3.8	50
26	35	299	95	e34	e15	87	76	30	21	21	3.6	43
27	35	596	94	e33	e16	84	77	30	23	18	56	37
28	34	439	92	e31	e17	84	87	28	16	16	25	32
29	31	311	87	e30	---	80	82	26	15	15	21	29
30	30	234	83	e29	---	97	79	24	16	15	15	46
31	28	---	77	e28	---	182	---	28	---	20	12	---
TOTAL	1542	4538	3462	1358	549	3139	4385	1806	615	1185	335.4	943.0
MEAN	49.7	151	112	43.8	19.6	101	146	58.3	20.5	38.2	10.8	31.4
MAX	153	596	201	71	30	246	323	115	35	115	56	95
MIN	17	27	54	28	14	47	65	24	14	15	3.4	7.0
CFSM	1.08	3.27	2.42	.95	.42	2.19	3.16	1.26	.44	.83	.23	.68
IN.	1.24	3.65	2.79	1.09	.44	2.53	3.53	1.45	.50	.95	.27	.76

CAL YR 1986 TOTAL 29386.9 MEAN 80.5 MAX 741 MIN 5.5 CFSM 1.74 IN. 23.66
WTR YR 1987 TOTAL 23857.4 MEAN 65.4 MAX 596 MIN 3.4 CFSM 1.41 IN. 19.21

e Estimated

01545600 YOUNG WOMANS CREEK NEAR RENOVO, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965 to current year.

PERIOD OF DAILY RECORD.--
SUSPENDED-SEDIMENT DISCHARGE: October 1980 to September 1981.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (FTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT											
28...	1145	31	37	7.20	11.5	0.30	742	11.2	105	31	66
JAN											
27...	1130	33	38	7.00	0.0	0.20	750	14.0	97	--	K6
APR											
21...	1300	73	32	7.60	12.0	0.30	739	10.2	98	K1	K1
JUL											
29...	1140	14	39	7.30	17.0	0.40	740	9.5	101	K4	28

DATE	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE IT-FLD (MG/L AS HCO3)	ALKA-LINITY WAT WH TOT FET FIELD MG/L AS CACO3	ALKA-LINITY LAB (MG/L AS CACO3)	ALKA-LINITY, CARBON-ATE IT-FLD (MG/L - CACO3)
OCT											
28...	14	4.1	1.0	1.0	12	0.1	0.90	--	6	8.0	--
JAN											
27...	14	4.1	1.0	0.90	11	0.1	0.60	5.3	5	7.0	4.5
APR											
21...	13	3.7	1.0	1.4	18	0.2	0.70	4.9	6	5.0	4.0
JUL											
29...	16	4.5	1.2	1.2	13	0.1	0.90	--	10	9.0	--

DATE	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)
OCT											
28...	--	8.4	1.7	<0.10	3.7	36	25	0.05	2.97	<0.010	0.160
JAN											
27...	0.8	9.5	1.3	<0.10	4.2	31	26	0.04	2.75	<0.010	0.360
APR											
21...	0.2	9.1	1.0	<0.10	3.8	21	24	0.03	4.17	<0.010	0.140
JUL											
29...	--	8.5	1.0	<0.10	4.7	22	29	0.03	0.83	<0.010	0.260

DATE	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORGANIC TOTAL (MG/L AS P)	PHOS-PHOROUS ORGANIC DIS-SOLVED (MG/L AS P)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)
OCT											
28...	>0.010	<0.010	--	<0.20	0.030	<0.010	<0.010	0.03	--	10	<1
JAN											
27...	0.030	0.010	0.67	0.70	0.010	0.010	<0.010	0.01	0.01	<10	<1
APR											
21...	<0.010	<0.010	--	0.80	0.010	0.010	<0.010	0.01	0.01	<10	<1
JUL											
29...	[a]<0.010	[a]0.040	--	0.20	0.010	<0.010	<0.010	0.01	--	<10	<1

(K) Results based on non-ideal colony count.
(a) Results within limits of analytical precision.

01545600 YOUNG WOMANS CREEK NEAR RENOVO, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)
OCT 28...	27	<0.5	<1	<1	<3	8	17	<5	<4	3	<0.1
JAN 27...	26	<0.5	<1	<1	<3	<1	6	<5	<4	3	<0.1
APR 21...	25	<0.5	1	<1	<3	1	6	16	<4	2	<0.1
JUL 29...	32	<0.5	2	8	<3	1	21	<5	<4	6	<0.1

DATE	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 28...	<10	<1	<1	<1.0	26	<6	6	--	--	--
JAN 27...	<10	<1	<1	<1.0	26	<6	6	--	--	--
APR 21...	<10	<1	<1	<1.0	24	<6	10	3	0.60	94
JUL 29...	<10	<1	<1	<1.0	30	<6	5	--	--	--

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	GROSS ALPHA, DIS-SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS-SOLVED (PCI/L AS SR/YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90)	RADIUM 226, DIS-SOLVED, RADON METHOD (PCI/L)	URANIUM DIS-SOLVED, EXTRAC-TION (UG/L)	STRON-TIUM 90 DIS-SOLVED (PCI/L)
OCT 28...	1145	31	0.90	<0.4	<0.4	0.8	<0.4	0.8	<0.4	0.05	<0.01	6.3
APR 21...	1300	73	0.70	<0.4	<0.4	0.7	<0.4	0.7	<0.4	0.05	0.01	--

01546400 SPRING CREEK AT HOUSERVILLE, PA

LOCATION.--Lat 40°50'01", long 77°49'40", Centre County, Hydrologic Unit 02050204, on right bank 15 ft upstream from township bridge, 0.7 mi north of Houserville, 1.3 mi downstream from Slab Cabin Run, and 3.3 mi northeast of State College.

DRAINAGE AREA.--58.5 mi^2.

PERIOD OF RECORD.--November 1984 to current year.

GAGE.--Water-stage recorder. Datum of gage is 926.627 ft above National Geodetic Vertical Datum of 1929.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 687 ft^3/s, Mar. 15, 1986, gage height, 6.79 ft; minimum, 16 ft^3/s, Oct. 29, 1985, gage height, 2.56 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 230 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 4	2145	*440	*5.54	Aug. 9	2015	255	4.43
Apr. 6	2245	391	5.26				

Minimum daily discharge, 18 ft^3/s, Oct. 31 to Nov. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	18	79	66	48	72	149	63	50	39	23	e33
2	26	18	90	68	52	85	136	64	49	61	23	e31
3	37	18	127	64	56	79	120	98	57	e68	27	e30
4	36	20	100	61	56	74	278	120	50	e52	25	e28
5	31	25	92	59	53	71	352	102	48	e45	33	e27
6	28	22	86	58	52	69	349	94	47	e42	28	e32
7	26	22	82	60	52	77	345	e83	46	e50	28	e29
8	25	33	78	59	53	101	280	e70	45	e44	27	e38
9	23	76	87	55	52	122	235	e66	48	e45	62	e33
10	21	42	87	56	50	112	198	e62	42	e41	48	e31
11	21	46	77	54	50	102	172	58	42	44	36	e29
12	21	43	75	52	51	94	168	57	52	36	34	e38
13	26	39	71	49	49	88	152	56	63	35	30	e34
14	36	37	69	49	47	82	129	56	49	41	29	e31
15	25	37	68	60	45	81	118	88	45	37	28	e29
16	23	36	66	69	44	76	111	103	43	35	27	e28
17	23	35	64	66	44	73	117	79	41	34	e26	e31
18	22	42	75	66	43	71	107	74	40	33	e25	e42
19	21	50	70	68	42	69	98	82	39	32	e24	e36
20	21	54	64	66	41	66	94	114	44	32	e23	e33
21	20	69	62	63	41	64	89	75	49	32	e23	e31
22	19	61	60	62	40	62	84	66	60	31	e39	e36
23	19	58	59	62	42	60	78	61	45	30	e33	e32
24	20	56	74	55	40	60	100	59	42	30	e29	e29
25	20	53	95	e54	40	61	88	58	41	41	e28	e28
26	22	123	80	e54	39	62	77	58	43	43	e27	e26
27	20	147	77	e52	40	58	70	57	42	34	e31	e25
28	20	116	75	e52	44	57	75	55	40	32	e39	e25
29	19	101	73	51	---	56	69	52	40	31	e60	e30
30	19	90	71	52	---	98	66	50	37	29	e45	e38
31	18	---	68	50	---	152	---	49	---	26	e37	---
TOTAL	746	1587	2401	1812	1306	2454	4504	2229	1379	1205	997	943
MEAN	24.1	52.9	77.5	58.5	46.6	79.2	150	71.9	46.0	38.9	32.2	31.4
MAX	38	147	127	69	56	152	352	120	63	68	62	42
MIN	18	18	59	49	39	56	66	49	37	26	23	25
CFSM	.41	.90	1.32	.99	.80	1.35	2.57	1.23	.79	.66	.55	.54
IN.	.47	1.01	1.53	1.15	.83	1.56	2.86	1.42	.88	.77	.63	.60

CAL YR 1986 TOTAL 22971 MEAN 62.9 MAX 596 MIN 18 CFSM 1.08 IN. 14.61
WTR YR 1987 TOTAL 21563 MEAN 59.1 MAX 352 MIN 18 CFSM 1.01 IN. 13.71

e Estimated

01546500 SPRING CREEK NEAR AXEMANN, PA

LOCATION.--Lat 40°53'23", long 77°47'40", Centre County, Hydrologic Unit 02050204, on right bank at upstream side of highway bridge, 1.6 mi west of Axemann, 1.8 mi southwest of Bellefonte, and 2.5 mi upstream from Logan Branch.

DRAINAGE AREA.--87.2 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 788.81 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 19, 1940, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records fair. Occasional regulation at low flow by fish hatchery and Rockview Penitentiary. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--47 years, 92.1 ft^3/s, 14.39 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,410 ft^3/s, June 23, 1972, gage height, 7.47 ft in gage well, 8.75 ft from floodmarks, from rating curve extended above 1,400 ft^3/s on basis of contracted-opening measurement of peak flow; minimum, 9.6 ft^3/s, Nov. 24, 1941, gage height, 1.69 ft; minimum daily, 20 ft^3/s, Dec. 20, 30, 1963, Jan. 28, 29, 31, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 1936 reached a stage of 8.6 ft, from information by local residents, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 350 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 5	0045	*507	*3.71	Apr. 7	0145	469	3.64

Minimum daily discharge, 45 ft^3/s, Nov. 1-3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	75	45	127	92	76	89	163	118	83	79	62	59
2	61	45	132	96	77	106	151	117	84	97	62	55
3	68	45	173	91	82	103	138	142	89	101	68	54
4	79	48	149	88	82	98	262	181	89	83	61	52
5	67	52	140	85	80	94	435	161	83	78	72	50
6	62	53	132	83	79	92	412	153	82	79	67	55
7	60	49	127	84	80	96	433	147	82	83	63	53
8	57	65	122	86	81	119	357	141	81	77	63	61
9	56	117	130	82	80	139	298	133	87	73	74	55
10	53	83	134	82	76	133	255	130	80	72	99	52
11	51	84	123	82	76	124	226	124	80	82	65	50
12	51	82	119	80	79	116	217	122	92	73	60	62
13	57	78	114	79	76	110	207	118	98	69	55	55
14	72	74	110	78	75	104	182	114	99	74	53	50
15	60	73	109	84	73	103	170	120	87	72	52	48
16	57	72	107	97	70	98	163	114	86	67	51	49
17	56	70	105	95	69	94	167	111	83	65	50	53
18	55	72	113	94	69	91	159	109	82	63	50	70
19	53	94	112	99	68	90	148	123	80	62	48	58
20	53	84	105	96	67	88	143	135	86	62	47	55
21	52	116	101	92	67	86	136	106	95	64	46	55
22	50	106	98	93	67	84	131	100	106	67	66	58
23	50	103	97	90	70	82	127	95	91	67	55	57
24	52	99	102	84	67	81	148	93	87	66	51	53
25	50	96	130	84	66	79	138	91	85	67	50	52
26	52	147	108	83	65	84	127	91	85	100	51	48
27	50	207	104	79	65	78	124	91	87	79	54	47
28	48	169	103	78	67	76	129	88	85	70	62	47
29	47	152	100	78	---	74	124	85	84	66	106	46
30	47	139	98	79	---	103	121	83	80	64	66	68
31	46	---	95	78	---	158	---	83	---	63	62	---
TOTAL	1747	2719	3619	2671	2049	3072	5991	3619	2598	2284	1891	1627
MEAN	56.4	90.6	117	86.2	73.2	99.1	200	117	86.6	73.7	61.0	54.2
MAX	79	207	173	99	82	158	435	181	106	101	106	70
MIN	46	45	95	78	65	74	121	83	80	62	46	46
CFSM	.65	1.04	1.34	.99	.84	1.14	2.29	1.34	.99	.84	.70	.62
IN.	.75	1.16	1.54	1.14	.87	1.31	2.56	1.54	1.11	.97	.81	.69

CAL YR 1986 TOTAL 36356 MEAN 99.6 MAX 815 MIN 45 CFSM 1.14 IN. 15.51
WTR YR 1987 TOTAL 33887 MEAN 92.8 MAX 435 MIN 45 CFSM 1.06 IN. 14.46

01547100 SPRING CREEK AT MILESBURG, PA

LOCATION.--Lat 40°55'54", long 77°47'13", Centre County, Hydrologic Unit 02050204, on left bank 60 ft downstream from privately-owned bridge, 400 ft west of State Route 144, and 0.8 mi upstream from mouth and Milesburg.

DRAINAGE AREA.--142 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 696.42 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Occasional regulation at low flow by fish hatchery and Rockview Penitentiary. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--20 years, 235 ft^3/s, 22.47 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,170 ft^3/s, June 23, 1972, gage height, 13.20 ft, from peak-stage indicator, from rating curve extended above 900 ft^3/s on basis of computation of peak flow-over-dam; minimum, 60 ft^3/s, Sept. 30, 1969, gage height, 2.22 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 570 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 6	2045	*817	*5.27	No other peak greater than base discharge.			

Minimum discharge, 124 ft^3/s, Aug. 21, gage height, 2.54 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	160	134	291	235	194	225	350	253	192	164	140	142
2	145	134	296	241	196	268	340	251	192	199	141	139
3	165	134	366	232	204	264	324	295	197	205	153	136
4	183	136	329	222	204	254	482	361	201	177	147	135
5	161	145	315	216	200	245	707	338	185	169	158	133
6	152	147	299	214	198	241	721	329	181	170	155	142
7	148	141	285	215	201	252	769	318	182	180	147	140
8	145	165	275	216	205	292	649	304	183	169	146	150
9	144	288	288	209	203	331	556	289	184	165	156	143
10	141	221	290	210	196	326	486	279	174	163	198	140
11	139	214	270	207	197	307	440	266	171	173	152	138
12	138	208	262	202	199	293	425	258	189	167	147	153
13	145	197	257	198	195	281	406	251	212	160	142	146
14	171	188	248	197	192	268	368	244	201	167	139	139
15	150	185	245	210	188	263	347	252	181	166	138	137
16	145	181	239	233	184	253	334	239	177	159	136	139
17	144	177	235	230	184	246	342	232	170	155	134	158
18	142	185	245	232	183	238	325	229	167	153	133	172
19	141	218	244	240	180	235	307	249	164	150	130	154
20	141	209	230	234	179	229	297	278	176	149	129	147
21	139	263	222	228	178	224	285	244	185	148	128	146
22	137	251	217	227	178	220	278	233	200	147	160	150
23	136	243	215	223	183	216	272	225	180	145	140	151
24	138	235	229	210	178	213	303	218	172	144	134	143
25	136	224	292	210	176	213	287	215	167	145	133	141
26	142	337	259	210	174	217	270	215	169	169	135	138
27	138	483	256	202	174	208	266	215	173	154	140	136
28	136	404	255	200	179	204	278	209	168	146	154	135
29	133	356	250	199	---	199	266	201	165	144	211	136
30	134	321	248	201	---	235	259	197	164	143	151	163
31	132	---	239	198	---	329	---	194	---	141	144	---
TOTAL	4501	6724	8191	6701	5302	7789	11739	7881	5422	4986	4551	4322
MEAN	145	224	264	216	189	251	391	254	181	161	147	144
MAX	183	483	366	241	205	331	769	361	212	205	211	172
MIN	132	134	215	197	174	199	259	194	164	141	128	133
CFSM	1.02	1.58	1.86	1.52	1.33	1.77	2.76	1.79	1.27	1.13	1.03	1.01
IN.	1.18	1.76	2.15	1.76	1.39	2.04	3.08	2.06	1.42	1.31	1.19	1.13

CAL YR 1986 TOTAL 83593 MEAN 229 MAX 1570 MIN 108 CFSM 1.61 IN. 21.90
WTR YR 1987 TOTAL 78109 MEAN 214 MAX 769 MIN 128 CFSM 1.51 IN. 20.46

01547200 BALD EAGLE CREEK BELOW SPRING CREEK AT MILESBURG, PA

LOCATION.--Lat 40°56'35", long 77°47'12", Centre County, Hydrologic Unit 02050204, on right bank 130 ft downstream from bridge on State Highway 144 at Milesburg and 250 ft downstream from Spring Creek.

DRAINAGE AREA.--265 mi².

PERIOD OF RECORD.--October 1955 to current year. Monthly discharge only for October and November 1955 published in WSP 1722. Prior to October 1967, published as North Bald Eagle Creek below Spring Creek at Milesburg.

GAGE.--Water-stage recorder. Datum of gage is 682.49 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 31, 1956, nonrecording gage at site 130 ft upstream at same datum.

REMARKS.--No estimated daily discharges. Records good. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite and landline telemeters at station.

AVERAGE DISCHARGE.--32 years, 405 ft³/s, 20.78 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,300 ft³/s, June 23, 1972, gage height, 11.67 ft, from floodmark in gage well, from rating curve extended above 9,000 ft³/s; minimum, 50 ft³/s, Aug. 3, 1966, gage height, -0.80 ft.

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

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 26	2300	3,070	4.11	Apr. 5	0015	*3,210	*4.23

Minimum discharge, 126 ft³/s, Aug. 20, 21, gage height, -0.54 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	196	147	544	378	265	639	1300	411	242	185	143	153
2	186	147	607	387	276	1010	949	397	239	314	145	147
3	236	146	1300	360	343	790	760	607	242	384	155	143
4	427	148	916	319	353	625	1560	1080	269	258	150	140
5	326	164	730	286	325	528	2370	844	231	222	164	138
6	244	235	613	292	314	502	1880	715	217	213	167	149
7	209	209	542	323	337	703	1770	618	217	270	152	154
8	190	372	493	324	345	1180	1380	542	220	235	147	173
9	181	1380	624	300	323	1220	1080	483	229	217	156	174
10	171	689	713	296	288	886	880	443	208	205	283	155
11	163	523	602	293	303	685	753	407	198	230	175	147
12	160	523	562	283	298	584	723	381	227	211	159	179
13	171	470	499	275	288	516	749	355	351	192	150	198
14	261	386	426	269	274	461	617	335	335	198	145	167
15	244	353	421	419	258	444	575	352	245	196	142	153
16	201	340	388	547	237	419	551	324	223	182	139	152
17	188	331	370	482	258	388	596	302	207	174	137	210
18	179	375	435	453	254	369	570	294	198	169	136	342
19	171	730	462	453	239	357	518	337	192	165	133	290
20	167	607	389	422	234	344	489	458	214	163	131	247
21	164	1020	363	376	235	335	462	371	236	159	130	223
22	160	757	338	311	238	325	442	328	257	156	179	215
23	157	623	323	341	262	315	419	311	227	153	153	206
24	157	569	366	286	268	308	584	291	203	150	141	185
25	154	526	917	298	274	311	561	279	193	152	137	174
26	163	1320	745	304	276	337	500	276	192	180	138	164
27	165	2020	631	276	285	315	474	281	215	164	149	158
28	159	1160	547	269	288	304	530	270	200	153	188	154
29	153	839	480	276	---	292	478	254	188	149	301	151
30	150	662	445	276	---	441	440	244	185	147	181	216
31	146	---	410	274	---	1360	---	260	---	145	159	---
TOTAL	5999	17771	17201	10448	7938	17293	24960	12850	6800	6091	4965	5457
MEAN	194	592	555	337	283	558	832	415	227	196	160	182
MAX	427	2020	1300	547	353	1360	2370	1080	351	384	301	342
MIN	146	146	323	269	234	292	419	244	185	145	130	138
CFSM	.73	2.24	2.09	1.27	1.07	2.11	3.14	1.56	.86	.74	.60	.69
IN.	.84	2.49	2.41	1.47	1.11	2.43	3.50	1.80	.95	.86	.70	.77

CAL YR 1986 TOTAL 151693 MEAN 416 MAX 5190 MIN 133 CFSM 1.57 IN. 21.29
WTR YR 1987 TOTAL 137773 MEAN 377 MAX 2370 MIN 130 CFSM 1.42 IN. 19.34

01547400 BALD EAGLE CREEK NEAR MILESBURG, PA

LOCATION.--Lat 40°58'31", long 77°44'35", Centre County, Hydrologic Unit 02050204, on left bank just downstream from highway bridge at Curtin, 250 ft downstream from Nittany Creek, 500 ft downstream from Antis Run, and 3.5 mi downstream from Milesburg.

DRAINAGE AREA.--296 mi².

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: July 1967 to current year.

INSTRUMENTATION.--Water-temperature recorder since July 1967.

REMARKS.--The temperature recorder measures the water temperature of the inflow to Foster Joseph Sayers Lake.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE (water years 1967-81, 1983-87): Maximum, 29.0°C, July 17, 18, Aug. 9, 23, 1968, June 27, 30, July 16, 1969; minimum, 0.0°C, on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum recorded, 24.0°C, July 11, 12; minimum, 0.0°C, Jan. 24, 25, 26, 27, 28.

TEMPERATURE, WATER (°C), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

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

01547400 BALD EAGLE CREEK NEAR MILESBURG, PA--Continued

TEMPERATURE, WATER (°C), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	20.0	16.0	18.0	20.0	18.0	19.0	20.5	16.0	18.0	15.5	13.5	14.5
2	20.0	16.5	18.5	19.0	17.0	18.0	18.0	16.0	17.0	14.0	12.0	13.5
3	18.5	16.5	17.0	21.0	17.5	19.5	19.0	16.0	17.5	16.0	12.5	14.0
4	18.0	15.5	16.5	21.0	17.5	19.5	21.0	16.0	18.5	18.5	12.5	15.0
5	19.0	14.0	16.5	22.0	17.0	19.5	19.5	17.0	17.5	15.5	14.0	15.0
6	18.5	15.0	17.0	20.0	17.5	19.0	19.5	15.5	17.5	15.0	14.0	14.5
7	18.0	14.5	16.5	22.5	17.5	19.5	19.0	16.0	17.5	15.5	14.0	15.0
8	18.5	15.5	17.0	23.0	19.0	21.0	20.0	15.5	18.0	16.5	15.0	16.0
9	19.0	16.0	17.5	22.5	19.5	21.0	18.0	16.0	16.5	18.0	15.5	16.5
10	19.5	14.5	17.0	22.0	19.0	20.5	19.0	15.0	17.5	18.0	15.0	16.5
11	19.0	14.0	17.0	24.0	18.5	21.0	18.5	15.0	17.0	17.5	15.0	16.5
12	17.5	15.5	16.0	24.0	20.0	22.0	19.0	15.0	17.0	17.0	16.5	17.0
13	20.0	15.5	17.5	23.5	20.0	22.0	19.5	15.0	17.5	18.0	16.5	17.5
14	21.0	16.5	19.0	21.5	17.5	19.5	19.5	15.0	17.5	18.5	15.5	17.0
15	21.5	17.5	19.5	18.5	15.5	17.0	20.0	15.5	18.0	16.0	14.5	15.5
16	22.0	17.0	20.0	19.5	15.0	17.5	20.5	16.0	18.5	16.0	14.5	15.0
17	21.5	17.0	19.5	18.5	15.0	17.0	21.0	16.5	19.0	18.0	15.0	16.0
18	21.0	16.0	19.0	19.5	15.0	17.0	21.0	17.0	19.0	16.5	15.5	16.5
19	22.0	17.0	19.5	20.0	15.5	18.0	20.5	16.0	18.0	15.5	14.5	14.5
20	20.0	17.5	18.5	21.0	16.5	19.0	19.5	15.5	17.0	15.0	14.0	14.5
21	19.5	17.0	18.0	22.5	18.0	20.0	18.0	13.5	16.0	16.0	14.0	15.0
22	20.0	17.5	18.5	22.0	17.5	20.0	18.0	15.0	17.0	15.5	14.0	15.0
23	21.0	17.5	19.5	21.5	17.5	19.5	17.0	14.5	16.0	15.5	13.5	14.5
24	22.0	17.5	20.0	21.5	17.5	19.5	16.5	12.5	14.5	16.0	13.0	14.5
25	22.5	17.5	20.0	20.0	17.0	19.0	15.0	12.0	13.5	15.0	12.5	13.5
26	20.0	17.0	18.0	20.0	16.5	18.0	14.0	12.5	13.5	14.5	10.5	12.5
27	21.0	16.0	18.5	20.5	16.0	18.5	16.0	13.5	14.5	15.5	11.5	13.5
28	19.0	15.5	17.5	19.5	15.5	17.5	16.5	15.0	15.5	16.0	12.5	14.5
29	20.0	15.5	18.0	19.5	15.0	17.5	16.0	14.5	15.5	16.0	13.0	14.5
30	21.0	17.5	19.0	19.0	15.5	17.5	17.0	13.0	15.0	16.0	14.0	15.0
31	---	---	---	20.0	16.0	18.0	16.5	13.0	15.0	---	---	---
MONTH	22.5	14.0	18.0	24.0	15.0	19.0	21.0	12.0	17.0	18.5	10.5	15.0

01547500 BALD EAGLE CREEK AT BLANCHARD, PA

LOCATION.--Lat 41°03'06", long 77°36'17", Centre County, Hydrologic Unit 02050204, on left bank 0.4 mi downstream from Foster Joseph Sayers Dam, 0.7 mi upstream from Marsh Creek, and 0.9 mi south of Blanchard.

DRAINAGE AREA.--339 mi^2.

PERIOD OF RECORD.--May 1954 to current year. Prior to October 1967, published as North Bald Eagle Creek at Blanchard.

REVISED RECORDS.--WSP 1903: 1956(M).

GAGE.--Water-stage recorder. Datum of gage is 579.79 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since March 1971 by Foster Joseph Sayers Dam (station 01547480). Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--33 years, 463 ft^3/s, 18.60 in/yr, adjusted for storage since March 1971.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,100 ft^3/s, Mar. 10, 1964, gage height, 11.59 ft, from rating curve extended above 4,100 ft^3/s; no flow parts of June 16, Nov. 10, 1970, due to construction of Foster Joseph Sayers Dam, May 12, 18, 19, 1976, Mar. 6, 1979, result of shutoff at dam.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,040 ft^3/s, Oct. 6, gage height, 5.85 ft; minimum daily, 155 ft^3/s, July 31, Aug. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	169	182	1480	449	352	462	459	474	256	209	156	165
2	169	168	884	527	330	625	551	474	257	318	155	165
3	174	168	994	528	363	647	607	532	270	641	184	167
4	175	168	1270	398	407	731	619	1140	286	605	256	168
5	426	168	1150	301	408	828	644	1060	267	366	247	168
6	1570	168	847	302	390	728	907	879	229	302	278	168
7	1960	208	596	322	365	646	1420	744	229	302	225	168
8	1870	350	599	370	368	1100	1600	581	229	284	182	171
9	1630	1240	659	411	422	1190	1400	463	258	271	184	255
10	1160	1490	858	408	433	1010	1140	467	236	259	187	223
11	885	771	829	387	407	843	948	468	239	212	204	180
12	864	677	732	342	381	836	948	468	246	183	237	183
13	758	506	650	324	365	768	945	468	466	185	182	249
14	525	507	586	324	348	644	825	415	432	184	174	223
15	697	504	470	345	308	557	752	384	297	183	161	174
16	1130	459	407	566	276	411	696	384	279	184	161	172
17	604	413	446	641	266	347	668	383	247	185	161	172
18	189	391	521	591	285	348	667	360	247	184	161	174
19	191	776	518	591	307	353	668	323	228	186	162	176
20	191	1000	517	588	307	353	564	414	196	168	164	176
21	191	1070	459	506	307	353	480	449	183	158	165	288
22	191	1110	407	421	297	353	396	446	184	158	235	359
23	191	804	407	404	286	311	327	445	390	158	235	359
24	191	629	408	403	286	237	302	425	355	158	207	359
25	191	629	422	339	302	238	305	391	232	158	197	289
26	192	725	817	286	330	223	307	338	205	158	191	246
27	192	547	1250	286	330	216	374	318	191	158	287	246
28	193	1440	910	286	330	216	418	276	191	158	381	221
29	188	1910	622	353	---	216	451	256	191	158	341	203
30	187	1860	528	391	---	219	473	256	191	156	341	226
31	187	---	475	365	---	329	---	256	---	155	228	---
TOTAL	17431	21038	21718	12755	9556	16338	20861	14737	7707	7144	6629	6493
MEAN	562	701	701	411	341	527	695	475	257	230	214	216
MAX	1960	1910	1480	641	433	1190	1600	1140	466	641	381	359
MIN	169	168	407	286	266	216	302	256	183	155	155	165
MEAN‡	247	731	664	410	345	653	933	481	261	218	189	249
CFSM‡	.73	2.16	1.96	1.21	1.02	1.93	2.75	1.42	.77	.64	.56	.73
IN.‡	.84	2.41	2.26	1.40	1.06	2.23	3.07	1.64	.86	.74	.65	.81

CAL YR 1986 TOTAL 185201 MEAN 507 MAX 2470 MIN 23 MEAN‡ 482 CFSM‡ 1.43 IN.‡ 19.33
WTR YR 1987 TOTAL 162407 MEAN 445 MAX 1960 MIN 155 MEAN‡ 448 CFSM‡ 1.32 IN.‡ 17.97

‡ Adjusted for change in contents in Foster Joseph Sayers Lake.

01547700 MARSH CREEK AT BLANCHARD, PA

LOCATION.--Lat 41°03'34", long 77°36'22", Centre County, Hydrologic Unit 02050204, on right bank 20 ft downstream from highway bridge, 0.5 mi southwest of Blanchard, 0.6 mi downstream from bridge on U.S. Highway 150, and 0.6 mi upstream from mouth.

DRAINAGE AREA.--44.1 mi^2.

PERIOD OF RECORD.--October 1955 to current year. Monthly discharge only for October 1955, published in WSP 1722.

REVISED RECORDS.--WDR PA-72-1: 1971 (runoff in $(ft^3/s)/mi^2$ and inches).

GAGE.--Water-stage recorder. Datum of gage is 586.16 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 31, 1956, nonrecording gage at site 20 ft upstream at same datum.

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

AVERAGE DISCHARGE.--32 years, 58.6 ft^3/s, 18.06 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,900 ft^3/s, June 18, 1984, gage height, 7.85 ft, from rating curve extended above 4,900 ft^3/s; no flow Aug. 30, 31, 1966.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 26	2200	*578	*3.64	No other peak greater than base discharge.			

Minimum discharge, 2.1 ft^3/s, Aug. 21, 22, gage height, 1.04 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	11	96	58	29	98	170	52	17	13	4.9	6.9
2	13	11	91	58	30	162	154	50	17	66	4.7	5.9
3	70	11	157	52	36	142	126	78	16	80	5.5	5.3
4	122	11	132	43	36	117	159	126	16	50	5.0	4.8
5	148	13	116	36	32	100	176	126	14	38	4.6	4.4
6	74	26	98	33	32	92	207	113	12	31	5.0	6.2
7	50	22	85	39	38	112	241	98	13	28	4.3	8.0
8	38	51	75	37	42	181	208	83	13	23	4.0	10
9	31	237	90	34	39	223	158	71	16	21	3.7	10
10	26	176	95	33	34	170	124	61	11	19	8.8	7.4
11	21	133	91	33	36	127	102	53	10	16	4.5	6.4
12	19	111	91	31	35	102	94	48	21	14	4.0	43
13	21	93	80	29	34	86	88	41	47	13	3.9	119
14	34	75	68	28	31	74	75	37	31	13	3.6	57
15	28	67	62	49	25	67	71	36	22	12	3.4	36
16	23	63	55	73	e20	57	69	31	17	10	3.2	28
17	21	61	51	e58	e26	51	76	28	15	9.3	2.9	60
18	19	71	56	e55	27	47	70	28	13	8.6	2.7	103
19	18	148	53	e54	24	43	64	30	12	8.0	2.5	97
20	17	140	46	e48	22	41	62	46	11	7.5	2.3	95
21	16	200	41	e41	22	39	59	33	12	7.0	2.2	83
22	16	171	38	e37	23	37	57	30	26	6.5	21	69
23	15	141	37	e34	27	35	54	28	28	6.2	8.8	55
24	14	126	46	e32	27	33	61	26	15	5.8	4.9	44
25	13	118	113	e31	28	34	55	24	12	5.6	4.1	36
26	16	263	111	e30	29	38	51	24	12	6.0	4.0	29
27	16	367	105	e29	31	34	51	23	14	8.0	9.9	25
28	15	243	95	e29	34	33	61	22	12	6.1	28	21
29	13	173	83	e31	---	31	57	19	9.8	5.6	22	19
30	13	127	77	e30	---	47	55	18	9.4	5.2	10	38
31	12	---	68	e29	---	131	---	20	---	5.4	7.6	---
TOTAL	968	3460	2502	1234	849	2584	3055	1503	494.2	547.8	206.0	1132.3
MEAN	31.2	115	80.7	39.8	30.3	83.4	102	48.5	16.5	17.7	6.65	37.7
MAX	148	367	157	73	42	223	241	126	47	80	28	119
MIN	12	11	37	28	20	31	51	18	9.4	5.2	2.2	4.4
CFSM	.71	2.62	1.83	.90	.69	1.89	2.31	1.10	.37	.40	.15	.86
IN.	.82	2.92	2.11	1.04	.72	2.18	2.58	1.27	.42	.46	.17	.96

CAL YR 1986 TOTAL 21189.7 MEAN 58.1 MAX 783 MIN 3.1 CFSM 1.32 IN. 17.87
WTR YR 1987 TOTAL 18535.2 MEAN 50.8 MAX 367 MIN 2.2 CFSM 1.15 IN. 15.64

e Estimated

01547950 BEECH CREEK AT MONUMENT, PA

LOCATION.--Lat 41°06'42", long 77°42'09", Centre County, Hydrologic Unit 02050204, on right bank 800 ft downstream from bridge at Monument, 850 ft downstream from Monument Run, 0.6 mi upstream from Twin Run, and 8.7 mi upstream from mouth.

DRAINAGE AREA.--152 mi².

PERIOD OF RECORD.--August 1968 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 750 ft above National Geodetic Vertical Datum of 1929, from topographic map.

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

AVERAGE DISCHARGE.--19 years, 278 ft³/s, 24.85 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,740 ft³/s, June 23, 1972, gage height, 15.22 ft, from rating curve extended above 2,500 ft³/s on basis of slope-area measurement of peak flow; minimum, 8.8 ft³/s, Nov. 17, 1980; minimum gage height, 5.08 ft, Oct. 15, 18, 1972.

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

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 27	0130	*2,040	*9.00	No other peak greater than base discharge.			

Minimum discharge, 31 ft³/s, Aug. 21, 22, gage height, 5.36 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	87	658	e160	e90	182	684	292	206	171	64	61
2	67	86	604	e155	e96	335	680	278	182	495	62	54
3	88	86	854	e140	e110	338	613	344	166	765	72	50
4	266	86	770	e120	e115	326	713	571	159	624	65	47
5	340	93	704	e110	e100	307	915	549	144	481	61	44
6	211	139	620	e105	e105	302	966	540	131	386	61	52
7	179	138	547	e130	e115	386	993	495	133	361	56	58
8	159	244	487	e120	e120	691	913	439	136	302	53	66
9	144	770	493	e110	e115	1030	789	387	154	257	53	76
10	131	820	508	e110	e110	943	663	347	125	225	79	57
11	118	691	446	e110	e115	772	566	310	113	197	58	57
12	109	588	428	e105	e115	640	521	282	164	177	51	670
13	116	499	401	e105	e110	539	501	252	458	162	47	399
14	153	411	358	e100	e100	462	421	228	472	193	45	294
15	157	365	339	e160	e81	410	386	228	397	164	43	233
16	134	339	311	e200	e76	363	363	203	335	144	40	204
17	128	318	289	e185	e105	320	397	186	276	133	39	282
18	123	314	299	e175	e100	292	376	181	233	124	36	472
19	117	370	290	e170	e90	272	346	197	202	117	35	487
20	113	342	257	e160	e88	257	330	216	186	110	33	544
21	110	476	236	e140	e90	246	314	192	184	103	32	517
22	107	485	214	e120	e100	235	301	178	305	95	102	460
23	105	491	203	e110	e110	220	285	175	320	90	73	397
24	101	530	210	e105	103	210	333	171	236	85	46	335
25	96	557	349	e100	99	208	339	161	202	82	40	289
26	109	1010	e340	e98	102	227	307	157	185	89	39	245
27	109	1890	e320	e94	96	209	305	156	188	89	96	211
28	108	1430	e290	e92	95	199	349	149	165	76	152	186
29	101	1060	e250	e100	---	189	329	139	147	71	138	172
30	97	826	e210	e98	---	230	311	135	138	69	83	255
31	91	---	e180	e94	---	567	---	295	---	71	63	---
TOTAL	4051	15541	12465	3881	2851	11907	15309	8433	6442	6508	1917	7274
MEAN	131	518	402	125	102	384	510	272	215	210	61.8	242
MAX	340	1890	854	200	120	1030	993	571	472	765	152	670
MIN	64	86	180	92	76	182	285	135	113	69	32	44
CFSM	.86	3.41	2.65	.82	.67	2.53	3.36	1.79	1.41	1.38	.41	1.60
IN.	.99	3.80	3.05	.95	.70	2.91	3.75	2.06	1.58	1.59	.47	1.78

CAL YR 1986 TOTAL 97386 MEAN 267 MAX 2610 MIN 36 CFSM 1.76 IN. 23.83
WTR YR 1987 TOTAL 96579 MEAN 265 MAX 1890 MIN 32 CFSM 1.74 IN. 23.64

e Estimated

01548005 BALD EAGLE CREEK NEAR BEECH CREEK STATION, PA

LOCATION.--Lat 41°04'51", long 77°32'59", Clinton County, Hydrologic Unit 02050204, on right bank at abandoned railroad bridge, 1.5 mi downstream from Beech Creek Station, 1.5 mi downstream from Beech Creek, and 4.2 mi downstream from Foster Joseph Sayers Dam.

DRAINAGE AREA.--562 mi².

PERIOD OF RECORD.--July 1910 to current year. Monthly discharge only for some periods, published in WSP 1302. Prior to October 1967, published as North Bald Eagle Creek at Beech Creek Station.

REVISED RECORDS.--WSP 756: Drainage area. WSP 1111: 1936(M). WSP 1302: 1911(M), 1912-15, 1918, 1922, 1923-25(M), 1931. WSP 1502: 1919, 1920(M).

GAGE.--Water-stage recorder. Datum of gage is 560.00 ft above National Geodetic Vertical Datum of 1929. Prior to October 1984 at site 1.2 mi upstream at datum 11.74 ft higher. July 1910, to Jan. 10, 1930, nonrecording gage.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated since March 1971 by Foster Joseph Sayers Dam (station 01547480). Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite and landline telemeter at station.

AVERAGE DISCHARGE.--77 years, 816 ft³/s, 19.69 in/yr, adjusted for storage since March 1971.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,600 ft³/s, Mar. 18, 1936, gage height, 14.42 ft from rating curve extended above 12,000 ft³/s; minimum, 29 ft³/s, Aug. 22, 1930, gage height, 1.21 ft (site and datum then in use); minimum daily, 80 ft³/s, Jan. 16, 24, 25, 1931.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,920 ft³/s, Nov. 26, gage height, 10.62 ft; minimum daily, 191 ft³/s, Aug. 21, 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	245	294	2350	832	528	691	1350	801	453	335	221	217
2	257	280	1660	877	504	1190	1390	784	421	392	217	211
3	356	280	2080	892	526	1180	1370	885	409	870	217	206
4	638	280	2250	734	581	1190	1520	1780	420	1310	244	202
5	994	281	2050	579	573	1250	1790	1760	394	885	289	198
6	1870	330	1670	561	548	1150	2160	1550	341	688	301	198
7	2180	377	1300	598	530	1120	2830	1340	336	646	275	205
8	2070	579	1220	632	537	1940	2910	1090	341	585	225	211
9	1860	2420	1260	653	562	2540	2390	878	387	529	225	290
10	1380	2740	1530	647	558	2210	1980	819	346	487	242	282
11	1070	1730	1440	633	569	1780	1650	768	328	420	250	219
12	1030	1510	1310	575	533	1600	1570	726	367	363	256	331
13	932	1220	1190	518	508	1420	1550	688	825	346	246	724
14	744	1090	1060	505	474	1190	1350	617	966	338	218	586
15	774	1020	933	502	422	1050	1220	580	689	344	199	430
16	1350	944	818	664	353	852	1150	552	605	327	198	382
17	840	860	816	727	384	726	1130	530	512	314	196	380
18	352	837	845	778	414	693	1120	503	466	303	193	525
19	343	1410	850	886	401	670	1080	443	422	298	194	789
20	333	1600	857	886	403	653	969	583	370	280	192	834
21	331	1880	780	798	404	643	858	607	355	262	191	808
22	326	1910	694	676	400	634	763	586	437	254	191	805
23	326	1570	667	662	413	585	674	586	608	250	212	814
24	323	1380	674	612	401	491	681	566	589	243	251	733
25	316	1400	948	508	406	479	716	517	429	238	233	622
26	323	2220	998	488	437	490	665	470	377	237	221	524
27	337	3580	1500	e470	441	466	713	448	361	247	269	484
28	331	3550	1460	e480	440	456	799	411	349	233	341	429
29	319	3410	1120	524	---	440	823	372	328	225	341	378
30	312	2990	1000	590	---	473	827	363	317	222	392	501
31	304	---	909	564	---	997	---	506	---	221	296	---
TOTAL	23166	43972	38239	20051	13250	31249	39998	23109	13548	12692	7536	13518
MEAN	747	1466	1234	647	473	1008	1333	745	452	409	243	451
MAX	2180	3580	2350	892	581	2540	2910	1780	966	1310	392	834
MIN	245	280	667	470	353	440	665	363	317	221	191	198
MEAN‡	432	1496	1197	646	477	1134	1571	751	456	397	218	484
CFSM‡	.77	2.66	2.13	1.15	.85	2.02	2.80	1.34	.81	.71	.39	.86
IN.‡	.89	2.97	2.46	1.33	.89	2.33	3.12	1.54	.90	.82	.45	.96

CAL YR 1986 TOTAL 325972 MEAN 893 MAX 5080 MIN 193 MEAN‡ 868 CFSM‡ 1.55 IN.‡ 20.97
WTR YR 1987 TOTAL 280328 MEAN 768 MAX 3580 MIN 191 MEAN‡ 772 CFSM‡ 1.37 IN.‡ 18.66

e Estimated
‡ Adjusted for change in contents in Foster Joseph Sayers Lake.

01548500 PINE CREEK AT CEDAR RUN, PA

LOCATION.--Lat 41°31'18", long 77°26'52", Lycoming County, Hydrologic Unit 02050205, on left bank at upstream side of highway bridge at village of Cedar Run, 2,000 ft downstream from Cedar Run, and 1.2 mi upstream from Gamble Run.

DRAINAGE AREA.--604 mi^2.

PERIOD OF RECORD.--July 1918 to current year. Monthly discharge only for some periods, published in WSP 1302.

GAGE.--Water-stage recorder. Datum of gage is 780.36 ft above National Geodetic Vertical Datum of 1929. Prior to Feb. 13, 1930, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Several measurements of water temperature were made during the year. National Weather Service satellite and landline telemeter at station.

AVERAGE DISCHARGE.--69 years, 835 ft^3/s, 18.74 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 66,000 ft^3/s, June 23, 1972, gage height, 16.0 ft, from flood-mark, from rating curve extended above 16,000 ft^3/s on basis of slope-area measurement of peak flow; minimum, 8.0 ft^3/s, Sept. 1, 2, 3, 1939; minimum gage height, 0.80 ft, Nov. 28, 1930.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,900 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 26	2330	*8,380	*6.46	No other peak greater than base discharge.			

Minimum discharge, 41 ft^3/s, Aug. 21, 22, 26, gage height 1.32 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	142	215	1820	839	e330	e440	3190	885	316	263	159	107
2	234	214	1560	816	e340	e900	2940	836	497	688	124	93
3	227	216	2930	771	e370	e1200	2540	865	467	1490	124	85
4	1060	214	2700	668	e340	e920	3090	1370	940	988	128	78
5	724	219	2310	e580	e320	e720	4930	1140	910	803	115	71
6	556	334	1960	e590	e310	e640	4480	1150	749	663	110	72
7	462	411	1680	e600	e320	e750	4860	1090	672	589	109	85
8	391	426	1470	560	e300	e2100	4060	992	612	733	102	119
9	362	1420	1340	503	e290	e3500	3120	884	550	635	97	161
10	324	1400	1520	476	e290	2990	2370	793	455	760	111	141
11	286	1170	1270	473	e280	2260	1900	712	384	601	107	107
12	258	1060	1180	457	e260	1840	1680	683	364	763	93	156
13	249	964	1090	433	e230	1520	1810	628	424	960	80	550
14	288	801	933	400	e220	1240	1540	533	617	838	73	457
15	344	705	981	479	e190	1040	1430	576	511	743	65	312
16	281	660	866	772	e180	899	1360	546	443	569	61	258
17	260	632	805	595	e180	796	1280	469	378	469	55	290
18	247	618	840	568	e190	724	1180	438	328	391	51	759
19	234	681	909	635	e190	684	1040	449	289	334	48	1130
20	221	604	785	587	e180	657	925	595	259	293	47	925
21	215	867	710	e500	e180	636	837	556	306	257	43	836
22	211	892	612	e470	e190	613	769	500	566	224	51	748
23	206	851	597	e460	e200	604	711	542	557	206	55	798
24	200	1250	613	e450	e190	591	793	502	415	190	59	627
25	190	1650	1630	e410	e180	636	1030	472	305	172	50	534
26	199	3690	1550	e380	e180	1010	863	453	272	176	42	435
27	241	6940	1360	e370	e180	1020	856	440	339	307	240	372
28	256	4840	1240	e360	e170	1020	953	419	273	191	391	317
29	261	3340	1120	e350	---	990	995	372	227	153	292	275
30	244	2410	1030	e350	---	1100	938	338	219	137	187	386
31	229	---	937	e340	---	2580	---	318	---	137	130	---
TOTAL	9602	39694	40348	16242	6780	36620	58470	20546	13644	15723	3399	11284
MEAN	310	1323	1302	524	242	1181	1949	663	455	507	110	376
MAX	1060	6940	2930	839	370	3500	4930	1370	940	1490	391	1130
MIN	142	214	597	340	170	440	711	318	219	137	42	71
CFSM	.51	2.19	2.15	.87	.40	1.96	3.23	1.10	.75	.84	.18	.62
IN.	.59	2.44	2.49	1.00	.42	2.26	3.60	1.27	.84	.97	.21	.69

CAL YR 1986 TOTAL 321382 MEAN 880 MAX 11800 MIN 58 CFSM 1.46 IN. 19.79
WTR YR 1987 TOTAL 272352 MEAN 746 MAX 6940 MIN 42 CFSM 1.24 IN. 16.77

e Estimated

01549500 BLOCKHOUSE CREEK NEAR ENGLISH CENTER, PA

LOCATION.--Lat 41°28'25", long 77°13'52", Lycoming County, Hydrologic Unit 02050205, on right bank just downstream from bridge on State Highway 284, 0.7 mi upstream from Blacks Creek, 1.7 mi upstream from confluence with Texas Creek, and 5.0 mi northeast of English Center.

DRAINAGE AREA.--37.7 mi².

PERIOD OF RECORD.--October 1940 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 951: 1941. WSP 1031: 1942-44(M). WSP 1502: 1942. WDR PA-75-2: 1973(P), 1974(P).

GAGE.--Water-stage recorder. Datum of gage is 1,041.85 ft above National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--47 years, 58.3 ft³/s, 21.05 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,260 ft³/s, June 23, 1972, gage height, 9.34 ft, from rating curve extended above 1,200 ft³/s on basis of contracted-opening measurement at gage height 8.81 ft; no flow Aug. 6, 7, 31, Sept. 2, 1962.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 18, 1936 reached a stage of 9.0 ft, from floodmark, discharge, 5,780 ft³/s, from rating curve extended as explained above.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,100 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 26	1930	*981	*4.24				

Minimum discharge, 1.4 ft³/s, Aug. 21, 22, gage height, 0.60 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	9.0	113	57	e20	e50	232	33	12	5.7	4.7	5.8
2	30	9.0	123	e51	e21	e160	198	32	17	31	4.5	5.0
3	38	8.9	405	e48	e23	e98	156	46	14	66	5.1	4.6
4	116	8.8	245	44	e21	e63	397	64	29	22	4.6	4.0
5	50	9.6	182	e42	e20	56	402	48	19	14	4.2	3.4
6	36	29	139	e39	e19	62	378	47	14	11	4.3	3.9
7	29	25	112	e37	e20	138	417	45	14	20	4.1	4.7
8	24	115	92	34	e18	243	286	43	13	19	4.0	5.7
9	21	276	105	33	e18	304	200	39	13	14	3.9	8.2
10	18	180	122	31	e17	214	148	36	11	24	5.8	6.0
11	15	136	95	31	e17	156	113	33	9.5	32	4.7	4.9
12	14	106	85	29	e16	124	110	32	12	61	3.7	39
13	14	86	69	26	e14	97	116	28	13	50	3.1	79
14	20	66	e63	e25	e13	74	87	25	12	36	2.7	44
15	19	57	58	39	e12	62	77	25	9.5	29	2.5	27
16	16	53	52	56	e11	53	70	22	8.0	22	2.2	21
17	14	54	48	e38	e11	47	76	20	7.0	17	2.1	70
18	12	55	74	e34	e12	43	71	19	6.3	15	1.8	140
19	11	61	72	e33	e11	41	60	21	5.8	13	1.6	136
20	11	60	58	e32	e11	40	55	35	5.7	11	1.6	148
21	11	164	49	e30	e11	38	51	24	5.8	10	1.5	103
22	10	114	e40	e29	e12	38	48	21	12	8.8	2.4	83
23	9.9	107	e37	e28	e12	38	44	21	12	8.0	3.0	67
24	9.6	186	47	e27	e11	39	51	18	9.0	11	2.2	55
25	9.2	161	272	e25	e11	46	49	16	6.8	8.0	1.8	48
26	12	499	161	e24	e11	70	42	15	5.9	13	1.8	40
27	13	557	135	e23	e10	59	39	15	7.2	11	39	34
28	13	332	110	e23	e10	55	39	16	7.5	7.8	20	30
29	12	222	92	e22	---	51	39	14	5.6	6.4	19	27
30	10	156	78	e22	---	76	36	12	5.3	5.6	10	40
31	9.4	---	67	e21	---	228	---	14	---	5.3	7.0	---
TOTAL	639.1	3902.3	3400	1033	413	2863	4087	879	321.9	607.6	178.9	1287.2
MEAN	20.6	130	110	33.3	14.7	92.4	136	28.4	10.7	19.6	5.77	42.9
MAX	116	557	405	57	23	304	417	64	29	66	39	148
MIN	9.2	8.8	37	21	10	38	36	12	5.3	5.3	1.5	3.4
CFSM	.55	3.45	2.91	.88	.39	2.45	3.61	.75	.28	.52	.15	1.14
IN.	.63	3.85	3.35	1.02	.41	2.83	4.03	.87	.32	.60	.18	1.27

CAL YR 1986 TOTAL 22019.2 MEAN 60.3 MAX 1030 MIN 2.7 CFSM 1.60 IN. 21.73
WTR YR 1987 TOTAL 19611.9 MEAN 53.7 MAX 557 MIN 1.5 CFSM 1.43 IN. 19.35

e Estimated

01549700 PINE CREEK BELOW LITTLE PINE CREEK NEAR WATERVILLE, PA

LOCATION.--Lat 41°16'25", long 77°19'28", Lycoming County, Hydrologic Unit 02050205, on left bank on abutment of abandoned bridge 0.9 mi downstream from Ramsey Run, 4.0 mi downstream from Little Pine Creek, 4.0 mi south of Waterville, and 9.2 mi upstream from mouth.

DRAINAGE AREA.--944 mi².

PERIOD OF RECORD.--October 1957 to current year.

REVISED RECORDS.--WDR PA-72-1: 1964(P).

GAGE.--Water-stage recorder. Datum of gage is 570.62 ft above National Geodetic Vertical Datum of 1929. Prior to June 16, 1982, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flood flows subject to regulation by Little Pine Creek Reservoir 8.5 mi upstream, capacity 24,900 acre-ft. Several measurements of water temperature were made during the year. National Weather Service satellite telemeter at station.

AVERAGE DISCHARGE.--30 years, 1,410 ft³/s, 20.23 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 104,000 ft³/s, June 23, 1972, gage height, 22.76 ft, from floodmarks, from rating curve extended above 22,000 ft³/s on basis of slope-area measurement of peak flow; minimum observed, 25 ft³/s, Sept. 25, 26, 27, 1964; minimum gage height observed, 0.97 ft, Sept. 13, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 9,200 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 27	0445	*14,200	*7.67	Apr. 5	0800	9,600	6.48

Minimum discharge, 73 ft³/s, Aug. 21, 22, gage height, 1.48 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	214	318	3150	1390	e560	e700	5520	1290	445	296	217	187
2	258	309	2580	1310	e590	e1400	4730	1220	426	392	210	156
3	365	308	4230	1260	e620	e1800	4160	1190	708	1900	192	143
4	1400	308	4760	e1000	e580	e1500	4120	1960	788	1330	190	130
5	1400	309	4050	e900	e540	e1200	8810	1820	1270	1000	185	122
6	971	350	3380	e870	e520	e1000	7600	1790	930	802	170	118
7	783	526	2830	e900	e540	e1200	8230	1740	813	726	169	122
8	652	715	2430	e850	e510	e3300	6880	1600	764	717	163	141
9	569	2580	2180	818	e480	e5600	5280	1410	685	831	156	172
10	514	3240	2390	774	e470	5140	3980	1260	596	813	164	202
11	461	2490	2270	749	e470	3840	3120	1140	498	781	168	177
12	414	2090	2060	730	e450	3080	2650	1020	455	1620	159	293
13	392	1800	1910	690	e410	2500	2720	979	507	1550	140	697
14	412	1530	1630	e630	e380	2040	2490	837	652	1280	125	845
15	478	1290	1540	647	e340	1730	2230	778	637	1120	117	547
16	471	1170	1470	1050	e310	1480	2120	844	551	878	107	423
17	423	1110	1350	1020	e310	1290	2030	708	469	707	100	419
18	403	1080	1330	865	e330	1170	1940	650	405	588	93	1180
19	373	1210	1520	966	e310	1070	1740	666	361	500	83	2360
20	391	1160	1360	877	e300	1020	1570	732	323	437	83	2420
21	417	1490	1200	e800	e300	980	1440	859	310	383	74	2130
22	360	1770	1060	e770	e320	944	1320	721	521	339	84	1690
23	319	1670	931	e750	e340	931	1220	716	603	302	95	1540
24	314	1900	939	e740	e320	904	1200	715	609	282	92	1280
25	313	2830	2190	e690	e300	930	1540	640	418	273	89	1050
26	309	4390	2780	e640	e300	1290	1350	613	333	266	86	871
27	321	12800	2390	e610	e290	1520	1290	594	369	319	254	732
28	373	9430	2150	e600	e290	1460	1320	578	384	330	556	628
29	382	6250	1920	e580	---	1440	1480	535	310	240	489	546
30	400	4230	1740	e580	---	1430	1380	480	276	212	352	610
31	347	---	1570	e570	---	3050	---	447	---	269	238	---
TOTAL	15199	70653	67290	25626	11480	56939	95460	30532	16416	21483	5400	21931
MEAN	490	2355	2171	827	410	1837	3182	985	547	693	174	731
MAX	1400	12800	4760	1390	620	5600	8810	1960	1270	1900	556	2420
MIN	214	308	931	570	290	700	1200	447	276	212	74	118
CFSM	.52	2.49	2.30	.88	.43	1.95	3.37	1.04	.58	.73	.18	.77
IN.	.60	2.78	2.65	1.01	.45	2.24	3.76	1.20	.65	.85	.21	.86

CAL YR 1986 TOTAL 529905 MEAN 1452 MAX 17200 MIN 127 CFSM 1.54 IN. 20.88
WTR YR 1987 TOTAL 438409 MEAN 1201 MAX 12800 MIN 74 CFSM 1.27 IN. 17.28

e Estimated

01550000 LYCOMING CREEK NEAR TROUT RUN, PA

LOCATION.--Lat 41°25'06", long 77°01'59", Lycoming County, Hydrologic Unit 02050206, on right bank 150 ft upstream from highway bridge, 0.5 mi downstream from Grays Run, and 2.6 mi northeast of Trout Run.

DRAINAGE AREA.--173 mi².

PERIOD OF RECORD.--December 1913 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 756: Drainage area. WSP 921: 1933, 1934(M), 1935-39. WSP 1302: 1914-16, 1922(M), 1932-25, 1926(M), 1927-28, 1930, 1931(M). WSP 1502: 1920-21(M), 1932(M), 1933.

GAGE.--Water-stage recorder. Datum of gage is 693.95 ft above National Geodetic Vertical Datum of 1929. Prior to June 1, 1939, nonrecording gage at site 150 ft downstream at same datum.

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

AVERAGE DISCHARGE.--73 years, 284 ft³/s, 22.27 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,900 ft³/s, June 22, 1972, gage height, 20.19 ft, from floodmark in gage shelter, from rating curve extended above 5,300 ft³/s on basis of slope-area measurement of peak flow; minimum, 3.2 ft³/s, Sept. 27, 1936; minimum daily, 4.0 ft³/s, Sept. 19-24, 27-28, 1936, Sept. 1, 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,900 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 26	2115	*4,300	7.27	Apr. 4	1800	4,120	*7.50

Minimum daily discharge, 5.3 ft³/s, Aug. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	56	563	320	e110	e200	922	164	75	27	19	67
2	85	54	529	310	e100	727	736	151	111	127	16	53
3	87	52	1780	285	e110	458	642	175	103	393	18	44
4	398	50	1130	235	e106	344	1970	367	151	189	16	36
5	226	52	830	212	e90	289	1930	237	139	126	14	29
6	156	116	656	210	e80	280	1560	213	99	98	14	29
7	123	148	551	207	e88	533	1700	201	88	111	13	31
8	105	335	472	193	e86	1100	1190	187	86	304	12	35
9	94	822	526	179	e79	1450	896	171	84	213	12	36
10	86	561	666	175	e67	916	692	157	74	290	19	34
11	79	453	511	173	e65	657	559	142	62	205	19	29
12	73	396	455	164	e81	539	567	132	64	183	14	113
13	72	356	385	157	e70	446	662	121	80	147	11	481
14	94	276	299	147	e59	364	516	107	67	133	9.1	418
15	110	242	313	175	e53	311	446	105	57	122	7.9	243
16	90	225	291	273	e50	271	400	97	47	99	6.8	194
17	81	225	265	186	e48	240	395	86	40	81	6.0	329
18	75	251	425	189	e59	222	391	78	34	66	5.6	660
19	70	310	446	199	e56	215	329	82	30	54	5.4	711
20	67	277	348	188	e49	215	286	137	27	44	5.6	661
21	64	723	300	e172	e45	211	257	115	26	38	5.3	514
22	61	541	253	e167	e52	204	233	96	35	32	8.0	423
23	59	476	232	e158	e60	215	211	91	50	36	11	399
24	57	627	252	e150	e58	236	247	78	45	41	12	322
25	55	600	1450	e146	e49	283	284	69	36	33	12	281
26	62	1780	965	e142	e47	547	223	65	30	70	12	242
27	71	2450	733	e138	e50	414	202	65	30	102	148	212
28	69	1420	601	e136	e54	363	198	65	28	60	158	190
29	67	990	500	e135	---	323	199	58	25	38	158	170
30	63	733	430	e130	---	345	181	62	25	27	110	267
31	59	---	368	e124	---	906	---	84	---	22	82	---
TOTAL	2904	15597	17525	5775	1921	13824	19024	3958	1848	3511	959.7	7253
MEAN	93.7	520	565	186	68.6	446	634	128	61.6	113	31.0	242
MAX	398	2450	1780	320	110	1450	1970	367	151	393	158	711
MIN	46	50	232	124	45	200	181	58	25	22	5.3	29
CFSM	.54	3.01	3.27	1.08	.40	2.58	3.67	.74	.36	.65	.18	1.40
IN.	.62	3.35	3.77	1.24	.41	2.97	4.09	.85	.40	.75	.21	1.56

CAL YR 1986 TOTAL 112992.0 MEAN 310 MAX 6050 MIN 22 CFSM 1.79 IN. 24.30
WTR YR 1987 TOTAL 94099.7 MEAN 258 MAX 2450 MIN 5.3 CFSM 1.49 IN. 20.23

e Estimated

01551500 WEST BRANCH SUSQUEHANNA RIVER AT WILLIAMSPORT, PA

LOCATION.--Lat 41°14'10", long 76°59'49", Lycoming County, Hydrologic Unit 02050206, on right bank 100 ft upstream from Market Street Bridge at South Williamsport and 350 ft upstream from Hagermans Run.

DRAINAGE AREA.--5,682 mi².

PERIOD OF RECORD.--March 1895 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 756: Drainage area. WSP 1302: 1925-28. WSP 1502: 1895-1904, 1912-13, 1919.

GAGE.-- Water-stage recorder. Datum of gage is 494.98 ft above National Geodetic Vertical Datum of 1929. Mar. 1, 1895, to Sept. 30, 1928, nonrecording gage at bridge 100 ft downstream at same datum. Prior to July 1980, on left bank 100 ft downstream at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow slightly regulated by 6 flood-control reservoirs which have a combined capacity of 440,200 acre-ft. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter and National Weather Service and City of Williamsport landline telemeters at station.

AVERAGE DISCHARGE.--92 years, 8,958 ft³/s, 21.46 in/yr, adjusted for storage 1961-75.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 279,000 ft³/s, June 23, 1972, gage height, 34.75 ft, from rating curve extended above 210,000 ft³/s on basis of slope-area measurement at gage height 33.57 ft; minimum, 162 ft³/s, Sept. 17, 1943; minimum gage height, -0.78 ft, Sept. 13, 1983; minimum daily discharge, 251 ft³/s, Sept. 13, 1932.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known prior to 1895, 32.4 ft, June 1, 1889, discharge, about 252,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 71,400 ft³/s, Nov. 27, gage height, 14.97 ft; minimum, 876 ft³/s, Aug. 22, gage height, -0.14 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2460	3120	24400	9420	e4500	3890	28400	10100	4120	3730	1600	2200
2	2060	2910	19800	8970	e4700	7870	31200	9240	4180	4570	1490	2040
3	2880	2740	22300	8600	e4900	14800	27300	8800	4220	14600	1570	1910
4	4940	2730	27600	7770	e5200	15700	27000	11400	4120	23800	1530	1640
5	12700	2760	27200	6560	5430	12900	39800	15600	5400	16300	1800	1380
6	14900	2990	23200	5690	5000	11100	48800	15700	5090	11500	1880	1320
7	12900	3660	18900	5590	4700	10600	48800	14200	4330	9170	1790	1350
8	10000	5120	16200	5970	4480	15300	43200	12600	4010	12400	1860	1400
9	7820	10800	15000	6000	e4200	28600	35500	10900	3890	14500	1740	1670
10	6510	23900	15600	5620	e4100	34600	27900	9650	3950	11000	1820	2880
11	5200	24100	17500	5380	3900	28600	21900	8610	3670	8810	1790	2590
12	4480	19800	16900	5150	3830	22500	18500	7690	3370	8220	2010	2850
13	4110	17300	15600	4910	4060	18000	17300	7010	3620	7610	1920	7090
14	4060	15000	13400	4730	3790	14800	16200	6460	7020	6650	1630	9730
15	3960	12000	11700	4600	e3500	12700	14200	5910	10500	5970	1390	7030
16	5230	10600	10600	5430	e3100	11000	13200	5740	7650	5400	1300	5150
17	5540	9550	9530	7220	2910	9570	12800	5560	5630	4710	1200	4320
18	4420	8840	9560	7740	2970	8580	12600	5130	4630	4050	1090	6090
19	3660	10300	10300	8000	3180	7920	11400	5320	3980	3540	1030	13800
20	3410	12200	10000	8070	3160	7450	10600	5730	3530	3150	957	17700
21	3160	15400	8960	7700	2940	7150	9680	6660	3130	2750	911	18900
22	2960	18700	7960	6960	2840	6890	8780	6980	3550	2440	984	16400
23	2810	18500	7140	e5600	2990	6710	8000	6180	4850	2260	1150	13600
24	2710	16700	6700	e5000	2950	6470	7790	5900	6610	2170	1290	10900
25	2600	17900	10100	e4500	2910	6360	10100	5390	5210	2140	1340	8920
26	2590	22100	13900	e4100	2890	7100	12500	4980	4010	2120	1190	7390
27	2630	58900	15000	e4500	2910	8860	11800	4640	3830	2150	1530	6180
28	2740	61300	14400	e4600	2980	9510	10900	4510	5540	2160	2750	5350
29	2910	41800	12800	e4100	---	9020	11300	4420	4750	1940	4530	4660
30	3410	31200	11700	e4100	---	8390	10800	4170	3980	1740	3460	4760
31	3360	---	10400	e4600	---	11500	---	4340	---	1740	2710	---
TOTAL	153120	502920	454350	187180	105020	384440	608250	239520	142370	203290	53242	191200
MEAN	4939	16760	14660	6038	3751	12400	20270	7726	4746	6558	1717	6373
MAX	14900	61300	27600	9420	5430	34600	48800	15700	10500	23800	4530	18900
MIN	2060	2730	6700	4100	2840	3890	7790	4170	3130	1740	911	1320
CFSM	.87	2.95	2.58	1.06	.66	2.18	3.57	1.36	.84	1.15	.30	1.12
IN.	1.00	3.29	2.97	1.23	.69	2.52	3.98	1.57	.93	1.33	.35	1.25

CAL YR 1986 TOTAL 3619010 MEAN 9915 MAX 80600 MIN 958 CFSM 1.74 IN. 23.69
WTR YR 1987 TOTAL 3224900 MEAN 8835 MAX 61300 MIN 911 CFSM 1.55 IN. 21.11

e Estimated

01552000 LOYALSOCK CREEK AT LOYALSOCKVILLE, PA

LOCATION.--Lat 41°19'31", long 76°54'43", Lycoming County, Hydrologic Unit 02050206, on left bank 500 ft downstream from highway bridge at Loyalsockville, 2.5 mi downstream from Wallis Run, and 7.3 mi upstream from mouth.

DRAINAGE AREA.--443 mi^2.

PERIOD OF RECORD.--August 1925 to September 1974, October 1975 to current year. Monthly discharge only for some periods, published in WSP 1302. Prior to October 1969, published as "at Loyalsock".

REVISED RECORDS.--WSP 756: Drainage area. WSP 871: 1938(M). WSP 1051: 1926(M), 1933(M), 1936(M). WSP 1302: 1926-30. WSP 1502: 1932-33, 1935(M), 1937(M).

GAGE.--Water-stage recorder. Datum of gage is 585.63 ft above Pennsylvania Department of Transportation datum. Prior to Sept. 16, 1926, nonrecording gage at same site and datum.

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

AVERAGE DISCHARGE.--61 years, 759 ft^3/s, 23.22 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 88,700 ft^3/s, June 23, 1972, gage height, 14.74 ft, from floodmark in gage well, from rating curve extended above 16,000 ft^3/s on basis of slope-area measurement of peak flow; minimum, 11 ft^3/s, Sept. 25, 26, Nov. 24, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 26, 1975, reached a stage of 14.50 ft, from floodmark, discharge, 84,600 ft^3/s, from rating curve extended as explained above.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 27	0100	17,500	8.96	Apr. 4	2130	*21,000	*9.45

Minimum discharge, 29 ft^3/s, Aug. 21, 23, 24, 26, gage height, 2.76 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	300	210	1370	786	e300	e560	2660	377	223	96	75	153
2	294	207	1200	830	e290	e2000	1680	347	953	126	69	137
3	429	202	2840	837	e310	1650	1460	361	776	296	71	118
4	990	194	2280	e680	e310	1140	7070	873	565	243	68	104
5	952	196	1650	e660	e250	952	8240	736	511	167	67	82
6	712	296	1330	e620	e220	876	3750	592	382	137	67	82
7	558	402	1140	578	e240	1040	3360	531	310	129	67	86
8	468	501	1010	537	e240	2570	2450	482	293	235	66	89
9	413	2020	1090	492	e200	4050	1830	437	263	472	63	132
10	378	2090	1570	477	e180	2280	1460	403	232	813	66	243
11	342	1390	1240	471	e170	1670	1200	371	198	448	67	164
12	313	1140	1080	451	e210	1330	1160	339	190	480	62	155
13	306	1020	927	430	e190	1110	1740	315	206	294	57	900
14	348	832	e770	395	e160	934	1510	287	211	211	51	1360
15	460	737	752	439	e140	835	1220	271	201	206	49	705
16	407	681	739	685	e130	750	1060	262	175	186	47	436
17	354	667	671	588	e130	679	1000	242	157	164	41	430
18	323	749	975	559	e150	633	997	224	139	143	36	1010
19	298	896	1310	587	e140	612	869	222	130	131	38	1280
20	290	819	1000	598	e130	623	765	258	122	122	35	1260
21	264	3680	861	560	e120	615	683	304	119	114	32	1090
22	255	2530	742	e490	e140	600	612	263	122	107	37	862
23	246	1780	663	e450	e160	653	557	244	173	102	35	822
24	234	1870	679	e410	e140	716	550	221	185	95	31	672
25	223	1910	2800	e370	e130	798	620	207	151	88	34	547
26	231	4510	2380	e370	e130	1460	573	192	134	100	33	443
27	274	9760	1700	e360	e120	1230	490	185	125	187	107	370
28	296	3870	1360	e340	e120	1010	448	188	116	158	233	316
29	270	2460	1150	e330	---	884	429	395	110	121	292	273
30	245	1800	1010	e320	---	798	409	334	100	93	262	491
31	225	---	899	e310	---	1460	---	288	---	82	162	---
TOTAL	11698	49419	39188	16010	5150	36518	50852	10751	7572	6346	2420	14812
MEAN	377	1647	1264	516	184	1178	1695	347	252	205	78.1	494
MAX	990	9760	2840	837	310	4050	8240	873	953	813	292	1360
MIN	223	194	663	310	120	560	409	185	100	82	31	82
CFSM	.85	3.72	2.85	1.17	.42	2.66	3.83	.78	.57	.46	.18	1.11
IN.	.98	4.15	3.29	1.34	.43	3.07	4.27	.90	.64	.53	.20	1.24

CAL YR 1986 TOTAL 319371 MEAN 875 MAX 24900 MIN 70 CFSM 1.98 IN. 26.82
WTR YR 1987 TOTAL 250736 MEAN 687 MAX 9760 MIN 31 CFSM 1.55 IN. 21.06

e Estimated

01552500 MUNCY CREEK NEAR SONESTOWN, PA

LOCATION.--Lat 41°21'25", long 76°32'06", Sullivan County, Hydrologic Unit 02050206, on right bank 150 ft downstream from Slip Run, 185 ft downstream from bridge on Legislative Route 611, and 1.2 mi east of Sonestown.

DRAINAGE AREA.--23.8 mi².

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

REVISED RECORDS.--WSP 1502: 1941-42.

GAGE.--Water-stage recorder. Datum of gage is 1,025.01 ft above National Geodetic Vertical Datum of 1929. Prior to Mar. 31, 1941, nonrecording gage at same site and datum.

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

AVERAGE DISCHARGE.--47 years, 48.5 ft³/s, 27.70 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,260 ft³/s, June 22, 1972, gage height, 8.94 ft, from rating curve extended above 3,400 ft³/s; minimum, 0.1 ft³/s, Sept. 11, 12, 13, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1936 reached a stage of about 9.3 ft, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,100 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 26	1745	1,340	4.73	Apr. 4	1415	*1,900	*5.34

Minimum discharge, 1.6 ft³/s, Aug. 19, gage height, 1.38 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	12	70	42	e10	e200	163	19	11	4.8	3.2	9.2
2	13	12	75	42	e10	181	119	18	37	14	3.1	5.8
3	21	12	215	e51	e12	108	97	34	19	13	4.2	4.9
4	60	11	121	e48	e12	79	727	47	18	7.2	3.6	4.2
5	39	13	94	e35	e11	66	335	31	15	5.6	3.2	3.8
6	29	26	77	e31	e9.6	61	196	29	13	4.8	3.7	4.1
7	23	19	66	e26	e11	83	154	28	14	5.7	3.3	5.9
8	20	41	57	e22	e10	165	116	26	12	27	3.0	19
9	18	221	81	e19	e9.0	199	92	24	12	19	2.8	24
10	17	121	83	e17	e7.6	119	75	24	10	16	4.0	11
11	15	89	72	e15	e7.2	90	64	21	9.1	14	3.1	8.5
12	14	73	65	e14	e8.8	79	78	20	13	15	2.7	11
13	15	59	54	e13	e8.2	61	109	18	12	11	2.4	189
14	26	47	e48	e13	e7.0	52	83	16	10	10	2.2	82
15	22	42	e45	e30	e6.2	44	73	17	8.9	9.6	2.1	42
16	18	40	39	e40	e5.6	39	65	15	7.8	7.6	2.0	30
17	17	44	35	e25	e5.6	36	61	14	7.1	6.8	1.9	86
18	16	49	84	e17	e6.6	33	53	12	6.5	6.0	1.8	137
19	14	55	70	e18	e6.2	32	44	15	6.2	5.5	1.7	124
20	14	172	58	e19	e5.8	32	38	14	5.9	5.1	1.9	99
21	14	321	50	e17	e5.2	31	34	13	6.0	4.8	1.9	73
22	13	148	e43	e16	e6.0	33	32	13	8.0	4.3	2.3	69
23	12	109	e41	e15	e7.0	37	29	11	7.6	4.1	2.5	66
24	12	115	e38	e14	e6.4	43	29	11	6.7	4.2	1.9	49
25	11	96	210	e13	e5.6	82	30	11	5.6	4.3	1.7	39
26	17	455	116	e13	e5.6	137	26	9.9	4.9	9.4	1.8	32
27	17	375	91	e12	e5.2	96	23	14	6.2	6.8	26	28
28	15	179	75	e12	e5.2	81	23	14	5.2	4.3	11	24
29	14	121	63	e11	---	68	22	18	4.6	3.8	18	21
30	13	91	56	e11	---	62	21	11	5.1	3.4	7.7	177
31	12	---	48	e10	---	232	---	14	---	3.4	6.9	---
TOTAL	572	3168	2340	681	215.6	2661	3011	581.9	307.4	260.5	137.6	1478.4
MEAN	18.5	106	75.5	22.0	7.70	85.8	100	18.8	10.2	8.40	4.44	49.3
MAX	60	455	215	51	12	232	727	47	37	27	26	189
MIN	11	11	35	10	5.2	31	21	9.9	4.6	3.4	1.7	3.8
CFSM	.78	4.44	3.17	.92	.32	3.61	4.22	.79	.43	.35	.19	2.07
IN.	.89	4.95	3.66	1.06	.34	4.16	4.71	.91	.48	.41	.22	2.31

CAL YR 1986 TOTAL 19938.6 MEAN 54.6 MAX 1230 MIN 3.0 CFSM 2.30 IN. 31.16
WTR YR 1987 TOTAL 15414.3 MEAN 42.2 MAX 727 MIN 1.7 CFSM 1.77 IN. 24.09

e Estimated

01553500 WEST BRANCH SUSQUEHANNA RIVER AT LEWISBURG, PA
(National stream-quality accounting network station)

LOCATION.--Lat 40°58'05", long 76°52'25", Northumberland County, Hydrologic Unit 02050206, at downstream side of left abutment of Market Street Bridge at Lewisburg, 0.2 mi downstream from Buffalo Creek, and 7.4 mi upstream from mouth.

DRAINAGE AREA.--6,847 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for some periods, published in WSP 1302. September 1913 to August 1923 (gage heights only), are contained in reports of Water Supply Commission of Pennsylvania or Pennsylvania Department of Forests and Waters.

GAGE.--Water-stage recorder. Datum of gage is 428.20 ft above National Geodetic Vertical Datum of 1929. Sept. 21, 1913, to Aug. 31, 1923, and Dec. 7, 1939, to July 2, 1940, nonrecording gage at same site and datum. Since Oct. 1, 1942, water-stage recorder for Susquehanna River at Sunbury (station 01553990) used as an auxiliary gage.

REMARKS.--Records good except those for estimated daily discharges, and the period June 1 to Sept. 30 (affected by bridge construction), which are fair. Flow slightly regulated by 6 flood-control reservoirs, which have a combined capacity of 440,200 acre-ft. U.S. Army Corps of Engineers satellite telemeter and National Weather Service landline telemeter at station.

AVERAGE DISCHARGE.--48 years, 10,870 ft³/s, 21.56 in/yr, adjusted 1961-75.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 300,000 ft³/s, June 24, 1972, gage height, 34.23 ft, from floodmarks (backwater from Susquehanna River); minimum, 390 ft³/s, Nov. 16, 1964, gage height, 0.57 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 19, 1936, reached a stage of 32.1 ft, from floodmarks (backwater from Susquehanna River), discharge, 287,000 ft³/s from slope-area measurement at Watsontown, 8.0 mi upstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 77,000 ft³/s, Nov. 28, gage height, 14.62 ft (backwater from Susquehanna River); minimum daily discharge, 1,280 ft³/s, Aug. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3570	3880	30400	12200	e5600	5710	27200	11800	5320	4260	2230	3750
2	3040	3690	24800	11600	e5800	12300	35300	11000	5040	5060	2050	3190
3	2920	3470	28800	11100	e6100	17300	31900	10200	5850	9200	2020	3010
4	5170	3410	33000	10100	e6200	20700	30800	12000	5600	25600	2070	2720
5	11000	3420	33100	8820	e6500	17200	45700	15900	5960	19900	2100	2390
6	16600	3690	28900	7590	e6400	14800	51900	17700	6580	14100	2480	2170
7	15000	4130	24100	7330	e6100	13800	54500	16500	5700	10600	2330	2210
8	12600	5710	20300	7400	e5800	17500	49600	14800	5120	11500	2350	2370
9	9820	12400	18800	7630	e5500	31000	43600	13100	4980	17000	2360	2560
10	8200	24900	19800	7230	e5300	38700	35600	11500	4670	14100	2630	3240
11	6740	28600	20600	6980	e5000	35000	28500	10200	4760	11300	2400	4030
12	5680	24200	20600	6760	e4700	28200	23700	9050	4300	9710	2440	3840
13	5110	20800	19100	6430	e4600	22600	21900	8400	4420	9220	2550	8180
14	5090	18400	16800	6160	e4400	18800	21000	7890	5380	7970	2350	14500
15	5220	15200	14600	5990	e4400	16000	18600	7250	10700	7160	2040	11200
16	5430	13100	13400	6650	e4500	13900	16800	6800	10300	6490	1810	7950
17	6620	11900	12000	8310	e5100	12200	16100	6750	7100	5770	1710	6630
18	6010	10900	12200	9250	e4800	10800	15900	6170	5750	4960	1600	9050
19	4780	12800	14200	9670	e4600	9950	14800	6180	4930	4350	1450	16500
20	4360	14500	13500	9950	e4300	9320	13500	6680	4350	3890	1370	22000
21	4060	22200	12200	9520	e4000	8860	12400	7160	3910	3520	1280	23200
22	3840	24400	10700	8730	3820	8540	11400	8060	3860	3190	1370	24200
23	3630	23700	9580	7610	3910	8350	10200	7480	5040	2960	1490	22300
24	3470	21300	8870	7010	3930	8120	9560	6990	6580	2800	1640	19800
25	3330	21200	14700	e6500	3850	7960	10200	6530	6930	2720	1770	15200
26	3290	25200	18800	e6000	3800	8810	13300	6050	5120	2800	1790	10300
27	3380	60700	19400	e6100	3800	10300	13800	5650	4390	2850	2000	8770
28	3480	70600	18600	e6400	3840	11600	12900	5430	5280	2860	2970	7430
29	3560	50500	16800	e5800	---	11200	12500	5420	5840	2720	6020	6430
30	3760	37700	15100	e5700	---	10400	12700	5510	4870	2410	5590	6350
31	4160	---	13700	e5600	---	11800	---	5420	---	2310	4350	---
TOTAL	182920	596600	577450	242120	136650	471720	715860	279570	168630	233280	72610	275470
MEAN	5901	19890	18630	7810	4880	15220	23860	9018	5621	7525	2342	9182
MAX	16600	70600	33100	12200	6500	38700	54500	17700	10700	25600	6020	24200
MIN	2920	3410	8870	5600	3800	5710	9560	5420	3860	2310	1280	2170
CFSM	.86	2.90	2.72	1.14	.71	2.22	3.49	1.32	.82	1.10	.34	1.34
IN.	.99	3.24	3.14	1.32	.74	2.56	3.89	1.52	.92	1.27	.39	1.50

CAL YR 1986 TOTAL 4386060 MEAN 12020 MAX 98400 MIN 1310 CFSM 1.76 IN. 23.83
WTR YR 1987 TOTAL 3952880 MEAN 10830 MAX 70600 MIN 1280 CFSM 1.58 IN. 21.48

e Estimated

01553500 WEST BRANCH SUSQUEHANNA RIVER AT LEWISBURG, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1945-53, 1956-58, 1960 to current year.

REMARKS.--Agency collection codes: 42011 - Susquehanna River Basin Commission, 1028 - U.S. Geological Survey.
Agency analyzing codes: 9813 - Pa. Department of Environmental Resources, 80020 - U.S. Geological Survey.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TURBIDITY (FTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)
NOV											
18...	0930	1028	80020	10800	160	7.00	2.6	761	12.2	94	400
APR											
08...	0930	1028	80020	50000	111	6.90	9.0	756	11.6	99	190
MAY											
28...	0930	1028	80020	5630	210	7.25	1.3	770	9.3	93	--
SEP											
18...	1200	1028	80020	8140	195	7.00	9.0	757	8.6	97	1400

DATE	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS TOTAL (MG/L AS CACO3)	HARDNESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE IT-FLD (MG/L AS HCO3)	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3
NOV											
18...	140	60	47	15	5.5	3.6	11	0.2	1.3	16	13
APR											
08...	28	39	31	9.7	3.4	2.7	12	0.2	4.6	9.0	8
MAY											
28...	--	79	58	20	7.0	5.1	12	0.3	1.7	26	21
SEP											
18...	230	71	49	19	5.8	5.4	14	0.3	2.0	27	23

DATE	ALKALINITY LAB (MG/L AS CACO3)	ALKALINITY, CARBONATE IT-FLD (MG/L - CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)
NOV											
18...	15	13	2.5	45	5.7	0.10	5.3	100	93	0.14	2920
APR											
08...	8.0	7.4	1.8	30	7.7	<0.10	4.8	68	71	0.09	9180
MAY											
28...	20	21	2.3	58	6.6	<0.10	4.1	114	118	0.16	1730
SEP											
18...	23	22	4.3	48	7.4	0.10	4.6	106	106	0.14	2330

01553500 WEST BRANCH SUSQUEHANNA RIVER AT LEWISBURG, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)
OCT									
08...	1245	42011	9813	12600	222	--	16.5	--	0.420
NOV									
05...	1130	42011	9813	3410	240	8.00	8.0	--	0.600
18...	0930	1028	80020	10800	160	7.00	4.5	<0.010	--
21...	2000	42011	9813	25000	150	8.50	3.0	--	0.940
22...	1430	42011	9813	24200	165	--	3.0	--	0.900
23...	1515	42011	9813	23500	170	--	3.0	--	0.800
24...	1550	42011	9813	20800	165	--	5.0	--	0.760
25...	1600	42011	9813	21400	142	7.70	6.0	--	0.740
DEC									
16...	1140	42011	9813	13500	120	7.00	4.0	--	0.740
JAN									
14...	1400	42011	9813	6140	205	7.00	4.0	--	1.06
FEB									
18...	1320	42011	9813	4800	245	8.00	2.0	--	1.20
MAR									
19...	1200	42011	9813	9960	155	7.60	7.0	--	0.740
30...	1510	42011	9813	10400	175	8.30	12.5	--	0.600
APR									
03...	2400	42011	9813	29900	190	8.25	6.0	--	0.580
04...	0600	42011	9813	29100	195	8.50	6.0	--	0.580
04...	1830	42011	9813	31800	110	8.00	7.0	--	0.600
05...	0600	42011	9813	45300	100	7.20	5.5	--	0.600
05...	1800	42011	9813	47100	104	7.60	7.0	--	0.640
06...	0425	42011	9813	49300	125	7.70	7.0	--	0.620
06...	1230	42011	9813	51700	110	7.50	--	--	0.600
06...	1830	42011	9813	53000	110	7.33	--	--	0.580
07...	1330	42011	9813	53900	110	7.30	8.5	--	0.600
08...	0930	1028	80020	50000	111	6.90	8.0	<0.010	--
08...	1215	42011	9813	49300	100	7.70	9.5	--	0.640
09...	1100	42011	9813	43900	135	7.40	9.0	--	0.660
10...	1130	42011	9813	35400	135	7.70	10.5	--	0.660
13...	1300	42011	9813	21900	150	7.60	13.5	--	0.700
14...	1015	42011	9813	21300	145	7.80	11.0	--	0.640
28...	1300	42011	9813	12800	170	7.60	14.0	--	0.820
MAY									
19...	1300	42011	9813	6420	200	7.80	19.0	--	0.620
28...	0930	1028	80020	5630	210	7.25	16.0	<0.010	--
JUN									
08...	1300	42011	9813	5080	175	7.30	25.0	--	0.620
JUL									
07...	1200	42011	9813	10600	145	7.20	--	--	0.580
AUG									
04...	1050	42011	9813	2080	287	8.00	27.0	--	0.700
SEP									
08...	1610	42011	9813	2410	302	7.80	22.0	--	0.640
08...	2145	42011	9813	2430	345	7.70	22.0	--	0.740
09...	0315	42011	9813	2460	305	--	22.0	--	0.680
18...	1200	1028	80020	8140	195	7.00	21.0	--	--
18...	1305	42011	9813	8220	--	--	--	--	0.840

01553500 WEST BRANCH SUSQUEHANNA RIVER AT LEWISBURG, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)
OCT									
08...	0.420	0.030	0.025	0.59	0.40	0.62	0.42	1.0	0.080
NOV									
05...	0.600	0.050	0.050	0.45	0.33	0.50	0.38	1.1	0.020
18...	0.670	0.030	0.030	0.47	--	0.50	--	--	0.020
21...	0.940	0.045	0.040	0.23	0.14	0.28	0.18	1.2	0.040
22...	0.900	0.055	0.055	0.36	0.22	0.42	0.28	1.3	0.040
23...	0.800	0.040	0.040	0.28	0.18	0.32	0.22	1.1	0.040
24...	0.760	0.045	0.045	0.13	0.13	0.18	0.18	0.94	0.030
25...	0.740	0.035	0.035	0.16	0.15	0.20	0.18	0.94	0.040
DEC									
16...	0.740	0.040	0.040	0.34	0.34	0.38	0.38	1.1	0.020
JAN									
14...	1.06	0.060	0.055	0.47	0.47	0.53	0.53	1.6	0.030
FEB									
18...	1.20	0.060	0.060	0.30	0.24	0.36	0.30	1.6	0.040
MAR									
19...	0.740	0.040	0.040	0.40	0.34	0.44	0.38	1.2	0.080
30...	0.600	0.045	0.045	0.26	0.17	0.31	0.21	0.91	0.100
APR									
03...	0.580	0.050	0.050	0.44	0.33	0.49	0.38	1.1	0.100
04...	0.580	0.045	0.045	0.63	0.23	0.68	0.28	1.3	0.090
04...	0.600	0.045	0.045	0.56	0.31	0.61	0.36	1.2	0.090
05...	0.600	0.045	0.045	0.95	0.43	1.0	0.48	1.6	0.100
05...	0.640	0.040	0.040	0.54	0.41	0.58	0.45	1.2	0.120
06...	0.620	0.035	0.035	0.46	0.35	0.50	0.38	1.1	0.120
06...	0.600	0.090	0.090	0.15	0.09	0.24	0.18	0.84	0.080
06...	0.580	0.080	0.080	0.28	0.24	0.36	0.32	0.94	0.050
07...	0.600	0.110	0.100	0.37	0.33	0.48	0.43	1.1	0.030
08...	0.600	0.060	0.050	--	--	--	--	--	0.010
08...	0.640	0.090	0.090	0.41	0.16	0.50	0.25	1.1	0.040
09...	0.640	0.090	0.090	0.26	0.11	0.35	0.20	1.0	0.170
10...	--	0.030	0.030	0.42	0.25	0.45	0.28	1.1	0.060
13...	0.700	0.030	0.030	0.30	0.21	0.33	0.24	1.0	0.050
14...	0.640	0.050	0.050	0.17	0.17	0.22	0.22	0.86	0.020
28...	0.820	0.005	0.005	0.49	0.35	0.50	0.36	1.3	0.090
MAY									
19...	0.620	0.080	0.080	0.87	0.83	0.95	0.91	1.6	0.040
28...	0.580	[a]0.030	[a]0.040	0.77	--	0.80	--	--	0.030
JUN									
08...	0.620	0.015	0.015	0.26	0.14	0.28	0.16	0.90	0.070
JUL									
07...	--	0.030	0.030	0.82	0.41	0.85	0.44	1.4	0.190
AUG									
04...	0.700	0.020	0.020	0.52	0.33	0.54	0.35	1.2	0.050
SEP									
08...	0.620	0.055	0.055	0.24	0.24	0.30	0.30	0.94	0.060
08...	0.740	0.055	0.055	0.40	0.14	0.46	0.20	1.2	0.050
09...	0.680	0.080	0.065	0.22	0.15	0.30	0.22	0.98	0.040
18...	--	--	--	--	--	--	--	--	--
18...	0.820	0.060	0.040	0.32	0.34	0.38	0.38	1.2	0.190

(a) Results within limits of analytical precision.

01553500 WEST BRANCH SUSQUEHANNA RIVER AT LEWISBURG, PA-Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORGANIC TOTAL (MG/L AS P)	PHOS-PHOROUS ORGANIC DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT								
08...	0.010	0.002	0.08	0.01	2.3	23	799	--
NOV								
05...	0.020	0.007	0.02	0.01	2.9	1	11	--
18...	0.010	<0.010	0.02	0.01	--	7	204	90
21...	0.030	<0.002	0.04	0.03	1.6	32	2150	--
22...	0.040	0.009	0.04	0.03	1.5	25	1630	--
23...	0.030	<0.002	0.04	0.03	1.6	20	1250	--
24...	0.030	<0.002	0.03	0.03	1.7	18	988	--
25...	0.040	0.066	0.04	0.0	1.4	10	589	--
DEC								
16...	<0.020	0.010	0.02	--	1.4	5	182	--
JAN								
14...	0.020	0.013	0.03	0.01	2.5	2	38	--
FEB								
18...	0.030	0.008	0.04	0.02	3.9	3	44	--
MAR								
19...	0.030	0.005	0.08	0.02	1.6	11	296	--
30...	0.050	0.004	0.10	0.05	3.0	11	314	--
APR								
03...	0.020	0.004	0.10	0.02	1.7	38	3040	--
04...	0.020	0.004	0.09	0.02	2.0	28	2220	--
04...	0.030	0.004	0.09	0.03	2.2	29	2520	--
05...	0.030	0.004	0.10	0.03	3.4	132	16200	--
05...	0.030	0.004	0.12	0.03	2.8	62	7850	--
06...	0.020	0.006	0.12	0.01	2.3	91	12100	--
06...	0.020	0.002	0.08	0.02	3.7	58	8120	--
06...	0.020	0.002	0.05	0.02	1.8	65	9340	--
07...	0.020	0.002	0.03	0.02	2.4	70	10100	--
08...	0.010	<0.010	0.01	0.01	--	--	--	--
08...	0.020	0.002	0.04	0.02	1.3	36	4810	--
09...	0.170	0.002	0.17	0.17	2.5	27	3240	--
10...	0.020	0.002	0.06	0.02	1.6	25	2420	--
13...	0.030	0.002	0.05	0.03	2.2	16	958	--
14...	0.020	0.002	0.02	0.02	2.5	13	742	--
28...	0.030	0.005	0.09	0.02	7.9	8	276	--
MAY								
19...	<0.010	<0.020	0.04	--	2.7	12	203	--
28...	0.020	<0.010	0.03	0.02	--	10	152	71
JUN								
08...	0.060	0.013	0.07	0.05	1.0	6	82	--
JUL								
07...	0.040	0.008	0.19	0.03	1.6	15	441	--
AUG								
04...	0.030	0.003	0.05	0.03	2.3	3	17	--
SEP								
08...	0.020	0.020	0.06	0.0	1.3	4	26	--
08...	0.030	0.011	0.05	0.02	<1.0	7	46	--
09...	0.020	0.014	0.04	0.01	3.0	6	40	--
18...	--	--	--	--	--	20	440	91
18...	0.090	0.077	0.19	0.01	3.7	--	--	--

01553500 WEST BRANCH SUSQUEHANNA RIVER AT LEWISBURG, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAMFLOW, INSTANTANEOUS (CFS)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)
NOV												
18...	0930	1028	80020	10800	10	<1	32	<0.5	<1	<1	3	5
APR												
08...	0930	1028	80020	50000	10	<1	320	<0.5	1	<1	3	<1
MAY												
28...	0930	1028	80020	5630	<10	<1	29	<0.5	<1	<1	<3	2
SEP												
18...	1200	1028	80020	8140	20	<1	27	<0.5	<1	<1	<3	3

DATE	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)
NOV												
18...	10	<5	6	460	<0.1	<10	15	<1	<1.0	82	<6	34
APR												
08...	17	<5	9	290	--	<10	8	<1	3.0	48	<6	26
MAY												
28...	8	<5	17	210	<0.1	<10	16	<1	1.0	120	<6	11
SEP												
18...	26	<5	<4	80	--	<10	5	<1	<1.0	110	<6	13

CROSS-SECTION ANALYSIS OF WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK) (00009)	STREAMFLOW, INSTANTANEOUS (CFS) (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	OXYGEN, DISSOLVED (MG/L) (00300)	SEDIMENT, SUSPENDED (MG/L) (80154)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
MAY										
27...	1057	50	5620	191	7.20	20.0	--	2	30	--
27...	1104	100	5620	187	7.28	20.0	9.2		30	--
27...	1111	150	5620	193	7.38	20.0	--	6	91	80
27...	1117	200	5620	193	7.32	20.0	9.7	--	--	--
27...	1125	250	5620	187	7.29	20.5	--	2	30	--
27...	1132	300	5620	186	7.30	20.5	9.2	--	--	--
27...	1137	350	5620	185	7.30	20.5	--	3	46	--
27...	1140	400	5620	185	7.33	20.5	9.2	--	--	--
27...	1146	450	5620	185	7.34	20.5	--	5	76	81
27...	1150	500	5620	186	7.33	20.5	9.4	--	--	--
27...	1155	550	5620	188	7.33	20.5	--	3	46	--
27...	1202	600	5620	186	7.30	20.5	9.4	--	--	--
27...	1205	650	5620	186	7.25	20.5	--	2	30	--
27...	1215	750	5620	184	7.21	20.5	9.2	6	91	79
27...	1219	800	5620	184	7.09	21.0	9.1	5	76	--
27...	1224	830	5620	186	7.26	21.0	--	--	--	--
27...	1230	950	5620	184	7.18	21.0	9.2	--	--	--
27...	1235	1000	5620	178	7.60	21.0	9.2	7	106	58

01553700 CHILLISQUAQUE CREEK AT WASHINGTONVILLE, PA

LOCATION.--Lat 41°03'42", long 76°40'50", Montour County, Hydrologic Unit 02050206, on left bank 60 ft upstream from bridge on State Highway 54 and 0.7 mi north of U.S. Post Office in Washingtonville.

DRAINAGE AREA.--51.3 mi².

PERIOD OF RECORD.--May 1979 to current year.

REVISED RECORDS.--WDR PA-82-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 503.70 ft above National Geodetic Vertical Datum of 1929 (Pennsylvania Power and Light Co. benchmark).

REMARKS.--No estimated daily discharges. Records good. Flow includes diversion from West Branch Susquehanna River. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--8 years, 74.0 ft³/s, 19.56 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,510 ft³/s, June 28, 1983, gage height, 10.82 ft, from rating curve extended above 1,300 ft³/s; minimum, 4.9 ft³/s, Jan. 15, 1986, gage height, 0.54 ft.

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

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 21	0300	*1,570	*7.11	Sept. 18	2045	1,420	6.74
Sept.13	0615	1,250	6.29				

Minimum discharge, 12 ft³/s, July 31, Aug. 1, gage height, 0.60 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	16	77	58	38	398	102	19	15	14	13	37
2	16	19	73	57	41	582	72	19	15	36	14	27
3	28	20	333	60	46	311	65	25	15	97	15	24
4	69	30	180	50	50	206	339	58	19	30	15	21
5	38	32	122	47	49	145	256	32	18	22	17	20
6	25	60	94	45	46	156	222	28	14	20	17	21
7	21	48	80	46	46	223	174	26	16	18	16	23
8	19	142	71	46	46	266	125	24	17	65	16	90
9	18	390	103	45	42	239	93	23	23	28	18	77
10	18	164	199	47	36	139	74	22	18	25	37	41
11	16	92	116	54	37	90	62	20	15	21	20	31
12	15	98	99	54	38	74	69	19	22	19	18	41
13	16	92	79	52	36	64	72	17	22	19	16	561
14	49	58	59	54	34	56	54	16	22	19	16	164
15	40	49	57	65	31	51	49	16	19	18	16	82
16	26	48	55	128	29	46	46	15	17	16	16	60
17	22	44	54	90	31	41	48	14	16	15	17	72
18	20	41	147	73	31	38	46	14	17	15	16	392
19	18	283	181	66	30	37	38	19	17	15	16	360
20	19	158	108	65	29	34	35	21	15	15	17	213
21	16	766	90	55	29	33	33	19	15	14	18	132
22	16	208	74	45	31	32	31	18	19	15	21	97
23	16	127	64	57	35	30	29	17	21	15	19	82
24	15	109	59	57	36	29	29	15	19	14	18	63
25	15	95	458	42	35	31	29	15	17	15	17	53
26	20	431	230	43	35	42	25	15	16	21	17	44
27	23	451	151	39	37	36	23	14	16	17	30	39
28	26	181	113	36	37	33	23	14	15	14	47	36
29	22	125	88	37	---	30	22	16	14	14	122	33
30	20	97	78	39	---	28	21	15	14	13	41	57
31	18	---	70	41	---	109	---	15	---	13	30	---
TOTAL	717	4474	3762	1693	1041	3629	2306	620	518	692	726	2993
MEAN	23.1	149	121	54.6	37.2	117	76.9	20.0	17.3	22.3	23.4	99.8
MAX	69	766	458	128	50	582	339	58	23	97	122	561
MIN	15	16	54	36	29	28	21	14	14	13	13	20
CFSM	.45	2.91	2.37	1.06	.72	2.28	1.50	.39	.34	.44	.46	1.94
IN.	.52	3.24	2.73	1.23	.75	2.63	1.67	.45	.38	.50	.53	2.17

CAL YR 1986 TOTAL 29270 MEAN 80.2 MAX 2080 MIN 15 CFSM 1.56 IN. 21.22
WTR YR 1987 TOTAL 23171 MEAN 63.5 MAX 766 MIN 13 CFSM 1.24 IN. 16.80

RESERVOIRS IN WEST BRANCH SUSQUEHANNA RIVER BASIN

01541180 CURWENSVILLE LAKE.--Lat 40°57'13", long 78°31'40", Clearfield County, Hydrologic Unit 02050201, at Curwensville Dam on West Branch Susquehanna River, 0.7 mi upstream from State Highway 453, 1.2 mi south of Curwensville, and 2.5 mi upstream from Anderson Creek. DRAINAGE AREA, 365 mi². PERIOD OF RECORD, November 1965 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--Reservoir formed by earthfill dam with excavated chute spillway and concrete control sill at elevation 1,228.00 ft. Storage began in November 1965. Capacity at elevation 1,228.00 ft is 124,200 acre-ft. Conservation pool elevation is 1,155.00 ft and capacity is 4,870 acre ft. Reservoir is used for flood control, recreation and study of water quality. Figures given herein represent total contents. Flow regulated by three gates and low-flow by-pass system. U.S. Army Corps of Engineers satellite and landline telemetry at station.

COOPERATION.--Records provided by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 87,650 acre-ft, June 25, 1972, elevation, 1,214.11 ft; minimum, 252 acre-ft, Nov. 6, 1968, elevation, 1,136.70 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 16,080 acre-ft, Nov. 10, elevation, 1,169.21 ft; minimum, 4,450 acre-ft, Dec. 14, elevation, 1,154.23 ft.

01541340 GLENDALE LAKE.--Lat 40°41'50", long 78°32'15", Cambria County, Hydrologic Unit 02050201, at Glendale Dam on Beaverdam Run, 1.0 mi upstream from Dutch Run, 1.3 mi southwest of Flinton, 1.9 mi above mouth, and 3.4 mi south of Coalport. DRAINAGE AREA, 41.9 mi². PERIOD OF RECORD, January 1963 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir formed by an earth and rockfill dam with ungated concrete spillway at elevation 1,435.00 ft. Storage began Dec. 1, 1960. Capacity at elevation 1,435.00 ft is 41,200 acre-ft of which 15,900 acre-ft is controlled storage above elevation 1,427.00 ft. Dead storage is 25,300 acre-ft. Reservoir is used for flood control and recreation. Figures given herein represent total contents. Outflow is controlled by 72-inch gate and an 8-inch bypass valve.

COOPERATION.--Records provided by Pennsylvania Department of Environmental Resources.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 33,390 acre-ft, June 24, 1972, elevation, 1,431.63 ft; minimum, 10,640 acre-ft, Nov. 16, 1965, elevation, 1,415.53 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 27,560 acre-ft, Oct. 5, elevation, 1,428.41 ft; minimum observed, 18,340 acre-ft, Nov. 18, elevation, 1,421.95 ft.

01543900 FIRST FORK SINNEMAHONING CREEK RESERVOIR.--Lat 41°24'25", long 78°01'10", Cameron County, Hydrologic Unit 02050202, at control tower of George B. Stevenson Dam, on First Fork Sinnemahoning Creek, 8.0 mi northeast of Sinnemahoning, and 8.0 mi upstream from mouth. DRAINAGE AREA, 243 mi². PERIOD OF RECORD, January 1956 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by an earthfill dam. Storage began Jan. 31, 1956. Capacity, 75,800 acre-ft between elevations 890.00 ft (sill of outlet gates) and 1,026.00 ft (crest of spillway). No dead storage. Ordinary minimum (conservation) pool elevation is 920.00 ft and capacity is 2,000 acre-ft. Reservoir is used for flood control and recreation. Figures given herein represent total contents. U.S. Army Corps of Engineers satellite and landline telemetry at station.

COOPERATION.--Records provided by Pennsylvania Department of Environmental Resources.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 62,030 acre-ft, June 26, 1972, elevation, 1,015.87 ft; minimum, (after first filling), 37 acre-ft, many days in October 1973, elevation, 891.84 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 3,580 acre-ft, Nov. 27, elevation, 928.42 ft; minimum, 1,430 acre-ft, Oct. 11, elevation, 915.26 ft.

01544800 KETTLE CREEK LAKE (formerly published as Alvin R. Bush Reservoir).--Lat 41°21'37", long 77°55'27", Clinton County, Hydrologic Unit 02050203, at control tower of dam on Kettle Creek, 1.1 mi downstream from Sugar Camp Run, and 8.5 mi upstream from mouth and Westport. DRAINAGE AREA, 226 mi². PERIOD OF RECORD, February 1962 to current year. GAGE, water-stage recorder. Datum of gage is National Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--Reservoir formed by an earthfill embankment, rock faced, with ungated concrete spillway at elevation 937.00 ft. Storage began Feb. 7, 1962; water in reservoir first reached conservation pool elevation in March 1962. Total capacity at elevation 937.00 ft is 75,000 acre-ft. No dead storage. Ordinary minimum (conservation) pool elevation is 840.00 ft and capacity is 1,590 acre-ft. Reservoir is used for flood control and recreation. Figures given herein represent total contents. Storage is regulated by three gates and low-flow by-pass system. U.S. Army Corps of Engineers satellite and landline telemetry at station.

COOPERATION.--Records provided by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 51,660 acre-ft, June 25, 1972, elevation, 919.13 ft; minimum, no storage, June 7, 1962.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 3,540 acre-ft, Nov. 27, elevation, 849.55 ft; minimum, 1,600 acre-ft, Dec. 7, elevation, 840.10 ft.

01547480 FOSTER JOSEPH SAYERS LAKE.--Lat 41°02'53", long 77°36'35", Centre County, Hydrologic Unit 02050204, at Foster Joseph Sayers Dam, on Bald Eagle Creek, 1.0 mi upstream from Marsh Creek, and 1.2 mi south of Blanchard. DRAINAGE AREA, 339 mi². PERIOD OF RECORD, March 1971 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--Reservoir formed by an earthfill dam with ungaged concrete ogee weir at elevation 657.00 ft with abutting concrete gravity walls and partially paved exit channel. Storage began in March 1971. Capacity at elevation 657.00 ft is 99,100 acre-ft. Dead storage is 25 acre-ft. Ordinary minimum (conservation) pool elevation is 610.0 ft and capacity is 6,300 acre-ft. Reservoir used for flood control and recreation. Figures given herein represent total contents. Regulation is accomplished by two gates. U.S. Army Corps of Engineers satellite and landline telemetry at station.

COOPERATION.--Records provided by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 103,900 acre-ft, June 25, 1972, elevation, 658.41 ft; minimum, 4,960 acre-ft, Mar. 10, 1971, elevation, 609.37 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 29,570 acre-ft, July 3, elevation, 630.43 ft; minimum, 6,060 acre-ft, Jan. 4, elevation, 609.60 ft.

Reservoirs in West Branch Susquehanna River basin-Continued

MONTHEND ELEVATION, IN FEET NGVD, AND CONTENTS AT 2400, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (equivalent in ft³/s/day)	Elevation (feet)	Contents (acre-feet)	Change in contents (equivalent in ft³/s/day)
	01541180 Curwensville Lake			01541340 Glendale Lake		
Sept. 30.....	1,161.29	9,000	--	1,427.43	25,990	--
Oct. 31.....	1,161.95	9,500	+ 8.1	1,425.79	23,510	- 40.3
Nov. 30.....	1,158.80	7,200	- 38.7	1,425.28	22,790	- 12.1
Dec. 31.....	1,154.80	4,770	- 39.5	1,427.49	26,080	+ 53.5
CAL YR 1986.....	--	--	- 0.9	--	--	+ 0.26
Jan. 31.....	1,155.38	5,090	+ 5.2	1,427.84	26,640	+ 9.1
Feb. 28.....	1,154.82	4,780	- 5.6	1,427.75	26,500	- 2.6
Mar. 31.....	1,157.22	6,180	+ 22.8	1,427.84	26,640	+ 2.3
Apr. 30.....	1,158.33	6,880	+ 11.8	1,427.76	26,520	- 2.0
May 31.....	1,161.90	9,460	+ 42.0	1,427.35	25,860	- 10.7
June 30.....	1,161.97	9,520	+ 1.0	1,427.58	26,230	+ 6.2
July 31.....	1,162.40	9,870	+ 5.7	1,427.14	25,520	- 11.5
Aug. 31.....	1,162.28	9,770	- 1.6	1,427.22	25,650	+ 2.1
Sept. 30.....	1,162.35	9,830	+ 1.0	1,427.38	25,910	+ 4.4
WTR YR 1987.....	--	--	+ 1.1	--	--	- 0.11

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (equivalent in ft³/s/day)	Elevation (feet)	Contents (acre-feet)	Change in contents (equivalent in ft³/s/day)
	01543900 F F Sinnemahoning Cr Reservoir			01544800 Kettle Creek Lake		
Sept. 30.....	920.77	2,090	--	841.72	1,860	--
Oct. 31.....	920.82	2,250	+ 2.6	841.20	1,770	- 1.5
Nov. 30.....	920.70	2,210	- 0.7	841.33	1,790	+ 0.3
Dec. 31.....	921.04	2,300	+ 1.5	841.29	1,790	0
CAL YR 1986	--	--	+ 0.3	--	--	- 0.1
Jan. 31	920.84	2,250	- 0.8	841.27	1,780	- 0.2
Feb. 28	920.78	2,230	- 0.4	841.15	1,760	- 0.4
Mar. 31	922.23	2,430	+ 3.3	841.60	1,840	+ 1.3
Apr. 30	921.15	2,320	- 1 8	841.11	1,760	- 1.3
May 31	921.23	2,320	0	841.15	1,760	0
June 30	921.63	2,360	+ 0.7	841.05	1,750	- 0.2
July 31	921.39	2,340	- 0.3	841.33	1,790	+ 0.7
Aug. 31	921.17	2,320	- 0.3	840.93	1,730	- 1.0
Sept. 30	921.18	2,320	0	841.33	1,790	+ 1.0
WTR YR 1987.....	--	--	+ 0.3	--	--	- 0.1

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (equivalent in ft³/s/day)
	01547480 Foster Joseph Sayers Lake		
Sept. 30	628.42	26,190	--
Oct. 31	610.80	6,840	-315
Nov. 30	613.32	8,630	+ 30.2
Dec. 31	610.08	6,350	- 37.1
CAL YR 1986.....	--	--	- 24.8
Jan. 31	610.02	6,310	- 0.7
Feb. 28	610.36	6,540	+ 4.1
Mar. 31	619.50	14,310	+126
Apr. 30	629.80	28,470	+238
May 31	630.03	28,850	+ 6.2
June 30	630.15	29,070	+ 3.7
July 31	629.71	28,320	- 12.2
Aug. 31	628.77	26,770	- 25.2
Sept. 30	629.97	28,750	+ 33.4
WTR YR 1987	--	--	+ 3.5

01554000 SUSQUEHANNA RIVER AT SUNBURY, PA

LOCATION.--Lat 40°50'04", long 76°49'37", Snyder County, Hydrologic Unit 02050301, on right bank at borough of Shamokin Dam, on grounds of Pennsylvania Power and Light Co. generating plant, 1.0 mi downstream from Shamokin Creek, 1.5 mi downstream from Sunbury Fabridam, and 1.8 mi south of Sunbury.

DRAINAGE AREA.--18,300 mi², approximately (excluding that of Shamokin Creek).

PERIOD OF RECORD.--October 1937 to current year. June 1918 to September 1918 (gage heights only), in reports of Pennsylvania Department of Forests and Waters.

REVISED RECORDS.--WSP 891: 1936(M). WDR PA-79-2: 1978(M).

GAGE.--Water-stage recorder. Datum of gage is 408.61 ft above National Geodetic Vertical Datum of 1929. See WSP 1903 for history of changes prior to Dec. 13, 1937. Dec. 13, 1937, to Mar. 23, 1967, water-stage recorder at site 1.7 mi upstream at datum 11.05 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow slightly regulated by 14 flood-control reservoirs which have a capacity of about 809,000 acre-ft, and during low flow by Fabridam upstream. U.S. Army Corps of Engineers satellite telemeter and National Weather Service landline telemeter at station.

AVERAGE DISCHARGE.--50 years, 26,610 ft³/s, 19.75 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 620,000 ft³/s, June 24, 1972, gage height, 35.80 ft; minimum, 964 ft³/s, Oct. 16, 1971, gage height, 4.83 ft, result of shutoff at Fabridam.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 164,000 ft³/s, Nov. 28, gage height, 19.42 ft; minimum, 3,380 ft³/s, Aug. 22, gage height, 6.04 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8980	10600	78800	29700	e13000	e11000	57300	26000	10700	8120	5440	7890
2	8050	10200	63100	27900	e14000	25200	74400	25200	10100	8650	5100	7660
3	7420	9820	61700	26400	e14000	37500	71200	23800	11100	15300	4840	6810
4	9720	9560	69300	24400	e15000	59700	68400	25600	13100	31500	4850	6110
5	19000	9410	76900	21600	e15000	53800	124000	29900	14200	28300	4850	5520
6	29400	9870	73600	19400	e14000	46300	157000	32000	15200	25400	5130	5160
7	32500	10500	60900	18300	e14000	41900	149000	29300	15300	19500	5080	5160
8	28300	12200	50400	18600	e13000	47100	139000	25500	13900	20200	4980	5770
9	23200	21800	44900	19100	e13000	83800	120000	24000	12500	28600	4990	13000
10	19400	42800	45500	18600	e12000	114000	98600	21500	11400	34200	5850	17800
11	16200	57000	46700	18100	e12000	99100	81400	17400	10900	27300	5910	13800
12	14200	53200	48600	17600	e11000	74400	67600	18100	10300	22100	5210	10600
13	12900	45200	45900	16800	e11000	58200	59500	16500	10100	19700	5030	28400
14	12300	39900	40200	16400	e11000	48900	65000	15200	10500	17900	4790	47400
15	12500	34800	34200	15700	e10000	42900	70800	14300	15200	16400	4540	38300
16	12200	30200	30200	e15000	e10000	37600	64400	13400	15900	16900	4640	34900
17	13500	27000	27800	e17000	e9800	33300	56600	12900	12300	14300	4640	28600
18	13300	24700	27500	e25000	e9600	30100	50500	11600	10300	12700	4280	29500
19	12100	27400	32600	e27000	e9400	27700	45500	12300	9200	12500	3940	41200
20	11200	30000	32800	e25000	e9200	25900	41000	13100	8210	10900	3670	43300
21	10200	45600	32300	e23000	e9100	25100	37300	13300	7490	9330	3460	46900
22	10000	60500	28800	e20000	e9100	24900	33400	14100	7230	8000	3510	43600
23	9340	62000	25700	e18000	e9200	24600	29800	13500	8500	7490	3510	37400
24	8890	60000	23500	e16000	e9200	24400	27300	12700	10200	6690	3470	31500
25	8490	54500	31300	e14000	e9100	25200	26900	13000	10700	6170	3470	27100
26	8340	60600	41000	e13000	e9000	29900	30800	12500	9360	6120	3470	22100
27	8570	107000	49900	e13000	e9000	39700	32200	12900	10000	6360	3630	20000
28	8890	159000	48600	e12000	e9000	48600	29900	12300	10200	6180	4880	17500
29	9120	135000	42800	e12000	---	49200	27700	11400	10700	5960	8690	15500
30	9540	99900	37700	e12000	---	45100	26900	11000	9190	6260	9950	14700
31	10400	---	33400	e13000	---	42900	---	10800	---	5910	8490	---
TOTAL	418150	1360260	1386600	583600	312700	1378000	1963400	545100	333980	464940	154290	673180
MEAN	13490	45340	44730	18830	11170	44450	65450	17580	11130	15000	4977	22440
MAX	32500	159000	78800	29700	15000	114000	157000	32000	15900	34200	9950	47400
MIN	7420	9410	23500	12000	9000	11000	26900	10800	7230	5910	3460	5160
CFSM	.74	2.48	2.44	1.03	.61	2.43	3.58	.96	.61	.82	.27	1.23
IN.	.85	2.77	2.82	1.19	.64	2.80	3.99	1.11	.68	.95	.31	1.37

CAL YR 1986 TOTAL 11093200 MEAN 30390 MAX 275000 MIN 4000 CFSM 1.66 IN. 22.55
WTR YR 1987 TOTAL 9574200 MEAN 26230 MAX 159000 MIN 3460 CFSM 1.43 IN. 19.46

e Estimated

01554500 SHAMOKIN CREEK NEAR SHAMOKIN, PA

LOCATION.--Lat 40°48'37", long 76°35'04", Northumberland County, Hydrologic Unit 02050301, on right bank at Weigh Scales, 1.0 mi downstream from Trout Run, 1.1 mi upstream from Bennys Run, and 2.0 mi northwest of Shamokin.

DRAINAGE AREA.--54.2 mi^2.

PERIOD OF RECORD.--November 1939 to current year. Prior to October 1964, published as "at Weigh Scales".

GAGE.--Water-stage recorder and concrete control. Datum of gage is 606.28 ft above National Geodetic Vertical Datum of 1929. Nov. 14, 1939, to Jan. 9, 1967, water-stage recorder at site 0.4 mi upstream at datum 2.00 ft higher, and Jan. 10 to Dec. 10, 1967, nonrecording gage at site 0.4 mi downstream at datum 11.50 ft lower.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Regulation by mine pumps upstream from station. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--47 years, 85.7 ft^3/s, 21.47 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,070 ft^3/s, June 22, 1972, gage height, 8.72 ft, from rating curve extended above 560 ft^3/s on basis of slope-area measurement of peak flow; minimum, 3.2 ft^3/s, Feb. 15, 1940, gage height, 0.42 ft, site and datum then in use.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Sept. 13	0530	*645	*3.90				

Minimum discharge, 34 ft^3/s, Aug. 31, gage height 2.24 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	e41	82	101	74	134	118	94	69	56	39	50
2	46	e42	91	104	74	124	110	93	67	62	39	37
3	46	e41	135	99	76	111	114	108	67	59	39	36
4	50	e43	99	93	75	105	189	120	74	51	38	35
5	54	e54	95	90	74	101	166	98	66	49	50	35
6	50	e65	93	88	73	101	221	94	64	48	39	50
7	47	e62	91	87	72	113	209	92	69	47	37	45
8	46	e60	89	85	71	132	199	90	68	130	38	61
9	48	e75	99	82	70	145	188	90	68	58	61	61
10	46	e100	93	83	69	141	175	91	61	54	61	44
11	45	e95	87	83	68	135	163	90	61	51	40	41
12	45	e110	84	80	68	130	170	88	69	50	38	78
13	51	e95	81	79	68	124	157	86	64	49	38	440
14	69	e85	78	78	67	120	135	84	60	49	38	170
15	52	e75	78	80	66	113	129	87	59	48	38	121
16	48	e70	77	85	64	107	125	84	57	47	38	101
17	47	e65	76	84	64	102	125	81	55	46	38	106
18	47	e60	112	83	64	98	118	83	55	45	37	177
19	47	e70	90	84	63	95	114	92	54	45	39	289
20	47	e100	82	85	63	92	110	100	54	44	39	191
21	e45	e130	80	83	62	90	106	87	54	44	36	170
22	e44	e120	79	82	62	87	103	82	85	43	50	144
23	e44	e110	79	83	63	86	101	79	58	42	38	125
24	e43	e100	99	80	63	84	126	91	54	42	36	116
25	e43	e96	175	78	62	86	117	80	52	52	36	106
26	e43	e92	121	78	61	85	104	76	51	49	36	99
27	e54	e88	119	77	61	80	102	75	51	43	48	93
28	e51	e88	117	76	65	80	101	73	50	41	53	88
29	e48	87	114	75	---	78	100	72	49	40	50	85
30	e46	85	111	75	---	80	97	71	49	40	37	100
31	e43	---	105	75	---	173	---	70	---	40	46	---
TOTAL	1485	2404	3011	2595	1882	3332	4092	2701	1814	1564	1290	3294
MEAN	47.9	80.1	97.1	83.7	67.2	107	136	87.1	60.5	50.5	41.6	110
MAX	69	130	175	104	76	173	221	120	85	130	61	440
MIN	43	41	76	75	61	78	97	70	49	40	36	35
CFSM	.88	1.48	1.79	1.54	1.24	1.98	2.52	1.61	1.12	.93	.77	2.03
IN.	1.02	1.65	2.07	1.78	1.29	2.29	2.81	1.85	1.25	1.07	.89	2.26

CAL YR 1986 TOTAL 32717 MEAN 89.6 MAX 656 MIN 32 CFSM 1.65 IN. 22.46
WTR YR 1987 TOTAL 29464 MEAN 80.7 MAX 440 MIN 35 CFSM 1.49 IN. 20.22

e Estimated

01555000 PENNS CREEK AT PENNS CREEK, PA

LOCATION.--Lat 40°52'00", long 77°02'55", Union County, Hydrologic Unit 02050301, on left bank 200 ft downstream from bridge on State Highway 104, 0.8 mi northeast of Penns Creek, and 2.9 mi upstream from Sweitzers Run.

DRAINAGE AREA.--301 mi².

PERIOD OF RECORD.--October 1929 to current year. Monthly discharge only for some periods, published in WSP 1302. Prior to October 1965, published as Penn Creek at Penns Creek.

REVISED RECORDS.--WSP 891: 1934(M). WSP 1502: 1933(M), 1934, 1936(M). WDR PA-72-1: 1933-34(M), 1936(M), 1940(M), 1951(M). WDR PA-79-2: 1978.

GAGE.--Water-stage recorder. Datum of gage is 506.72 ft above National Geodetic Vertical Datum of 1929. Prior to Feb. 1, 1930, nonrecording gage at same site and datum.

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

AVERAGE DISCHARGE.--58 years, 438 ft³/s, 19.76 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 34,600 ft³/s, June 23, 1972, gage height, 14.85 ft, from floodmark in gage well, from rating curve extended above 6,800 ft³/s on basis of contracted-opening measurement of peak flow; minimum, 7.0 ft³/s, Sept. 27, 1932, gage height, 0.85 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,100 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 27	0515	*2,450	*5.36				

Minimum discharge, 50 ft³/s, Aug. 21, gage height, 1.25 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	122	76	924	601	e270	e580	1160	427	235	133	77	115
2	140	75	977	e580	e270	977	953	411	225	239	75	100
3	127	74	1970	e530	e280	864	860	461	239	437	78	90
4	230	73	1390	e480	e340	744	1260	787	284	311	81	82
5	277	84	1170	e460	e340	638	1550	658	259	215	83	76
6	213	143	1020	e430	e320	609	1650	609	215	185	100	84
7	164	146	915	e420	e310	687	1810	580	205	174	89	103
8	138	200	832	e410	e290	1030	1560	547	208	178	81	119
9	125	624	949	e390	e270	1320	1330	508	244	166	82	112
10	115	631	1060	e380	e260	1210	1150	478	205	155	134	99
11	103	477	852	385	e250	1010	1010	452	181	148	134	82
12	97	483	e720	366	e240	898	970	425	195	137	95	154
13	104	449	e640	352	e230	804	1040	398	234	131	81	255
14	145	385	e600	353	e230	722	838	372	320	140	73	191
15	173	349	e560	395	e220	667	749	375	252	155	68	143
16	145	337	e550	565	e220	621	701	361	206	135	65	118
17	125	320	e540	526	e250	562	920	331	197	120	63	278
18	115	332	739	488	e300	521	903	327	168	110	60	562
19	105	595	760	e470	e240	493	774	364	157	103	56	746
20	98	555	599	e440	e280	474	719	535	154	99	53	664
21	95	999	549	e410	e270	457	669	495	166	95	52	498
22	93	866	509	e390	e260	436	630	402	218	90	86	425
23	90	735	477	e370	e250	418	592	357	250	86	137	430
24	87	678	555	e350	e250	396	613	342	187	84	94	368
25	85	634	1290	e340	e240	390	626	313	161	82	71	312
26	97	1050	976	e330	e230	443	543	305	147	103	64	271
27	107	2210	872	e310	e220	414	501	298	150	126	76	242
28	102	1630	802	e310	e210	383	484	290	142	100	101	218
29	93	1320	733	e290	---	362	479	271	131	88	220	200
30	85	1100	684	e280	---	363	455	256	126	85	276	311
31	79	---	643	e270	---	807	---	245	---	83	140	---
TOTAL	3874	17630	25857	12671	7340	20300	27499	12980	6061	4493	2945	7448
MEAN	125	588	834	409	262	655	917	419	202	145	95.0	248
MAX	277	2210	1970	601	340	1320	1810	787	320	437	276	746
MIN	79	73	477	270	210	362	455	245	126	82	52	76
CFSM	.42	1.95	2.77	1.36	.87	2.18	3.05	1.39	.67	.48	.32	.82
IN.	.48	2.18	3.20	1.57	.91	2.51	3.40	1.60	.75	.56	.36	.92

CAL YR 1986 TOTAL 165670 MEAN 454 MAX 6240 MIN 59 CFSM 1.51 IN. 20.47
WTR YR 1987 TOTAL 149098 MEAN 408 MAX 2210 MIN 52 CFSM 1.36 IN. 18.43

e Estimated

01555500 EAST MAHANTANGO CREEK NEAR DALMATIA, PA

LOCATION.--Lat 40°36'40", long 76°54'44", Northumberland County, Hydrologic Unit 02050301, on right bank at highway bridge, 2.0 mi upstream from mouth, and 3.2 mi south of Dalmatia.

DRAINAGE AREA.--162 mi².

PERIOD OF RECORD.--October 1929 to current year. Monthly discharge only for some periods, published in WSP 1302. Prior to October 1945, published as Mahantango Creek East near Dalmatia.

REVISED RECORDS.--WSP 891: 1933(M). WSP 1302: 1930(M), 1938(M).

GAGE.--Water-stage recorder. Datum of gage is 401.22 ft above National Geodetic Vertical Datum of 1929. Oct. 1, 1929, to Feb. 11, 1930, nonrecording gage, and Feb. 12, 1930, to Nov. 18, 1973, water-stage recorder at present site and datum. Nov. 19, 1973, to June 18, 1974, nonrecording gage at site 2 mi upstream at different datum.

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

AVERAGE DISCHARGE.--58 years, 224 ft³/s, 18.78 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 69,900 ft³/s, June 22, 1972, gage height, 26.62 ft, from floodmark in gage shelter, from rating curve extended above 5,100 ft³/s on basis of slope-area measurement of peak flow; minimum, 1.3 ft³/s, Oct. 7, 1957, Nov. 3, 1964; minimum gage height, 0.84 ft, Sept. 21, 1932.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,900 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 2	0045	2,330	6.10	Sept. 13	0930	*3,890	*7.66

Minimum discharge, 8.4 ft³/s, Aug. 19, gage height, 1.03 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	137	42	259	e250	e120	889	690	206	69	51	25	20
2	117	46	239	e230	e110	1700	463	189	64	61	20	25
3	100	42	850	e210	e110	1020	423	193	66	70	19	22
4	155	45	721	e190	e120	723	654	344	70	55	18	15
5	175	50	513	e180	e120	537	957	273	69	48	24	13
6	160	99	403	e180	e110	447	1210	242	65	42	36	17
7	127	105	336	214	e100	430	1270	228	57	39	27	26
8	109	115	294	175	e100	474	890	211	57	63	26	45
9	98	221	284	156	e95	485	666	194	63	67	20	80
10	84	283	311	153	e95	450	530	181	59	50	21	54
11	72	263	258	159	e90	391	441	168	49	41	23	33
12	67	297	e220	153	e88	347	404	157	50	40	20	110
13	69	263	e200	147	e100	312	406	144	58	35	17	2840
14	114	213	e190	149	e90	277	331	131	59	33	14	1110
15	147	178	e180	164	e85	250	291	130	49	34	12	484
16	123	161	e170	274	e74	224	268	123	45	36	11	302
17	108	144	169	344	e65	203	270	112	41	31	11	222
18	96	128	258	330	e70	189	261	106	38	27	9.9	341
19	83	368	491	322	e75	177	234	122	33	24	9.0	541
20	76	419	409	298	e78	166	221	147	34	22	11	511
21	67	1310	335	247	e80	156	203	133	35	21	11	390
22	67	766	276	202	e80	146	190	114	70	18	16	306
23	60	494	240	e190	358	140	176	107	332	17	22	238
24	61	403	235	e170	158	133	177	105	137	17	22	189
25	53	320	1180	e300	131	127	479	95	92	16	17	154
26	60	306	907	e200	129	134	385	90	72	25	13	124
27	67	522	641	160	140	124	328	87	63	26	13	106
28	60	472	500	e130	132	119	288	84	57	26	15	92
29	55	387	409	e130	---	113	261	81	49	20	20	81
30	50	315	353	e120	---	108	234	74	43	18	21	97
31	47	---	306	e120	---	330	---	71	---	16	18	---
TOTAL	2864	8777	12137	6247	3103	11321	13601	4642	2045	1089	561.9	8588
MEAN	92.4	293	392	202	111	365	453	150	68.2	35.1	18.1	286
MAX	175	1310	1180	344	358	1700	1270	344	332	70	36	2840
MIN	47	42	169	120	65	108	176	71	33	16	9.0	13
CFSM	.57	1.81	2.42	1.24	.68	2.25	2.80	.92	.42	.22	.11	1.77
IN.	.66	2.02	2.79	1.43	.71	2.60	3.12	1.07	.47	.25	.13	1.97

CAL YR 1986 TOTAL 8458.0 MEAN 232 MAX 5400 MIN 20 CFSM 1.43 IN. 19.42
WTR YR 1987 TOTAL 7497.9 MEAN 205 MAX 2840 MIN 9.0 CFSM 1.27 IN. 17.21

e Estimated

01556000 FRANKSTOWN BRANCH JUNIATA RIVER AT WILLIAMSBURG, PA

LOCATION.--Lat 40°27'47", long 78°12'00", Blair County, Hydrologic Unit 02050302, on left bank 10 ft downstream from highway bridge at Williamsburg and 2.5 mi upstream from Clover Creek.

DRAINAGE AREA.--291 mi^2.

PERIOD OF RECORD.--October 1916 to current year. Monthly figures only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 756: Drainage area. WDR PA-71-1: 1954(M), 1960(M), 1961(M).

GAGE.--Water-stage recorder. Datum of gage is 831.78 ft above National Geodetic Vertical Datum of 1929 (Penn Central Railroad benchmark). Prior to Aug. 14, 1928, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Some regulation at low flow by mill above station. Several measurements of water temperature were made during the year. National Weather Service satellite telemeter at station.

AVERAGE DISCHARGE.--71 years, 394 ft^3/s, 18.39 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,000 ft^3/s, Mar. 18, 1936, gage height, 18.58 ft, from floodmark in gage shelter, from rating curve extended above 14,000 ft^3/s on basis of slope-area measurement of peak flow; minimum, 13 ft^3/s, July 24, 1934, gage height, 0.97 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1, 1889, reached a stage of 19.1 ft, from floodmark, discharge, about 35,500 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 5	0400	*9,040	*13.76	No other peaks greater than base discharge.			

Minimum daily discharge, 70 ft^3/s, Aug. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	79	109	432	326	229	849	1300	299	231	142	e92	104
2	167	108	625	333	275	1130	965	292	241	331	e130	91
3	143	108	1660	308	454	869	758	432	225	279	e120	84
4	466	112	947	270	475	682	3080	1330	231	179	e130	80
5	281	147	683	233	395	541	6300	988	191	152	e140	78
6	152	247	539	226	367	480	3310	792	173	140	e120	94
7	114	169	458	262	404	515	3070	651	162	1480	98	115
8	98	155	408	278	404	798	2170	542	156	467	90	266
9	89	2020	1080	242	366	1050	1570	459	171	289	90	271
10	83	436	1280	242	296	897	1190	403	154	229	168	142
11	78	368	876	242	301	675	915	357	141	198	107	115
12	75	484	706	229	296	549	917	324	139	177	93	116
13	90	418	562	214	277	470	995	292	188	180	87	110
14	171	301	440	212	256	406	721	265	165	242	82	99
15	135	224	403	308	231	407	678	507	140	197	79	93
16	103	211	363	358	185	385	728	366	133	157	77	90
17	93	187	335	318	217	350	1100	297	125	141	76	112
18	89	175	414	308	208	322	1130	367	119	132	75	820
19	83	655	439	419	188	304	931	955	115	126	74	374
20	81	447	341	509	183	290	779	944	119	120	71	273
21	79	1210	306	390	188	277	649	681	207	114	70	219
22	78	645	278	334	183	265	542	570	163	107	87	191
23	79	471	260	341	211	255	473	474	167	103	105	169
24	76	397	320	e290	210	250	461	402	135	101	82	144
25	76	338	1210	e300	203	253	415	345	120	97	76	136
26	101	999	836	e320	198	275	379	321	137	96	76	126
27	107	1490	651	e270	199	259	346	342	237	95	85	118
28	108	1180	544	e260	197	265	415	308	138	e90	137	112
29	121	689	455	250	---	253	351	259	122	e90	242	109
30	116	530	409	244	---	365	329	234	141	e88	118	264
31	111	---	368	244	---	1500	---	270	---	e92	97	---
TOTAL	3722	15030	18628	9080	7596	16186	36967	15068	4886	6431	3174	5115
MEAN	120	501	601	293	271	522	1232	486	163	207	102	170
MAX	466	2020	1660	509	475	1500	6300	1330	241	1480	242	820
MIN	75	108	260	212	183	250	329	234	115	88	70	78
CFSM	.41	1.72	2.06	1.01	.93	1.79	4.23	1.67	.56	.71	.35	.59
IN.	.48	1.92	2.38	1.16	.97	2.07	4.73	1.93	.62	.82	.41	.65

CAL YR 1986 TOTAL 132007 MEAN 362 MAX 5790 MIN 58 CFSM 1.24 IN. 16.88
WTR YR 1987 TOTAL 141883 MEAN 389 MAX 6300 MIN 70 CFSM 1.34 IN. 18.14

e Estimated

01557500 BALD EAGLE CREEK AT TYRONE, PA

LOCATION.--Lat 40°41'01", long 78°14'02", Blair County, Hydrologic Unit 02050302, on left bank 0.2 mi upstream from plant of West Virginia Pulp and Paper Co. at Tyrone, 0.2 mi upstream from Laurel Run, and 1.3 mi upstream from mouth.

DRAINAGE AREA.--44.1 mi².

PERIOD OF RECORD.--October 1944 to current year. Prior to October 1967, published as South Bald Eagle Creek at Tyrone.

REVISED RECORDS.--WSP 1903: 1954(M). WDR PA-75-2: 1974.

GAGE.--Water-stage recorder. Datum of gage is 921.80 ft above National Geodetic Vertical Datum of 1929. Oct. 1, 1944, to Nov. 15, 1950, water-stage recorder, and Nov. 16, 1950, to Nov. 30, 1952, nonrecording gage at site 0.5 mi downstream at datum 17.99 ft lower.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Prior to Nov. 30, 1952, daily discharges were affected by diversion by West Virginia Pulp and Paper Co. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--43 years, 76.1 ft³/s, 23.43 in/yr, adjusted for diversion from October 1950 to November 1952.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,140 ft³/s, Nov. 25, 1950, gage height, 7.5 ft, from floodmarks, site and datum then in use, from rating curve extended above 2,100 ft³/s on basis of contracted-opening measurement of peak flow; minimum, 1.4 ft³/s, Sept. 12, 13, 1973.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, about 15 ft, Mar. 17 or 18, 1936, site and datum in use prior to Dec. 1, 1952.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 940 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 4	1715	*1,230	*3.54	June 13	1045	1,110	3.35

Minimum discharge, 7.1 ft³/s, Aug. 26, Sept. 5, gage height, 0.06 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	25	125	59	e36	168	327	52	34	40	13	9.6
2	30	25	196	61	e45	206	238	51	33	100	13	8.3
3	66	24	314	55	154	149	182	125	50	87	22	7.8
4	147	27	214	52	122	110	631	191	43	68	14	7.2
5	111	38	168	61	89	90	665	154	33	60	21	7.2
6	63	54	138	e58	72	89	482	129	29	55	17	11
7	53	43	118	e52	60	151	399	108	28	86	14	13
8	47	130	106	47	54	261	317	91	33	53	12	21
9	42	458	185	44	50	293	242	78	37	46	37	24
10	39	220	177	43	e48	224	187	68	27	42	48	13
11	36	181	146	42	e46	172	151	61	25	39	19	10
12	34	167	129	41	e44	139	147	56	29	36	15	53
13	37	135	108	39	e42	115	129	51	340	40	13	33
14	97	109	98	41	e41	98	101	48	177	39	12	24
15	55	97	83	72	e39	92	93	51	117	34	11	20
16	45	89	74	79	e40	81	87	44	88	29	10	20
17	41	81	68	69	e41	72	96	41	68	27	9.8	19
18	38	123	112	e62	e39	67	86	43	57	25	9.6	44
19	35	207	93	e66	e38	63	75	53	51	23	8.8	31
20	34	208	77	62	e36	60	71	83	117	22	8.5	30
21	33	279	70	56	e36	58	68	57	85	21	7.9	27
22	31	203	62	e52	e36	57	65	54	72	20	11	24
23	30	159	58	e50	e40	56	62	52	64	18	11	22
24	29	138	95	e45	e40	55	68	48	55	18	8.2	21
25	28	118	199	e43	e39	58	60	46	50	17	7.5	23
26	35	367	149	e45	e38	62	55	47	66	19	7.7	22
27	33	452	122	e43	e38	61	52	50	58	17	10	20
28	30	289	101	e42	e40	59	65	44	48	15	13	18
29	28	210	84	e41	---	56	55	40	42	14	36	17
30	27	160	75	e39	---	130	53	37	41	14	13	33
31	26	---	66	e37	---	387	---	36	---	14	9.7	---
TOTAL	1413	4816	3810	1598	1443	3739	5309	2089	1997	1138	462.7	633.1
MEAN	45.6	161	123	51.5	51.5	121	177	67.4	66.6	36.7	14.9	21.1
MAX	147	458	314	79	154	387	665	191	340	100	48	53
MIN	26	24	58	37	36	55	52	36	25	14	7.5	7.2
CFSM	1.03	3.64	2.79	1.17	1.17	2.73	4.01	1.53	1.51	.83	.34	.48
IN.	1.19	4.06	3.21	1.35	1.22	3.15	4.48	1.76	1.68	.96	.39	.53

CAL YR 1986 TOTAL 27359.1 MEAN 75.0 MAX 1020 MIN 5.8 CFSM 1.70 IN. 23.08
WTR YR 1987 TOTAL 28447.8 MEAN 77.9 MAX 665 MIN 7.2 CFSM 1.77 IN. 24.00

e Estimated

01558000 LITTLE JUNIATA RIVER AT SPRUCE CREEK, PA

LOCATION.--Lat 40°36'45", long 78°08'27", Huntingdon County, Hydrologic Unit 02050302, on right bank 150 ft downstream from Penn Central Railroad bridge, 0.5 mi northwest of village of Spruce Creek, and 0.5 mi upstream from Spruce Creek.

DRAINAGE AREA.--220 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 751.15 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Several measurements of water temperature were made during the year. National Weather Service satellite telemeter at station.

AVERAGE DISCHARGE.--49 years, 374 ft³/s, 23.09 in/yr.

EXTREMES PERIOD OF RECORD.--Maximum discharge, 28,600 ft³/s, June 23, 1972, gage height, 16.98 ft, from rating curve extended above 5,600 ft³/s on basis of slope-area measurement of peak flow; minimum, 45 ft³/s, Sept. 26, 1943, Oct. 4, 1949; minimum gage height, 1.41 ft, Sept. 26, 1943.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 18, 1936, reached a stage of 19.1 ft, from floodmarks 175 ft downstream, discharge, 39,800 ft³/s, from rating curve extended as explained above.

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

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 5	0015	*7,790	*9.16	No other peak greater than base discharge.			

Minimum discharge, 73 ft³/s, Aug. 21, gage height, 1.75 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	117	115	611	367	208	759	1330	304	196	199	91	93
2	149	115	803	373	260	934	1110	297	184	431	90	88
3	261	113	1350	345	346	715	865	492	212	494	123	84
4	901	120	1040	308	350	583	2990	1070	242	340	100	81
5	550	163	842	271	307	499	3980	787	171	282	115	80
6	368	270	675	259	299	472	2460	682	154	243	134	89
7	296	211	602	281	315	594	2190	595	145	418	98	102
8	257	426	549	286	311	1010	1790	526	142	260	95	187
9	230	1630	876	251	283	1210	1450	467	177	215	94	203
10	208	939	913	248	246	1030	1190	423	142	188	257	109
11	186	799	741	245	253	777	985	385	130	170	116	98
12	175	748	692	234	255	658	863	355	136	155	97	230
13	191	626	590	223	238	573	797	324	556	146	94	144
14	381	521	507	222	220	509	627	296	432	168	91	117
15	278	469	475	348	199	489	572	359	307	153	89	112
16	224	435	424	405	165	450	549	295	254	132	85	96
17	207	395	394	370	203	408	584	260	214	123	83	103
18	194	419	512	360	193	381	549	251	186	115	84	426
19	179	915	491	396	177	362	491	427	168	110	82	218
20	167	756	409	399	169	346	491	426	254	106	79	184
21	159	1280	387	350	169	335	511	346	270	104	77	158
22	157	922	363	304	173	324	459	319	253	102	86	139
23	150	721	355	315	207	316	403	298	225	100	96	127
24	139	647	381	235	205	313	410	274	181	100	83	121
25	134	576	923	242	203	319	375	257	158	99	78	123
26	164	1310	694	256	196	344	340	253	178	99	79	109
27	168	1790	624	224	200	328	322	292	253	99	90	103
28	152	1260	547	215	211	322	398	262	178	97	96	100
29	136	986	478	227	---	304	345	225	147	95	216	97
30	131	735	435	226	---	477	331	206	141	94	101	208
31	122	---	407	221	---	1360	---	199	---	93	91	---
TOTAL	7131	20412	19090	9006	6561	17501	29757	11952	6386	5530	3190	4129
MEAN	230	680	616	291	234	565	992	386	213	178	103	138
MAX	901	1790	1350	405	350	1360	3980	1070	556	494	257	426
MIN	117	113	355	215	165	304	322	199	130	93	77	80
CFSM	1.05	3.09	2.80	1.32	1.07	2.57	4.51	1.75	.97	.81	.47	.63
IN.	1.21	3.45	3.23	1.52	1.11	2.96	5.03	2.02	1.08	.94	.54	.70

CAL YR 1986 TOTAL 142381 MEAN 390 MAX 4200 MIN 74 CFSM 1.77 IN. 24.08
WTR YR 1987 TOTAL 140645 MEAN 385 MAX 3980 MIN 77 CFSM 1.75 IN. 23.78

01559000 JUNIATA RIVER AT HUNTINGDON, PA

LOCATION.--Lat 40°29'05", long 78°01'09", Huntingdon County, Hydrologic Unit 02050302, on right bank 170 ft downstream from Smithfield Bridge at Huntingdon and 0.8 mi upstream from Standing Stone Creek.

DRAINAGE AREA.--816 mi².

PERIOD OF RECORD.--September 1941 to current year. Gage-height records collected in this vicinity for the period May 1895 to December 1938 are contained in reports of U.S. Weather Bureau. Prior to October 1950, published as Frankstown Branch Juniata River at Huntingdon.

REVISED RECORDS.--WDR PA-73-1: 1936(M). WDR PA-80-2: 1972(M). WDR PA-84-2: 1936(M) 1972(M).

GAGE.--Water-stage recorder. Datum of gage is 599.69 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges which are fair. Flow regulated September 1941 to June 1972, and since December 1985 by Warrior Ridge Hydroelectric Plant (reservoir capacity 400 acre-ft), 4 mi upstream. National Weather Service satellite telemeter and U.S. Army Corps of Engineers landline telemeter at station.

AVERAGE DISCHARGE.--46 years, 1,098 ft³/s, 18.27 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 57,000 ft³/s, June 23, 1972, gage height, 20.03 ft, from rating curve extended above 22,000 ft³/s on basis of computation of peak flow-over-dam, slope-conveyance study, and Pennsylvania Department of Environmental Resources step-backwater study; minimum discharge recorded, 14 ft³/s, Feb. 8, 1948, Aug. 2, 1954; minimum gage height recorded, 0.27 ft, Feb. 8, 1948.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 18, 1936, reached a stage of 21.87 ft, from floodmark, discharge 81,000 ft³/s, from rating curve extended as explained above.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,500 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 5	0430	*16,900	*10.63	[a]No other peak greater than base discharge.			

(a) Other peaks above base may have occurred during period of estimated record in November and December.

Minimum daily discharge, 243 ft³/s, Sept. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	341	337	e1700	1160	744	1630	3770	943	728	568	293	368
2	503	334	e2300	1160	750	2730	2770	902	747	1010	318	371
3	495	317	e5000	1070	1090	2300	2310	1300	861	1300	343	367
4	2080	347	e4000	961	1220	1900	4860	3080	746	813	329	361
5	1370	406	e2900	885	1100	1570	14200	2480	649	817	364	243
6	973	655	e2400	848	1020	1400	8200	2100	591	666	439	352
7	621	578	e1900	869	1050	1470	7530	1760	583	1770	367	395
8	561	778	e1600	931	1080	2110	5680	1570	621	1420	309	448
9	477	3310	e2300	880	1010	2710	4330	1350	605	885	308	929
10	460	2360	e3700	e840	877	2520	3380	1220	534	754	531	500
11	436	1670	e3000	e810	898	2080	2760	1110	534	654	433	421
12	379	1870	e2400	e780	873	1730	2390	1020	744	585	331	513
13	397	1590	e1900	e740	833	1500	2710	953	1140	628	306	490
14	621	1230	e1600	e720	785	1330	2050	899	756	693	387	430
15	692	964	e1400	e750	756	1290	1840	1180	682	647	299	389
16	506	868	e1200	e1300	634	1250	1830	984	597	548	289	357
17	435	815	e1200	e1200	675	1100	1940	869	573	495	283	417
18	434	786	1330	e1100	678	1040	2260	1360	558	482	285	1540
19	420	2180	1530	e1000	644	988	1990	1990	558	459	304	1100
20	365	1640	1170	e1500	621	943	1700	1840	768	419	326	770
21	382	3320	1090	e1300	620	906	1650	1460	741	412	264	682
22	350	2330	985	1060	608	898	1520	1280	681	386	283	551
23	360	1770	969	1030	666	835	1220	1130	581	381	376	534
24	336	e1600	994	1030	710	863	1350	1020	575	352	383	462
25	284	e1500	2860	997	723	816	1230	924	544	357	296	420
26	383	e1400	2380	918	610	883	1120	915	548	353	270	427
27	430	e5100	1990	951	663	879	1030	990	804	368	366	377
28	385	e4500	1710	868	671	810	1170	886	603	331	392	377
29	398	e3100	1500	810	---	853	1070	779	559	307	758	335
30	354	e2200	1370	823	---	886	1020	753	521	325	521	564
31	355	---	1260	803	---	2840	---	777	---	292	400	---
TOTAL	16583	49855	61638	30094	22609	45060	90880	39824	19732	19477	11153	15490
MEAN	535	1662	1988	971	807	1454	3029	1285	658	628	360	516
MAX	2080	5100	5000	1500	1220	2840	14200	3080	1140	1770	758	1540
MIN	284	317	969	720	608	810	1020	753	521	292	264	243
CFSM	.66	2.04	2.44	1.19	.99	1.78	3.71	1.57	.81	.77	.44	.63
IN.	.76	2.27	2.81	1.37	1.03	2.05	4.14	1.82	.90	.89	.51	.71

CAL YR 1986 TOTAL 440178 MEAN 1206 MAX 14900 MIN 245 CFSM 1.48 IN. 20.07
WTR YR 1987 TOTAL 422395 MEAN 1157 MAX 14200 MIN 243 CFSM 1.42 IN. 19.26

e Estimated

01560000 DUNNING CREEK AT BELDEN, PA

LOCATION.--Lat 40°04'18", long 78°29'34", Bedford County, Hydrologic Unit 02050303, on left bank 10 ft upstream from highway bridge, 0.8 mi southeast of Belden, 3.8 mi north of Bedford, and 4.3 mi above mouth.

DRAINAGE AREA.--172 mi².

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

REVISED RECORDS.--WSP 971: 1940(M). WSP 1502: 1940-41. WDR PA-72-1: 1967(M).

GAGE.--Water-stage recorder. Datum of gage is 1,051.16 ft above National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--48 years, 228 ft³/s, 18.00 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,400 ft³/s, July 20, 1977, gage height, 14.15 ft, from rating curve extended above 9,200 ft³/s on basis of contracted-opening measurement at gage height 12.67 ft and contracted-opening and flow over road measurement at gage height 13.03 ft; minimum, 2.6 ft³/s, Sept. 6, 1964, gage height, 1.03 ft; minimum gage height, 0.92 ft, Jan. 8, 1954, result of freeze-up.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 17.8 ft, Mar. 18, 1936, from floodmarks (backwater from Raystown Branch Juniata River), discharge, about 16,900 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,300 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 4	2315	*6,340	*10.71	July 7	1545	2,720	7.63

Minimum discharge, 12 ft³/s, Aug. 20, 21, 22, gage height, 1.14 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	30	227	e180	e120	592	962	160	69	72	21	27
2	41	30	e500	e160	e170	786	715	175	137	363	20	24
3	34	30	e1100	e140	e290	702	555	201	76	347	29	17
4	71	30	e750	e130	e260	578	2950	457	70	198	26	16
5	59	50	482	e130	e230	429	4000	481	58	131	26	15
6	50	157	329	e130	e240	350	2180	448	50	95	40	21
7	38	108	260	e130	e220	371	1770	352	50	1410	26	36
8	33	111	218	e135	e190	611	1200	275	47	645	23	82
9	29	346	e600	134	e170	777	818	217	51	300	21	96
10	25	291	e1000	136	e160	636	621	181	50	188	21	50
11	23	283	e700	135	e140	455	489	153	41	135	22	37
12	22	335	454	124	e130	326	466	132	39	102	19	32
13	25	226	316	119	e120	256	489	116	58	94	17	32
14	54	174	231	124	e110	210	357	102	72	103	16	28
15	60	146	199	208	e100	196	366	116	45	93	15	24
16	43	131	173	236	e95	177	500	116	39	67	14	23
17	38	114	158	238	e92	175	952	102	35	57	14	28
18	34	109	225	239	e90	156	1000	100	32	50	13	481
19	32	425	225	423	e90	142	736	130	30	45	13	212
20	30	298	180	508	90	134	575	143	316	41	13	200
21	29	e750	e150	357	92	130	439	120	295	38	12	165
22	28	536	e140	278	90	128	344	105	119	34	16	143
23	27	348	e130	e200	e92	126	282	93	89	32	38	116
24	26	272	211	e180	e94	125	274	84	67	30	22	93
25	25	214	663	e170	e94	131	228	73	54	28	17	76
26	33	e600	608	e150	e98	139	185	70	80	27	16	65
27	48	e940	528	e140	111	131	161	94	144	26	19	56
28	38	e680	412	e135	118	135	191	93	70	24	25	49
29	33	445	315	e130	---	123	176	70	55	23	31	45
30	31	302	266	e125	---	193	170	61	58	22	30	86
31	30	---	226	e120	---	877	---	69	---	21	29	---
TOTAL	1115	8511	11976	5744	3896	10297	24151	5089	2396	4841	664	2375
MEAN	36.0	284	386	185	139	332	805	164	79.9	156	21.4	79.2
MAX	71	940	1100	508	290	877	4000	481	316	1410	40	481
MIN	22	30	130	119	90	123	161	61	30	21	12	15
CFSM	.21	1.65	2.25	1.08	.81	1.93	4.68	.95	.46	.91	.12	.46
IN.	.24	1.84	2.59	1.24	.84	2.23	5.22	1.10	.52	1.05	.14	.51

CAL YR 1986 TOTAL 71249 MEAN 195 MAX 3780 MIN 11 CFSM 1.13 IN. 15.41
WTR YR 1987 TOTAL 81055 MEAN 222 MAX 4000 MIN 12 CFSM 1.29 IN. 17.53

e Estimated

01562000 RAYSTOWN BRANCH JUNIATA RIVER AT SAXTON, PA
(National stream-quality accounting network station)

LOCATION.--Lat 40°12'57", long 78°15'56", Bedford County, Hydrologic Unit 02050303, on left bank 500 ft downstream from bridge on State Highway 913, 0.5 mi west of Saxton, and 1.5 mi upstream from Shoup Run.

DRAINAGE AREA.--756 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1911 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 1302: 1912-13(M), 1914-15. WSP 1502: 1934, 1936.

GAGE.--Water-stage recorder. Datum of gage is 795.77 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1931, nonrecording gage at site 0.8 mi downstream at datum 4.82 ft lower.

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

AVERAGE DISCHARGE.--76 years, 915 ft³/s, 16.44 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 80,500 ft³/s, Mar. 18, 1936, gage height, 24.54 ft, from floodmark in gage shelter, from rating curve extended above 21,000 ft³/s on basis of slope-area measurement of peak flow; minimum, 39 ft³/s, Sept. 6, 7, 12, 1966, gage height, 0.84 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1, 1889, reached a stage of 23.0 ft at present site and datum, from floodmarks, discharge, about 71,300 ft³/s, from rating curve extended as explained above.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 7,700 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 5	0515	*18,900	*13.22	No other peak greater than base discharge.			

Minimum discharge, 89 ft³/s, Aug. 20, 21, 22, gage height, 1.09 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	169	111	876	865	e560	e800	4030	805	316	231	121	137
2	154	110	771	801	e580	2920	3120	746	403	228	119	119
3	131	109	1840	754	e590	2760	2290	880	514	413	119	111
4	172	110	2350	668	e1100	2240	6600	1310	476	618	123	107
5	164	112	1620	560	e990	1750	17200	2020	443	432	126	104
6	161	131	1230	432	e830	1440	10100	1830	342	337	146	111
7	156	228	1020	512	e760	1300	8660	1600	292	665	135	123
8	152	290	882	577	e710	1470	6310	1350	260	1770	142	153
9	134	274	945	595	e690	1840	4430	1130	256	934	130	253
10	122	451	2200	528	e650	1890	3240	967	242	571	125	392
11	115	556	1940	519	e610	1490	2400	831	235	432	119	223
12	110	569	1580	506	e560	1190	2000	723	221	458	112	185
13	109	642	1280	467	e520	1000	2140	665	214	629	110	209
14	118	488	1000	450	e490	865	1670	586	245	437	108	353
15	131	407	887	474	e470	786	1460	548	291	529	104	254
16	143	354	724	635	e440	742	1650	539	234	415	101	197
17	154	319	636	675	e480	679	3220	507	198	295	99	203
18	134	300	629	658	e460	649	5140	450	178	254	97	476
19	123	454	725	751	e440	599	3860	495	170	231	94	666
20	117	808	e800	1820	e410	563	e3200	679	174	210	90	561
21	112	1390	e750	1750	e390	533	e2200	717	237	191	90	530
22	109	1660	e690	1420	e390	507	1800	609	270	179	97	486
23	108	1140	e640	1120	e400	488	1480	541	270	169	112	410
24	106	890	e610	937	e400	471	1420	491	289	161	106	374
25	104	758	e2000	e880	e390	460	1380	480	264	154	112	336
26	114	773	e1800	e780	e390	469	1130	416	228	149	117	290
27	123	1960	e1700	e730	e400	478	990	435	291	144	113	259
28	119	1980	e1500	e680	e410	478	934	607	402	139	114	227
29	126	1420	e1300	e630	---	498	978	515	292	132	122	183
30	128	1090	1120	e590	---	569	877	430	250	126	134	201
31	117	---	990	e560	---	1600	---	364	---	123	145	---
TOTAL	4035	19884	37035	23324	15510	33524	105909	24266	8497	11756	3582	8233
MEAN	130	663	1195	752	554	1081	3530	783	283	379	116	274
MAX	172	1980	2350	1820	1100	2920	17200	2020	514	1770	146	666
MIN	104	109	610	432	390	460	877	364	170	123	90	104
CFSM	.17	.88	1.58	1.00	.73	1.43	4.67	1.04	.37	.50	.15	.36
IN.	.20	.98	1.82	1.15	.76	1.65	5.21	1.19	.42	.58	.18	.41

CAL YR 1986 TOTAL 263127 MEAN 721 MAX 13000 MIN 75 CFSM .95 IN. 12.95
WTR YR 1987 TOTAL 295555 MEAN 810 MAX 17200 MIN 90 CFSM 1.07 IN. 14.54

e Estimated

01562000 RAYSTOWN BRANCH JUNIATA RIVER AT SAXTON, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1950-56, 1958-64, 1966-68, 1972-76, 1987 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (FTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
NOV											
21...	1150	971	212	7.60	3.5	24	750	12.0	92	K7300	K16000
FEB											
03...	1030	590	230	7.70	20.0	19	743	13.6	154	--	--
APR											
06...	1200	9480	130	6.70	7.0	20	744	11.4	96	2300	3700
MAY											
12...	1030	714	189	7.70	19.0	2.2	752	9.6	105	90	62
JUL											
09...	1030	936	143	7.55	25.0	58	753	7.1	87	K2500	1500
SEP											
02...	1410	117	404	8.20	21.0	3.4	755	10.9	124	28	K31

DATE	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE IT-FLD (MG/L AS HCO3)	ALKA-LINITY WAT WH TOT FET FIELD MG/L AS CACO3	ALKA-LINITY LAB (MG/L AS CACO3)
NOV											
21...	87	43	24	6.6	6.1	13	0.3	3.0	54	44	49
FEB											
03...	86	30	23	7.0	9.6	19	0.5	1.6	69	57	50
APR											
06...	48	28	13	3.8	4.7	17	0.3	1.8	25	21	23
MAY											
12...	81	40	21	6.9	4.5	10	0.2	2.8	50	45	54
JUL											
09...	56	24	15	4.6	2.8	9	0.2	2.9	39	34	35
SEP											
02...	180	58	43	17	9.0	10	0.3	6.5	146	120	122

DATE	ALKA-LINITY, CARBON-ATE IT-FLD (MG/L - CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)
NOV											
21...	44	2.1	31	11	<0.10	6.0	105	122	0.14	275	<0.010
FEB											
03...	57	2.2	26	24	<0.10	4.5	130	138	0.18	207	<0.010
APR											
06...	20	7.9	20	8.3	<0.10	6.4	75	79	0.10	1920	<0.010
MAY											
12...	41	1.6	26	9.0	0.10	2.9	110	104	0.15	212	<0.010
JUL											
09...	32	1.7	21	4.4	0.20	6.3	95	83	0.13	240	<0.010
SEP											
02...	120	1.5	44	20	0.10	3.2	216	222	0.29	68.2	<0.010

(K) Results based on non-ideal colony count.

01562000 RAYSTOWN BRANCH JUNIATA RIVER AT SAXTON, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHOROUS TOTAL (MG/L AS P)	PHOSPHOROUS DISSOLVED (MG/L AS P)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)	PHOSPHOROUS ORGANIC TOTAL (MG/L AS P)	PHOSPHOROUS ORGANIC DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)
NOV											
21...	1.60	0.060	0.060	0.64	0.70	0.080	0.020	0.020	0.08	0.0	160
FEB											
03...	1.90	0.030	0.020	1.7	1.7	0.120	0.020	0.010	0.12	0.01	--
APR											
06...	1.90	0.060	0.050	0.64	0.70	0.030	0.020	<0.010	0.03	0.02	90
MAY											
12...	1.20	0.030	0.020	0.87	0.90	0.050	0.020	0.020	0.05	0.0	110
JUL											
09...	1.50	[a]0.050	[a]0.060	1.2	1.2	0.030	0.030	0.030	0.03	0.0	--
SEP											
02...	1.50	[a]0.010	[a]0.020	0.39	0.40	0.040	<0.010	<0.010	0.04	--	150

DATE	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)
NOV											
21...	<1	42	<0.5	<1	<1	<3	9	230	<5	6	76
FEB											
03...	--	--	--	--	--	--	--	--	--	--	--
APR											
06...	<1	32	<0.5	<1	<1	<3	<1	100	<5	8	46
MAY											
12...	<1	40	<0.5	1	<1	<3	3	18	<5	7	46
JUL											
09...	--	--	--	--	--	--	--	--	--	--	--
SEP											
02...	<1	65	<0.5	<1	<1	<3	3	4	<5	<4	16

DATE	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)	SEDIMENT, SUSPENDED (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV										
21...	0.1	<10	10	<1	<1.0	160	<6	41	--	--
FEB										
03...	--	--	--	--	--	--	--	--	--	--
APR										
06...	0.3	<10	4	<1	<1.0	64	<6	10	111	81
MAY										
12...	--	<10	5	<1	<1.0	130	<6	28	67	58
JUL										
09...	--	--	--	--	--	--	--	--	104	95
SEP										
02...	0.6	<10	1	<1	4.0	390	<6	4	14	86

(a) Results within limits of analytical precision.

01562000 RAYSTOWN BRANCH JUNIATA RIVER AT SAXTON, PA-Continued

CROSS-SECTION ANALYSIS OF WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)
NOV							
21...	1118	7	971	206	7.53	4.0	13.6
21...	1119	22	971	212	7.80	3.5	13.6
21...	1120	37	971	214	7.80	3.5	13.8
21...	1122	52	971	209	7.85	3.5	13.6
21...	1123	67	971	210	7.85	3.5	13.9
21...	1124	82	971	210	7.86	3.5	13.2
21...	1126	97	971	211	7.86	3.5	13.7
21...	1127	112	971	212	7.88	3.5	13.6
21...	1128	127	971	213	7.90	3.5	13.7
21...	1130	142	971	212	7.90	3.5	12.8
21...	1131	157	971	212	7.96	3.5	12.6

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)
FEB					
03...	0950	210	590	239	7.80
03...	1000	190	590	240	7.90
03...	1010	170	590	240	7.90
03...	1020	150	590	238	7.90
03...	1029	130	590	231	7.80
03...	1040	110	590	228	7.70
03...	1050	90	590	230	7.70
03...	1100	70	590	225	7.70
03...	1110	50	590	208	7.60
03...	1120	30	590	200	7.50

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)
APR							
06...	1100	60	9590	110	6.70	6.5	11.4
06...	1115	120	9560	110	6.80	7.0	11.4
06...	1130	180	9540	125	6.60	7.0	11.4
06...	1145	240	9510	135	6.80	7.0	11.4
06...	1155	300	9480	140	6.80	7.0	11.4

01563100 RAYSTOWN LAKE NEAR HUNTINGDON, PA

LOCATION.--Lat 40°26'06", long 78°00'25", Huntingdon County, Hydrologic Unit 02050303, at Raystown Dam on Raystown Branch Juniata River, 3.5 mi south of Huntingdon, and 5.7 mi upstream from mouth.

DRAINAGE AREA.--959 mi².

PERIOD OF RECORD.--October 1972 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--Reservoir is formed by earthfill dam with a gated spillway in right abutment at elevation 768.6 ft and an ungated spillway, separate from embankment, at elevation 812.0 ft. Storage began November 1972. Capacity at elevation 768.6 ft is 383,500 acre-ft. Capacity at elevation 812.0 ft is 762,000 acre-ft. Conservation pool elevation is 786.0 ft and capacity is 514,000 acre-ft. Lake is used for flood control, low-flow augmentation, and recreation. Figures given herein represent total contents. U.S. Army Corps of Engineers satellite telemeter at station.

COOPERATION.--Records provided by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 589,700 acre-ft, March 7, 1979, elevation, 794.81 ft; minimum, 2,240 acre-ft, March 2, 1973, elevation, 628.80 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 554,890 acre-ft, Apr. 6, elevation, 790.81 ft; minimum, 496,100 acre-ft, Nov. 4, elevation, 783.90 ft.

MONTHEND ELEVATION, IN FEET NGVD, AND CONTENTS AT 2400, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (equivalent in ft³/s/day)
Sept. 30	784.34	499,690	--
Oct. 31	783.98	496,630	- 49.8
Nov. 30	786.69	519,860	+390
Dec. 31	786.33	516,800	- 49.8
CAL YR 1986	--	--	+ 0.4
Jan. 31	785.97	513,740	- 49.8
Feb. 28	786.10	514,850	+ 20.0
Mar. 31	786.80	520,800	+ 96.8
Apr. 30	786.68	519,780	- 17.1
May 31	786.66	519,610	- 2.8
June 30	786.47	518,000	- 27.1
July 31	786.19	515,620	- 38.7
Aug. 31	785.72	511,560	- 66.0
Sept. 30	786.01	514,080	+ 42.4
WTR YR 1987	--	--	+ 19.9

01563200 RAYSTOWN BRANCH JUNIATA RIVER BELOW RAYSTOWN DAM NEAR HUNTINGDON, PA

LOCATION.--Lat 40°25'44", long 77°59'29", Huntingdon County, Hydrologic Unit 02050303, on left bank 1.0 mi downstream from Raystown Dam, 4.0 mi south of Huntingdon, and 4.7 mi upstream from mouth.

DRAINAGE AREA.--960 mi².

PERIOD OF RECORD.--January 1946 to current year. Published as "near Huntingdon" prior to Oct. 1, 1969.

GAGE.--Water-stage recorder. Datum of gage is 597.36 ft above National Geodetic Vertical Datum of 1929 (Corps of Engineers benchmark). Prior to Oct. 1, 1969, water-stage recorder at site 4.3 mi upstream at datum 22.72 ft higher.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since October 1972 by Raystown Dam (station 01563100). National Weather Service satellite telemeter and U.S. Army Corps of Engineers landline telemeter at station.

AVERAGE DISCHARGE.--41 years, 1,142 ft³/s, 16.15 in/yr, adjusted for storage since October 1972.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,500 ft³/s, Nov. 25, 1950, gage height, 16.74 ft, site and datum then in use, from rating curve extended above 16,000 ft³/s on basis of computation of flow-over-dam at peak flow; maximum gage height at present site and datum, 18.54 ft, Apr. 3, 1970; minimum daily discharge, 5.0 ft³/s, Oct. 30, 1957, May 18, 1973.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 18, 1936, reached a stage of 31.0 ft, discharge, 87,000 ft³/s, at previous site and datum, by computation of flow-over-dam.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13,700 ft³/s, Apr. 5, gage height, 13.93 ft; minimum daily, 192 ft³/s, Nov. 5, Aug. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	200	199	1920	812	1070	1240	4170	982	576	371	199	194
2	200	199	1920	812	842	2340	4400	985	575	727	198	193
3	199	199	2310	1010	844	3500	3510	986	575	959	200	193
4	200	193	2860	1250	1360	3520	4540	2220	575	605	199	193
5	199	192	2240	1010	2070	2690	9420	3490	574	371	201	193
6	199	193	1900	838	1800	1860	13700	3250	572	371	198	194
7	199	193	1320	837	1570	1860	13500	2210	571	596	199	193
8	199	193	673	838	1570	1600	13200	1900	571	1860	198	194
9	199	195	686	839	1570	1450	12500	1900	428	1450	199	193
10	199	193	1900	840	1570	1450	6630	1290	291	739	199	193
11	198	194	2660	840	1030	1450	2850	970	291	444	199	194
12	199	193	2220	696	725	1450	2840	969	291	255	199	196
13	199	193	1650	513	725	1450	2840	763	291	316	199	196
14	199	320	1320	513	725	1450	2280	659	291	471	199	196
15	199	493	910	513	725	1450	1890	660	291	636	198	196
16	199	500	909	514	725	1450	1890	657	291	737	198	196
17	199	496	909	513	725	1030	3540	658	291	525	198	197
18	199	499	913	513	725	801	5920	661	291	283	197	456
19	199	500	911	755	725	801	5420	864	289	233	192	737
20	199	502	909	1330	618	685	4100	1580	291	198	195	787
21	199	504	863	2240	539	622	2810	1310	291	198	195	471
22	199	504	834	2640	539	622	1940	975	659	198	196	472
23	199	504	564	2630	539	622	980	727	959	198	196	472
24	199	504	502	2630	539	622	2120	576	608	197	196	459
25	199	504	3020	1530	539	551	2330	576	371	198	196	471
26	199	511	4060	613	539	509	1890	571	372	199	196	472
27	199	512	2900	513	779	509	1550	573	371	199	196	386
28	199	1060	2500	513	941	509	972	576	371	199	197	283
29	199	1930	1450	513	---	509	972	576	370	198	196	283
30	199	1930	812	836	---	681	985	576	371	199	195	284
31	199	---	812	1330	---	1560	---	577	---	199	194	---
TOTAL	6171	14302	49357	31774	26668	40843	135689	35267	12959	14329	6117	9337
MEAN	199	477	1592	1025	952	1318	4523	1138	432	462	197	311
MAX	200	1930	4060	2640	2070	3520	13700	3490	959	1860	201	787
MIN	198	192	502	513	539	509	972	571	289	197	192	193
MEAN‡	149	867	1542	975	972	1415	4506	1135	405	423	131	353
CFSM‡	.16	.90	1.61	1.02	1.01	1.47	4.69	1.18	.42	.44	.14	.37
IN.‡	.18	1.00	1.86	1.18	1.05	1.70	5.23	1.36	.47	.51	.16	.41

CAL YR 1986 TOTAL 354634 MEAN 972 MAX 13200 MIN 184 MEAN‡ 972 CFSM‡ 1.01 IN.‡ 13.75
WTR YR 1987 TOTAL 382813 MEAN 1049 MAX 13700 MIN 192 MEAN‡ 1069 CFSM‡ 1.11 IN.‡ 15.12

‡ Adjusted for change in contents in Raystown Lake.

01563500 JUNIATA RIVER AT MAPLETON DEPOT, PA

LOCATION.--Lat 40°23'32", long 77°56'07", Huntingdon County, Hydrologic Unit 02050304, on right bank 0.2 mi downstream from Scrub Run and 0.3 mi downstream from bridge on State Highway 655 at Mapleton Depot.

DRAINAGE AREA.--2,030 mi².

PERIOD OF RECORD.--October 1937 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WDR PA-73-1: 1936(M).

GAGE.--Water-stage recorder. Datum of gage is 557.31 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated since October 1972 by Raystown Dam (station 01563100) 12 mi upstream. Several measurements of water temperature were made during the year. National Weather Service satellite telemeter and U.S. Army Corps of Engineers and National Weather Service landline telemeters at station.

AVERAGE DISCHARGE.--50 years, 2,514 ft³/s, 16.82 in/yr, adjusted for storage since October 1972.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 125,000 ft³/s, June 23, 1972, gage height, 33.07 ft, from rating curve extended above 39,000 ft³/s on basis of runoff comparison with upstream and downstream stations; minimum, 68 ft³/s, Sept. 13, 1964, gage height, 1.15 ft; minimum daily, 101 ft³/s, Aug. 21, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 18, 1936, reached a stage of 38.2 ft, from floodmark, discharge, 165,000 ft³/s from rating curve extended as explained above.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 30,300 ft³/s, Apr. 5, gage height, 15.97 ft; minimum, 319 ft³/s, Sept. 5, gage height, 1.92 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	543	624	4070	2400	2250	3390	9310	2380	1660	1020	e590	597
2	717	609	3980	2400	1960	6070	8420	2360	1570	1850	e600	583
3	778	636	7070	2380	2370	6820	6700	2530	1680	2710	e610	577
4	2180	587	6690	2620	2950	6230	11400	6350	1940	1830	e800	570
5	1810	711	5470	2310	3680	5170	27200	7300	1680	1160	e1000	485
6	1360	964	4410	2030	3340	3910	26100	6460	1460	1230	e820	566
7	1020	1030	3740	2030	3130	3960	24600	4970	1370	2140	e700	603
8	846	1000	2770	2150	3160	4480	21200	4200	1340	3580	610	701
9	809	3540	3000	2070	3050	4950	18400	3900	1300	2780	591	1130
10	752	3110	5790	2010	2840	4780	12100	3260	1060	1670	837	820
11	727	2210	5830	2050	2460	4220	6550	2630	960	1360	806	667
12	667	2440	5210	1890	1970	3810	6150	2500	960	979	630	733
13	702	2140	4050	1500	1920	3550	6580	2200	1180	943	586	803
14	893	1860	3460	1530	1830	3320	5280	1950	1680	1280	567	685
15	1160	1810	2750	1770	1770	3260	4510	2050	1240	1400	559	620
16	898	1730	2610	2350	1610	3230	4450	2250	1090	1470	547	626
17	769	1620	2510	2170	1690	2750	5850	1900	1020	1260	540	628
18	757	1590	2660	2030	1700	2290	8770	1850	965	872	532	2010
19	736	3060	3070	2300	1620	2230	8130	4000	920	802	523	2100
20	690	2630	2620	3210	1500	2060	6600	4390	972	686	561	1880
21	646	4290	2430	3780	1340	1890	4990	3870	1220	645	507	1120
22	673	3530	2270	4120	1370	1870	4240	3000	1470	657	495	1210
23	629	2820	2010	4080	1460	1790	2760	2560	1870	627	598	1160
24	633	2470	1860	3830	1480	1800	3870	2120	1500	627	610	1080
25	601	2270	5810	2880	1490	1710	4440	1950	993	615	532	1040
26	661	3250	7890	1940	1420	1730	3610	1860	1020	633	483	1030
27	680	7900	5860	1590	1650	1700	3330	1900	1270	e660	569	934
28	696	4990	4870	1490	1940	1610	2670	1870	1110	e650	669	786
29	687	5140	4000	1600	---	1670	2600	1780	991	e620	999	737
30	659	4490	2690	1840	---	1930	2510	e1690	969	e610	867	960
31	622	---	2550	2480	---	5420	---	1600	---	e590	637	---
TOTAL	26001	75051	124000	72830	58950	103600	263320	93630	38460	37956	19975	27441
MEAN	839	2502	4000	2349	2105	3342	8777	3020	1282	1224	644	915
MAX	2180	7900	7890	4120	3680	6820	27200	7300	1940	3580	1000	2100
MIN	543	587	1860	1490	1340	1610	2510	1600	920	590	483	485
MEAN‡	789	2892	3950	2299	2125	3439	8760	3017	1255	1185	578	957
CFSM‡	.39	1.42	1.95	1.13	1.05	1.69	4.32	1.49	.62	.58	.28	.47
IN.‡	.45	1.58	2.25	1.30	1.09	1.95	4.82	1.72	.69	.67	.32	.52

CAL YR 1986 TOTAL 900467 MEAN 2467 MAX 22600 MIN 429 MEAN‡ 2467 CFSM‡ 1.22 IN.‡ 16.50
WTR YR 1987 TOTAL 941214 MEAN 2579 MAX 27200 MIN 483 MEAN‡ 2599 CFSM‡ 1.28 IN.‡ 17.38

e Estimated
‡ Adjusted for change in contents in Raystown Lake.

01564500 AUGHWICK CREEK NEAR THREE SPRINGS, PA

LOCATION.--Lat 40°12'45", long 77°55'32", Huntingdon County, Hydrologic Unit 02050304, on right bank 10 ft downstream from bridge on State Highway 994, 300 ft upstream from East Broad Top Railroad bridge, 350 ft upstream from Three Springs Creek, and 3.5 mi northeast of Three Springs. Records include flow of Three Springs Creek.

DRAINAGE AREA.--205 mi², includes that of Three Springs Creek.

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

GAGE.--Water-stage recorder. Datum of gage is 618.65 ft above National Geodetic Vertical Datum of 1929, unadjusted.

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

AVERAGE DISCHARGE.--49 years, 245 ft³/s, 16.23 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,700 ft³/s, June 22, 1972, gage height, 19.20 ft, from rating curve extended above 7,100 ft³/s on basis of contracted-opening measurement of peak flow; minimum, 0.8 ft³/s, Sept. 2, 3, 4, 11, 12, 13, 1966, gage height, 1.74 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1, 1889, reached a stage of about 19.3 ft, discharge, about 24,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,100 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Dec. 25	0800	2,270	7.95	Apr. 4	2315	*9,800	*14.61

Minimum discharge, 5.6 ft³/s, Aug. 21, 22, gage height, 2.11 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	18	122	214	e140	752	1140	196	64	30	9.9	13
2	17	18	115	e200	e160	1150	740	191	62	36	22	11
3	22	18	569	e180	e180	890	549	246	76	59	27	10
4	30	18	439	e160	e200	675	3730	704	116	57	14	9.2
5	26	23	287	e130	e270	517	4980	820	90	37	19	8.4
6	22	40	209	e130	e320	424	2880	599	64	30	28	12
7	19	56	168	e130	e300	376	2460	473	54	73	28	16
8	16	40	145	e130	e300	364	1490	380	48	111	21	31
9	14	42	243	e130	e270	362	1000	312	49	52	17	43
10	13	52	604	e130	e230	317	746	266	48	39	15	41
11	12	53	427	e133	e200	261	583	229	45	36	14	47
12	12	70	329	e133	e180	236	527	199	40	86	12	53
13	15	75	256	e130	e160	217	582	171	45	259	11	181
14	26	56	179	e120	e140	193	429	147	57	105	10	112
15	27	47	e170	e150	e130	190	379	139	54	75	9.2	55
16	26	57	e150	272	e120	185	384	129	42	56	8.4	40
17	23	54	e140	236	e110	161	846	113	35	42	7.8	38
18	18	48	e140	211	e100	147	1060	104	31	35	7.1	451
19	16	152	232	289	e100	137	814	130	29	30	6.5	243
20	15	145	177	570	e100	129	634	236	41	26	6.0	166
21	14	324	156	466	e100	123	507	207	53	24	5.6	150
22	14	225	133	376	e100	116	426	143	53	20	8.0	114
23	15	140	119	318	e100	109	359	125	55	18	8.9	93
24	15	114	247	248	e105	102	377	151	49	16	9.2	77
25	15	99	1640	e250	e105	100	362	119	38	15	9.2	60
26	18	138	934	e190	e108	117	284	102	31	14	9.7	49
27	21	448	626	e170	e110	109	249	104	32	13	12	42
28	26	286	472	e160	e110	104	251	110	34	12	15	37
29	26	201	360	e150	---	109	240	94	31	11	21	33
30	21	153	301	e140	---	135	230	78	30	11	30	45
31	18	---	258	e130	---	895	---	70	---	10	23	---
TOTAL	583	3210	10347	6376	4548	9702	29238	7087	1496	1438	444.5	2280.6
MEAN	18.8	107	334	206	162	313	975	229	49.9	46.4	14.3	76.0
MAX	30	448	1640	570	320	1150	4980	820	116	259	30	451
MIN	11	18	115	120	100	100	230	70	29	10	5.6	8.4
CFSM	.09	.52	1.63	1.00	.79	1.53	4.75	1.12	.24	.23	.07	.37
IN.	.11	.58	1.88	1.16	.83	1.76	5.31	1.29	.27	.26	.08	.41

CAL YR 1986 TOTAL 74176.7 MEAN 203 MAX 6290 MIN 5.4 CFSM .99 IN. 13.46
WTR YR 1987 TOTAL 76750.0 MEAN 210 MAX 4980 MIN 5.6 CFSM 1.03 IN. 13.93

e Estimated

01567000 JUNIATA RIVER AT NEWPORT, PA

LOCATION.--Lat 40°28'42", long 77°07'46", Perry County, Hydrologic Unit 02050304, on right bank at downstream side of bridge on State Highway 34 at Newport and 1,000 ft upstream from Little Buffalo Creek.

DRAINAGE AREA.--3,354 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1899 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 756: Drainage area. WSP 781: 1902(M). WSP 1302: 1915-17. WSP 1502: 1899-1908, 1914, 1924, 1936. WSP 1722: 1916.

GAGE.--Water-stage recorder. Datum of gage is 363.93 ft above National Geodetic Vertical Datum of 1929. Prior to July 16, 1929, nonrecording gage at same site and datum.

REMARKS.--Records fair. Flow regulated since October 1972 by Raystown Dam (station 01563100) about 75 mi upstream. National Weather Service satellite and landline telemeters at station.

AVERAGE DISCHARGE.--88 years, 4,291 ft³/s, 17.37 in/yr, adjusted for storage since October 1972.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 190,000 ft³/s, Mar. 19, 1936, gage height, 34.24 ft, from floodmark in gage shelter, from rating curve extended above 100,000 ft³/s; minimum, 195 ft³/s, July 27, 1966, gage height, 2.81 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1, 1889, reached a stage of 35.9 ft, from floodmarks, discharge, 209,000 ft³/s, from rating curve extended above 100,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 43,000 ft³/s, Apr. 5, gage height, 15.54 ft; minimum daily discharge, 562 ft³/s, Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	562	826	6400	4490	3850	4360	9950	3700	2550	1280	789	1140
2	590	810	5860	4290	3490	8590	13200	3540	2550	1440	781	939
3	625	793	10300	4160	3180	11500	11200	3490	2550	2210	788	868
4	1000	797	12400	3910	3750	11100	10800	4990	2550	3300	831	825
5	1820	859	10200	3850	4490	9550	30800	10300	2880	2630	986	801
6	2540	1170	8220	3580	5290	7860	42300	10600	2570	1670	1240	834
7	1650	1410	6620	e3100	5070	6240	38000	9020	2510	1590	1160	873
8	1200	1670	5780	e2900	4870	6250	32100	7110	2290	1610	1090	1060
9	927	2040	4920	e3000	4850	6940	26500	5980	2030	3730	1010	1110
10	824	3930	5620	e2900	4530	7360	22700	5420	1900	3630	974	1120
11	764	4620	8700	e2800	4250	6910	14000	4730	1710	2050	998	1440
12	734	3660	8440	e2600	4030	6070	10000	3920	1510	1830	1070	1310
13	747	3520	7460	e2500	3310	5480	9990	3630	1480	1480	1040	2230
14	814	3190	5920	e2400	3160	5070	9710	3350	1580	1360	887	1730
15	974	2740	5180	2620	2890	4790	7830	2970	2020	1490	821	1510
16	1180	2560	4400	3520	2760	4670	6860	3120	1870	1620	795	1320
17	1200	2430	4080	4270	2730	4530	7030	3170	1580	1700	775	1150
18	983	2380	4110	4080	2560	4100	9530	2750	1450	1650	764	1540
19	886	3370	4700	3870	2560	3480	12100	3730	1370	1370	748	2850
20	869	4570	4900	4190	2430	3340	10700	5840	1300	1110	737	3850
21	852	6300	4420	5210	2340	3160	8900	6810	1290	1030	709	3220
22	815	7140	3980	5620	2160	2880	7110	5850	1550	929	764	2590
23	797	6050	3650	5890	2210	2760	6180	4670	1700	896	822	2100
24	786	4840	3540	6020	2330	2670	4690	4470	2170	850	763	1850
25	762	4180	8120	5530	2410	2590	5730	3680	2170	838	760	1730
26	809	3930	13400	4820	2390	2710	6170	3320	1540	871	805	1570
27	858	8320	12200	3850	2380	2650	5090	3080	1360	945	799	1470
28	890	11500	9350	3050	2330	2610	4770	2960	1370	933	803	1420
29	905	8030	7730	2580	---	2500	4090	2900	1480	901	991	1290
30	895	7480	6500	2920	---	2440	3970	2670	1320	821	1170	1240
31	868	---	4850	2950	---	3160	---	2570	---	798	1360	---
TOTAL	30126	115115	211950	117470	92600	158320	392000	144340	56200	48562	28030	46980
MEAN	972	3837	6837	3789	3307	5107	13070	4656	1873	1567	904	1566
MAX	2540	11500	13400	6020	5290	11500	42300	10600	2880	3730	1360	3850
MIN	562	793	3540	2400	2160	2440	3970	2570	1290	798	709	801
MEAN‡	1922	4227	6787	3739	3327	5204	13050	4653	1846	1528	838	1608
CFSM‡	.27	1.26	2.02	1.11	.99	1.55	3.89	1.39	.55	.46	.25	.48
IN.‡	.31	1.41	2.33	1.28	1.03	1.79	4.34	1.60	.61	.53	.29	.54

CAL YR 1986 TOTAL 1445507 MEAN 3960 MAX 41400 MIN 484 MEAN‡ 3961 CFSM‡ 1.18 IN.‡ 16.03
WTR YR 1987 TOTAL 1441693 MEAN 3950 MAX 42300 MIN 562 MEAN‡ 3970 CFSM‡ 1.18 IN.‡ 16.07

e Estimated
‡ Adjusted for change in contents in Raystown Lake.

01567000 JUNIATA RIVER AT NEWPORT, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1945 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1964 to current year.
WATER TEMPERATURE: October 1944 to September 1953, April 1958 to September 1962, October 1964 to current year.
SUSPENDED-SEDIMENT DISCHARGE: January 1951 to current year.

INSTRUMENTATION.--Sediment sampler and shelter attached to downstream bridge rail 447 ft from left bank.

REMARKS.--Once daily water temperatures and laboratory specific conductance values obtained from sediment samples.

COOPERATION.--Water-quality samples collected by Susquehanna River Basin Commission and analyzed by the Pa. Department of Environmental Resources.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: (Water years 1965-86) Maximum daily, 558 microsiemens, Oct. 27, 1969; minimum daily, 107 microsiemens, Dec. 2, 1984.
WATER TEMPERATURE: Maximum daily, 33.0°C, July 23, 24, 1987; minimum daily, 0.0°C on many days during winter periods based on unpublished records.
SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,130 mg/L, Mar. 2, 1954; minimum daily mean, <1 mg/L on many days.
SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 365,000 tons, June 23, 1972; minimum daily, <.01 ton on many days.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum daily, 33.0°C, July 23, 24; minimum daily, 0.0°C on several days during Jan. and Feb. based on unpublished records.
SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 290 mg/L, Apr. 5; minimum daily mean, 1 mg/L on many days.
SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 28,600 tons, Apr. 6; minimum daily, 2.2 tons, Oct. 22.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)
OCT										
08...	1515	1130	285	--	18.0	1.10	1.10	0.010	0.010	0.55
NOV										
05...	1345	842	260	8.20	9.0	0.940	0.940	0.020	0.020	0.32
20...	1230	4760	205	7.25	3.5	1.60	1.60	0.050	0.050	0.57
20...	1945	5260	215	7.60	4.5	1.50	1.50	0.055	0.055	0.53
20...	2245	5490	218	7.40	3.5	1.68	1.66	0.055	0.055	0.60
21...	0426	6130	195	7.45	5.0	1.82	1.80	0.065	0.065	0.43
21...	0950	6400	205	7.60	4.5	1.78	1.74	0.055	0.055	0.53
21...	1647	6550	215	7.90	5.0	1.76	1.76	0.065	0.065	0.74
21...	2200	6340	193	7.70	4.0	1.64	1.60	0.060	0.055	0.52
22...	0745	6920	222	8.70	3.5	1.70	1.60	0.060	0.060	0.52
22...	1850	7610	205	8.00	3.0	1.50	1.50	0.065	0.060	0.37
23...	1300	5890	205	7.50	6.0	1.48	1.46	0.070	0.055	[a]0.45
24...	1200	4820	178	--	6.0	1.62	1.60	0.060	0.060	0.58
24...	1745	4630	183	--	6.0	1.60	1.60	0.040	0.040	0.40
25...	1300	4130	198	7.80	7.0	1.60	1.60	0.040	0.035	0.40
DEC										
16...	1400	4380	190	7.80	4.0	1.72	1.72	0.015	0.010	0.32
JAN										
14...	1600	2400	227	8.20	--	1.62	1.62	0.020	0.020	0.31
FEB										
18...	1530	2520	240	8.90	--	1.62	1.62	0.010	0.010	0.41
MAR										
19...	1330	3470	200	8.80	9.0	1.24	1.24	<0.010	<0.010	--
30...	1339	2420	224	8.75	13.0	1.00	1.00	0.025	0.015	0.42
31...	1240	2930	217	8.25	11.0	1.00	1.00	0.070	0.070	0.64
31...	2015	4100	205	8.20	9.0	1.02	1.02	0.085	0.085	0.79

(a) Results within limits of analytical precision.

01567000 JUNIATA RIVER AT NEWPORT, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)
APR										
01...	0500	6850	220	8.50	6.5	1.04	1.02	0.165	0.165	0.36
01...	1100	9370	200	8.20	8.0	0.940	0.940	0.095	0.090	1.0
01...	1615	12400	190	7.90	9.0	0.880	0.880	0.120	0.120	0.92
01...	2115	13600	180	7.90	8.0	0.860	0.860	0.095	0.090	0.85
02...	0445	12700	160	8.50	6.5	0.980	0.980	0.100	0.100	0.71
02...	1030	13200	165	7.80	7.0	0.940	0.940	0.090	0.090	1.2
02...	1545	13500	185	7.75	8.0	0.920	0.920	0.090	0.090	0.74
02...	2215	13100	175	7.85	6.0	0.960	0.960	0.075	0.075	0.70
03...	0615	12200	180	7.85	5.0	0.960	0.960	0.055	0.055	0.65
03...	1630	10200	173	7.90	5.5	1.18	1.18	0.060	0.060	0.30
04...	0145	9760	180	7.80	7.0	1.18	1.18	0.055	0.055	0.36
04...	0745	9730	200	8.30	7.0	1.20	1.20	0.070	0.070	0.37
04...	1100	9910	230	8.60	9.0	1.22	1.22	0.055	0.050	0.18
04...	1500	10600	170	8.00	9.0	1.22	1.22	0.050	0.050	0.33
04...	2030	12500	165	8.00	8.0	1.22	1.22	0.060	0.060	0.46
05...	0130	16200	160	7.00	6.5	1.22	1.22	0.060	0.060	0.69
05...	1020	29400	140	7.60	7.0	1.22	1.22	0.090	0.090	0.66
05...	1435	35700	114	7.75	6.5	1.18	1.14	0.105	0.105	0.97
05...	2100	42000	104	7.70	6.0	1.18	1.12	0.145	0.145	0.80
06...	0245	43000	170	7.75	6.5	1.20	1.20	0.160	0.160	0.84
06...	1420	42500	150	7.76	--	1.48	1.48	0.190	0.140	0.71
06...	2010	41500	155	7.80	--	1.50	1.50	0.120	0.120	0.53
07...	1500	37300	165	7.60	9.5	1.46	1.46	0.120	0.100	0.39
08...	1400	31500	173	7.90	9.0	1.46	1.46	a0.090	a0.120	0.44
09...	1240	26400	185	7.90	9.0	1.50	1.50	0.080	0.070	0.73
10...	1340	22700	200	7.70	10.5	1.42	--	0.025	0.025	0.42
13...	0945	9910	185	7.80	11.5	1.60	1.60	0.035	0.035	0.55
28...	1440	4790	195	8.00	14.0	1.42	1.40	0.005	0.005	0.37
MAY										
19...	1500	4240	220	8.20	17.5	1.60	1.06	0.080	0.080	1.2
JUN										
08...	1500	2260	200	8.70	27.0	1.40	1.40	0.030	0.020	0.34
JUL										
07...	1400	1630	240	8.40	25.5	1.46	1.40	0.050	0.050	0.39
AUG										
04...	1400	856	268	9.00	26.0	--	--	0.015	0.010	0.86
SEP										
08...	1315	1080	265	8.30	23.0	0.860	0.860	0.095	0.085	0.54
08...	1830	1100	255	8.30	22.0	0.880	0.880	0.075	0.075	0.56
09...	0500	1130	260	8.30	21.5	0.920	0.920	0.080	0.080	0.54
17...	1215	1130	285	7.70	22.5	1.46	1.44	0.060	0.040	1.2
17...	2330	1220	305	8.40	22.0	1.22	1.16	0.090	0.090	0.81
18...	0630	1440	270	8.20	22.0	1.40	1.38	0.060	0.060	0.94
18...	1110	1590	240	8.20	23.0	1.42	1.40	0.060	0.050	0.84
18...	1400	1630	250	8.30	23.0	1.38	1.38	0.060	0.060	0.94
19...	0730	2770	210	7.90	19.0	1.56	1.52	0.100	0.080	1.5
19...	1745	2960	215	7.80	19.0	1.50	1.46	0.100	0.100	1.7
20...	0730	4210	240	7.70	18.0	1.42	1.42	0.100	0.100	1.1
20...	1700	3500	240	7.90	19.0	1.44	1.34	0.120	0.090	1.1
21...	1135	3270	283	7.80	19.0	1.56	1.52	0.120	0.100	0.88
21...	1645	3140	278	7.70	20.0	1.56	1.56	0.120	0.110	1.1
22...	1100	2620	272	7.80	18.0	1.66	1.64	0.080	0.080	0.86
22...	1655	2450	260	7.90	20.0	1.52	1.52	0.080	0.070	0.88

(a) Results within limits of analytical precision.

01567000 JUNIATA RIVER AT NEWPORT, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHOROUS TOTAL (MG/L AS P)	PHOSPHOROUS DISSOLVED (MG/L AS P)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
OCT										
08...	0.53	0.56	0.54	1.7	0.200	0.150	0.096	5.8	9	29
NOV										
05...	--	0.34	<0.20	1.3	0.070	0.060	0.035	7.2	<1	--
20...	0.57	0.62	0.62	2.2	0.120	0.070	0.048	4.4	32	406
20...	0.53	0.58	0.58	2.1	0.120	0.060	0.039	3.9	52	739
20...	0.60	0.66	0.66	2.3	0.130	0.060	0.038	3.5	52	765
21...	0.43	0.50	0.50	2.3	0.190	0.060	0.038	4.3	104	1720
21...	0.46	0.58	0.52	2.4	0.170	0.060	0.044	4.2	66	1150
21...	0.53	0.81	0.60	2.6	0.140	0.080	0.056	4.3	102	1800
21...	0.48	0.58	0.54	2.2	0.120	0.080	0.052	4.3	92	1570
22...	0.28	0.58	0.34	2.3	0.120	0.070	0.047	4.2	49	919
22...	0.30	0.44	0.36	1.9	0.150	0.060	0.038	3.9	60	1230
23...	[a]0.46	0.52	0.52	2.0	0.130	0.060	0.043	3.5	36	574
24...	0.54	0.64	0.60	2.3	0.060	0.060	0.021	3.1	20	267
24...	0.34	0.44	0.38	2.0	0.060	0.050	<0.002	3.5	36	450
25...	0.38	0.44	0.42	2.0	0.060	0.060	0.026	2.3	12	134
DEC										
16...	0.29	0.34	0.30	2.1	0.050	0.040	0.023	2.8	4	45
JAN										
14...	0.19	0.33	0.21	1.9	0.050	0.040	0.036	4.7	6	36
FEB										
18...	0.29	0.42	0.30	2.0	0.050	0.040	0.017	6.9	3	21
MAR										
19...	--	0.36	0.32	1.6	0.040	0.040	0.005	5.1	5	45
30...	0.26	0.45	0.28	1.5	0.110	0.070	0.008	--	11	69
31...	0.64	0.71	0.71	1.7	0.110	0.070	0.015	--	55	434
31...	0.54	0.88	0.63	1.9	0.110	0.080	0.010	--	29	319
APR										
01...	0.22	0.53	0.39	1.6	0.130	0.120	0.030	--	67	1240
01...	0.59	1.1	0.68	2.1	0.130	0.100	0.006	--	96	2440
01...	0.61	1.0	0.73	1.9	0.180	0.060	0.037	--	108	3600
01...	0.42	0.94	0.51	1.8	0.130	0.060	0.004	--	105	3870
02...	0.41	0.81	0.51	1.8	0.130	0.060	0.045	--	89	3060
02...	0.32	1.3	0.41	2.3	0.120	0.050	0.008	--	81	2880
02...	0.31	0.83	0.40	1.7	0.130	0.050	0.015	--	75	2730
02...	0.34	0.78	0.41	1.7	0.120	0.040	0.015	--	59	2090
03...	0.22	0.70	0.28	1.7	0.120	0.030	0.015	--	40	1320
03...	0.22	0.36	0.28	1.5	0.120	0.030	0.011	4.8	23	647
04...	0.26	0.42	0.32	1.6	0.110	0.040	0.014	5.4	22	590
04...	0.27	0.44	0.34	1.6	0.100	0.040	0.009	5.1	13	344
04...	0.16	0.24	0.21	1.5	0.110	0.040	0.002	5.4	18	476
04...	0.29	0.38	0.34	1.6	0.110	0.040	0.016	4.5	23	655
04...	0.20	0.52	0.26	1.7	0.120	0.040	0.018	4.0	32	1070
05...	0.32	0.75	0.38	2.0	0.150	0.040	0.002	6.2	78	3410
05...	0.37	0.75	0.46	2.0	0.230	0.040	0.004	6.1	310	24600
05...	0.64	1.1	0.75	2.3	0.380	0.040	0.004	6.9	392	37800
05...	0.50	0.94	0.65	2.1	0.280	0.050	0.004	8.4	517	58600
06...	0.30	1.0	0.46	2.2	0.390	0.050	0.004	8.2	493	57300
06...	--	0.90	0.24	2.4	0.130	0.040	0.002	5.5	256	29400
06...	0.36	0.65	0.48	2.1	0.110	0.040	0.002	3.9	150	16900
07...	0.33	0.51	0.43	2.0	0.080	0.040	0.002	3.5	79	7990
08...	0.26	0.53	0.38	2.0	0.090	0.030	<0.002	4.0	53	4500
09...	0.63	0.81	0.70	2.3	0.110	0.030	<0.002	4.3	47	3340
10...	0.29	0.45	0.31	1.9	0.070	0.040	0.002	5.7	32	1960
13...	0.27	0.58	0.31	2.2	0.070	0.040	0.006	7.1	28	747
28...	0.30	0.38	0.30	1.8	0.080	0.040	0.016	7.8	14	182
MAY										
19...	0.98	1.3	1.1	2.9	0.070	[a]<0.010	[a]<0.020	1.9	41	473
JUN										
08...	0.24	0.37	0.26	1.8	0.120	0.090	0.048	1.5	--	--
JUL										
07...	0.37	0.44	0.42	1.9	0.210	0.130	0.052	3.5	13	56
AUG										
04...	0.43	0.88	0.44	--	0.120	0.070	0.004	4.7	11	26
SEP										
08...	0.43	0.64	0.52	1.5	0.100	0.070	0.029	1.3	9	26
08...	0.35	0.64	0.42	1.5	0.100	0.060	0.022	4.1	12	36
09...	0.28	0.62	0.36	1.5	0.110	0.060	0.032	2.7	20	61
17...	0.76	1.2	0.80	2.7	0.080	0.070	0.024	2.3	34	104
17...	0.71	0.90	0.80	2.1	0.090	0.070	0.052	1.9	54	178
18...	0.74	1.0	0.80	2.4	0.100	0.080	0.015	2.6	33	128
18...	0.55	0.90	0.60	2.3	0.080	0.070	0.007	3.0	43	185
18...	0.64	1.0	0.70	2.4	0.100	0.060	0.008	2.0	36	158
19...	0.92	1.6	1.0	3.2	0.120	0.080	0.008	2.4	88	658
19...	0.70	1.8	0.80	3.3	0.120	0.080	0.006	2.6	57	456
20...	0.70	1.2	0.80	2.6	0.210	0.090	0.006	1.8	68	773
20...	0.71	1.2	0.80	2.7	0.120	0.080	0.055	1.8	51	482
21...	0.60	1.0	0.70	2.6	0.110	0.080	0.007	2.8	45	397
21...	0.79	1.2	0.90	2.8	0.110	0.090	0.026	3.1	35	297
22...	0.44	0.94	0.52	2.6	0.120	0.100	0.063	3.0	34	241

01567000 JUNIATA RIVER AT NEWPORT, PA--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25°C, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	329	307	186	210	247	252	---	211	233	282	298	322
2	310	309	190	214	232	---	---	208	237	276	285	315
3	310	315	180	217	231	---	---	208	236	270	285	326
4	313	313	184	220	236	---	---	197	235	247	278	307
5	304	299	188	229	243	---	---	189	240	249	274	324
6	310	286	186	228	252	---	---	186	227	251	293	312
7	321	288	188	235	232	---	---	169	240	251	278	305
8	271	280	192	248	231	---	---	171	235	261	293	296
9	283	280	198	246	235	---	---	176	245	258	299	309
10	268	275	197	240	233	---	---	181	247	238	296	315
11	276	241	199	242	230	---	---	184	255	210	302	314
12	280	225	182	242	229	---	---	193	---	220	306	318
13	274	214	186	244	233	---	---	199	266	247	306	301
14	278	220	188	245	245	---	---	218	262	266	289	351
15	277	224	197	246	---	---	---	208	262	277	289	343
16	277	233	203	248	---	---	---	206	273	292	275	312
17	280	231	205	238	252	---	---	211	---	285	261	318
18	280	227	207	233	258	---	---	220	251	270	260	311
19	296	224	207	220	256	---	---	218	269	260	286	278
20	281	218	210	217	256	---	---	210	255	258	286	280
21	297	205	211	219	---	---	---	195	255	271	271	292
22	307	201	212	---	258	---	---	195	251	279	269	273
23	293	203	213	---	252	---	---	193	265	283	271	264
24	289	195	218	---	262	---	---	200	---	278	282	255
25	295	201	186	---	229	---	---	202	253	279	296	262
26	295	205	177	---	268	---	---	212	248	272	321	263
27	295	189	---	---	265	---	---	223	---	281	326	267
28	302	175	188	255	261	---	---	225	244	292	311	265
29	305	172	192	---	---	---	---	229	255	301	313	282
30	301	183	197	---	---	---	207	227	---	298	299	278
31	307	---	201	247	---	---	---	228	---	299	292	---
MEAN	294	238	---	---	---	---	---	203	---	268	290	299

WATER TEMPERATURE, DEGREES CENTIGRADE, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25.0	11.0	5.5	3.5	1.0	5.0	9.5	14.0	27.5	28.0	30.0	23.0
2	25.0	12.0	5.0	2.0	3.0	5.0	8.5	14.5	27.5	26.0	28.0	23.0
3	21.5	12.0	7.0	3.0	3.0	5.0	7.0	13.0	24.0	28.0	29.5	24.0
4	22.0	11.0	6.5	2.0	4.0	4.0	9.0	13.0	24.0	28.0	31.0	25.0
5	21.5	8.0	5.0	1.0	3.0	5.0	7.0	13.0	25.0	28.0	27.0	21.0
6	18.0	9.0	5.5	1.5	3.0	5.5	7.0	15.0	23.5	26.0	28.0	20.0
7	17.0	8.5	5.5	2.0	3.0	7.0	8.5	15.5	24.0	26.0	26.0	21.0
8	17.0	9.0	6.0	2.0	3.0	9.0	9.0	16.0	26.0	30.0	29.5	21.0
9	18.0	11.5	5.5	3.0	1.0	8.5	9.5	17.5	25.0	29.0	28.0	24.0
10	15.0	9.5	7.0	2.0	2.0	6.0	11.0	19.5	24.5	27.5	27.5	25.5
11	15.0	7.0	5.0	2.5	2.5	5.0	12.0	19.5	25.0	30.0	27.0	24.0
12	14.0	8.5	5.0	3.0	3.0	6.0	10.0	20.0	24.0	31.0	27.0	22.5
13	15.0	5.5	3.5	3.5	2.5	6.0	11.0	19.0	24.0	31.0	27.0	22.0
14	15.5	4.5	2.0	4.0	2.0	5.5	12.0	19.0	27.0	28.0	28.0	21.0
15	14.0	4.0	3.5	4.0	---	7.0	11.0	20.0	27.5	27.0	29.5	25.5
16	13.0	5.0	3.5	5.0	---	6.5	10.5	21.0	28.0	27.0	30.5	24.0
17	12.0	6.0	4.0	3.0	1.5	7.0	11.0	23.0	---	28.0	31.5	24.5
18	12.0	6.5	4.5	3.0	3.0	8.0	12.0	23.0	29.0	29.0	31.5	24.0
19	13.0	5.0	4.5	3.0	3.0	9.0	13.0	18.5	30.5	29.0	30.0	23.0
20	13.5	5.5	4.0	3.0	4.0	9.0	14.0	15.5	28.0	31.0	29.0	19.0
21	14.5	4.0	3.0	2.5	---	9.0	16.0	15.5	25.0	[a]32.0	29.0	18.5
22	13.0	6.0	3.5	---	4.5	10.0	18.0	18.0	27.5	[a]32.5	26.0	20.0
23	13.0	6.0	3.0	---	3.0	11.5	15.0	21.0	28.0	[a]33.0	24.5	19.0
24	13.5	7.0	2.5	---	4.0	12.5	14.0	23.0	---	[a]33.0	23.0	20.0
25	12.0	7.0	3.5	---	4.0	10.0	14.5	20.0	28.5	[a]32.0	23.0	19.5
26	12.0	6.0	4.0	---	4.0	11.5	14.0	19.0	24.5	28.0	21.0	19.0
27	14.0	8.0	---	---	4.0	12.0	14.0	18.0	---	30.5	23.0	21.0
28	15.0	6.0	4.5	---	3.5	12.0	12.0	22.5	24.0	30.0	21.0	22.0
29	15.0	8.0	4.0	---	---	14.0	13.0	25.0	26.0	30.0	22.0	21.0
30	15.0	7.5	5.0	.5	---	13.0	13.0	27.0	---	30.5	24.0	21.0
31	13.0	---	4.0	1.0	---	11.5	---	26.0	---	30.5	23.5	---
MEAN	15.7	7.5	---	---	---	8.3	11.5	18.9	---	29.3	27.0	21.9

(a) Accuracy of measurements verified.

01567000 JUNIATA RIVER AT NEWPORT, PA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	562	5	7.6	826	3	6.7	6400	13	225
2	590	5	8.0	810	3	6.6	5860	9	142
3	625	6	10	793	3	6.4	10300	43	1260
4	1000	6	16	797	2	4.3	12400	48	1610
5	1820	12	72	859	2	4.6	10200	33	909
6	2540	21	144	1170	4	13	8220	14	311
7	1650	8	36	1410	5	19	6620	7	125
8	1200	5	16	1670	2	9.0	5780	6	94
9	927	5	13	2040	7	39	4920	7	93
10	824	5	11	3930	46	488	5620	11	167
11	764	4	8.3	4620	48	599	8700	24	564
12	734	4	7.9	3660	27	267	8440	20	456
13	747	3	6.1	3520	13	124	7460	10	201
14	814	3	6.6	3190	9	78	5920	6	96
15	974	3	7.9	2740	5	37	5180	4	56
16	1180	8	25	2560	2	14	4400	3	36
17	1200	11	36	2430	3	20	4080	3	33
18	983	3	8.0	2380	2	13	4110	4	44
19	886	2	4.8	3370	13	118	4700	9	114
20	869	1	2.3	4570	28	345	4900	10	132
21	852	1	2.3	6300	48	821	4420	4	48
22	815	1	2.2	7140	54	1050	3980	3	32
23	797	2	4.3	6050	35	572	3650	3	30
24	786	2	4.2	4840	16	209	3540	2	19
25	762	2	4.1	4180	9	102	8120	34	1320
26	809	3	6.6	3930	13	138	13400	67	2480
27	858	2	4.6	8320	87	1950	12200	41	1350
28	890	3	7.2	11500	127	3940	9350	16	404
29	905	3	7.3	8030	110	2380	7730	10	209
30	895	3	7.2	7480	33	666	6500	7	123
31	868	4	9.4	---	---	---	4850	4	52
TOTAL	30126	---	505.9	115115	---	14039.6	211950	---	12735
		JANUARY			FEBRUARY			MARCH	
1	4490	4	48	3850	5	52	4360	10	118
2	4290	3	35	3490	2	19	8590	41	980
3	4160	3	34	3180	1	8.6	11500	44	1370
4	3910	2	21	3750	3	30	11100	26	779
5	3850	3	31	4490	5	61	9550	14	361
6	3580	3	29	5290	6	86	7860	7	149
7	3100	2	17	5070	5	68	6240	6	101
8	2900	3	23	4870	5	66	6250	7	118
9	3000	3	24	4850	7	92	6940	11	206
10	2900	2	16	4530	6	73	7360	10	199
11	2800	3	23	4250	3	34	6910	8	149
12	2600	4	28	4030	4	44	6070	6	98
13	2500	4	27	3310	4	36	5480	5	74
14	2400	3	19	3160	3	26	5070	4	55
15	2620	2	14	2890	3	23	4790	3	39
16	3520	3	29	2760	2	15	4670	2	25
17	4270	6	69	2730	1	7.4	4530	2	24
18	4080	4	44	2560	1	6.9	4100	2	22
19	3870	3	31	2560	1	6.9	3480	1	9.4
20	4190	4	45	2430	2	13	3340	2	18
21	5210	7	98	2340	2	13	3160	2	17
22	5620	10	152	2160	2	12	2880	1	7.8
23	5890	12	191	2210	4	24	2760	1	7.5
24	6020	12	195	2330	4	25	2670	2	14
25	5530	11	164	2410	2	13	2590	2	14
26	4820	9	117	2390	2	13	2710	2	15
27	3850	8	83	2380	1	6.4	2650	2	14
28	3050	7	58	2330	1	6.3	2610	1	7.0
29	2580	5	35	---	---	---	2500	1	6.8
30	2920	4	32	---	---	---	2440	2	13
31	2950	3	24	---	---	---	3160	10	85
TOTAL	117470	---	1756	92600	---	880.5	158320	---	5095.5

01567000 JUNIATA RIVER AT NEWPORT, PA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		APRIL			MAY			JUNE	
1	9950	74	2180	3700	18	180	2550	17	117
2	13200	62	2210	3540	18	172	2550	19	131
3	11200	26	786	3490	18	170	2550	21	145
4	10800	22	642	4990	24	323	2550	23	158
5	30800	307	29400	10300	54	1540	2880	28	218
6	42300	260	29900	10600	44	1260	2570	23	160
7	38000	70	7180	9020	30	731	2510	20	136
8	32100	46	3990	7110	21	403	2290	19	117
9	26500	35	2500	5980	15	242	2030	17	93
10	22700	28	1720	5420	14	205	1900	16	82
11	14000	25	945	4730	15	192	1710	15	69
12	10000	23	621	3920	12	127	1510	13	53
13	9990	22	593	3630	12	118	1480	10	40
14	9710	20	524	3350	10	90	1580	9	38
15	7830	21	444	2970	9	72	2020	11	60
16	6860	19	352	3120	9	76	1870	11	56
17	7030	15	285	3170	10	86	1580	12	51
18	9530	23	592	2750	9	67	1450	10	39
19	12100	29	947	3730	30	302	1370	8	30
20	10700	23	664	5840	55	937	1300	7	25
21	8900	20	481	6810	102	1870	1290	7	24
22	7110	19	365	5850	42	663	1550	6	25
23	6180	18	300	4670	30	378	1700	7	32
24	4690	17	215	4470	33	398	2170	8	47
25	5730	19	294	3680	24	238	2170	7	41
26	6170	20	333	3320	19	170	1540	10	42
27	5090	11	151	3080	17	141	1360	10	37
28	4770	12	155	2960	18	144	1370	9	33
29	4090	11	121	2900	17	133	1480	9	36
30	3970	22	236	2670	14	101	1320	8	29
31	---	---	---	2570	15	104	---	---	---
TOTAL	392000	---	89126	144340	---	11633	56200	---	2164
		JULY			AUGUST			SEPTEMBER	
1	1280	7	24	789	6	13	1140	6	18
2	1440	8	31	781	5	11	939	6	15
3	2210	14	84	788	7	15	868	11	26
4	3300	24	214	831	10	22	825	13	29
5	2630	17	121	986	13	35	801	6	13
6	1670	14	63	1240	16	54	834	4	9.0
7	1590	13	56	1160	14	44	873	5	12
8	1610	13	57	1090	14	41	1060	7	20
9	3730	26	249	1010	13	35	1110	6	18
10	3630	73	715	974	13	34	1120	5	15
11	2050	36	199	998	16	43	1440	7	27
12	1830	17	84	1070	18	52	1310	4	14
13	1480	11	44	1040	11	31	2230	25	155
14	1360	10	37	887	10	24	1730	13	61
15	1490	11	44	821	12	27	1510	6	24
16	1620	11	48	795	10	21	1320	7	25
17	1700	10	46	775	7	15	1150	6	19
18	1650	8	36	764	6	12	1540	7	29
19	1370	7	26	748	7	14	2850	26	200
20	1110	5	15	737	10	20	3850	48	499
21	1030	5	14	709	10	19	3220	34	296
22	929	5	13	764	10	21	2590	29	203
23	896	4	9.7	822	10	22	2100	23	130
24	850	3	6.9	763	9	19	1850	18	90
25	838	3	6.8	760	7	14	1730	17	79
26	871	3	7.1	805	7	15	1570	13	55
27	945	4	10	799	7	15	1470	10	40
28	933	5	13	803	6	13	1420	8	31
29	901	5	12	991	7	19	1290	7	24
30	821	5	11	1170	8	25	1240	6	20
31	798	5	11	1360	8	29	---	---	---
TOTAL	48562	---	2307.5	28030	---	774	46980	---	2196.0
YEAR	1441693		143213.0						

01567500 BIXLER RUN NEAR LOYSVILLE, PA

LOCATION.--Lat 40°22'15", long 77°24'09", Perry County, Hydrologic Unit 02050305, on right bank 400 ft upstream from bridge on State Highway 850 at Bixler, 2.3 mi upstream from mouth, and 3.6 mi west of Loysville.

DRAINAGE AREA.--15.0 mi^2.

PERIOD OF RECORD.--January 1954 to current year.

GAGE.--Water-stage recorder. Datum of gage is 601.22 ft above National Geodetic Vertical Datum of 1929. Prior to May 14, 1954, nonrecording gage and crest-stage gage 400 ft downstream at same datum.

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

AVERAGE DISCHARGE.--33 years, 18.7 ft^3/s, 16.93 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,780 ft^3/s, Nov. 1, 1956, gage height, 10.39 ft, from rating curve extended above 2,700 ft^3/s on basis of slope-area measurement of peak flow; minimum, 1.5 ft^3/s, Feb. 2, 1959.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 3	0030	285	5.40	Apr. 4	1630	*399	*5.84
Dec. 24	2200	385	5.79	Apr. 6	1230	251	5.25

Minimum discharge, 2.8 ft^3/s, Aug. 18, 19, 20, 21, 22, gage height, 2.82 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.8	4.5	14	e18	13	33	24	14	9.3	4.9	3.7	3.4
2	6.8	4.6	49	e17	14	40	22	14	9.0	6.0	4.0	3.4
3	5.7	4.5	119	e16	17	47	19	17	10	6.6	4.6	3.3
4	12	4.8	46	e15	e16	36	168	32	11	5.2	3.7	3.3
5	6.9	11	32	e14	e15	29	141	22	8.9	5.0	5.0	3.4
6	4.9	15	25	e14	e15	e23	210	20	7.9	5.0	4.6	6.1
7	4.3	8.3	22	e14	e16	e22	128	19	7.6	5.2	3.7	7.4
8	4.2	11	19	e14	e15	e20	81	17	7.3	5.1	3.7	8.7
9	4.1	13	31	e14	e15	e19	58	16	7.4	4.6	4.6	5.3
10	3.9	9.7	26	e14	e15	19	45	15	6.8	4.5	5.8	4.2
11	3.8	12	22	e15	e15	17	38	14	6.6	4.4	4.2	4.5
12	4.0	11	20	e14	e15	16	40	13	7.0	4.2	3.7	30
13	5.2	9.3	18	e14	e14	15	37	12	7.0	4.3	3.6	14
14	7.6	8.0	16	e14	e14	15	28	11	6.6	5.0	3.5	7.4
15	5.5	7.8	16	e17	e12	16	26	17	6.2	4.7	3.5	6.0
16	4.8	7.6	15	e16	e12	15	26	12	5.9	4.3	3.5	5.5
17	4.8	7.1	14	e16	e13	13	39	11	5.7	4.2	3.4	28
18	4.7	9.1	21	e17	e13	13	30	11	5.5	4.1	3.2	17
19	4.5	18	18	e18	e12	12	27	19	5.6	4.0	3.1	12
20	4.5	28	16	e16	e11	12	25	34	6.3	3.9	3.1	12
21	4.5	39	15	e16	e11	12	23	24	7.1	3.7	3.0	8.5
22	4.4	22	14	e16	e12	11	22	20	6.2	3.7	5.0	24
23	4.4	17	14	e15	e11	11	20	17	5.8	3.7	3.6	11
24	4.4	16	70	e14	e14	10	21	16	5.4	3.7	3.3	9.7
25	4.4	13	114	e13	e14	11	19	14	5.2	3.7	3.3	7.2
26	6.0	39	55	e13	e13	12	17	14	5.3	4.7	3.4	5.9
27	5.9	34	39	e13	e13	10	16	13	5.6	4.8	4.1	5.3
28	6.2	24	32	e13	e15	10	16	13	5.0	3.9	7.1	4.8
29	5.1	20	27	e13	---	9.6	16	11	4.8	3.8	7.0	6.3
30	4.8	17	25	e13	---	11	15	11	4.7	3.7	3.6	5.9
31	4.5	---	21	e13	---	35	---	9.8	---	3.7	3.4	---
TOTAL	161.6	445.3	985	459	385	574.6	1397	502.8	202.7	138.3	125.0	273.5
MEAN	5.21	14.8	31.8	14.8	13.7	18.5	46.6	16.2	6.76	4.46	4.03	9.12
MAX	12	39	119	18	17	47	210	34	11	6.6	7.1	30
MIN	3.8	4.5	14	13	11	9.6	15	9.8	4.7	3.7	3.0	3.3
CFSM	.35	.99	2.12	.99	.92	1.24	3.10	1.08	.45	.30	.27	.61
IN.	.40	1.10	2.44	1.14	.95	1.43	3.46	1.25	.50	.34	.31	.68

CAL YR 1986 TOTAL 7219.4 MEAN 19.8 MAX 467 MIN 3.8 CFSM 1.32 IN. 17.90
WTR YR 1987 TOTAL 5649.8 MEAN 15.5 MAX 210 MIN 3.0 CFSM 1.03 IN. 14.01

e Estimated

01568000 SHERMAN CREEK AT SHERMANS DALE, PA

LOCATION.--Lat 40°19'24", long 77°10'09", Perry County, Hydrologic Unit 02050305, on left bank on downstream side of bridge on State Highway 34 at Shermans Dale and 1.2 mi upstream from Fishing Run.

DRAINAGE AREA.--200 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1929 to current year. Monthly discharge only for some months, published in WSP 1302. Prior to October 1962, published as "at Shermandale".

REVISED RECORDS.--WSP 1302: 1930(M). WSP 1502: 1933, 1934(M), 1935-36.

GAGE.--Water-stage recorder. Datum of gage is 422.63 ft above National Geodetic Vertical Datum of 1929. Prior to Jan. 29, 1930, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. National Weather Service satellite telemeter at station.

AVERAGE DISCHARGE.--58 years, 287 ft³/s, 19.49 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,500 ft³/s, June 23, 1972, gage height, 18.09 ft, from rating curve extended above 18,000 ft³/s; minimum, 3.9 ft³/s, Dec. 1, 1930; minimum gage height, 0.62 ft, Sept. 11, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 22, 1927, reached a stage of 20.34 ft, from floodmark, discharge, about 44,000 ft³/s.

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

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 4	2300	*4,030	*7.10	Apr. 6	1645	3,280	6.41

Minimum discharge, 17 ft³/s, Aug. 21, 22, gage height, 0.79 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	32	142	259	e180	1040	583	203	124	45	22	25
2	46	32	203	271	e170	1170	422	197	118	75	22	22
3	55	32	1400	249	e180	843	366	231	115	91	27	21
4	70	32	603	219	e200	650	1740	680	194	63	25	20
5	67	45	375	183	e210	506	2690	630	156	48	30	19
6	44	128	284	194	e200	436	2910	477	110	42	48	22
7	33	94	243	225	e190	426	2130	389	94	43	41	38
8	29	66	217	229	e180	477	1320	328	88	47	31	109
9	26	73	276	202	e170	494	958	284	83	41	28	98
10	26	74	420	200	e160	425	756	257	78	37	29	49
11	25	72	293	197	e150	355	628	232	71	36	27	32
12	26	85	260	186	e150	327	566	212	70	34	24	655
13	28	77	231	177	e140	304	629	192	76	40	23	1700
14	39	60	e180	182	e140	281	463	177	76	41	22	403
15	44	51	e190	258	e130	282	405	197	65	41	21	193
16	39	49	e170	366	e130	276	390	188	58	35	20	120
17	34	47	e160	301	e140	249	522	156	54	33	20	149
18	31	52	335	278	e140	233	507	148	50	30	19	770
19	29	194	441	317	e130	221	425	237	50	29	19	385
20	28	190	295	367	e130	211	382	609	49	28	19	331
21	27	540	252	300	e120	201	346	460	87	27	17	270
22	27	294	218	e240	e120	192	319	351	105	26	23	228
23	27	192	195	e210	e130	182	292	284	76	25	25	236
24	27	161	328	e200	e130	173	294	252	77	24	23	169
25	27	138	1820	e180	e130	173	342	219	56	24	23	139
26	34	155	878	e170	e120	205	273	203	50	24	21	106
27	42	425	591	e170	e120	182	247	195	51	25	21	89
28	41	256	462	e180	e140	169	238	185	48	24	37	79
29	39	202	376	219	---	161	232	164	43	23	80	73
30	34	167	329	201	---	158	225	145	40	22	55	170
31	33	---	293	e190	---	454	---	132	---	23	31	---
TOTAL	1108	4015	12460	7120	4230	11456	21600	8614	2412	1146	873	6720
MEAN	35.7	134	402	230	151	370	720	278	80.4	37.0	28.2	224
MAX	70	540	1820	367	210	1170	2910	680	194	91	80	1700
MIN	25	32	142	170	120	158	225	132	40	22	17	19
CFSM	.18	.67	2.01	1.15	.76	1.85	3.60	1.39	.40	.18	.14	1.12
IN.	.21	.75	2.32	1.32	.79	2.13	4.02	1.60	.45	.21	.16	1.25

CAL YR 1986 TOTAL 87558 MEAN 240 MAX 4300 MIN 21 CFSM 1.20 IN. 16.29
WTR YR 1987 TOTAL 81754 MEAN 224 MAX 2910 MIN 17 CFSM 1.12 IN. 15.21

e Estimated

01568000 SHERMAN CREEK AT SHERMANS DALE, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962, 1964, 1969, 1985 to current year.

COOPERATION.--Water-quality samples collected by Susquehanna River Basin Commission and analyzed by the Pa. Department of Environmental Resources.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)
OCT										
07...	0815	33	230	8.00	12.0	0.460	0.440	0.010	0.010	0.59
NOV										
05...	1000	36	227	7.90	3.0	0.540	0.530	0.020	0.020	0.34
20...	1352	151	180	7.70	3.0	1.42	1.42	0.040	0.040	0.22
20...	1845	162	185	8.00	2.5	1.36	1.36	0.050	0.050	0.28
20...	2245	340	160	7.80	3.5	1.46	1.46	0.050	0.045	0.45
21...	0324	490	160	7.40	4.0	1.34	1.34	0.055	0.055	0.47
21...	0817	577	170	7.25	3.5	1.58	1.56	0.060	0.060	0.39
21...	1319	647	160	7.20	4.5	1.62	1.56	0.060	0.060	0.77
21...	2100	468	200	7.40	4.5	1.80	1.68	0.070	0.070	0.56
22...	0645	300	180	8.20	2.5	1.98	1.78	0.055	0.055	0.37
22...	1720	253	195	7.00	3.5	1.90	1.90	0.030	0.030	0.32
24...	1854	138	160	--	5.0	1.88	1.88	0.020	0.020	0.48
DEC										
16...	1500	172	155	7.70	3.0	1.86	1.86	<0.010	<0.010	--
JAN										
13...	1420	175	155	7.70	3.0	1.70	1.70	0.010	0.010	0.34
FEB										
19...	1700	130	155	8.00	3.0	1.56	1.56	<0.005	<0.005	--
MAR										
19...	1415	204	130	8.15	9.5	1.18	1.16	<0.010	<0.010	--
30...	1249	138	160	8.35	14.0	0.800	0.800	0.025	0.025	0.29
31...	1120	380	132	8.40	11.5	0.860	0.860	0.105	0.095	0.47
31...	1325	502	132	8.00	11.0	0.840	0.840	0.055	0.055	0.53
31...	1600	572	125	8.00	9.0	0.840	0.840	0.080	0.080	0.45
31...	1915	666	120	8.10	8.5	0.880	0.840	0.095	0.095	0.98
APR										
01...	0400	726	165	8.20	5.0	0.840	0.800	0.075	0.075	0.45
01...	0945	554	113	8.10	6.0	0.800	0.800	0.095	0.095	0.63
01...	1510	485	110	8.20	9.0	0.800	0.800	0.070	0.070	0.73
01...	2015	456	131	8.90	8.0	0.800	0.800	0.070	0.050	0.81
02...	0930	408	107	7.85	6.5	0.820	0.820	0.040	0.040	0.51
02...	2345	380	115	7.75	7.0	0.820	0.820	0.035	0.035	0.21
03...	1530	340	108	8.20	6.0	1.02	1.02	0.030	0.030	0.25
04...	0230	380	182	8.40	6.5	1.02	1.02	0.040	0.040	--
04...	0830	794	140	8.30	7.5	1.06	1.06	0.075	0.070	0.36
04...	1015	1000	120	8.30	8.5	1.08	1.08	0.095	0.095	0.58
04...	1330	1480	132	8.00	14.0	1.20	1.20	0.100	0.080	0.86
04...	2200	4000	97	7.50	7.5	1.28	1.28	0.150	0.105	1.7
05...	0030	3890	90	7.20	8.0	1.30	1.30	0.212	0.212	0.72
05...	0850	2710	92	7.30	6.0	1.30	1.30	0.115	0.115	0.61
05...	1335	2170	95	7.49	7.5	1.42	1.42	0.125	0.125	0.83
05...	2000	2250	135	7.55	6.5	1.50	1.44	0.075	0.075	0.60
06...	0200	2450	120	7.30	--	1.50	1.50	0.080	0.080	0.53
06...	1510	3230	127	8.20	--	1.60	1.60	0.120	0.120	0.31
06...	2055	3160	103	8.05	--	1.60	1.58	0.120	0.120	0.69
07...	1545	1890	95	7.80	10.0	1.52	1.52	0.100	0.100	0.41
08...	1500	1250	100	7.80	10.5	1.52	1.50	0.100	0.090	0.41
09...	1325	943	115	8.00	10.5	1.50	1.40	[a]0.070	[a]0.080	0.41
10...	1430	741	125	7.80	11.5	1.40	1.40	0.010	0.010	0.36
13...	0900	696	127	7.90	10.5	1.40	1.40	<0.005	<0.010	--
14...	1230	456	125	8.20	13.0	1.28	1.28	0.035	0.035	0.16
28...	1515	218	130	8.30	14.0	1.04	1.02	<0.005	<0.005	--
MAY										
18...	1600	141	125	8.85	23.0	0.740	0.720	0.025	0.025	0.35
JUN										
03...	1445	112	160	7.80	22.0	0.820	0.820	0.100	0.090	0.63
30...	1100	40	160	8.30	25.0	0.620	--	0.020	0.020	0.30
AUG										
04...	1535	22	215	8.70	30.5	0.320	--	0.035	0.030	0.55

(a) Results within limits of analytical precision.

01568000 SHERMAN CREEK AT SHERMANS DALE, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT										
07...	0.55	0.60	0.56	1.1	0.050	0.030	0.009	4.5	5	0.49
NOV										
05...	0.32	0.36	0.34	0.90	0.040	0.020	0.009	5.6	1	0.07
20...	0.18	0.26	0.22	1.7	0.040	0.030	0.007	5.2	--	--
20...	0.17	0.33	0.22	1.7	0.070	0.030	0.006	4.7	45	20
20...	0.28	0.50	0.33	2.0	0.150	0.030	0.007	4.7	256	235
21...	0.34	0.53	0.40	1.9	0.160	0.050	0.023	5.9	154	204
21...	0.34	0.45	0.40	2.0	0.200	0.060	0.030	7.9	119	186
21...	0.55	0.83	0.61	2.4	0.130	0.050	0.020	5.4	477	834
21...	0.48	0.63	0.55	2.4	0.170	0.050	0.028	5.7	497	628
22...	0.14	0.43	0.20	2.4	0.100	0.060	0.029	5.9	26	21
22...	0.23	0.35	0.26	2.2	0.080	0.050	0.023	6.0	19	13
24...	0.20	0.50	0.22	2.4	0.040	0.030	<0.002	5.0	10	3.8
DEC										
16...	--	0.28	0.26	2.1	0.040	0.020	0.024	4.0	<1	--
JAN										
13...	0.30	0.35	0.31	2.0	0.020	0.020	0.007	4.4	5	2.2
FEB										
19...	--	0.28	0.20	1.8	0.030	0.030	0.002	4.6	2	0.84
MAR										
19...	--	0.22	0.22	1.4	0.020	0.020	0.005	3.1	2	1.1
30...	0.29	0.31	0.31	1.1	0.070	0.020	0.005	14	12	4.7
31...	0.43	0.58	0.53	1.4	0.090	0.020	0.004	13	27	27
31...	0.39	0.58	0.45	1.4	0.100	0.020	0.004	12	36	49
31...	0.30	0.53	0.38	1.4	0.150	0.080	0.036	12	42	65
31...	0.58	1.1	0.68	2.0	0.120	0.040	0.007	12	49	88
APR										
01...	0.40	0.53	0.48	1.4	0.180	0.120	0.085	12	50	98
01...	0.60	0.73	0.70	1.5	0.120	0.040	0.015	13	32	48
01...	0.51	0.80	0.58	1.6	0.120	0.040	0.006	11	24	32
01...	0.25	0.88	0.30	1.7	0.120	0.040	0.006	11	22	27
02...	0.41	0.55	0.45	1.4	0.090	0.030	0.006	9.2	9	9.7
02...	0.15	0.25	0.18	1.1	0.090	<0.020	0.006	9.5	21	22
03...	0.13	0.28	0.16	1.3	0.090	0.020	0.002	4.1	6	5.9
04...	--	<0.20	<0.20	--	0.090	0.020	0.003	4.2	13	13
04...	0.19	0.44	0.26	1.5	0.120	0.040	0.002	5.8	35	76
04...	0.33	0.68	0.42	1.8	0.130	0.060	0.018	5.4	49	133
04...	0.45	0.96	0.53	2.2	0.170	0.050	0.027	6.6	127	507
04...	0.47	1.9	0.58	3.2	0.200	0.050	0.004	9.2	472	5100
05...	0.59	0.93	0.80	2.2	0.110	0.100	0.002	9.0	524	5510
05...	0.48	0.73	0.60	2.0	0.190	0.050	0.002	6.7	151	1100
05...	0.50	0.96	0.63	2.4	0.130	0.050	0.002	7.1	77	453
05...	0.35	0.68	0.42	2.2	0.130	0.050	0.002	5.9	53	321
06...	0.44	0.61	0.52	2.1	0.140	0.050	0.011	5.2	53	350
06...	0.30	0.43	0.42	2.0	0.120	0.060	0.006	4.3	82	716
06...	0.48	0.81	0.60	2.4	0.150	0.050	0.003	5.0	63	542
07...	0.28	0.51	0.38	2.0	0.050	0.040	0.002	3.3	29	150
08...	0.23	0.51	0.32	2.0	0.040	0.030	0.002	3.4	24	80
09...	0.28	0.48	0.36	2.0	0.040	0.020	0.002	2.2	24	61
10...	0.30	0.37	0.31	1.8	0.050	0.030	0.002	4.0	12	23
13...	--	0.33	0.22	1.7	0.040	0.040	0.002	5.5	14	27
14...	0.12	0.20	0.16	1.5	0.060	0.040	0.006	5.4	9	11
28...	--	0.32	0.15	1.4	0.050	0.030	0.004	6.0	11	6.7
MAY										
18...	0.35	0.38	0.38	1.1	0.040	<0.010	<0.020	1.6	8	3.0
JUN										
03...	0.55	0.73	0.64	1.6	0.080	0.040	0.004	4.1	28	8.4
30...	0.18	0.32	0.20	0.94	0.060	0.050	<0.010	3.3	11	1.2
AUG										
04...	0.51	0.58	0.54	0.90	0.060	0.050	0.004	3.9	11	0.68

01568000 SHERMAN CREEK AT SHERMANS DALE, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)
SEP										
08...	1130	97	520	7.30	21.0	0.800	0.800	0.090	0.090	0.49
08...	1745	175	288	7.60	22.0	1.14	1.12	0.100	0.100	0.88
08...	2330	170	225	7.70	21.0	0.980	0.960	0.090	0.085	1.2
09...	0545	146	200	8.00	20.0	1.20	1.18	0.115	0.095	0.90
17...	1310	117	180	--	21.0	1.94	1.88	0.070	0.070	0.73
17...	2245	598	140	8.40	20.0	0.920	0.900	0.200	0.120	2.0
18...	0530	903	130	7.50	19.5	1.50	1.48	0.100	0.080	0.80
18...	1005	809	135	7.50	20.0	1.72	1.72	0.080	0.060	0.72
18...	1445	740	140	7.20	21.0	1.78	1.78	0.110	0.110	0.37
19...	0630	464	139	7.30	17.0	1.96	1.88	0.080	0.080	0.72
19...	1700	354	125	7.40	17.0	1.78	1.76	0.060	0.060	0.74
20...	0630	376	133	8.00	16.0	1.84	1.76	0.080	0.080	0.40
20...	1615	358	140	7.50	18.0	1.94	1.84	0.080	0.080	0.82
21...	1030	297	165	7.50	17.0	2.04	2.04	0.060	0.040	0.54
21...	1535	280	165	7.40	20.0	2.04	2.04	0.050	0.040	0.65
22...	0950	234	170	7.30	16.0	1.98	1.98	0.160	0.040	0.44

DATE	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
SEP										
08...	0.45	0.58	0.54	1.4	0.070	0.030	0.010	1.6	19	5.0
08...	0.55	0.98	0.65	2.1	0.090	0.040	0.009	3.3	48	23
08...	0.50	1.3	0.58	2.3	0.250	0.040	0.010	3.0	316	145
09...	0.48	1.0	0.58	2.2	0.200	0.070	0.013	4.3	128	50
17...	0.41	0.80	0.48	2.7	0.060	0.030	0.015	4.9	8	2.5
17...	0.68	2.2	0.80	3.2	0.200	0.060	0.018	5.3	885	1430
18...	0.62	0.90	0.70	2.4	0.200	0.080	0.022	4.3	117	285
18...	0.42	0.80	0.48	2.5	0.100	0.060	0.020	4.8	49	107
18...	0.37	0.48	0.48	2.3	0.090	0.060	0.010	3.7	46	92
19...	0.72	0.80	0.80	2.8	0.080	0.080	0.012	3.0	28	35
19...	0.42	0.80	0.48	2.6	0.080	0.050	0.014	3.4	17	16
20...	0.30	0.48	0.38	2.3	0.070	0.050	0.008	3.9	19	19
20...	0.62	0.90	0.70	2.8	0.060	0.040	0.006	2.8	10	9.7
21...	0.44	0.60	0.48	2.6	0.050	0.040	0.007	2.8	16	13
21...	0.44	0.70	0.48	2.7	0.050	0.040	0.006	2.9	10	7.6
22...	0.44	0.60	0.48	2.6	0.050	0.030	0.012	3.1	9	5.7

01568400 DeHART RESERVOIR NEAR CARSONVILLE, PA

LOCATION.--Lat 40°27'50", long 76°44'50", Dauphin County, Hydrologic Unit 02050305, at DeHart Dam on Clark Creek, 1.8 mi southeast of Carsonville, and 15.3 mi upstream from mouth.

DRAINAGE AREA.--21.7 mi².

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

GAGE.--Staff. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by City of Harrisburg).

REMARKS.--Reservoir formed by earthfill dam with ungated concrete spillway at elevation 644.00 ft. Crest of spillway raised 4 ft in November 1954. Storage began Jan. 21, 1940. Capacity at elevation 644.00 ft is 18,480 acre-ft. Reservoir is used for municipal water supply. Figures given herein represent total contents. Regulation is controlled by valves on pipe through dam.

COOPERATION.--Records provided by City of Harrisburg.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 19,460 acre-ft, Sept. 27, 1975, elevation, 645.75 ft; minimum (after first filling), 4,680 acre-ft, Jan. 2, 1966, elevation, 613.33 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 18,800 acre-ft, Apr. 7, elevation 644.58 ft; minimum, 13,490 acre-ft, Nov. 17, elevation, 635.50 ft.

MONTHEND ELEVATION, IN FEET NGVD, AND CONTENTS AT 2400, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (equivalent in ft³/s/day)
Sept. 30	638.17	15,040	--
Oct. 31	636.17	13,880	- 18.9
Nov. 30	636.67	14,170	+ 4.9
Dec. 31	642.58	17,650	+ 56.6
CAL YR 1986	--	--	+ 3.7
Jan. 31	644.17	18,570	+ 15.0
Feb. 28	644.00	18,480	- 1.6
Mar. 31	644.08	18,520	+ 0.6
Apr. 30	644.08	18,520	0
May 31	644.00	18,480	- 0.6
June 30	643.00	17,890	- 9.9
July 31	640.75	16,580	- 21.3
Aug. 31	638.08	14,990	- 25.9
Sept. 30	640.17	16,240	+ 21.0
WTR YR 1987	--	--	+ 1.7

01568500 CLARK CREEK NEAR CARSONVILLE, PA

LOCATION.--Lat 40°27'37", long 76°45'06", Dauphin County, Hydrologic Unit 02050305, on right bank 0.3 mi downstream from DeHart Dam, 1.8 mi southeast of Carsonville, and 15.0 mi upstream from mouth.

DRAINAGE AREA.--22.5 mi^2.

PERIOD OF RECORD.--September 1937 to current year.

REVISED RECORDS.--WSP 1302: 1940(M). WSP 1702: 1942 (monthly mean).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 552.32 ft above National Geodetic Vertical Datum of 1929. Prior to Jan. 6, 1939, water-stage recorder at site 1,700 ft upstream at datum 9.49 ft higher. Jan. 6, 1939, to July 27, 1940, nonrecording gage at site 100 ft downstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since 1941 by DeHart Dam (station 01568400). Diversion from reservoir to City of Harrisburg. Several measurements of water temperature were made during the year.

COOPERATION.--Records of diversion and change in reservoir contents provided by City of Harrisburg.

AVERAGE DISCHARGE.--49 years, 40.0 ft^3/s, 24.14 in/yr, adjusted for storage and diversion since 1941.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,800 ft^3/s, June 22, 1972, gage height, 10.98 ft, from rating curve extended above 2,400 ft^3/s on basis of computation of peak flow-over-dam; minimum daily, 0.2 ft^3/s, Jan. 29 to Feb. 3, 1940.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 225 ft^3/s, Sept. 12, gage height, 2.95 ft; minimum daily, 2.5 ft^3/s, Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	3.6	5.3	6.0	11	33	106	22	5.8	5.9	5.2	5.0
2	22	3.6	6.4	6.1	9.6	104	78	22	5.8	5.5	5.2	4.6
3	19	3.6	10	6.1	9.3	96	81	28	7.9	5.4	5.2	4.4
4	4.3	3.6	6.5	6.5	9.7	87	119	61	5.8	5.4	5.2	4.2
5	4.2	3.9	6.2	6.3	8.3	73	131	54	5.8	5.4	5.4	3.9
6	4.1	3.8	6.0	6.3	7.6	62	171	42	5.8	5.4	6.0	4.0
7	4.1	3.6	5.9	6.3	7.7	60	167	37	5.8	5.4	4.9	4.1
8	4.1	3.8	5.8	6.1	8.1	78	136	35	5.7	5.5	4.9	4.2
9	4.1	3.9	6.0	6.1	8.4	103	110	31	5.7	5.5	5.0	3.5
10	4.1	3.8	6.0	6.3	6.8	97	90	28	5.6	5.4	5.0	3.3
11	4.2	4.0	5.8	6.3	6.6	78	77	26	5.6	5.4	5.0	3.3
12	4.1	3.8	5.7	6.2	7.1	65	70	26	5.6	5.4	5.0	25
13	4.3	3.8	5.6	5.6	7.5	56	68	20	5.6	5.2	4.8	22
14	4.4	3.7	5.4	5.6	6.6	48	57	15	5.6	5.3	4.9	4.3
15	4.3	3.6	5.4	5.7	6.4	44	49	17	5.6	5.2	4.9	3.8
16	4.3	3.6	5.4	8.0	6.0	38	45	15	5.6	5.2	4.9	3.6
17	4.3	3.6	5.4	6.1	6.0	32	44	13	5.6	5.2	4.9	3.7
18	4.2	4.0	8.4	6.1	5.8	28	41	14	5.6	5.2	4.9	5.1
19	4.3	4.4	6.8	6.3	5.8	28	40	31	5.6	5.2	5.0	5.9
20	4.3	4.9	6.2	6.2	5.7	21	36	34	5.7	5.2	4.9	4.6
21	3.8	7.2	6.0	6.1	5.7	20	30	30	5.5	5.1	4.9	4.2
22	3.6	5.3	6.0	6.2	5.7	18	30	24	5.7	5.2	5.1	4.1
23	3.6	5.2	5.9	6.7	5.8	17	25	21	5.5	5.2	4.9	3.9
24	3.6	5.3	7.2	7.6	5.8	15	29	17	5.4	5.2	4.9	3.9
25	3.6	5.2	11	8.9	5.7	15	44	15	5.4	5.2	4.9	3.8
26	3.7	5.9	7.1	11	5.7	16	37	12	5.4	5.3	4.9	3.7
27	3.7	6.1	6.7	11	5.8	14	32	9.0	5.4	5.2	5.1	3.6
28	3.6	5.5	6.5	11	5.9	13	27	7.2	5.4	5.2	5.0	3.6
29	3.6	5.4	6.3	11	---	12	25	6.7	5.4	5.2	5.0	3.5
30	3.6	5.3	6.2	15	---	16	23	6.4	5.6	5.2	4.9	3.6
31	3.6	---	6.1	14	---	74	---	6.0	---	5.2	5.3	---
TOTAL	155.2	133.0	199.2	232.7	196.1	1461	2018	725.3	170.5	164.5	156.1	160.4
MEAN	5.01	4.43	6.43	7.51	7.00	47.1	67.3	23.4	5.68	5.31	5.04	5.35
MAX	22	7.2	11	15	11	104	171	61	7.9	5.9	6.0	25
MIN	2.5	3.6	5.3	5.6	5.7	12	23	6.0	5.4	5.1	4.8	3.3
(†)	19.9	21.3	17.9	18.0	18.8	18.1	17.9	18.3	19.6	21.3	21.6	19.9
MEAN‡	6.01	30.6	80.9	40.5	24.2	65.8	85.2	41.0	15.4	5.31	.74	46.2
CFSM‡	.27	1.36	3.60	1.80	1.08	2.92	3.79	1.82	.68	.24	.03	2.05
IN.‡	.31	1.52	4.15	2.08	1.12	3.37	4.23	2.10	.76	.28	.04	2.29

CAL YR 1986 TOTAL 5495.2 MEAN 15.1 MAX 440 MIN 2.4 MEAN‡ 38.5 CFSM‡ 1.71 IN.‡ 23.22
WTR YR 1987 TOTAL 5771.9 MEAN 15.8 MAX 171 MIN 2.5 MEAN‡ 36.9 CFSM‡ 1.64 IN.‡ 22.25

(†) Diversion for municipal supply of City of Harrisburg, equivalent in cubic feet per second.
‡ Adjusted for diversion and change in reservoir contents.

01569800 LETORT SPRING RUN NEAR CARLISLE, PA

LOCATION.--Lat 40°14'05", long 77°08'23", Cumberland County, Hydrologic Unit 02050305, on right bank 320 ft downstream from bridge on U.S. Highway 11, 3.1 mi west of New Kingstown, and 3.7 mi east of Carlisle.

DRAINAGE AREA.--21.6 mi^2.

PERIOD OF RECORD.--June 1976 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 410 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--11 years, 44.1 ft^3/s, 27.73 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,400 ft^3/s, Jan. 24, 1979, gage height, 6.53 ft, from rating curve extended above 680 ft^3/s on basis of slope-area measurement at gage height 6.43 ft; no flow part of Aug. 15, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1936 reached a stage of 8.8 ft, discharge not determined, and flood in June 1972 reached a stage of 8.4 ft, from information by local resident, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 130 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 24	2300	158	4.60	Sept. 13	0015	*1,180	*6.42

Minimum discharge, 19 ft^3/s, Aug. 17, 19, 20, 26, Sept. 3, 4, 5, gage height, 3.50 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	25	29	38	34	52	35	37	33	34	21	21
2	24	25	53	38	34	53	35	39	33	29	21	20
3	24	24	71	37	34	52	34	45	35	26	20	20
4	28	25	52	36	35	51	63	56	36	25	21	20
5	27	33	46	35	36	49	59	44	33	24	36	20
6	35	31	42	34	37	47	71	42	32	24	24	23
7	38	28	40	34	37	46	66	40	32	24	23	35
8	24	29	38	34	38	45	62	39	31	28	22	56
9	24	28	49	33	37	44	60	38	32	24	22	33
10	24	27	41	34	37	43	58	38	31	24	22	28
11	24	33	40	33	36	42	54	36	30	23	22	27
12	24	29	39	33	36	42	55	36	30	25	21	117
13	26	27	37	32	36	41	51	36	29	24	20	270
14	32	27	35	32	35	40	49	36	29	25	20	93
15	26	27	34	33	35	40	48	44	28	23	20	78
16	26	26	33	34	34	39	49	36	28	23	20	71
17	25	26	32	34	33	38	50	36	28	22	20	70
18	25	34	40	34	33	38	47	38	28	22	22	79
19	25	35	34	43	33	37	45	44	28	22	20	66
20	24	41	34	41	32	37	44	60	33	21	19	64
21	25	42	33	40	32	37	43	48	29	21	20	60
22	24	35	32	41	32	36	42	44	28	21	27	59
23	24	33	31	39	34	36	41	42	29	21	21	57
24	24	32	53	38	33	35	42	40	28	21	20	54
25	24	30	70	37	32	36	41	39	27	22	20	52
26	27	36	53	37	32	35	40	38	27	23	20	51
27	25	33	48	36	32	35	39	36	27	21	22	49
28	25	32	45	35	35	35	39	36	27	21	26	47
29	24	31	42	35	---	34	38	35	26	21	22	46
30	24	30	42	35	---	34	38	35	26	21	21	50
31	24	---	40	34	---	41	---	34	---	21	21	---
TOTAL	799	914	1308	1109	964	1270	1438	1247	893	726	676	1736
MEAN	25.8	30.5	42.2	35.8	34.4	41.0	47.9	40.2	29.8	23.4	21.8	57.9
MAX	38	42	71	43	38	53	71	60	36	34	36	270
MIN	24	24	29	32	32	34	34	34	26	21	19	20
CFSM	1.19	1.41	1.95	1.66	1.59	1.90	2.22	1.86	1.38	1.08	1.01	2.68
IN.	1.38	1.57	2.25	1.91	1.66	2.19	2.48	2.15	1.54	1.25	1.16	2.99

CAL YR 1986 TOTAL 14898 MEAN 40.8 MAX 152 MIN 23 CFSM 1.89 IN. 25.66
WTR YR 1987 TOTAL 13080 MEAN 35.8 MAX 270 MIN 19 CFSM 1.66 IN. 22.53

01570000 CONODOGUINET CREEK NEAR HOGESTOWN, PA

LOCATION.--Lat 40°15'08", long 77°01'17", Cumberland County, Hydrologic Unit 02050305, on left bank 1,000 ft upstream from highway bridge, 0.4 mi downstream from Hogestown Run, and 1.0 mi northeast of Hogestown.

DRAINAGE AREA.--470 mi².

PERIOD OF RECORD.--October 1911 to September 1917, October 1929 to September 1958, June 1967 to current year. Monthly discharges only for some periods, published in WSP 1302. October 1917 to December 1919 (gage heights and discharge measurements only), in reports of Water Supply Commission of Pennsylvania. Published as "at Brysons Bridge" 1912-17.

REVISED RECORDS.--WSP 1722: 1913, 1917.

GAGE.--Water-stage recorder. Datum of gage is 351.00 ft above National Geodetic Vertical Datum of 1929. Prior to December 1919, nonrecording gage at site 2 mi downstream at different datum. Oct. 1, 1929, to Aug. 3, 1931, nonrecording gage at site 1,000 ft downstream at present datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Since June 1969 the Pa. American Water Co. has diverted water upstream from station for municipal supply. Diversion for the year was equivalent to a mean daily discharge of about 5.8 ft³/s. Several measurements of water temperature were made during the year. National Weather Service satellite and landline telemeters at station.

AVERAGE DISCHARGE.--55 years (1911-17, 1929-58, 1967-87), 588 ft³/s, 16.99 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,700 ft³/s, June 23, 1972, gage height, 17.01 ft, from floodmark in gage shelter; minimum, 24 ft³/s, Dec. 16, 1930; minimum daily, 26 ft³/s, Dec. 23, 1930.

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

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Sept. 13	0115	*8,850	*9.44	No other peak greater than base discharge.			

Minimum discharge, 74 ft³/s, Aug. 19, 21, gage height, 0.97 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	103	98	407	570	e380	1220	560	370	274	148	89	104
2	128	97	434	559	e390	2340	540	352	266	203	92	93
3	116	96	1650	546	e400	1680	463	382	261	217	91	90
4	166	93	1480	503	e420	1230	648	742	310	221	96	84
5	147	107	933	454	e450	969	2430	993	448	183	103	85
6	136	191	699	403	e460	804	3220	791	352	164	152	93
7	115	238	580	401	e440	706	3320	637	292	154	121	130
8	111	216	509	428	e430	649	2230	555	266	193	120	308
9	104	204	553	443	e420	623	1600	493	255	179	108	457
10	98	215	978	449	e390	580	1260	450	243	159	104	279
11	93	233	964	463	e380	518	1040	413	231	144	101	211
12	93	268	768	459	e380	488	913	381	222	149	93	1120
13	100	286	655	440	e370	474	912	353	220	187	88	5900
14	137	244	537	453	e370	452	812	333	223	173	88	2810
15	134	204	e440	500	e360	448	679	356	214	158	86	1210
16	142	186	e420	649	e350	452	631	341	200	137	84	803
17	128	181	e410	697	e340	422	701	313	187	128	84	616
18	115	180	568	620	e330	393	894	295	175	122	90	1360
19	106	359	817	640	e320	374	807	342	172	116	81	1450
20	101	528	767	986	e310	358	705	764	170	114	81	1010
21	99	1020	642	1070	e300	347	637	972	196	108	77	888
22	95	968	551	892	e300	334	584	679	215	101	95	734
23	94	640	478	775	e320	323	538	541	231	99	112	650
24	94	506	511	e590	e360	312	507	488	202	99	96	556
25	93	437	2290	e510	e400	303	531	474	175	97	94	476
26	106	418	1980	e480	416	317	496	401	166	106	87	404
27	114	693	1300	e440	422	325	443	376	166	101	94	360
28	120	777	995	e410	438	311	409	363	163	92	114	322
29	117	602	816	e400	---	295	394	341	161	90	173	294
30	110	493	703	e400	---	286	386	311	152	91	131	296
31	100	---	636	e390	---	326	---	289	---	90	115	---
TOTAL	3515	10778	25471	17020	10646	18659	29290	14891	6808	4323	3140	23193
MEAN	113	359	822	549	380	602	976	480	227	139	101	773
MAX	166	1020	2290	1070	460	2340	3320	993	448	221	173	5900
MIN	93	93	407	390	300	286	386	289	152	90	77	84
CFSM	.24	.76	1.75	1.17	.81	1.28	2.08	1.02	.48	.30	.22	1.64
IN.	.28	.85	2.02	1.35	.84	1.48	2.32	1.18	.54	.34	.25	1.84

CAL YR 1986 TOTAL 180644 MEAN 495 MAX 7530 MIN 91 CFSM 1.05 IN. 14.30
WTR YR 1987 TOTAL 167734 MEAN 460 MAX 5900 MIN 77 CFSM .98 IN. 13.28

e Estimated

01570500 SUSQUEHANNA RIVER AT HARRISBURG, PA
(National stream-quality accounting network, radiochemical and tritium program)

LOCATION.--Lat 40°15'17", long 76°53'11", Dauphin County, Hydrologic Unit 02050305, on east bank of City Island, 60 ft downstream from Market Street Bridge in Harrisburg, 3,670 ft upstream from sanitary dam, and 1.7 mi upstream from Paxton Creek.

DRAINAGE AREA.--24,100 mi², approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1890 to current year.

REVISED RECORDS.--WSP 711: 1929. WSP 1502: 1891-1923, 1926(M), 1928. WSP 1702: 1953 (total runoff in inches), 1958 (1957 calendar year mean discharge).

GAGE.--Water-stage recorder. Concrete control since Aug. 29, 1916. Datum of gage is 290.01 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1928, nonrecording gage at Walnut Street Bridge 600 ft upstream, and Oct. 1, 1928, to Aug. 31, 1975, water-stage recorder at site 3,170 ft downstream, all gages at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow slightly regulated by 15 flood-control reservoirs, which have a combined capacity of 1,571,000 acre-ft. National Weather Service satellite and landline telemeters at station.

COOPERATION.--Daily discharges through Safe Harbor Dam provided by Safe Harbor Water Power Corporation.

AVERAGE DISCHARGE.--97 years, 34,310 ft³/s, 19.33 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,020,000 ft³/s, June 24, 1972, gage height, 32.57 ft, from floodmark; minimum, 1,600 ft³/s, Nov. 29, 1930, gage height, 2.48 ft, result of freezeup. Minimum daily discharge since construction of sanitary dam and not affected by freezeup, 1,700 ft³/s, Sept. 18, 1964; minimum gage height, 1.83 ft, Sept. 13, 1964 (result of repairs to sanitary dam).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known during period 1786 to 1890, 26.8 ft at Walnut Street Bridge, June 2, 1889, discharge, 654,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 180,000 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 6	2400	*221,000	*13.46	No other peak greater than base discharge.			

Minimum discharge, 4,470 ft³/s, Aug. 25, gage height, 3.10 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11200	11400	93200	37800	e18000	e15000	53200	30900	14200	11400	7430	10700
2	10500	11600	73800	35300	e19000	34100	77900	30100	14000	10800	6850	9430
3	9580	11100	73100	33100	e21000	47900	85600	29200	13300	11400	6420	9010
4	9440	10700	81200	31000	e22000	63600	77100	31300	14300	20300	6130	8280
5	11400	11000	84900	28200	e23000	68100	119000	38400	16500	33600	6340	7540
6	21600	11500	85500	25100	e24000	58700	209000	42700	17300	29000	6970	7090
7	30600	12200	72300	23700	e24000	51200	214000	41700	17500	25000	6770	7300
8	31600	13000	59500	22400	e23000	49200	191000	37400	17300	20800	6730	7610
9	26900	15600	51500	22700	e22000	66100	169000	32200	16100	24400	6520	8490
10	22600	30300	50100	23400	e21000	114000	139000	30100	14800	32900	6460	13900
11	19200	53600	53000	22500	e20000	119000	110000	27300	13700	34400	6980	18400
12	16500	56200	55000	21900	e19000	91600	85800	22200	13000	26900	7530	17700
13	14900	49900	53600	21200	e18000	70000	72600	22400	12700	22700	6870	38400
14	14300	43500	48400	20500	e17000	57300	69300	20500	12600	20300	6340	50100
15	13600	39200	42300	20300	e15000	50400	76100	19300	12800	18700	5980	48200
16	13800	34500	37100	21100	e13000	45300	73600	18200	17200	17700	5680	39400
17	13700	30800	34100	24800	e12000	40900	66500	17400	17100	17800	5540	34600
18	14400	28100	32900	31000	e12000	37300	61600	16900	14000	15700	5620	33800
19	14200	28600	37200	34000	e13000	33900	59400	16900	12300	14200	5400	40800
20	13100	34100	39900	32200	e14000	31400	54200	20100	11300	13600	5150	48900
21	12200	42900	39000	32200	e14000	29600	48700	23300	10400	12300	4770	48800
22	11200	62100	36500	e28000	e14000	28800	43500	22400	9930	10800	4750	49400
23	11000	65900	32600	e22000	e14000	28300	39800	20900	10500	9470	4750	43600
24	10500	64500	30100	e19000	e13000	27800	35400	19900	11400	8830	4700	38000
25	10000	58000	38800	e18000	e14000	27700	33800	18200	12900	8330	4620	32600
26	10100	56400	53700	e17000	e13000	29300	36000	17800	13000	7940	4630	28400
27	9950	83200	59900	e16000	e13000	34800	38100	16900	11400	7570	4740	23300
28	10000	161000	60100	e15000	e13000	44700	37200	17000	11600	7780	5190	21400
29	10300	165000	54000	e15000	---	49300	34100	16300	11800	7650	5790	19000
30	10400	122000	47600	e15000	---	47800	32200	15300	12400	7290	9410	17400
31	10700	---	41900	e16000	---	45300	---	14600	---	7320	11700	---
TOTAL	449470	1417900	1652800	745400	478000	1538400	2442700	747800	407330	516880	192760	781550
MEAN	14500	47260	53320	24050	17070	49630	81420	24120	13580	16670	6218	26050
MAX	31600	165000	93200	37800	24000	119000	214000	42700	17500	34400	11700	50100
MIN	9440	10700	30100	15000	12000	15000	32200	14600	9930	7290	4620	7090
CFSM	.60	1.96	2.21	.99	.71	2.06	3.38	1.00	.56	.69	.26	1.08
IN.	.69	2.19	2.55	1.15	.74	2.37	3.77	1.15	.63	.80	.30	1.21

CAL YR 1986 TOTAL 12928300 MEAN 35420 MAX 346000 MIN 4880 CFSM 1.47 IN. 19.96
WTR YR 1987 TOTAL 11371000 MEAN 31150 MAX 214000 MIN 4620 CFSM 1.29 IN. 17.55

e Estimated

01570500 SUSQUEHANNA RIVER AT HARRISBURG, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1945-53, 1956 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: May 1974 to August 1979.
pH: May 1974 to June 1979.
WATER TEMPERATURE: May 1974 to August 1979.
DISSOLVED OXYGEN: May 1974 to August 1979.
SUSPENDED SEDIMENT DISCHARGE: October 1963 to September 1968, April 1970 to September 1979, April 1980 to March 1981.

INSTRUMENTATION.--Water-quality monitor May 1974 to August 1979.

REMARKS.--Agency collection codes: 42011 - Susquehanna River Basin Commission, 1028 - U.S. Geological Survey.
Agency analyzing codes: 9813 - Pa. Department of Environmental Resources, 80020 - U.S. Geological Survey.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAMFLOW, INSTANTANEOUS (CFS)	PH (STANDARD UNITS)	TURBIDITY (FTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
NOV 17...	1230	1028	80020	30500	--	3.1	762	11.8	100	130	K18
JAN 06...	1130	1028	80020	24500	7.00	1.6	772	14.0	103	120	K13
APR 09...	0940	1028	80020	172000	7.50	22	763	11.2	96	590	1600
MAY 11...	1230	1028	80020	27200	8.50	2.2	767	11.0	115	470	86
JUL 08...	1000	1028	80020	20600	7.70	5.1	770	7.6	92	51	150
SEP 02...	0840	1028	80020	9570	7.95	6.9	769	10.0	108	23	140

DATE	HARDNESS TOTAL (MG/L AS CACO3)	HARDNESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	CARBONATE IT-FLD (MG/L AS CO3)	BICARBONATE IT-FLD (MG/L AS HCO3)	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3
NOV 17...	79	45	22	5.8	6.8	15	0.3	2.0	--	--	34
JAN 06...	87	36	24	6.6	--	--	--	1.3	--	63	52
APR 09...	54	27	15	4.0	4.2	14	0.3	1.4	--	33	28
MAY 11...	77	37	21	6.0	6.0	14	0.3	1.4	1	47	40
JUL 08...	97	46	27	7.3	9.0	16	0.4	2.0	--	63	52
SEP 02...	140	82	35	12	13	17	0.5	2.8	--	68	57

DATE	ALKALINITY LAB (MG/L AS CACO3)	ALKALINITY, CARBONATE IT-FLD (MG/L - CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)
NOV 17...	--	--	--	35	10	<0.10	5.0	131	113	0.18	10800
JAN 06...	48	52	10	38	9.3	<0.10	5.4	139	--	--	--
APR 09...	27	27	1.6	22	7.0	<0.10	5.1	80	80	0.11	37200
MAY 11...	43	40	0.2	37	9.6	<0.10	1.8	103	112	0.14	7560
JUL 08...	51	52	2.0	44	11	0.10	4.1	146	140	0.20	8120
SEP 02...	58	56	1.2	74	19	0.10	1.8	194	195	0.26	5010

(K) Results based on non-ideal colony count.

01570500 SUSQUEHANNA RIVER AT HARRISBURG, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)
OCT												
08...	1400	42011	9813	31700	290	8.15	19.0	--	0.860	0.860	0.035	0.035
NOV												
05...	1300	42011	9813	11000	335	8.05	6.5	--	1.08	1.08	0.015	0.015
17...	1230	1028	80020	30500	162	--	8.0	<0.010	--	1.20	0.040	0.040
20...	1840	42011	9813	35300	--	8.00	--	--	1.32	1.32	0.065	0.065
22...	0800	42011	9813	59600	220	--	--	--	2.00	2.00	0.075	0.060
23...	0900	42011	9813	65800	185	--	--	--	1.78	1.78	0.040	0.040
24...	1845	42011	9813	64000	175	7.80	6.0	--	1.52	1.52	0.050	0.050
25...	1830	42011	9813	55700	182	7.80	6.0	--	1.44	1.44	0.045	0.045
26...	1330	42011	9813	56300	165	--	5.0	--	1.40	1.40	0.045	0.045
DEC												
17...	1435	42011	9813	33900	190	7.70	4.0	--	1.34	1.34	0.050	0.050
JAN												
06...	1130	1028	80020	24500	236	7.00	3.0	0.010	--	1.60	0.060	0.060
13...	1115	42011	9813	21300	260	7.90	5.0	--	1.72	1.72	0.065	0.065
FEB												
20...	1450	42011	9813	14000	286	8.60	4.5	--	2.00	2.00	<0.005	<0.005
MAR												
03...	1050	42011	9813	48400	215	7.80	6.0	--	2.42	2.42	0.100	0.100
04...	1110	42011	9813	64600	205	7.45	2.0	--	2.10	2.08	0.080	0.070
04...	1500	42011	9813	72900	220	7.55	4.0	--	2.02	2.02	0.080	0.080
04...	2200	42011	9813	72900	340	7.50	4.0	--	2.00	1.98	0.045	0.040
05...	0930	42011	9813	69200	205	7.70	2.0	--	1.76	1.76	0.060	0.060
06...	0930	42011	9813	59600	215	7.90	3.0	--	1.72	1.72	0.075	0.075
07...	1300	42011	9813	50800	240	7.60	10.0	--	1.92	1.92	0.065	0.050
08...	1130	42011	9813	48500	210	7.70	10.0	--	1.92	1.92	0.025	0.025
18...	1424	42011	9813	36900	194	8.05	9.0	--	1.42	1.42	0.010	0.010
30...	1600	42011	9813	47400	172	7.90	14.0	--	0.820	0.820	0.065	0.065
APR												
03...	2140	42011	9813	81200	156	7.70	8.0	--	0.980	0.980	0.065	0.065
04...	0430	42011	9813	78000	165	7.35	8.0	--	1.00	1.00	0.100	0.100
04...	1130	42011	9813	76200	154	7.10	12.0	--	0.980	0.980	0.065	0.065
04...	2110	42011	9813	76600	250	7.20	9.0	--	0.920	0.920	0.075	0.075
05...	1220	42011	9813	112000	160	7.55	5.0	--	1.12	1.12	0.085	0.085
05...	2343	42011	9813	180000	145	7.60	6.5	--	1.10	1.10	0.085	0.085
06...	0945	42011	9813	208000	160	7.60	6.5	--	1.04	1.04	0.090	0.090
06...	1515	42011	9813	216000	137	7.15	9.0	--	1.06	1.06	0.220	0.220
07...	1215	42011	9813	215000	135	7.00	10.0	--	1.18	1.18	0.160	0.160
08...	1355	42011	9813	189000	145	7.80	13.0	--	1.28	1.28	0.100	0.100
09...	0940	1028	80020	172000	143	7.50	8.5	<0.010	--	1.10	0.050	0.040
09...	1500	42011	9813	165000	155	7.85	13.0	--	1.18	1.18	0.160	0.160
10...	1315	42011	9813	136000	135	7.70	15.0	--	1.10	1.10	0.045	0.030
13...	0920	42011	9813	72900	200	7.85	11.0	--	1.30	1.30	0.045	0.045
14...	0900	42011	9813	68600	185	7.75	11.5	--	1.36	1.34	0.050	0.045
28...	1415	42011	9813	37300	215	8.20	15.0	--	1.12	1.11	0.020	0.015
MAY												
11...	1230	1028	80020	27200	210	7.60	18.0	<0.010	--	0.760	0.020	0.020
18...	1200	42011	9813	16600	250	8.80	26.0	--	0.820	0.800	0.055	0.055
JUN												
08...	1400	42011	9813	17400	295	9.10	27.0	--	1.12	1.12	0.050	0.040
JUL												
06...	1450	42011	9813	28900	205	8.25	28.0	--	1.14	1.08	0.300	0.300
08...	1000	1028	80020	20600	250	7.70	25.5	<0.010	--	1.00	[a]0.020	[a]0.040
08...	1010	42011	9813	20600	250	7.70	25.5	--	1.04	1.04	0.030	0.020
AUG												
04...	1530	42011	9813	6000	400	9.00	33.0	--	0.340	0.400	0.035	--
SEP												
02...	0840	1028	80020	9570	353	7.95	19.5	<0.010	--	0.750	0.020	0.020
02...	1310	42011	9813	9310	353	7.90	19.5	--	0.820	--	0.015	0.015
08...	1255	42011	9813	7680	305	--	21.0	--	0.800	0.800	0.075	0.075
08...	2310	42011	9813	8280	295	7.90	22.0	--	0.720	0.720	0.060	0.060
09...	1100	42011	9813	8660	319	7.70	24.0	--	1.08	1.04	0.100	0.100
10...	1445	42011	9813	16800	350	--	26.0	--	1.02	1.02	0.080	0.080
11...	0700	42011	9813	18900	330	--	22.0	--	1.04	1.04	0.045	0.045
11...	1648	42011	9813	18200	320	--	27.0	--	1.40	1.38	0.075	0.075
12...	1710	42011	9813	16200	260	8.10	23.0	--	0.880	0.880	0.075	0.075

(a) Results within limits of analytical precision.

01570500 SUSQUEHANNA RIVER AT HARRISBURG, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT												
08...	0.95	0.51	0.98	0.55	1.8	0.140	0.040	0.019	4.5	40	3420	--
NOV												
05...	0.35	0.26	0.36	0.28	1.4	0.050	0.030	0.008	5.9	5	140	--
17...	1.1	--	1.1	--	--	0.050	0.030	0.020	--	13	1070	96
20...	0.33	0.13	0.40	0.20	1.7	0.090	0.030	<0.002	3.3	25	2380	--
22...	0.74	0.28	0.82	0.34	2.8	0.150	0.030	<0.002	4.3	98	15800	--
23...	0.38	0.12	0.42	0.16	2.2	0.110	0.030	<0.002	2.9	62	11000	--
24...	0.38	0.21	0.43	0.26	2.0	0.090	0.030	0.007	4.0	44	7620	--
25...	0.21	0.11	0.26	0.16	1.7	0.080	0.030	<0.002	2.9	36	5350	--
26...	1.1	0.38	1.1	0.43	2.5	0.090	0.040	<0.002	4.7	37	5560	--
DEC												
17...	0.45	0.45	0.50	0.50	1.8	0.040	[a]0.020	[a]0.023	2.2	8	760	--
JAN												
06...	0.24	--	0.30	--	--	<0.010	<0.010	<0.010	--	--	--	--
13...	0.41	0.23	0.48	0.30	2.2	0.040	0.020	0.011	4.3	9	518	--
FEB												
20...	--	--	0.40	0.38	2.4	0.050	0.030	0.004	8.2	6	227	--
MAR												
03...	0.92	0.68	1.0	0.78	3.4	0.140	0.010	0.006	4.2	75	9790	--
04...	0.58	0.29	0.66	0.36	2.8	0.070	0.020	0.011	6.6	--	--	--
04...	0.58	0.34	0.66	0.42	2.7	0.070	0.010	0.007	6.9	--	--	--
04...	0.66	0.38	0.70	0.42	2.7	0.070	0.030	0.006	5.8	87	17200	--
05...	1.4	0.52	1.4	0.58	3.2	0.140	<0.010	0.002	4.9	76	14200	--
06...	0.66	0.56	0.74	0.64	2.5	0.060	0.020	<0.002	6.3	53	8590	--
07...	0.81	0.39	0.88	0.44	2.8	0.050	0.020	0.005	6.3	30	4060	--
08...	0.68	0.48	0.70	0.51	2.6	0.040	0.020	0.002	5.5	22	2910	--
18...	0.47	0.43	0.48	0.44	1.9	0.030	0.020	0.007	5.5	14	1390	--
30...	0.53	0.41	0.60	0.48	1.4	0.110	0.020	0.006	9.9	32	4110	--
APR												
03...	0.67	0.30	0.74	0.37	1.7	0.090	0.030	0.002	4.6	46	10200	--
04...	0.73	0.40	0.83	0.50	1.8	0.100	0.030	0.002	6.6	53	11300	--
04...	0.33	0.24	0.40	0.31	1.4	0.070	0.020	0.002	4.8	40	8290	--
04...	0.58	0.45	0.66	0.53	1.6	0.080	0.020	0.002	4.2	38	7820	--
05...	1.1	0.57	1.2	0.66	2.3	0.140	0.030	0.003	5.3	94	28400	--
05...	1.1	0.44	1.2	0.53	2.3	0.150	0.030	0.003	5.6	230	112000	--
06...	1.9	0.25	2.0	0.34	3.0	0.330	0.030	0.002	6.9	301	169000	--
06...	0.69	0.28	0.91	0.50	2.0	0.330	0.040	<0.002	5.8	275	160000	--
07...	0.66	0.24	0.82	0.40	2.0	0.180	0.040	<0.002	5.0	209	121000	--
08...	0.55	0.55	0.65	0.65	1.9	0.150	0.040	0.002	3.1	--		--
09...	0.25	--	0.30	--	--	0.100	0.010	<0.010	--	73	33900	7
09...	0.40	0.26	0.56	0.42	1.7	0.180	0.030	<0.002	3.8	90	40300	--
10...	0.50	0.37	0.55	0.40	1.6	0.060	0.040	0.002	4.1	66	24100	--
13...	0.58	0.28	0.63	0.33	1.9	0.080	0.040	0.002	5.2	--	--	--
14...	0.31	0.17	0.36	0.22	1.7	0.080	0.040	0.003	5.2	35	6410	--
28...	0.53	0.26	0.55	0.28	1.7	0.040	0.030	0.007	5.8	22	2210	--
MAY												
11...	1.7	--	1.7	--	--	0.050	0.020	0.010	--	8	588	94
18...	0.92	0.59	0.98	0.65	1.8	0.050	[a]<0.010	[a]<0.020	2.8	6	269	--
JUN												
08...	0.75	0.76	0.80	0.80	1.9	0.100	0.060	0.020	3.3	20	921	--
JUL												
06...	0.20	0.10	0.50	0.40	1.6	0.160	0.080	0.007	4.4	25	1950	--
08...	0.38	--	0.40	--	--	0.020	0.020	0.010	--	22	1220	83
08...	0.53	0.38	0.56	0.40	1.6	0.060	0.040	0.013	3.3	22	1220	--
AUG												
04...	0.50	--	0.54	--	0.88	0.160	0.100	0.004	3.9	8	130	--
SEP												
02...	0.78	--	0.80	--	--	0.060	<0.010	<0.010	--	21	543	91
02...	0.81	0.42	0.82	0.44	1.6	0.020	0.020	0.010	2.6	21	528	--
08...	0.76	0.32	0.84	0.40	1.6	0.080	0.030	0.012	2.5	14	290	--
08...	0.80	0.32	0.86	0.38	1.6	0.090	0.030	0.010	3.6	26	581	--
09...	0.64	0.58	0.74	0.68	1.8	0.080	0.020	0.010	2.0	24	561	--
10...	1.1	0.56	1.2	0.64	2.2	0.100	0.030	0.010	1.6	45	2040	--
11...	1.3	0.49	1.4	0.54	2.4	0.140	0.020	0.003	2.7	42	2140	--
11...	0.97	0.24	1.0	0.32	2.4	0.120	0.030	0.006	3.2	29	1430	--
12...	0.90	0.32	0.98	0.40	1.9	0.070	0.030	0.006	3.6	24	1050	--

(a) Results within limits of analytical precision.

01570500 SUSQUEHANNA RIVER AT HARRISBURG, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	STREAM-FLOW, INSTAN-TANEOUS (CFS)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)
NOV												
17...	1230	1028	80020	30500	10	<1	33	<0.5	<1	4	<3	9
APR												
09...	0940	1028	80020	172000	40	<1	27	<0.5	<1	<1	<3	<1
MAY												
11...	1230	1028	80020	27200	50	<1	27	<0.5	<1	<1	<1	5
SEP												
02...	0840	1028	80020	9570	50	1	39	<0.5	<1	<1	<3	3

DATE	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV												
17...	75	<5	5	110	<0.1	<10	9	<1	<1.0	120	<6	21
APR												
09...	33	<5	8	67	0.1	<10	3	<1	<1.0	70	<6	11
MAY												
11...	7	<5	12	28	<0.1	<10	3	<1	<1.0	120	<6	30
SEP												
02...	6	<5	<4	6	0.1	<10	3	1	<1.0	260	<6	6

RADIOCHEMICAL ANALYSIS, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	STREAM-FLOW, INSTAN-TANEOUS NUMBER)	POTAS-SIUM, DIS-SOLVED (MG/L (CFS)	GROSS ALPHA, DIS-SOLVED (UG/L AS AS K)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)
APR							
09...	0940	1028	80020	172000	1.4	<0.4	<0.4
SEP							
02...	0840	1028	80020	9570	2.8	<0.4	0.7

DATE	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS-SOLVED (PCI/L AS SR/YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90)	RADIUM 226, DIS-SOLVED, RADON METHOD (PCI/L)	URANIUM DIS-SOLVED, EXTRAC-TION (UG/L)
APR						
09...	1.6	<0.4	1.4	<0.4	0.06	0.02
SEP						
02...	3.2	0.9	2.6	0.9	<0.02	--

01571000 PAXTON CREEK NEAR PENBROOK, PA

LOCATION.--Lat 40°18'30", long 76°51'00", Dauphin County, Hydrologic Unit 02050305, on right bank 90 ft upstream from bridge on North Progress Avenue, 0.3 mi north of Interstate Highway 81, and 2.0 mi north of Penbrook.

DRAINAGE AREA.--11.2 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1940 to September 1950. Annual maximum, water years 1974-84. October 1984 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 350 ft above National Geodetic Vertical Datum of 1929, from topographic map. Mar. 1, 1940, to Sept. 30, 1950, water-stage recorder at bridge 100 ft downstream at same datum.

REMARKS.--Records good except those below 1.0 ft³/s and estimated daily discharges, which are fair.

AVERAGE DISCHARGE.--13 years (water years 1941-50, 1985-87), 14.5 ft³/s, 17.58 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,600 ft³/s, Sept. 26, 1975, gage height, 13.25 ft, from rating curve extended above 2,800 ft³/s on basis of peak flow through culvert; minimum, 0.1 ft³/s or less during summer months some years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 22, 1972, reached a stage of 13.45 ft, from floodmarks, discharge 3,300 ft³/s.

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

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 20	2145	498	5.19	Dec. 24	2215	972	6.00
Dec. 3	0115	507	5.21	Sept. 12	2315	*3,630	*9.94

Minimum discharge, 0.38 ft³/s, July 25, gage height, 2.01 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	1.9	8.4	11	e8.2	126	14	6.0	4.3	.97	.58	5.6
2	4.6	2.1	62	13	e9.0	67	12	6.0	4.1	3.3	.58	1.8
3	5.8	2.0	117	12	e10	48	20	15	3.8	6.0	.58	1.5
4	9.4	1.9	28	11	e12	36	41	49	6.1	1.4	.57	1.1
5	7.4	12	20	9.0	e11	28	51	23	4.8	1.0	11	1.0
6	2.7	14	15	8.4	e11	24	99	17	3.6	.90	3.0	4.3
7	2.1	5.6	13	8.5	e12	21	57	14	3.1	1.1	1.1	32
8	1.8	11	11	8.9	e12	19	41	12	2.9	2.1	.90	59
9	1.6	8.7	29	8.7	e11	17	34	10	3.2	1.3	2.8	21
10	1.4	6.1	20	9.5	e11	15	27	9.0	2.3	.91	3.7	9.8
11	1.3	20	15	11	e10	13	23	8.0	1.9	.82	.96	6.7
12	1.3	12	14	9.8	e9.5	12	26	6.9	2.0	.75	.75	401
13	3.6	7.9	11	11	e9.0	11	25	5.9	2.5	5.2	.62	598
14	13	6.0	9.6	11	e8.4	10	18	5.2	2.4	6.1	.60	61
15	4.4	5.5	8.9	17	e7.6	10	15	29	3.2	2.6	.59	32
16	2.8	5.0	8.4	20	e7.0	9.1	14	8.2	2.8	1.3	.59	20
17	2.3	4.4	8.1	16	e6.4	8.2	18	6.6	1.6	.96	.97	26
18	1.9	29	77	16	e6.0	7.7	15	13	1.3	.81	1.1	62
19	1.8	27	29	33	e6.0	7.3	13	41	1.3	.72	1.7	28
20	1.7	69	21	26	e5.8	7.0	11	56	3.2	.61	2.5	28
21	1.6	42	16	20	e5.8	6.8	10	27	2.4	.59	.65	18
22	1.6	18	13	17	e6.0	6.4	9.6	20	2.3	.57	8.2	14
23	1.6	13	11	e16	e7.0	6.1	9.4	16	7.4	.56	1.5	12
24	1.5	15	134	e14	e9.0	5.8	14	13	1.8	.57	.83	9.0
25	1.5	11	123	e13	e8.8	5.9	12	11	1.4	9.4	.69	8.0
26	5.2	33	36	e11	e8.6	6.7	9.0	9.3	1.3	3.4	.61	6.1
27	3.3	22	26	e10	e8.4	5.5	8.0	9.6	1.4	1.0	1.3	5.3
28	4.1	15	20	e9.2	17	6.4	7.5	8.0	1.0	.75	16	4.5
29	2.5	12	16	e8.6	---	5.4	7.0	6.5	.89	.63	28	4.4
30	2.2	10	15	e9.0	---	5.5	6.6	5.4	.89	.61	3.5	6.5
31	2.0	---	12	e8.6	---	28	---	4.7	---	.59	2.5	---
TOTAL	103.8	442.1	947.4	407.2	253.5	584.8	667.1	471.3	81.18	57.52	98.97	1487.6
MEAN	3.35	14.7	30.6	13.1	9.05	18.9	22.2	15.2	2.71	1.86	3.19	49.6
MAX	13	69	134	33	17	126	99	56	7.4	9.4	28	598
MIN	1.3	1.9	8.1	8.4	5.8	5.4	6.6	4.7	.89	.56	.57	1.0
CFSM	.30	1.32	2.73	1.17	.81	1.68	1.99	1.36	.24	.17	.29	4.43
IN.	.34	1.47	3.15	1.35	.84	1.94	2.22	1.57	.27	.19	.33	4.94

CAL YR 1986 TOTAL 5540.47 MEAN 15.2 MAX 368 MIN .44 CFSM 1.36 IN. 18.40
WTR YR 1987 TOTAL 5602.44 MEAN 15.3 MAX 598 MIN .56 CFSM 1.37 IN. 18.61

e Estimated

01571000 PAXTON CREEK NEAR PENBROOK, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966, 1985 to current year.

INSTRUMENTATION.--Automatic pumping sampler since June 1985.

COOPERATION.--Water-quality samples collected by Susquehanna River Basin Commission and analyzed by the Pa. Department of Environmental Resources.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)
OCT										
03...	1245	1.7	325	8.05	--	0.500	0.500	0.030	0.030	0.55
03...	1922	17	270	7.90	--	0.500	0.500	0.045	0.045	1.1
03...	2115	14	250	7.85	--	0.640	0.640	0.840	0.840	1.1
03...	2215	20	280	7.90	--	0.320	0.300	0.050	0.050	0.91
03...	2315	16	320	8.00	--	0.260	0.260	0.050	0.050	0.75
04...	0015	15	317	8.10	--	0.320	0.320	0.030	0.030	0.72
04...	0215	18	264	8.00	--	0.600	0.600	0.090	0.080	0.81
04...	0315	16	240	8.00	--	0.660	0.660	0.180	0.155	0.54
04...	0415	18	245	8.00	--	0.720	0.700	0.085	0.085	0.81
04...	0515	22	265	8.00	--	0.620	0.600	0.035	0.035	0.85
04...	0645	20	255	8.00	--	0.620	0.620	0.035	0.025	0.70
04...	0745	15	257	8.05	--	0.620	0.620	0.035	0.025	0.56
04...	0845	5.8	265	8.20	--	0.640	0.640	0.040	0.035	0.62
NOV										
05...	0900	4.3	377	8.05	3.0	0.540	0.520	0.025	0.020	0.22
DEC										
17...	1255	7.6	270	8.80	5.0	1.30	1.30	<0.010	<0.010	0.44
FEB										
27...	2200	8.4	330	8.10	--	1.00	1.00	0.010	0.010	0.30
28...	1700	10	308	8.00	--	1.04	1.04	0.075	0.070	0.73
28...	2330	87	274	8.00	--	1.00	1.00	0.105	0.050	1.9
MAR										
01...	0200	104	232	7.80	--	0.940	0.940	0.115	0.070	0.86
01...	0345	92	228	7.70	--	0.940	0.940	0.085	0.075	0.73
01...	0545	101	228	7.70	--	1.02	1.02	0.085	0.065	0.81
01...	0800	117	228	7.70	--	1.04	1.04	0.075	0.065	0.80
01...	0835	140	224	7.70	--	1.04	1.04	0.070	0.050	0.83
01...	0935	192	215	7.60	--	1.04	1.04	0.030	0.030	0.63
01...	1040	233	194	7.70	--	0.980	0.980	0.055	0.025	0.66
01...	1210	205	180	7.78	--	1.00	1.00	0.060	0.030	0.60
01...	1415	152	187	7.75	--	1.14	1.08	0.050	0.040	0.61
01...	1645	120	208	7.72	--	1.34	1.30	0.050	0.040	0.67
01...	1945	100	218	7.70	--	1.62	1.60	0.025	0.020	0.59
02...	1500	67	--	--	--	1.76	1.76	0.020	0.020	0.34
03...	1150	50	240	7.81	--	1.82	1.80	0.030	0.025	0.57
30...	1405	5.2	322	8.00	13.0	0.460	0.460	0.025	0.025	0.39
APR										
03...	1700	19	290	8.40	12.0	0.930	0.900	0.035	0.035	0.48
04...	0200	62	283	7.70	--	0.820	0.820	0.035	0.030	0.81
04...	0430	52	240	7.60	--	0.760	0.760	0.060	0.025	0.82
05...	0630	26	290	7.70	11.0	1.02	1.02	0.010	0.010	0.35
28...	0935	7.6	285	8.05	12.5	0.580	0.540	0.015	0.015	0.62
MAY										
18...	1500	6.2	363	8.35	22.0	0.880	0.880	0.100	0.100	1.0
JUN										
02...	1610	4.1	342	8.40	24.5	0.820	0.800	0.030	0.025	1.9
30...	1225	0.89	380	8.40	26.0	1.18	--	0.025	0.025	0.49
AUG										
04...	0900	0.49	425	8.50	24.0	0.960	0.960	0.075	0.050	0.46
SEP										
07...	1200	61	187	7.90	--	0.680	0.660	0.100	0.060	1.0
07...	1300	80	274	7.70	--	0.760	0.760	0.290	0.110	3.5
07...	1343	134	256	7.60	--	0.700	0.700	0.170	0.020	0.95
07...	1435	85	170	7.80	--	0.640	0.640	0.050	0.040	1.0
07...	1615	54	135	7.90	--	0.660	0.620	0.100	0.080	1.5
07...	1818	51	160	8.00	--	0.820	0.800	0.080	0.040	0.68
07...	2030	37	257	7.80	--	1.12	1.10	0.080	0.030	1.1
08...	0600	13	275	7.90	--	1.30	1.22	0.040	0.040	0.84
08...	1200	47	244	7.70	--	1.08	1.02	0.160	0.100	1.7
08...	1400	154	274	7.60	--	0.940	0.940	0.050	0.020	2.0
08...	1600	103	205	7.60	--	0.880	0.860	0.070	0.030	1.7
12...	2340	3550	96	7.70	--	0.940	0.900	0.720	0.190	1.3
13...	0020	2990	107	7.60	--	1.08	1.06	0.160	0.140	1.7
13...	0022	3040	106	7.60	--	1.04	1.02	0.120	0.100	1.4
13...	0230	1620	144	7.50	--	1.42	1.40	0.100	0.080	1.9
13...	0500	1330	145	7.40	--	1.36	1.36	0.080	0.060	0.84
13...	0700	468	174	7.40	--	1.62	1.60	0.080	0.060	0.70
13...	1000	283	204	7.40	--	1.94	1.94	0.080	0.060	0.76
13...	1300	198	218	7.40	--	2.00	1.98	0.080	0.060	1.7
13...	2210	101	243	7.40	--	2.64	2.42	0.060	0.050	0.90

01571000 PAXTON CREEK NEAR PENBROOK, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT										
03...	0.52	0.58	0.55	1.1	0.090	0.050	0.032	6.9	22	0.10
03...	0.76	1.1	0.81	1.6	0.240	0.060	0.037	7.6	126	5.8
03...	0.96	2.0	1.8	2.6	--	--	--	7.4	492	19
03...	0.32	0.96	0.37	1.3	0.220	0.070	0.052	8.3	93	5.0
03...	0.68	0.80	0.73	1.1	0.140	0.070	0.037	9.8	39	1.7
04...	0.70	0.75	0.73	1.1	0.120	0.070	0.039	7.1	22	0.90
04...	0.52	0.90	0.60	1.5	0.220	0.130	0.084	7.8	58	2.8
04...	0.52	0.72	0.68	1.4	0.330	0.220	0.014	6.6	103	4.4
04...	0.59	0.90	0.68	1.6	0.250	0.150	0.100	7.6	73	3.5
04...	0.74	0.88	0.78	1.5	0.190	0.080	0.006	7.5	66	3.9
04...	0.61	0.74	0.64	1.4	0.180	0.090	0.055	7.4	50	2.7
04...	0.47	0.60	0.50	1.2	0.140	0.070	0.040	7.6	37	1.5
04...	0.60	0.66	0.64	1.3	0.120	0.060	0.037	6.6	22	0.35
NOV										
05...	0.16	0.25	0.18	0.79	0.070	0.030	0.013	7.1	22	0.26
DEC										
17...	0.30	0.44	0.30	1.7	0.040	0.020	0.011	5.7	<1	--
FEB										
27...	0.30	0.31	0.31	1.3	0.020	0.010	0.010	10	10	0.24
28...	0.38	0.81	0.45	1.8	0.150	0.010	0.005	12	151	4.1
28...	0.55	2.0	0.60	3.0	0.320	0.020	0.012	13	352	83
MAR										
01...	0.45	0.98	0.52	1.9	0.290	0.020	0.016	12	300	84
01...	0.72	0.82	0.80	1.8	0.200	0.030	0.019	11	162	40
01...	0.61	0.90	0.68	1.9	0.160	0.020	0.005	13	160	44
01...	0.63	0.88	0.70	1.9	0.190	0.030	0.010	10	187	59
01...	0.47	0.90	0.52	1.9	0.210	0.020	0.015	9.6	216	82
01...	0.61	0.66	0.64	1.7	0.240	0.020	0.003	9.5	--	--
01...	0.40	0.72	0.42	1.7	0.350	0.030	0.002	8.6	--	--
01...	0.41	0.66	0.44	1.7	0.280	0.040	0.008	9.9	--	--
01...	0.58	0.66	0.62	1.8	0.130	0.030	0.003	12	--	--
01...	0.54	0.72	0.58	2.1	0.100	0.030	0.005	16	--	--
01...	0.52	0.62	0.54	2.2	0.060	0.020	<0.002	7.6	--	--
02...	0.26	0.36	0.28	2.1	0.030	0.040	0.003	6.2	--	--
03...	0.45	0.60	0.48	2.4	0.030	0.020	0.002	4.9	--	--
30...	0.20	0.41	0.23	0.87	0.070	0.020	0.005	26	8	0.11
APR										
03...	0.42	0.52	0.46	1.4	0.100	0.030	0.005	9.5	12	0.60
04...	0.47	0.84	0.50	1.7	0.160	0.030	0.005	11	130	22
04...	0.45	0.88	0.48	1.6	0.200	0.030	0.004	11	260	37
05...	0.33	0.36	0.34	1.4	0.100	0.030	0.004	9.2	11	0.78
28...	0.48	0.64	0.50	1.2	0.060	0.040	0.003	9.9	21	0.44
MAY										
18...	0.83	1.1	0.93	2.0	0.050	<0.010	<0.020	2.2	8	0.13
JUN										
02...	0.35	2.0	0.38	2.8	0.080	0.050	0.005	3.8	10	0.11
30...	0.45	0.52	0.48	1.7	0.050	0.050	0.020	2.6	8	0.02
AUG										
04...	0.45	0.54	0.50	1.5	0.140	0.140	0.056	3.4	9	0.01
SEP										
07...	0.70	1.1	0.76	1.8	0.910	0.090	0.037	5.6	2050	338
07...	0.61	3.8	0.72	4.6	0.250	0.090	0.039	4.9	601	130
07...	0.27	1.1	0.29	1.8	0.280	0.070	0.031	7.5	474	171
07...	0.60	1.1	0.64	1.7	0.130	0.060	0.016	4.2	426	98
07...	0.72	1.5	0.80	2.2	0.360	0.060	0.017	4.4	482	70
07...	0.62	0.76	0.66	1.6	0.210	0.070	0.017	4.8	247	34
07...	0.43	1.1	0.46	2.2	0.240	0.090	0.041	6.8	192	19
08...	0.76	0.88	0.80	2.2	0.130	0.070	0.029	5.8	72	2.5
08...	0.55	1.9	0.65	3.0	0.240	0.130	0.080	3.8	455	58
08...	0.50	2.0	0.52	2.9	0.130	0.070	0.029	3.8	397	165
08...	0.62	1.8	0.65	2.7	0.190	0.080	0.030	5.6	253	70
12...	0.63	2.0	0.82	2.9	0.290	0.050	0.010	6.3	1660	15900
13...	0.54	1.8	0.68	2.9	0.210	0.050	0.008	5.7	1220	9850
13...	0.72	1.5	0.82	2.5	0.220	0.050	0.005	6.9	1200	9850
13...	0.77	2.0	0.85	3.4	0.170	0.060	0.005	6.4	766	3350
13...	0.84	0.92	0.90	2.3	0.170	0.070	0.022	5.5	398	1430
13...	0.56	0.78	0.62	2.4	0.170	0.070	0.020	6.1	227	287
13...	0.51	0.84	0.57	2.8	0.160	0.070	0.042	6.3	139	106
13...	0.72	1.8	0.78	3.8	0.140	--	0.021	6.2	87	47
13...	0.60	0.96	0.65	3.6	0.100	0.060	0.015	3.9	42	11

01571500 YELLOW BREECHES CREEK NEAR CAMP HILL, PA

LOCATION.--Lat 40°13'29", long 76°53'54", Cumberland County, Hydrologic Unit 02050305, on left bank 50 ft downstream from single-span highway bridge, 150 ft downstream from Olmsted Mill dam, 1.0 mi southeast of Camp Hill, and 3.1 mi upstream from mouth.

DRAINAGE AREA.--216 mi^2.

PERIOD OF RECORD.--April 1909 to December 1919, June 1954 to current year. Monthly discharge only for some periods published in WSP 1302. Prior to June 1954, published as "at Olmsteds Mill".

REVISED RECORDS.--WSP 1302: 1910, 1912-13, 1914(M), 1916.

GAGE.--Water-stage recorder. Datum of gage is 307.49 ft above National Geodetic Vertical Datum of 1929. March 1909 to December 1919, nonrecording gage at site 50 ft upstream at same datum.

REMARKS.-- Records good except those for estimated daily discharges, which are fair. The Mechanicsburg Water Co. diverts water, at a point about 4 mi upstream from station, for municipal supply. Diversion for the year was equivalent to a mean daily discharge of 1.7 ft^3/s. Several measurements of water temperature were made during the year. National Weather Service satellite and landline telemeters at station.

AVERAGE DISCHARGE.--43 years (1909-1919, 1954-87), 291 ft^3/s, 18.30 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,300 ft^3/s, Sept. 26, 1975, gage height, 18.77 ft, from floodmarks; minimum, 23 ft^3/s, Sept. 12, 1966, gage height, 0.17 ft; minimum daily, 67 ft^3/s, Sept. 13, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 22, 1953, reached a stage of 9.4 ft, from floodmarks, discharge, 3,940 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,250 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 25	0430	1,580	5.00	Sept. 13	1345	*1,800	*5.49

Minimum discharge, 84 ft^3/s, Oct. 10, 31, minimum gage height, 0.76 ft, Oct. 1, 10, 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	102	94	144	290	e200	743	390	236	204	126	96	101
2	119	94	175	310	e210	901	278	240	199	171	99	99
3	118	92	944	298	e210	666	287	273	197	149	102	96
4	124	95	463	271	e220	558	508	500	224	136	102	94
5	110	107	312	248	e220	467	764	510	239	126	144	97
6	97	167	257	235	e230	424	980	367	201	119	147	103
7	92	139	233	239	e240	415	948	331	185	118	123	147
8	93	123	217	239	e230	417	750	314	179	126	113	250
9	94	122	286	237	e220	405	642	302	181	133	109	311
10	91	114	353	240	e220	369	565	289	177	120	105	154
11	88	127	275	241	e210	340	505	275	169	116	101	131
12	90	157	246	231	e200	322	478	263	166	118	101	241
13	94	131	231	223	e200	315	505	252	172	128	100	1290
14	114	116	211	225	e190	301	424	245	168	122	97	409
15	110	109	206	259	e190	300	379	265	159	118	98	247
16	101	109	205	339	e190	297	367	271	152	112	98	203
17	97	107	201	296	e180	278	431	258	145	108	97	220
18	95	115	299	277	e175	265	447	247	142	104	100	471
19	92	226	333	394	e180	256	379	258	142	101	97	378
20	91	202	255	518	e180	249	354	573	158	104	96	294
21	92	445	230	397	e190	241	339	489	185	102	95	269
22	91	246	214	e335	e190	235	321	360	193	101	111	245
23	97	186	205	e332	224	225	308	308	201	98	115	222
24	94	171	275	e290	223	222	311	289	158	99	103	202
25	93	158	1240	e260	212	215	321	264	147	98	100	188
26	103	173	655	e240	206	222	290	255	142	99	101	177
27	107	239	488	e230	209	213	268	248	144	95	e109	169
28	103	186	419	e220	210	218	259	244	140	96	e112	162
29	97	164	366	e210	---	212	254	231	133	100	e110	154
30	95	154	342	e200	---	203	249	219	128	98	e107	165
31	90	---	316	e200	---	285	---	211	---	97	e104	---
TOTAL	3074	4668	10596	8524	5759	10779	13301	9387	5130	3538	3292	7289
MEAN	99.2	156	342	275	206	348	443	303	171	114	106	243
MAX	124	445	1240	518	240	901	980	573	239	171	147	1290
MIN	88	92	144	200	175	203	249	211	128	95	95	94
CFSM	.46	.72	1.58	1.27	.95	1.61	2.05	1.40	.79	.53	.49	1.12
IN.	.53	.80	1.82	1.47	.99	1.86	2.29	1.62	.88	.61	.57	1.26

CAL YR 1986 TOTAL 98412 MEAN 270 MAX 2400 MIN 88 CFSM 1.25 IN. 16.95
WTR YR 1987 TOTAL 85337 MEAN 234 MAX 1290 MIN 88 CFSM 1.08 IN. 14.70

e Estimated

01571827 SWATARA CREEK BELOW RAVINE, PA

LOCATION.--Lat 40°33'47", long 76°23'53", Schuylkill County, Hydrologic Unit 02050305, on right bank on State Highway 125, 0.8 mi south of Ravine, and 1.0 mi north of State Highway 443.

DRAINAGE AREA.--46.3 mi².

PERIOD OF RECORD.--December 1984 to September 1987 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 530 ft above National Geodetic Vertical Datum of 1929, from topographic map.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,300 ft³/s, Mar. 15, 1986, gage height, 7.78 ft; minimum, 12 ft³/s, Sept. 7, 8, 1985, Sept. 17, 18, 1986.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Sept. 13	0700	*1,200	*7.63	No other peak greater than base discharge.			

Minimum daily discharge, 14 ft³/s, Aug. 4, 8, 9, 15-19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	20	73	103	51	266	173	120	53	29	16	16
2	32	21	79	107	53	246	142	114	50	34	15	15
3	31	20	220	97	57	203	142	127	49	32	15	15
4	41	20	145	89	56	174	258	192	60	26	14	15
5	35	25	126	80	53	151	234	141	57	24	17	15
6	29	56	114	76	53	143	301	126	46	22	18	18
7	27	35	104	74	53	164	270	121	42	22	15	35
8	26	49	96	71	54	203	232	113	42	25	14	77
9	25	62	116	66	51	223	205	107	42	22	14	61
10	24	47	111	68	52	199	183	103	39	22	18	28
11	22	55	92	68	50	172	167	100	38	22	15	23
12	23	65	84	63	e46	156	169	94	37	21	15	122
13	26	52	77	61	e43	142	171	85	42	21	15	835
14	42	46	70	59	e39	130	145	82	37	22	15	215
15	34	44	68	68	e38	119	132	83	36	21	14	113
16	29	43	66	80	e36	108	125	77	32	19	14	81
17	26	40	64	73	e39	101	134	73	29	18	14	70
18	23	43	142	71	e38	95	128	71	28	18	14	89
19	22	109	131	75	e40	91	117	82	27	17	14	121
20	21	104	108	71	41	86	112	103	28	18	18	100
21	21	227	98	65	42	83	105	98	28	18	15	79
22	22	131	90	63	43	81	100	85	91	17	21	74
23	21	103	84	e60	47	76	95	89	83	18	17	68
24	20	95	101	e56	45	72	195	76	43	17	15	60
25	20	82	286	e54	43	71	235	68	37	18	15	55
26	26	110	190	e52	43	72	186	65	33	22	15	51
27	27	134	167	e47	43	67	166	63	34	20	17	48
28	24	103	152	e48	44	66	153	60	31	18	17	45
29	22	93	137	e50	---	63	144	58	29	16	20	43
30	21	84	124	e49	---	63	132	55	27	17	16	44
31	20	---	113	e48	---	225	---	54	---	18	16	---
TOTAL	814	2118	3628	2112	1293	4111	5051	2885	1250	654	488	2631
MEAN	26.3	70.6	117	68.1	46.2	133	168	93.1	41.7	21.1	15.7	87.7
MAX	42	227	286	107	57	266	301	192	91	34	21	835
MIN	20	20	64	47	36	63	95	54	27	16	14	15
CFSM	.57	1.52	2.53	1.47	.99	2.86	3.64	2.01	.90	.46	.34	1.89
IN.	.65	1.70	2.91	1.70	1.04	3.30	4.06	2.32	1.00	.53	.39	2.11

CAL YR 1986 TOTAL 27742 MEAN 76.0 MAX 927 MIN 14 CFSM 1.64 IN. 22.29
WTR YR 1987 TOTAL 27035 MEAN 74.1 MAX 835 MIN 14 CFSM 1.60 IN. 21.72

e Estimated

01572030 SWATARA CREEK NEAR SUEDBERG, PA

LOCATION.--Lat 40°31'29", long 76°27'24", Schuylkill County, Hydrologic Unit 02050305, on right bank 0.6 mi east of Suedberg, 0.7 mi upstream from small right-bank tributary, and 1.2 mi downstream from Interstate Highway 81.

DRAINAGE AREA.--124 mi².

PERIOD OF RECORD.--December 1984 to September 1987 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 470 ft above National Geodetic Vertical Datum of 1929, from topographic map.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,980 ft³/s, Sept. 13, 1987, gage height, 12.98 ft, from rating curve extended above 1,700 ft³/s on basis of step-backwater analysis; minimum, 16 ft³/s, Aug. 22, 1987, gage height, 3.29 ft.

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

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 21	0230	1,540	7.32	Mar. 1	1730	1,560	7.36
Dec. 25	0345	1,710	7.59	Sept. 13	1200	*6,980	*12.98

Minimum discharge, 16 ft³/s, Aug. 22, gage height, 3.29 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	41	241	293	e120	940	373	e255	91	56	24	29
2	64	45	244	296	e115	1080	306	e250	86	65	25	24
3	57	46	836	279	e140	766	314	e320	82	77	27	23
4	83	45	564	250	e150	584	682	e482	98	62	26	21
5	78	59	425	227	e140	459	757	e300	98	53	29	20
6	64	179	348	212	e140	408	979	305	77	47	42	26
7	55	121	308	212	e140	437	873	279	71	46	30	177
8	52	165	282	208	e145	546	650	250	71	50	28	609
9	50	217	314	195	e135	587	507	222	72	48	26	589
10	45	203	340	192	e140	482	424	205	65	44	29	229
11	41	230	289	194	e130	399	372	189	58	42	27	134
12	41	295	279	191	e125	360	367	172	62	39	24	514
13	48	230	252	167	e115	330	395	155	69	37	22	4420
14	90	177	220	147	e105	304	320	143	65	49	21	1320
15	78	153	211	169	e100	285	296	149	59	59	20	524
16	59	145	201	228	e96	259	282	134	54	42	19	355
17	52	137	195	224	e105	240	295	125	50	35	19	296
18	48	136	498	219	e95	222	293	117	47	31	19	375
19	45	391	567	246	e90	213	262	154	46	28	17	502
20	45	349	425	238	e88	202	242	202	46	27	21	425
21	45	1070	349	200	e95	189	223	192	45	26	18	339
22	46	540	306	e170	102	182	214	164	141	24	24	308
23	44	375	279	e160	120	169	199	185	242	24	24	277
24	42	330	296	e150	115	152	354	155	109	24	19	229
25	40	277	1280	e145	112	147	525	130	82	24	18	192
26	54	345	768	e140	111	149	e380	125	69	28	18	164
27	66	497	561	e130	112	142	e340	118	88	32	25	144
28	56	387	456	e125	114	139	e320	115	69	26	25	129
29	48	330	390	e130	---	133	e300	109	59	24	35	111
30	43	286	356	e130	---	129	e280	99	54	23	25	108
31	42	---	323	e25	---	426	---	95	---	28	23	---
TOTAL	1688	7801	12403	5892	3295	11060	12124	5895	2325	1220	749	12613
MEAN	54.5	260	400	190	118	357	404	190	77.5	39.4	24.2	420
MAX	90	1070	1280	296	150	1080	979	482	242	77	42	4420
MIN	40	41	195	25	88	129	199	95	45	23	17	20
CFSM	.44	2.10	3.23	1.53	.95	2.88	3.26	1.53	.62	.32	.19	3.39
IN.	.51	2.34	3.72	1.77	.99	3.32	3.64	1.77	.70	.37	.22	3.78

CAL YR 1986 TOTAL 76864 MEAN 211 MAX 4050 MIN 26 CFSM 1.70 IN. 23.06
WTR YR 1987 TOTAL 77065 MEAN 211 MAX 4420 MIN 17 CFSM 1.70 IN. 23.12

e Estimated

01573000 SWATARA CREEK AT HARPER TAVERN, PA

LOCATION.--Lat 40°24'09", long 76°34'39", Lebanon County, Hydrologic Unit 02050305, on left bank 100 ft downstream from bridge on State Highway 934 at Harper Tavern, 6.0 mi northwest of Annville, and 8.5 mi downstream from Little Swatara Creek.

DRAINAGE AREA.--337 mi².

PERIOD OF RECORD.--January 1919 to current year. Monthly discharge only for some periods, published in WSP 1302. Prior to October 1927, published as "at Harpers".

REVISED RECORDS.--WSP 1202: 1948. WSP 1302: 1920(M), 1921, 1924-25(M), 1927-28(M), 1930(M). WSP 1903: Drainage area. WDR PA-85-2: 1984(P).

GAGE.--Water-stage recorder. Datum of gage is 356.68 ft above National Geodetic Vertical Datum of 1929. Prior to July 16, 1931, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. The Pa. American Water Co. diverts water upstream from station for municipal supply of City of Lebanon. Diversion for the year was equivalent to a mean daily discharge of 8.8 ft³/s. Several measurements of water temperature were made during the year. National Weather Service satellite and landline telemeter at station.

AVERAGE DISCHARGE.--68 years, 570 ft³/s, 22.97 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 66,700 ft³/s, June 23, 1972, gage height, 23.72 ft, from floodmark mark in gage shelter, from rating curve extended above 25,000 ft³/s on basis of slope-area measurement of peak flow; minimum, 6.0 ft³/s, Aug. 21, 1965, gage height, -0.10 ft; minimum observed gage height, -0.32 ft, Sept. 24, 1980.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1, 1889, reached a stage of 25.6 ft, from floodmark, discharge, 88,000 ft³/s, from rating curve extended as explained above.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,800 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Dec. 25	1015	4,990	7.38	Sept. 14	0915	*11,600	*12.03

Minimum discharge, 37 ft³/s, Aug. 18, 19, 20, gage height, -0.14 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	145	101	587	644	352	2530	e470	459	217	122	55	123
2	163	104	608	684	338	3350	e390	426	205	129	41	86
3	156	112	2560	645	403	2340	e500	451	191	156	50	58
4	273	109	1580	558	472	1770	e1000	1300	209	130	54	48
5	235	141	1120	475	460	1270	e1900	869	230	104	53	43
6	188	541	876	447	408	1050	e2700	e590	189	90	83	50
7	150	390	749	440	428	979	e2200	e540	165	84	78	161
8	133	469	666	423	443	1110	1670	e490	165	86	56	692
9	125	645	791	402	407	1180	1250	e400	166	91	48	1740
10	117	515	992	399	324	989	987	e360	157	82	47	565
11	106	542	723	416	389	794	826	e340	138	75	45	309
12	100	855	660	404	354	715	774	e320	134	71	41	497
13	110	588	602	387	335	656	880	e310	149	66	39	8850
14	221	460	489	406	291	572	704	e300	151	74	39	6250
15	269	391	502	455	261	529	622	e290	138	183	38	1620
16	177	356	476	613	243	479	545	e280	123	102	38	1040
17	147	319	455	578	308	435	584	e270	109	77	38	778
18	135	323	1210	562	288	403	600	e350	101	67	37	1350
19	122	1160	1640	695	241	384	518	e600	99	61	37	2460
20	111	904	1080	792	240	363	480	e700	101	56	e44	1600
21	109	2870	858	e600	236	345	440	550	109	51	e38	1140
22	107	1500	719	e500	243	328	411	480	114	45	e45	858
23	105	1010	685	e460	299	311	381	574	510	41	e54	752
24	100	875	769	e410	319	294	692	558	261	41	e45	605
25	98	724	3850	e400	311	282	1530	388	168	40	e40	527
26	123	885	2070	e390	297	293	910	349	136	40	e38	427
27	171	1570	1450	e360	305	276	733	321	144	46	e50	367
28	155	1030	1150	e370	301	262	647	305	143	46	e90	324
29	132	836	940	e380	---	251	578	276	114	40	e135	288
30	117	697	819	e390	---	236	522	249	103	39	e100	279
31	109	---	732	e360	---	508	---	225	---	41	e70	---
TOTAL	4509	21022	32408	15045	9296	25284	26444	13920	4939	2376	1666	33887
MEAN	145	701	1045	485	332	816	881	449	165	76.6	53.7	1130
MAX	273	2870	3850	792	472	3350	2700	1300	510	183	135	8850
MIN	98	101	455	360	236	236	381	225	99	39	37	43
CFSM	.43	2.08	3.10	1.44	.99	2.42	2.62	1.33	.49	.23	.16	3.35
IN.	.50	2.32	3.58	1.66	1.03	2.79	2.92	1.54	.55	.26	.18	3.74

CAL YR 1986 TOTAL 193685 MEAN 531 MAX 8230 MIN 56 CFSM 1.57 IN. 21.38
WTR YR 1987 TOTAL 190796 MEAN 523 MAX 8850 MIN 37 CFSM 1.55 IN. 21.06

e Estimated

01573160 QUITTAPAHILLA CREEK NEAR BELLEGROVE, PA

LOCATION.--Lat 40°20'34", long 76°33'46", Lebanon County, Hydrologic Unit 02050305, on right bank 210 ft downstream from bridge on Legislative Route 38001, 0.7 mi downstream from Killinger Creek, and 1.8 mi south of Bellegrove.

DRAINAGE AREA.--74.2 mi^2.

PERIOD OF RECORD.--October 1975 to current year.

GAGE.--Water-stage recorder. Datum of gage is 361.88 ft above National Geodetic Vertical Datum of 1929 (levels by Susquehanna River Basin Commission).

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Slight regulation from Millard limestone quarry 0.7 mi upstream. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--11 years, 107 ft^3/s, 19.58 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,800 ft^3/s, Jan. 24, 1979, gage height, 13.27 ft, from rating curve extended above 1,900 ft^3/s; minimum, 28 ft^3/s, Oct. 26, 27, 28, 29, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 648 ft^3/s, Dec. 25, gage height, 6.42 ft; minimum daily, 45 ft^3/s, Oct. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	59	106	150	116	e170	118	83	106	105	80	70
2	82	59	122	161	114	e300	103	78	101	117	85	58
3	80	54	265	151	117	e280	116	93	115	161	69	59
4	87	56	174	140	125	e250	158	144	135	116	65	57
5	67	73	153	130	120	e230	148	100	123	111	105	58
6	49	103	138	132	118	e200	227	86	107	101	93	73
7	90	70	136	128	119	e180	191	81	109	101	70	85
8	52	87	119	121	117	e190	167	80	114	102	70	125
9	45	79	147	120	114	157	151	78	111	95	65	109
10	48	67	141	123	113	152	139	74	102	96	68	80
11	56	101	124	121	111	145	130	75	96	100	61	74
12	55	101	123	114	111	142	132	73	130	94	63	145
13	62	83	119	112	112	138	130	70	119	98	61	335
14	92	75	111	114	e110	133	115	65	146	152	58	147
15	69	79	104	125	e115	130	110	99	103	117	63	114
16	60	75	100	131	e115	128	105	79	97	86	63	99
17	61	68	101	124	e120	123	119	73	97	76	64	117
18	67	76	162	127	e115	119	105	74	111	78	72	376
19	61	142	146	150	e110	115	101	122	103	82	63	309
20	54	119	137	156	e115	112	95	162	118	77	84	217
21	55	267	128	142	e115	110	91	131	125	73	60	198
22	58	156	121	142	e110	109	86	117	118	72	83	150
23	53	139	116	140	e110	108	86	168	122	75	65	130
24	52	125	150	133	e108	102	128	142	116	76	62	124
25	60	117	431	132	e105	100	128	134	116	84	66	119
26	81	150	230	128	e105	103	106	117	113	97	57	105
27	65	152	215	125	e100	100	96	114	122	78	80	100
28	64	127	191	121	e100	99	89	111	111	69	108	98
29	100	128	167	116	---	95	86	112	105	69	81	91
30	59	113	166	117	---	96	85	112	107	71	66	92
31	52	---	151	118	---	145	---	104	---	74	60	---
TOTAL	1987	3100	4794	4044	3160	4561	3641	3151	3398	2903	2210	3914
MEAN	64.1	103	155	130	113	147	121	102	113	93.6	71.3	130
MAX	100	267	431	161	125	300	227	168	146	161	108	376
MIN	45	54	100	112	100	95	85	65	96	69	57	57
CFSM	.86	1.39	2.08	1.76	1.52	1.98	1.64	1.37	1.53	1.26	.96	1.76
IN.	.99	1.55	2.40	2.03	1.58	2.29	1.83	1.58	1.70	1.46	1.11	1.96

CAL YR 1986 TOTAL 37974 MEAN 104 MAX 431 MIN 32 CFSM 1.40 IN. 19.04
WTR YR 1987 TOTAL 40863 MEAN 112 MAX 431 MIN 45 CFSM 1.51 IN. 20.49

e Estimated

01573560 SWATARA CREEK NEAR HERSHEY, PA

LOCATION.--Lat 40°17'54", long 76°40'05", Dauphin County, Hydrologic Unit 02050305, on left bank, 0.4 mi downstream from Manada Creek, 0.5 mi upstream from State Highway 39, and 1.5 mi northwest of Hershey.

DRAINAGE AREA.--483 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1975 to current year.

GAGE.--Water-stage recorder and gated concrete control. Datum of gage is 325.94 ft above National Geodetic Vertical Datum of 1929 (levels by Susquehanna River Basin Commission).

REMARKS.--Records good except those for estimated daily discharges, which are fair. Daily discharge adjusted during periods of diversion which occurred intermittently throughout the year. National Weather Service satellite and landline telemeters at station.

COOPERATION.--Records of daily diversion furnished by Hershey Chocolate Company.

AVERAGE DISCHARGE.--12 years, 789 ft³/s, 22.18 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,400 ft³/s, Sept. 27, 1975, gage height, 15.36 ft; minimum daily, 59 ft³/s, Sept. 21, 24, 1985.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,900 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Sept. 14	0600	*10,300	*7.85	No other peak greater than base discharge.			

Minimum daily discharge, 70 ft³/s, Aug. 19, 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	199	163	879	1020	e590	2470	e820	e550	e270	190	104	177
2	241	166	902	1070	583	4670	e680	e520	e250	216	108	154
3	217	171	3460	1050	606	3100	e560	e440	e240	253	111	116
4	362	171	2310	924	733	2460	e900	e900	e340	217	105	97
5	334	188	1660	792	777	1880	e2400	e1730	e470	182	109	83
6	262	616	1330	724	701	1580	e3090	e1100	e350	164	160	93
7	218	559	1150	706	690	1450	e2800	e950	e300	154	143	189
8	194	546	1030	691	727	1470	e2500	e800	e270	152	119	758
9	178	818	1190	667	727	1530	e2100	699	e250	155	111	1700
10	170	666	1460	664	576	1410	e1500	571	e240	149	110	779
11	162	677	1130	681	589	1180	e1400	499	e230	141	92	418
12	153	1110	1020	666	615	1040	e1300	448	e220	132	90	402
13	158	795	931	635	577	943	e1280	463	e220	140	83	7050
14	273	611	762	673	527	850	e1100	410	e230	140	76	8050
15	366	511	709	733	449	792	e900	409	e220	257	71	2120
16	263	460	704	992	369	716	820	e400	e210	206	72	1370
17	217	417	669	964	454	647	877	e380	202	150	71	1060
18	202	409	1470	913	480	593	902	e360	196	136	79	1850
19	190	1390	2360	1070	393	562	784	e650	192	127	70	3250
20	172	1190	1600	1320	392	526	708	e990	183	123	93	2170
21	166	3460	1310	1120	391	501	651	e840	204	111	70	1570
22	171	2120	1100	979	403	475	589	e580	193	100	82	1220
23	167	1470	950	e820	475	455	520	e640	519	92	99	1040
24	160	1270	1000	e740	536	422	900	e590	426	91	94	852
25	158	1090	5030	e680	518	418	1850	e500	267	96	86	732
26	190	1190	3010	e660	498	431	1070	e440	226	104	75	589
27	241	2090	2120	e620	502	398	934	e380	219	102	88	497
28	242	1470	1710	e580	492	379	837	e360	226	102	156	437
29	209	1240	1430	e600	---	e350	709	e340	199	91	241	391
30	182	1050	1270	e620	---	e340	620	e310	181	85	197	375
31	169	---	1140	e600	---	e400	---	e290	---	86	127	---
TOTAL	6586	28084	46796	24974	15370	34438	36101	18539	7743	4444	3292	39589
MEAN	212	936	1510	806	549	1111	1203	598	258	143	106	1320
MAX	366	3460	5030	1320	777	4670	3090	1730	519	257	241	8050
MIN	153	163	669	580	369	340	520	290	181	85	70	83
CFSM	.44	1.94	3.13	1.67	1.14	2.30	2.49	1.24	.53	.30	.22	2.73
IN.	.51	2.16	3.60	1.92	1.18	2.65	2.78	1.43	.60	.34	.25	3.05

CAL YR 1986 TOTAL 281738 MEAN 772 MAX 8340 MIN 109 CFSM 1.60 IN. 21.70
WTR YR 1987 TOTAL 265956 MEAN 729 MAX 8050 MIN 70 CFSM 1.51 IN. 20.48

e Estimated

01573560 SWATARA CREEK NEAR HERSHEY, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1985 to current year.

REMARKS.--Samples collected from bridge on State Highway 39.

COOPERATION.--Water-quality samples collected by Susquehanna River Basin Commission and analyzed by the Pa. Department of Environmental Resources.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)
OCT										
07...	1230	223	376	7.95	15.0	5.00	4.00	0.045	0.045	0.96
NOV										
05...	1130	177	372	8.00	4.0	3.74	3.52	[a]0.020	[a]0.040	0.68
20...	1537	953	208	7.00	3.0	3.52	3.52	0.130	0.125	0.60
20...	2130	1510	205	7.40	3.0	3.52	3.52	0.105	0.105	0.80
21...	0200	2710	218	7.25	3.5	3.08	3.08	0.120	0.105	0.68
21...	0700	3600	230	7.20	4.0	3.30	3.30	0.125	0.110	0.58
21...	1130	4190	175	7.25	4.0	3.30	3.30	0.200	0.170	1.3
21...	1500	4050	200	8.20	5.0	3.30	3.30	0.185	0.175	1.3
21...	1830	3470	210	8.40	4.5	3.30	3.30	0.155	0.150	0.85
22...	0530	2420	210	7.90	4.0	3.96	3.74	0.110	0.105	0.69
22...	2015	1790	195	7.80	3.5	4.62	4.62	0.100	0.075	0.68
23...	1050	1470	220	7.30	5.5	4.84	4.84	0.080	0.080	0.36
DEC										
17...	1145	673	240	7.50	4.0	3.96	3.96	0.080	0.080	0.44
JAN										
13...	1330	624	257	7.85	5.5	3.75	3.55	0.090	0.090	--
FEB										
19...	0940	337	260	8.10	2.0	4.62	4.62	0.095	0.095	0.35
28...	1530	479	285	8.20	4.0	3.96	3.96	0.060	0.060	0.44
MAR										
01...	0320	1120	264	8.00	4.0	3.52	3.52	0.110	0.110	0.55
01...	1310	3230	210	7.80	5.0	2.64	2.64	0.240	0.220	0.84
01...	1945	4880	190	7.90	4.0	2.64	2.42	0.325	0.315	0.95
01...	2340	5370	170	8.15	5.5	2.42	2.42	0.325	0.300	0.85
02...	0310	5510	190	7.80	5.0	2.42	2.42	0.290	0.255	0.85
02...	0715	5070	170	7.65	5.0	2.64	2.64	0.235	0.215	0.81
02...	1400	4070	158	7.30	5.0	3.08	3.08	0.160	0.155	0.74
03...	1510	2800	182	7.55	6.0	3.52	3.52	0.100	0.100	0.58
04...	1305	2270	185	7.35	4.0	4.00	3.60	0.080	0.075	0.40
05...	1815	1690	200	7.65	5.0	3.96	3.84	0.095	0.085	0.80
06...	1815	1480	209	7.70	7.0	3.84	3.84	0.065	0.065	0.63
09...	1245	1550	196	7.75	10.0	3.36	3.36	0.020	0.015	0.60
18...	1310	577	270	7.80	8.0	3.96	3.96	0.035	0.035	0.45
30...	1300	340	272	7.90	15.0	3.00	3.00	0.045	0.045	0.37
APR										
03...	2035	913	200	7.80	9.5	2.00	2.00	0.060	0.060	0.30
04...	0325	1040	214	7.85	8.0	2.00	2.00	0.080	0.075	0.40
04...	1045	1410	229	7.45	10.5	2.00	2.00	0.065	0.065	0.76
04...	1340	1510	223	7.60	12.0	2.00	2.00	0.100	0.100	1.0
04...	2220	2200	190	7.05	10.0	1.88	1.88	0.110	0.110	1.1
06...	1230	3190	135	7.90	8.0	2.64	2.64	0.120	0.110	0.78
06...	1630	3530	152	8.25	8.5	2.64	2.64	0.120	0.100	1.0
06...	1915	3570	130	8.00	8.5	2.64	2.64	0.130	0.110	0.95
07...	1815	2620	160	7.85	12.0	3.08	3.08	0.100	0.100	0.29
08...	1320	2130	177	7.95	12.5	3.30	3.30	0.080	0.080	0.32
09...	1330	1670	195	7.85	11.5	3.52	3.30	[a]0.070	[a]0.110	0.51
10...	1230	1420	197	7.70	14.0	2.76	--	0.012	0.012	0.69
13...	1430	1310	200	7.80	13.0	2.88	2.88	0.045	0.045	0.46
14...	1430	1010	223	7.75	14.5	2.86	2.64	0.055	0.055	0.46
28...	1030	940	205	8.20	14.5	2.28	2.16	0.030	0.025	0.55
MAY										
18...	1400	354	285	8.20	23.5	3.00	3.00	0.055	0.045	0.59
JUN										
03...	1330	251	320	7.50	23.0	3.74	3.74	0.040	0.040	3.6
30...	1500	171	350	8.50	26.0	7.26	6.60	0.020	0.010	0.46
AUG										
04...	1400	110	435	8.20	30.0	5.72	5.28	0.035	0.035	[a]1.6
SEP										
08...	1200	660	310	7.80	20.0	2.64	2.52	0.090	0.090	1.5
08...	2215	1480	240	7.60	20.5	1.88	1.86	[a]0.080	[a]0.110	1.3
09...	0130	1360	245	7.50	20.5	2.02	2.00	0.125	0.110	1.1
09...	1000	2280	224	7.40	22.0	2.76	2.64	0.390	0.390	0.45
09...	1315	2060	193	7.10	23.0	2.88	2.88	0.390	0.390	0.37
09...	2005	1420	185	7.30	21.0	3.00	3.00	0.160	0.160	1.1
10...	1330	699	218	--	22.0	4.18	4.18	0.080	0.070	0.68
11...	1245	409	252	7.40	24.0	4.32	4.32	0.050	0.050	0.89

(a) Results within limits of analytical precision.

01573560 SWATARA CREEK NEAR HERSHEY, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHOROUS TOTAL (MG/L AS P)	PHOSPHOROUS DISSOLVED (MG/L AS P)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
OCT										
07...	0.81	1.0	0.86	6.0	0.090	0.070	0.040	6.9	11	6.4
NOV										
05...	0.51	0.70	0.55	4.4	0.060	0.040	0.020	7.7	1	0.67
20...	0.58	0.73	0.71	4.2	0.130	0.040	0.012	5.4	34	86
20...	0.60	0.91	0.71	4.4	0.060	0.050	0.025	3.4	62	254
21...	0.63	0.80	0.74	3.9	0.130	0.060	0.043	5.4	357	2610
21...	0.56	0.71	0.67	4.0	0.100	0.060	0.052	4.0	534	5190
21...	0.88	1.5	1.0	4.8	0.120	0.060	0.053	5.2	616	6970
21...	1.0	1.5	1.2	4.8	0.090	0.050	0.018	4.8	498	5440
21...	0.49	1.0	0.64	4.3	0.080	0.050	0.029	3.7	310	2900
22...	0.67	0.80	0.78	4.8	0.110	0.050	0.023	3.6	94	615
22...	0.44	0.78	0.52	5.4	0.060	0.030	0.013	3.5	42	204
23...	0.32	0.44	0.40	5.3	0.070	0.040	<0.002	4.1	29	115
DEC										
17...	0.40	0.52	0.48	4.5	0.050	0.030	0.017	4.2	8	14
JAN										
13...	0.36	--	0.45	--	0.050	0.030	0.025	2.4	--	--
FEB										
19...	0.16	0.44	0.26	5.1	0.040	0.030	0.002	6.1	--	--
28...	0.39	0.50	0.45	4.5	0.040	<0.020	0.006	7.9	5	7.0
MAR										
01...	0.50	0.66	0.61	4.2	0.090	<0.020	0.007	9.4	49	148
01...	0.48	1.1	0.70	3.7	0.180	0.040	0.012	9.9	473	4130
01...	0.85	1.3	1.2	3.9	0.390	0.050	0.011	11	551	7260
01...	0.84	1.2	1.1	3.6	0.400	0.050	0.014	8.6	667	9670
02...	0.64	1.1	0.90	3.6	0.190	0.050	0.011	7.5	484	7210
02...	0.58	1.0	0.80	3.7	0.120	0.040	0.012	6.7	317	4340
02...	0.59	0.90	0.75	4.0	0.140	0.030	0.014	5.9	155	1710
03...	0.30	0.68	0.40	4.2	0.080	0.020	0.004	4.6	48	363
04...	0.32	0.48	0.40	4.5	0.300	0.200	0.180	6.1	43	267
05...	0.47	0.90	0.56	4.9	0.050	0.020	0.003	3.5	29	131
06...	0.53	0.70	0.60	4.5	0.030	0.020	0.002	5.0	22	87
09...	0.26	0.62	0.28	4.0	0.040	0.030	<0.002	5.3	22	92
18...	0.42	0.48	0.46	4.4	0.020	0.020	0.007	7.1	--	--
30...	0.30	0.42	0.35	3.4	0.090	0.020	0.006	17	9	8.0
APR										
03...	0.20	0.36	0.26	2.4	0.100	0.030	<0.002	5.4	12	31
04...	0.26	0.48	0.34	2.5	0.090	0.030	<0.002	5.0	23	64
04...	0.33	0.83	0.40	2.8	0.110	0.030	<0.002	5.7	53	203
04...	0.38	1.1	0.48	3.1	0.140	0.040	<0.002	7.0	62	254
04...	0.35	1.2	0.46	3.1	0.120	0.040	<0.002	6.6	132	785
06...	0.37	0.90	0.48	3.5	0.120	0.060	0.004	6.9	21	180
06...	0.33	1.1	0.43	3.8	0.140	0.060	0.009	4.6	106	1010
06...	0.49	1.1	0.60	3.7	0.200	0.060	0.012	4.4	150	1450
07...	0.25	0.39	0.35	3.5	0.120	0.050	0.002	4.0	152	1080
08...	0.30	0.40	0.38	3.7	0.080	0.040	0.003	3.4	46	262
09...	0.47	0.58	0.58	4.1	0.070	0.030	0.003	3.1	29	132
10...	0.49	0.70	0.50	3.5	0.060	0.040	0.003	5.6	17	66
13...	0.40	0.51	0.45	3.4	0.080	0.030	0.002	5.4	22	79
14...	0.30	0.52	0.36	3.4	0.050	0.040	0.003	6.3	14	39
28...	0.52	0.58	0.55	2.9	0.080	0.040	0.014	6.8	20	50
MAY										
18...	0.41	0.65	0.46	3.6	0.080	<0.010	<0.020	1.6	10	9.6
JUN										
03...	2.8	3.7	2.9	7.4	0.100	0.050	0.004	1.7	14	9.8
30...	0.43	0.48	0.44	7.7	0.120	0.090	0.030	2.8	16	7.4
AUG										
04...	[a]1.8	[a]1.7	[a]1.8	7.4	0.170	0.140	0.006	2.3	11	3.4
SEP										
08...	0.95	1.6	1.0	4.2	0.150	0.070	0.042	3.2	39	69
08...	0.79	1.4	0.90	3.2	0.310	0.080	0.026	5.1	177	707
09...	0.75	1.2	0.86	3.2	0.310	0.100	0.011	4.8	171	628
09...	0.37	0.84	0.76	3.6	0.600	0.070	0.010	5.3	418	2570
09...	0.07	0.76	0.46	3.6	0.360	0.060	0.011	5.5	318	1770
09...	1.0	1.2	1.2	4.2	0.260	0.050	0.010	5.3	132	506
10...	0.57	0.76	0.64	4.9	0.120	0.050	0.026	3.4	30	57
11...	0.55	0.94	0.60	5.3	0.100	0.050	0.024	3.3	24	27

(a) Results within limits of analytical precision.

01573808 BRUSH RUN, SITE 1, NEAR McSHERRYSTOWN, PA

LOCATION.--Lat 39°49'06", long 77°06'26", Adams County, Hydrologic Unit 02050306, 5 ft upstream of private culvert, 15 ft upstream from Brush Run, Site 2, near McSherrystown (station 01573810), 1.0 mi upstream from small left-bank tributary, and 4.7 mi west of McSherrystown.

DRAINAGE AREA.--0.35 mi².

PERIOD OF RECORD.--December 1986 to current year.

WATER-QUALITY DATA, DECEMBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)
DEC							
19...	1020	1.2	2.10	--	0.390	--	1.4
FEB							
19...	1230	0.03	1.80	1.80	2.10	2.00	3.3
MAR							
12...	1310	0.05	0.720	0.720	0.150	0.130	3.1
APR							
23...	0855	0.01	0.130	0.130	0.060	0.040	2.4
MAY							
26...	1130	0.39	0.900	0.860	0.380	0.370	2.3
JUN							
11...	1205	0.69	0.800	0.730	1.30	1.20	2.9
JUL							
09...	0905	0.01	10.0	9.90	0.040	0.030	1.7
SEP							
16...	1400	0.10	8.00	8.00	0.110	0.080	2.7

DATE	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
DEC							
19...	--	3.5	0.390	--	--	4	0.01
FEB							
19...	3.2	5.1	1.00	0.760	0.720	16	0.00
MAR							
12...	0.70	3.8	0.130	0.100	0.050	19	0.00
APR							
23...	1.1	2.5	0.230	0.110	0.060	33	0.00
MAY							
26...	1.8	3.2	0.610	0.470	0.390	17	0.02
JUN							
11...	2.9	3.7	4.30	0.380	0.270	15	0.03
JUL							
09...	1.7	12	0.090	0.080	0.080	11	0.00
SEP							
16...	2.4	11	0.910	0.870	0.840	51	0.01

394906077062601 TILE DRAIN TO BRUSH RUN NEAR McSHERRYSTOWN, PA

LOCATION.--Lat 39°49'06", long 77°06'26", Adams County, Hydrologic Unit 02050306, on right bank, 1 ft upstream from private culvert, 11 ft above Brush Run, Site 2, near McSherrystown (station 01573810), 1.0 mi upstream from small left-bank tributary, and 4.7 mi west of McSherrystown.

DRAINAGE AREA.--Under pasture lands and croplands, unable to determine.

PERIOD OF RECORD.--Water years 1986 to current year.

WATER-QUALITY DATA, SEPTEMBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)
SEP							
10...	1430	<0.01	0.29	0.29	829	750	2400
OCT							
01...	1230	<0.01	179	--	950	750	140
02...	0931	<0.01	82.0	--	66.0	--	68
15...	1151	<0.01	82.0	0.74	6.70	6.40	19
NOV							
06...	0930	<0.01	63.0	--	8.50	--	17
12...	1300	<0.01	43.0	--	7.00	--	9.5
DEC							
12...	1210	<0.01	26.0	25.0	0.59	0.56	7.3
19...	1017	<0.01	9.40	--	58.0	--	63
31...	1348	<0.01	29.0	26.0	0.85	0.81	3.2
JAN							
21...	1325	<0.01	22.0	21.0	1.20	1.20	3.4
FEB							
11...	0950	<0.01	26.0	26.0	0.51	0.50	2.9
19...	1320	<0.01	29.0	29.0	0.22	0.22	1.5
MAR							
12...	1330	<0.01	15.0	14.0	31.0	--	47
APR							
23...	0850	<0.01	37.0	36.0	0.25	0.25	3.8
MAY							
19...	1200	<0.01	11.0	--	1.20	--	3.8
26...	1150	<0.01	24.0	24.0	0.26	0.26	3.1
JUN							
11...	1215	<0.01	23.0	22.0	0.09	0.09	3.1
JUL							
09...	0900	<0.01	19.0	3.40	0.07	0.04	2.8
SEP							
09...	1110	<0.01	39.0	--	1.20	--	6.0
16...	1350	<0.01	24.0	24.0	0.19	0.19	3.9

DATE	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
SEP							
10...	--	2400	40	13	5.9	3530	0.0
OCT							
01...	--	320	0.95	--	--	--	--
02...	--	150	0.13	--	--	--	--
15...	15	100	--	6.10	5.40	42	0.0
NOV							
06...	--	80	0.08	--	--	--	--
12...	--	53	0.85	--	--	--	--
DEC							
12...	3.9	33	1.50	1.50	1.00	5	0.0
19...	--	72	0.09	--	--	66	0.0
31...	3.1	32	0.57	0.54	0.47	2	0.0
JAN							
21...	2.9	25	1.70	1.60	1.20	<1	--
FEB							
11...	2.9	29	0.53	0.52	--	<1	--
19...	1.3	31	0.26	0.23	0.23	<1	--
MAR							
12...	47	62	4.10	4.00	--	45	0.0
APR							
23...	0.25	41	0.58	0.56	--	7	0.0
MAY							
19...	--	15	3.10	--	--	--	--
26...	2.7	27	0.69	0.64	0.55	5	0.0
JUN							
11...	3.1	26	1.00	0.96	0.82	18	0.0
JUL							
09...	2.6	22	1.30	1.10	1.00	10	0.0
SEP							
09...	--	45	3.30	--	--	--	--
16...	<0.2	28	2.20	2.20	1.80	4	0.0

01573810 BRUSH RUN, SITE 2, NEAR McSHERRYSTOWN, PA

LOCATION.--Lat 39°49'06", long 77°06'26", Adams County, Hydrologic Unit 02050306, on right bank 10 ft downstream of private culvert, 1.0 mi upstream from small left-bank tributary, and 4.7 mi west of McSherrystown.

DRAINAGE AREA.--0.38 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1985 to current year.

GAGE.--Water-stage recorder and wooden control. Elevation of gage is 600 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Jan. 24-31, Feb. 18, Mar. 12, May 26 to June 17, June 30, July 1 and Aug. 3-5. Records poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 170 ft^3/s, Aug. 16, 1986, gage height, 3.52 ft, from rating curve extended above 40 ft^3/s on basis of computation of peak flow through culvert and over road; no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 60 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 24	2000	*90	*3.02	No other peak greater than base discharge.			

No flow June 8-19, July 18 to Aug. 21, Aug. 23-30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.17	<.01	.17	.08	.13	18	.41	.01	<.01	e.02	.00	.11
2	.07	<.01	9.4	.16	.23	2.7	.25	.01	<.01	.02	.00	.01
3	.01	<.01	9.3	.31	1.6	.89	1.9	.05	<.01	.02	e.00	<.01
4	.01	<.01	.65	.43	4.2	.31	6.6	1.9	<.01	.01	e.00	<.01
5	.03	.38	.20	.48	2.3	.17	4.2	.64	<.01	.01	e.00	<.01
6	<.01	.17	.11	.41	1.6	.16	6.3	.16	<.01	.01	.00	.12
7	<.01	.03	.08	.71	2.5	.16	1.9	.07	<.01	.03	.00	.18
8	<.01	.24	.06	1.9	2.0	.13	.55	.04	e.00	.01	.00	6.5
9	<.01	.10	2.5	1.6	.75	.11	.21	.03	e.00	<.01	.00	.69
10	<.01	.04	1.7	1.6	.14	.06	.13	.01	e.00	<.01	.00	.32
11	<.01	1.9	.56	1.8	.12	.04	.09	.01	e.00	<.01	.00	.32
12	<.01	.51	1.1	.98	.15	e.02	.11	.03	e.00	<.01	.00	.52
13	.01	.12	.42	1.2	.17	.05	.15	.02	e.00	<.01	.00	8.4
14	.02	.04	.09	2.6	.13	.03	.09	.01	e.00	.01	.00	.96
15	.00	.02	.08	4.7	.07	.04	.06	.12	e.00	.01	.00	.86
16	<.01	.03	.08	1.1	.03	.04	.17	.06	e.00	<.01	.00	.62
17	<.01	.02	.11	.27	.02	.03	1.3	.01	e.00	<.01	.00	.24
18	<.01	2.9	5.5	.34	e.02	.02	.43	<.01	.00	.00	.00	5.2
19	<.01	2.7	1.2	8.3	.02	.02	.15	.05	.00	.00	.00	.53
20	<.01	7.4	.24	2.7	.03	.02	.07	2.2	.62	.00	e.00	2.2
21	<.01	3.6	.13	1.1	.04	.02	.02	.71	1.3	.00	e.00	3.7
22	<.01	.25	.05	.20	.08	.02	.01	.24	.56	.00	<.01	2.0
23	<.01	.18	.02	.15	.08	.02	.01	4.1	.28	.00	.00	.25
24	<.01	.68	13	e.11	.24	.02	1.1	1.7	.05	.00	.00	.09
25	<.01	.27	5.3	e.08	.23	.01	.42	.52	<.01	.00	.00	.04
26	.02	3.9	.43	e.06	.29	.01	.08	e.20	.19	.00	.00	.03
27	.01	1.6	.18	e.04	.32	.01	.03	e.10	.13	.00	.00	.03
28	<.01	.31	.17	e.02	1.2	.05	.02	e.05	.03	.00	.00	.05
29	<.01	.27	.10	e.02	---	.04	.01	e.02	<.01	.00	.00	.06
30	<.01	.22	.10	e.02	---	.04	.01	e.01	e.03	.00	.00	.04
31	<.01	---	.08	e.02	---	1.1	---	<.01	---	.00	.88	---
TOTAL	0.56	27.92	53.11	33.49	18.69	24.34	26.78	13.10	3.28	0.22	0.89	34.10
MEAN	.018	.93	1.71	1.08	.67	.79	.89	.42	.11	.007	.029	1.14
MAX	.17	7.4	13	8.3	4.2	18	6.6	4.1	1.3	.03	.88	8.4
MIN	.00	.01	.02	.02	.02	.01	.01	.01	.00	.00	.00	.01
CFSM	.05	2.45	4.51	2.84	1.76	2.07	2.35	1.11	.29	.02	.08	2.99
IN.	.05	2.73	5.20	3.28	1.83	2.38	2.62	1.28	.32	.02	.09	3.34

CAL YR 1986 TOTAL 201.28 MEAN .55 MAX 13 MIN .00 CFSM 1.45 IN. 19.70
WTR YR 1987 TOTAL 236.48 MEAN .65 MAX 18 MIN .00 CFSM 1.70 IN. 23.15

< Actual value is known to be less than the value shown
e Estimated

01573810 BRUSH RUN, SITE 2, NEAR McSHERRYSTOWN, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1986 to current year.

INSTRUMENTATION.--Automatic sediment pumping sampler since November 1985.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	SULFATE DIS-SOLVED (MG/L AS SO4)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)
FEB											
11...	0930	0.08	301	6.8	2.0	35	7.10	0.18	0.26	400	30

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)
OCT							
01...	2045	3.4	8.40	--	1.40	--	43
01...	2100	2.3	3.50	--	1.50	--	11
01...	2115	1.8	3.40	--	0.72	--	4.7
01...	2130	1.0	3.20	--	0.56	--	4.4
01...	2145	0.57	3.90	--	2.20	--	27
02...	0930	0.03	5.90	--	1.80	--	4.9
07...	0850	<0.01	17.0	--	5.80	--	15
15...	1155	<0.01	16.0	15.0	2.00	1.50	3.8
NOV							
05...	0655	0.02	18.0	--	3.60	--	5.6
05...	1155	0.15	7.00	--	5.40	--	10
05...	1540	0.12	7.90	--	9.50	--	15
05...	1810	0.25	9.50	--	14.0	--	25
05...	1925	1.8	6.90	--	11.0	--	15
06...	0025	0.73	5.10	--	3.40	--	7.5
11...	1550	4.9	5.20	--	0.59	--	3.3
11...	2210	2.5	5.40	--	0.25	--	2.2
12...	0450	0.69	7.00	--	0.27	--	2.5
DEC							
02...	1230	2.1	2.70	--	3.30	--	9.8
02...	1530	4.7	4.60	--	0.42	--	2.5
02...	1700	5.3	4.30	--	0.27	--	1.9
02...	1900	24	3.90	--	0.36	--	3.4
02...	2005	33	2.60	--	0.21	--	1.9
02...	2145	30	2.30	--	0.21	--	1.8
02...	2305	49	2.50	--	0.24	--	2.5
03...	0130	41	1.40	--	0.13	--	1.3
03...	0405	17	1.50	--	0.13	--	1.4
03...	0645	7.6	1.70	--	0.12	--	1.4
03...	1215	3.3	1.90	--	0.14	--	1.7
12...	1110	0.57	2.50	2.40	0.28	0.28	1.7
18...	0530	2.2	4.50	--	1.30	--	4.3
18...	0730	5.9	4.60	--	0.88	--	2.4
18...	1000	11	3.40	--	2.40	--	5.6
18...	1130	12	2.90	--	2.00	--	3.7
18...	1730	5.9	1.80	--	3.10	--	4.3
19...	0100	2.3	1.90	--	4.40	--	8.1
19...	0430	1.9	2.00	--	4.90	--	9.6
31...	1409	0.08	4.80	4.50	0.34	0.30	1.1
JAN							
21...	1324	1.0	2.20	2.20	0.23	0.20	0.9
FEB							
11...	0930	0.83	7.10	7.00	0.18	0.15	1.6
19...	1305	0.03	11.0	11.0	1.20	1.20	3.1
28...	1945	2.8	2.30	--	2.10	--	9.1
28...	2245	4.2	2.30	--	0.85	--	4.4
MAR							
01...	0245	11	1.80	--	0.56	--	2.8
01...	0515	20	1.60	--	0.65	--	3.7
01...	0915	23	1.70	--	0.80	--	3.2
01...	1345	28	1.70	--	0.71	--	2.9
01...	1445	38	1.60	--	0.66	--	3.4
01...	1845	11	1.40	--	0.48	--	2.5
01...	2345	5.4	1.80	--	0.47	--	2.7
02...	0715	2.8	2.10	--	0.43	--	2.1
12...	1250	0.05	7.00	7.00	1.10	1.10	3.0
30...	1615	0.05	1.20	--	0.40	--	2.3

01573810 BRUSH RUN, SITE 2, NEAR McSHERRYSTOWN, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHOROUS TOTAL (MG/L AS P)	PHOSPHOROUS DISSOLVED (MG/L AS P)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
OCT							
01...	--	51	0.11	--	--	1180	11
01...	--	15	3.30	--	--	486	3.0
01...	--	8.1	2.70	--	--	467	2.3
01...	--	7.6	0.35	--	--	403	1.1
01...	--	31	0.12	--	--	322	0.5
02...	--	11	0.13	--	--	--	--
07...	--	32	0.04	--	--	--	--
15...	3.3	20	1.00	1.00	0.96	14	0.0
NOV							
05...	--	24	3.00	--	--	50	0.0
05...	--	17	1.30	--	--	46	0.02
05...	--	23	0.08	--	--	44	0.01
05...	--	35	0.04	--	--	54	0.04
05...	--	22	0.07	--	--	111	0.54
06...	--	13	2.00	--	--	--	--
11...	--	8.5	1.20	--	--	80	1.1
11...	--	7.6	0.93	--	--	29	0.2
12...	--	9.5	0.85	--	--	27	0.05
DEC							
02...	--	12	2.00	--	--	111	0.63
02...	--	7.1	0.99	--	--	103	1.3
02...	--	6.2	0.86	--	--	64	0.92
02...	--	7.3	1.10	--	--	649	42
02...	--	4.5	0.87	--	--	316	28
02...	--	4.1	0.85	--	--	150	12
02...	--	5.0	--	--	--	510	67
03...	--	2.7	0.69	--	--	144	16
03...	--	2.9	0.69	--	--	74	3.4
03...	--	3.1	0.66	--	--	60	1.2
03...	--	3.6	0.60	--	--	33	0.29
12...	1.3	4.2	0.44	0.38	0.32	6	0.01
18...	--	8.8	0.99	--	--	228	1.4
18...	--	7.0	0.86	--	--	288	4.6
18...	--	9.0	0.92	--	--	237	7.0
18...	--	6.6	0.89	--	--	231	7.5
18...	--	6.1	0.78	--	--	49	0.78
19...	--	10	0.78	--	--	24	0.15
19...	--	12	0.75	--	--	20	0.1
31...	1.1	5.9	0.31	0.27	0.23	8	0.0
JAN							
21...	0.8	3.1	0.28	0.24	0.21	16	0.04
FEB							
11...	1.6	8.7	0.26	0.22	0.22	--	--
19...	2.9	14	0.68	0.52	0.48	14	0.0
28...	--	11	0.41	--	--	190	1.4
28...	--	6.7	0.61	--	--	143	1.6
MAR							
01...	--	4.6	0.56	--	--	304	9.0
01...	--	5.3	0.70	--	--	244	13
01...	--	4.9	0.85	--	--	177	11
01...	--	4.6	0.85	--	--	186	14
01...	--	5.0	0.73	--	--	432	44
01...	--	3.9	0.54	--	--	149	4.4
01...	--	4.5	0.49	--	--	67	0.98
02...	--	4.2	0.47	--	--	34	0.26
12...	2.9	10	0.29	0.23	0.16	17	0.0
30...	--	3.5	0.48	--	--	97	0.01

01573810 BRUSH RUN, SITE 2, NEAR McSHERRYSTOWN, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)
APR							
02...	0900	0.18	1.4	--	1.3	--	1.6
04...	0035	5.6	2.50	--	0.59	--	4.0
04...	0535	5.3	2.30	--	0.20	--	1.9
04...	0905	5.9	2.90	--	0.23	--	2.1
04...	1205	4.8	2.40	--	0.16	--	1.7
04...	1335	7.0	2.90	--	0.36	--	3.1
04...	1705	7.2	1.80	--	0.18	--	1.4
04...	1835	7.6	2.70	--	0.48	--	2.9
05...	0050	4.3	2.00	--	0.19	--	1.4
05...	1700	5.4	1.30	--	2.70	--	2.8
05...	2105	7.3	2.50	--	0.21	--	1.9
06...	0920	7.5	2.80	--	0.21	--	1.3
23...	0905	0.01	5.50	5.20	0.07	0.06	2.7
MAY							
19...	1840	0.13	4.40	--	3.00	--	5.2
20...	0010	0.18	1.80	--	2.40	--	4.6
20...	0110	0.83	2.50	--	2.70	--	7.9
20...	0240	0.69	2.40	--	6.20	--	18
20...	0540	2.6	0.90	--	1.10	--	2.8
20...	1000	3.4	0.40	--	2.80	--	3.0
20...	1040	3.4	0.50	--	0.57	--	3.7
20...	1910	1.8	0.80	--	0.38	--	2.6
21...	0010	1.2	2.50	--	0.36	--	2.8
21...	0610	0.83	0.90	--	0.55	--	2.7
23...	1450	0.96	4.00	--	2.80	--	14
23...	1550	9.4	0.70	--	1.50	--	14
23...	1650	21	0.80	--	0.70	--	9.0
23...	2150	7.2	0.80	--	0.28	--	2.3
24...	0250	2.8	0.60	--	0.28	--	2.3
24...	1650	1.0	0.70	--	0.21	--	2.4
26...	1220	0.39	3.40	3.30	0.30	0.30	1.7
JUN							
11...	1235	0.69	18.0	17.0	0.04	0.04	2.9
30...	1630	2.4	24.0	--	24.0	--	--
30...	1700	5.0	12.0	--	9.60	--	32
30...	1730	2.2	8.70	--	3.20	--	19
30...	2230	0.03	15.0	--	2.70	--	10
30...	2300	0.15	15.0	--	2.60	--	11
JUL							
01...	0715	0.03	7.80	--	0.59	--	4.5
09...	0910	0.01	9.40	9.00	0.17	0.15	2.3
AUG							
17...	1100	<0.01	0.20	0.15	6.30	6.30	14
31...	1815	0.39	14.0	--	0.95	--	3.0
31...	1845	6.2	14.0	--	4.60	--	4.6
31...	1915	6.4	5.30	--	0.85	--	5.5
31...	1945	2.0	7.00	--	0.88	--	1.6
31...	2145	0.32	11.0	--	0.66	--	1.7
31...	2245	0.15	3.10	--	0.59	--	0.59
31...	2315	2.0	5.20	--	0.58	--	2.6
SEP							
01...	0115	0.27	11.0	--	0.76	--	1.2
01...	0815	0.12	11.0	--	1.00	--	1.0
06...	0530	0.02	<0.10	--	16.0	--	46
07...	1750	0.32	9.40	--	1.00	--	5.7
08...	0920	0.13	<0.10	--	28.0	--	--
08...	0950	1.1	1.80	1.70	2.10	2.00	--
08...	1020	7.7	4.80	--	0.81	--	4.4
08...	1050	8.2	5.80	5.00	1.90	1.40	10
08...	1120	8.1	4.50	--	2.50	--	20
08...	1220	17	10.0	--	1.20	--	5.6
08...	1250	15	11.0	--	0.76	--	4.3
08...	1320	11	11.0	9.40	0.76	0.70	3.3
08...	1400	11	11.0	--	0.81	--	3.9
08...	1430	17	11.0	--	0.57	--	3.4
08...	1500	22	12.0	11.0	0.54	0.52	3.7
08...	1530	25	13.0	--	0.49	--	3.2
08...	1600	25	14.0	--	0.40	--	3.0
08...	1700	16	13.0	12.0	0.40	0.38	3.1
08...	1900	8.5	8.50	--	0.31	--	2.7
08...	2150	5.3	9.20	--	0.33	--	2.6
09...	0020	2.4	11.0	9.20	0.40	0.38	3.4
09...	0250	2.2	12.0	--	0.44	--	3.0
09...	0520	0.83	12.0	--	0.44	--	3.1
09...	0750	0.57	13.0	--	0.46	--	<0.46
09...	1050	0.39	13.0	11.0	0.50	0.45	3.0
09...	1110	0.39	13.0	--	0.46	--	2.8
16...	1340	0.1	11.0	10.0	0.59	0.59	3.4

01573810 BRUSH RUN, SITE 2, NEAR McSHERRYSTOWN, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHOROUS TOTAL (MG/L AS P)	PHOSPHOROUS DISSOLVED (MG/L AS P)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
APR							
02...	--	3.0	0.09	--	--	--	--
04...	--	6.5	1.20	--	--	257	3.9
04...	--	4.2	0.53	--	--	83	1.2
04...	--	5.0	0.69	--	--	67	1.1
04...	--	4.1	0.29	--	--	46	0.6
04...	--	6.0	1.00	--	--	425	8.0
04...	--	3.2	0.53	--	--	145	2.8
04...	--	5.6	2.00	--	--	832	17
05...	--	3.4	0.57	--	--	66	0.77
05...	--	4.1	0.39	--	--	--	--
05...	--	4.4	0.66	--	--	53	1.0
06...	--	4.1	0.70	--	--	44	0.89
23...	--	8.2	0.22	0.22	0.10	16	0.0
MAY							
19...	--	9.6	3.70	--	--	44	0.02
20...	--	6.4	2.20	--	--	35	0.02
20...	--	10	3.10	--	--	156	0.35
20...	--	20	10.0	--	--	127	0.24
20...	--	3.7	2.70	--	--	170	1.2
20...	--	3.4	0.06	--	--	--	--
20...	--	4.2	0.99	--	--	61	0.56
20...	--	3.4	0.60	--	--	--	--
21...	--	5.3	0.61	--	--	--	--
21...	--	3.6	0.69	--	--	--	--
23...	--	18	4.70	--	--	433	1.1
23...	--	15	3.90	--	--	1330	34
23...	--	9.8	1.60	--	--	--	--
23...	--	3.1	0.47	--	--	--	--
24...	--	2.9	0.45	--	--	71	0.54
24...	--	3.1	0.43	--	--	--	--
26...	1.7	5.1	0.56	0.42	0.35	8	0.01
JUN							
11...	2.9	21	0.15	0.13	0.07	9	0.02
30...	--	--	-	--	--	1090	7.1
30...	--	44	0.73	--	--	1540	21
30...	--	28	0.42	--	--	4480	27
30...	--	25	0.18	--	--	329	0.03
30...	--	26	0.13	--	--	327	0.13
JUL							
01...	--	12	0.14	--	--	54	0.0
09...	0.7	12	0.50	0.40	0.37	3	0.0
AUG							
17...	10	15	2.00	1.80	1.40	19	0.0
31...	--	17	1.70	--	--	342	0.36
31...	--	19	5.10	--	--	957	16
31...	--	11	13.0	--	--	418	7.2
31...	--	8.6	1.30	--	--	617	3.3
31...	--	13	1.50	--	--	161	0.14
31...	--	3.7	0.80	--	--	3520	1.4
31...	--	7.8	3.10	--	--	1280	6.9
SEP							
01...	--	12	1.20	--	--	278	0.2
01...	--	12	1.70	--	--	50	0.02
06...	--	--	5.00	--	--	--	--
07...	--	15	2.00	--	--	--	--
08...	--	--	--	--	--	1020	0.36
08...	2.8	--	7.00	3.40	2.80	--	--
08...	--	9.2	2.20	--	--	354	7.4
08...	4.1	16	4.40	2.30	2.30	--	--
08...	--	25	4.80	--	--	410	9.0
08...	--	16	2.80	--	--	--	--
08...	--	15	2.10	--	--	225	9.1
08...	2.4	14	2.00	1.40	1.20	--	--
08...	--	15	2.10	--	--	152	4.5
08...	--	14	1.40	--	--	259	12
08...	2.2	16	1.70	1.20	1.00	--	--
08...	--	16	1.60	--	--	234	16
08...	--	17	0.82	--	--	141	9.5
08...	2.2	16	1.10	0.97	0.83	--	--
08...	--	11	1.10	--	--	58	1.3
08...	--	12	1.00	--	--	12	0.17
09...	2.1	14	1.00	0.88	0.73	--	--
09...	--	15	1.00	--	--	16	0.09
09...	--	15	1.00	--	--	16	0.04
09...	--	--	1.10	--	--	6	0.01
09...	2.4	16	1.10	0.88	0.79	--	--
09...	--	16	1.10	--	--	--	--
16...	3.3	14	1.00	0.90	0.82	16	0.0

01573810 BRUSH RUN, SITE 2, NEAR McSHERRYSTOWN, PA--Continued

INSTANTANEOUS SUSPENDED-SEDIMENT DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT					
01...	2045	3.4	--	1180	11
01...	2100	2.3	--	486	3.0
01...	2115	1.8	--	467	2.3
01...	2130	1.0	--	403	1.1
01...	2145	0.57	--	322	0.5
15...	1155	<0.01	--	14	0.0
NOV					
05...	0655	0.02	--	50	0.0
05...	1155	0.15	--	46	0.02
05...	1540	0.12	--	44	0.01
05...	1810	0.25	--	54	0.04
05...	1925	1.8	--	111	0.54
07...	2250	0.05	--	554	0.08
07...	2350	0.41	--	98	0.11
08...	0540	0.34	--	42	0.04
08...	1550	0.15	--	18	0.01
11...	1550	4.9	--	80	1.1
11...	2210	2.5	--	29	0.2
12...	0450	0.69	--	27	0.05
18...	1850	0.2	--	221	0.12
18...	1905	0.37	--	450	0.45
18...	1920	0.72	--	299	0.58
18...	2005	4.3	--	608	7.1
18...	2035	9.5	--	718	18
18...	2120	17	--	468	21
18...	2335	21	--	147	8.3
19...	0205	8.2	--	96	2.1
19...	1005	2.1	--	39	0.22
20...	1625	0.98	--	108	0.29
20...	1755	4.3	--	142	1.6
20...	1840	10	--	252	6.8
20...	1910	20	--	442	24
20...	1940	32	--	476	41
20...	2010	43	--	349	41
20...	2110	41	--	214	24
20...	2225	30	--	114	9.2
21...	0110	12	--	58	1.9
21...	0355	6.3	--	44	0.75
21...	0840	3.0	--	27	0.22
26...	0511	0.18	--	110	0.05
26...	1111	2.2	--	67	0.4
26...	1311	3.5	--	106	1.0
26...	1345	4.4	--	93	1.1
26...	1545	5.9	--	98	1.6
26...	1615	8.1	--	159	3.5
26...	1645	10	--	169	4.6
26...	1715	12	--	153	5.0
26...	1815	11	--	111	3.3
26...	2015	8.1	--	52	1.1
26...	2315	4.7	--	42	0.53
27...	0145	3.3	--	30	0.27
27...	1145	1.5	--	12	0.05
DEC					
02...	1230	2.1	--	111	0.63
02...	1530	4.7	--	103	1.3
02...	1700	5.3	--	64	0.92
02...	1900	24	--	649	42
02...	2005	33	--	316	28
02...	2145	30	--	150	12
02...	2305	49	--	510	67
03...	0130	41	--	144	16
03...	0405	17	--	74	3.4
03...	0645	7.6	--	60	1.2
03...	1215	3.3	--	33	0.29
09...	1410	4.4	--	91	1.1
09...	1540	5.1	--	81	1.1
09...	1710	5.0	--	60	0.81
09...	2110	3.5	--	38	0.36
10...	0110	2.6	--	23	0.16
12...	1110	0.57	308	6	0.01
18...	0530	2.2	--	228	1.4
18...	0730	5.9	--	288	4.6
18...	1000	11	--	237	7.0
18...	1130	12	--	231	7.5
18...	1730	5.9	--	49	0.78
19...	0100	2.3	--	24	0.15
19...	0430	1.9	--	20	0.1
19...	1250	1.0	--	1	0.0

01573810 BRUSH RUN, SITE 2, NEAR McSHERRYSTOWN, PA--Continued

INSTANTANEOUS SUSPENDED-SEDIMENT DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
DEC					
24...	1720	3.8	--	271	2.8
24...	1750	8.5	--	545	13
24...	1850	42	--	1090	124
24...	1920	57	--	1290	199
24...	2020	71	--	1580	303
24...	2120	55	--	595	88
24...	2320	47	--	213	27
25...	0520	7.1	--	72	1.4
25...	1650	2.1	--	23	0.13
31...	1409	0.08	--	8	0.0
JAN					
14...	1545	2.9	--	77	0.6
14...	1715	4.2	--	75	0.85
14...	1945	5.5	--	51	0.76
14...	2145	6.1	--	45	0.74
15...	0145	6.0	--	30	0.49
15...	0545	7.5	--	50	1.0
15...	1015	5.5	--	21	0.31
15...	1415	4.0	--	480	5.2
15...	1430	4.0	--	42	0.45
15...	1545	3.6	--	17	0.17
15...	2345	2.2	--	13	0.08
19...	0745	2.5	--	88	0.59
19...	0845	4.9	--	111	1.5
19...	1045	15	--	264	11
19...	1315	26	--	176	12
19...	1415	20	--	88	4.8
19...	1515	20	--	74	4.0
19...	2115	5.3	--	28	0.4
20...	0820	2.5	--	12	0.08
20...	1650	3.1	--	21	0.18
20...	1920	2.4	--	20	0.13
21...	1324	1.0	239	16	0.04
FEB					
03...	1640	2.3	--	31	0.19
03...	2020	3.0	--	28	0.23
04...	0920	3.0	--	17	0.14
04...	0940	3.1	--	37	0.31
04...	1120	4.2	--	40	0.45
04...	1720	6.4	--	24	0.41
04...	1940	5.0	--	18	0.24
05...	0440	2.5	--	14	0.09
05...	1510	2.4	--	28	0.18
05...	1640	2.6	--	10	0.07
05...	1940	2.4	--	8	0.05
06...	1610	2.6	--	45	0.32
06...	1740	2.8	--	27	0.2
06...	2140	2.3	--	14	0.09
07...	0100	2.1	--	14	0.08
07...	1340	2.7	--	49	0.36
07...	1510	4.7	--	26	0.33
07...	1610	5.8	--	104	1.6
07...	1710	5.0	--	34	0.46
07...	2140	2.9	--	19	0.15
19...	1305	0.03	504	14	0.0
28...	1945	2.8	--	190	1.4
28...	2245	4.2	--	143	1.6
MAR					
01...	0245	11	--	304	9.0
01...	0515	20	--	244	13
01...	0915	23	--	177	11
01...	1345	28	--	186	14
01...	1445	38	--	432	44
01...	1845	11	--	149	4.4
01...	2345	5.4	--	67	0.98
02...	0715	2.8	--	34	0.26
12...	1250	0.05	367	17	0.0
30...	1615	0.05	--	97	0.01

01573810 BRUSH RUN, SITE 2, NEAR McSHERRYSTOWN, PA--Continued

INSTANTANEOUS SUSPENDED-SEDIMENT DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
APR					
04...	0035	5.6	--	257	3.9
04...	0535	5.3	--	83	1.2
04...	0905	5.9	--	67	1.1
04...	1205	4.8	--	46	0.6
04...	1335	7.0	--	425	8.0
04...	1705	7.2	--	145	2.8
04...	1835	7.6	--	832	17
05...	0050	4.3	--	66	0.77
05...	2105	7.3	--	53	1.0
06...	0920	7.5	--	44	0.89
06...	0950	7.6	--	43	0.88
06...	1210	8.5	--	51	1.2
06...	1450	8.7	--	47	1.1
06...	2050	3.4	--	24	0.22
16...	2120	0.24	--	68	0.04
17...	1450	1.7	--	34	0.16
18...	0850	0.48	--	17	0.02
23...	0905	0.01	392	16	0.0
24...	1330	0.32	--	87	0.08
24...	1430	3.0	--	201	1.6
24...	1600	4.1	--	274	3.0
24...	1830	2.3	--	104	0.65
25...	0500	0.57	--	27	0.04
26...	0100	0.12	--	15	0.0
30...	1300	0.01	--	243	0.01
MAY					
04...	1000	2.2	--	105	0.62
04...	1100	2.7	--	100	0.73
04...	1115	2.9	--	856	6.7
04...	1120	3.1	--	144	1.2
04...	1430	3.6	--	44	0.43
19...	1840	0.13	326	44	0.02
20...	0010	0.18	307	35	0.02
20...	0110	0.83	281	156	0.35
20...	0240	0.69	365	127	0.24
20...	0540	2.6	331	170	1.2
20...	1040	3.4	206	61	0.56
20...	1940	1.8	--	19	0.09
21...	0040	1.0	--	26	0.07
21...	0540	0.83	--	17	0.04
23...	1450	0.96	--	433	1.1
23...	1520	4.7	--	523	6.6
23...	1550	9.4	--	1330	34
23...	1620	13	--	945	33
23...	1720	19	--	292	15
23...	2120	7.8	--	92	1.9
24...	0220	2.9	--	37	0.29
24...	0250	2.8	--	71	0.54
24...	1620	1.0	--	11	0.03
26...	1220	0.39	--	8	0.01
JUN					
04...	1445	2.1	--	110	0.62
04...	1515	2.0	--	78	0.42
04...	1545	2.0	--	49	0.26
11...	1235	0.69	503	9	0.02
30...	1630	2.4	--	1090	7.1
30...	1700	5.0	--	1540	21
30...	1730	2.2	--	4480	27
30...	2230	0.03	--	329	0.03
30...	2300	0.15	--	327	0.13
JUL					
01...	0715	0.03	--	54	0.0
09...	0910	0.01	506	3	0.0
09...	1600	0.01	--	160	0.0
09...	1630	0.01	--	127	0.0
09...	2130	0.01	--	126	0.0
09...	2230	0.01	--	159	0.0
10...	0130	<0.01	--	53	0.0
10...	0400	<0.01	--	133	0.0
10...	0700	<0.01	--	34	0.0
14...	1300	0.03	--	20	0.0
14...	1500	0.01	--	22	0.0
14...	1600	0.01	--	27	0.0

01573810 BRUSH RUN, SITE 2, NEAR McSHERRYSTOWN, PA--Continued

INSTANTANEOUS SUSPENDED-SEDIMENT DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
AUG					
17...	1100	<0.01	601	19	0.0
22...	1020	0.10	--	157	0.04
23...	0300	<0.01	--	5	0.0
28...	0415	0.05	--	96	0.01
29...	0115	<0.01	--	6	0.0
29...	0245	<0.01	--	27	0.0
31...	1815	0.39	425	342	0.36
31...	1845	6.2	391	957	16
31...	1915	6.4	180	418	7.2
31...	1945	2.0	212	617	3.3
31...	2145	0.32	334	161	0.14
31...	2245	0.15	130	3520	1.4
31...	2315	2.0	159	1280	6.9
31...	2400	1.2	--	963	3.1
SEP					
01...	0020	0.69	--	1620	3.0
01...	0040	0.57	--	1400	2.2
01...	0115	0.27	296	278	0.2
01...	0140	0.22	--	303	0.18
01...	0400	0.10	--	70	0.02
01...	0815	0.12	421	50	0.02
08...	0920	0.13	--	1020	0.36
08...	1020	7.7	--	354	7.4
08...	1025	7.9	--	68	1.5
08...	1120	8.1	--	410	9.0
08...	1250	15	--	225	9.1
08...	1400	11	--	152	4.5
08...	1430	17	--	259	12
08...	1530	25	--	234	16
08...	1600	25	--	141	9.5
08...	1900	8.5	--	58	1.3
08...	2150	5.3	--	12	0.17
09...	0250	2.2	--	16	0.09
09...	0520	0.83	--	16	0.04
09...	0750	0.57	--	6	0.01
12...	2350	7.8	--	750	16
13...	0020	12	--	797	26
13...	0050	25	--	1140	77
13...	0120	31	--	583	49
13...	0150	24	--	198	13
13...	0220	27	--	175	13
13...	0250	28	--	171	13
13...	0320	23	--	109	6.8
13...	0520	10	--	43	1.2
13...	0920	6.8	--	25	0.46
13...	1150	4.8	--	18	0.23
13...	1720	2.8	--	13	0.1
14...	0850	0.83	--	7	0.02
16...	1340	0.10	554	16	0.0
17...	2345	8.5	--	823	19
18...	0015	18	--	735	36
18...	0045	21	--	447	25
18...	0145	15	--	148	6.0
18...	0415	9.2	--	41	1.0
18...	0645	6.5	--	27	0.47
18...	0845	4.5	--	18	0.22
21...	1820	17	--	1460	67
21...	1850	19	--	652	33
21...	1920	13	--	330	12
21...	2220	8.1	--	39	0.85
22...	0250	3.8	--	20	0.21

01573811 BRUSH RUN, SITE 3, NEAR McSHERRYSTOWN, PA

LOCATION.--Lat 39°49'11", long 77°06'25", Adams County, Hydrologic Unit 02050306, 410 ft downstream of private culvert, 1.0 mi upstream from small left-bank tributary, 4.7 mi west of McSherrystown, and 400 ft downstream from Brush Run, Site 2, near McSherrystown (station 01573810).

DRAINAGE AREA.--0.44 mi².

PERIOD OF RECORD.--Water years 1986 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	SULFATE DIS-SOLVED (MG/L AS SO4)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)
FEB											
11...	1420	2.00	328	8.3	2.0	35	7.20	0.29	0.26	580	50

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)
OCT							
15...	1220	<0.01	12.0	12.0	4.60	4.60	8.8
DEC							
12...	1125	0.57	3.10	2.90	0.28	0.28	1.2
31...	1405	0.08	6.40	5.60	0.83	0.69	2.3
JAN							
21...	1350	1.00	2.80	2.60	0.25	0.22	1.4
FEB							
11...	1420	0.83	7.20	7.20	0.29	0.27	2.3
19...	1250	0.03	11.0	11.0	2.10	2.10	9.0
MAR							
12...	1225	0.05	8.60	8.50	1.40	1.40	4.0
APR							
23...	0945	<0.01	4.60	4.40	0.57	0.56	3.2
MAY							
26...	1230	0.39	3.60	3.50	0.33	0.33	2.4
JUN							
11...	1230	0.69	0.72	0.72	7.40	7.40	12
JUL							
09...	0915	0.01	8.20	7.60	0.25	0.19	2.3
AUG							
17...	1045	<0.01	2.50	2.40	22.0	22.0	37
SEP							
16...	1325	0.1	12.0	11.0	0.47	0.47	3.1

01573811 BRUSH RUN, SITE 3, NEAR McSHERRYSTOWN, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHOROUS TOTAL (MG/L AS P)	PHOSPHOROUS DISSOLVED (MG/L AS P)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
OCT							
15...	8.8	21	4.00	2.00	2.00	13	0.0
DEC							
12...	1.2	4.3	0.43	0.38	0.33	13	0.02
31...	2.3	8.7	0.39	0.31	0.26	9	0.0
JAN							
21...	1.4	4.2	0.31	0.27	0.22	12	0.03
FEB							
11...	2.1	9.5	0.26	0.20	0.18	41	0.22
19...	4.2	20	0.69	0.47	0.41	11	0.03
MAR							
12...	3.4	13	0.37	0.31	0.24	10	0.0
APR							
23...	2.3	7.8	0.38	0.22	0.16	27	0.0
MAY							
26...	1.8	6.0	0.57	0.45	0.38	14	0.02
JUN							
11...	12	13	2.20	1.60	1.20	15	0.03
JUL							
09...	2.2	10	0.99	0.72	0.35	3	0.0
AUG							
17...	29	40	4.70	4.60	4.10	32	0.0
SEP							
16...	3.1	15	1.10	1.10	0.91	5	0.0

01573815 BRUSH RUN, SITE 4, NEAR McSHERRYSTOWN, PA

LOCATION.--Lat 39°49'35", long 77°06'08", Adams County, Hydrologic Unit 02050306, 0.5 mi downstream of private culvert, 0.5 mi upstream from small left-bank tributary, and 4.9 mi west of McSherrystown.

DRAINAGE AREA.--0.66 mi².

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

WATER-QUALITY DATA, SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)
SEP 16...	1245	0.16	21.0	19.0	0.15	0.15	2.6

DATE	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
SEP 16...	2.6	24	0.92	0.90	0.75	9	0.0

01574000 WEST CONEWAGO CREEK NEAR MANCHESTER, PA

LOCATION.--Lat 40°04'56", long 76°43'13", York County, Hydrologic Unit 02050306, on left bank 500 ft upstream from bridge on State Highway 181, 0.6 mi downstream from Little Conewago Creek, and 1.5 mi north of Manchester.

DRAINAGE AREA.--510 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1928 to current year. Monthly discharge only for October 1928, published in WSP 1302. Prior to October 1931, published as Conewago Creek near Manchester.

REVISED RECORDS.--WSP 741: Drainage area. WSP 1502: 1930, 1936.

GAGE.--Water-stage recorder. Datum of gage is 263.68 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Occasional slight regulation since October 1959 by Conewago Lake 12.9 miles upstream, capacity, 3,570 acre-ft. Pa. Department of Environmental Resources satellite telemeter at station.

AVERAGE DISCHARGE.--59 years, 586 ft³/s, 15.60 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 96,200 ft³/s, Sept. 26, 1975, gage height, 32.11 ft, from floodmarks, from rating curve extended above 45,000 ft³/s on basis of slope-area measurement at gage height 30.26 ft; minimum, 1.9 ft³/s, Oct. 13, 1941; minimum gage height, 1.03 ft, Aug. 9, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 10,800 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Dec. 25	1330	*13,000	*12.07	No other peak greater than base discharge.			

Minimum discharge, 23 ft³/s, Aug. 5, gage height, 2.08 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	61	406	561	e440	4620	747	330	182	90	27	52
2	153	56	432	577	e450	5350	515	309	172	157	33	66
3	189	54	5500	635	e500	2300	501	321	156	113	27	123
4	166	52	2120	597	e600	1490	1290	684	155	104	25	64
5	108	62	990	507	e820	1090	2270	1470	215	150	26	48
6	83	199	732	425	e840	909	3170	782	291	101	36	48
7	64	308	610	438	e780	823	3080	560	211	78	36	58
8	58	285	547	464	e640	776	1700	465	150	82	30	118
9	53	254	681	517	e550	733	1190	407	143	110	30	1910
10	46	250	1460	527	e470	647	956	359	139	106	33	583
11	43	299	987	621	e430	536	805	315	124	85	31	265
12	41	453	768	624	e440	478	724	290	116	211	31	178
13	42	443	747	560	e450	456	882	294	112	179	31	1690
14	53	279	589	621	e430	433	762	246	109	94	30	1390
15	59	208	474	1050	e370	417	608	259	111	81	29	534
16	66	176	461	1780	e330	419	552	278	103	66	29	336
17	70	161	433	1100	e320	393	626	254	88	58	30	329
18	67	174	994	843	e310	352	887	210	80	55	29	1190
19	58	937	1990	1830	e290	329	681	217	74	51	28	1420
20	51	946	946	4140	e280	314	566	1150	109	47	26	683
21	49	2760	689	1880	e280	295	495	1190	232	42	25	747
22	46	1170	565	1300	e290	273	447	707	194	38	28	745
23	44	602	473	1020	e310	263	411	548	190	35	40	868
24	43	498	602	879	e350	254	835	448	136	36	32	494
25	43	476	8470	e680	e390	241	844	432	105	37	28	359
26	53	528	2590	e640	e400	247	644	367	90	36	27	278
27	68	1460	1450	e560	e430	257	488	303	96	36	30	223
28	66	886	1100	e500	479	253	426	277	91	34	34	191
29	88	585	892	e460	---	262	393	253	93	31	38	171
30	82	469	768	e440	---	257	362	226	78	29	35	158
31	69	---	656	e430	---	305	---	200	---	28	33	---
TOTAL	2176	15091	40122	27206	12669	25772	27857	14151	4145	2400	947	15319
MEAN	70.2	503	1294	878	452	831	929	456	138	77.4	30.5	511
MAX	189	2760	8470	4140	840	5350	3170	1470	291	211	40	1910
MIN	41	52	406	425	280	241	362	200	74	28	25	48
CFSM	.14	.99	2.54	1.72	.89	1.63	1.82	.90	.27	.15	.06	1.00
IN.	.16	1.10	2.93	1.98	.92	1.88	2.03	1.03	.30	.18	.07	1.12

CAL YR 1986 TOTAL 205133 MEAN 562 MAX 10100 MIN 18 CFSM 1.10 IN. 14.96
WTR YR 1987 TOTAL 187855 MEAN 515 MAX 8470 MIN 25 CFSM 1.01 IN. 13.70

e Estimated

01574000 WEST CONEWAGO CREEK NEAR MANCHESTER, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1956, 1962-73, 1975-77, 1985 to current year.

REMARKS.--Samples collected from bridge on State Highway 181.

COOPERATION.--Water-quality samples collected by Susquehanna River Basin Commission and analyzed by the Pa. Department of Environmental Resources.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)
OCT										
07...	1030	65	370	8.10	15.5	0.640	0.640	0.045	0.045	0.97
NOV										
05...	1425	60	335	8.00	8.5	0.520	0.500	0.050	0.050	0.67
20...	1320	654	250	7.80	5.0	3.30	2.64	0.155	0.120	1.2
20...	2245	2080	200	7.70	5.5	2.64	2.42	0.205	0.205	2.9
21...	0130	2510	175	7.30	4.5	2.10	2.10	0.165	0.165	0.98
21...	0350	2020	180	7.75	4.0	2.00	1.98	0.145	0.135	1.5
21...	0630	2420	230	8.25	5.0	2.64	2.64	0.115	0.115	1.3
21...	1345	3410	205	7.85	5.5	3.08	2.86	0.215	0.200	1.6
21...	1615	3280	220	7.50	5.0	3.30	3.30	0.265	0.245	1.3
21...	2200	2260	190	7.90	4.0	3.30	3.30	0.185	0.175	0.97
22...	0916	1210	200	7.85	5.0	3.52	3.52	0.185	0.185	1.1
22...	2325	745	225	7.95	4.0	4.40	3.96	0.215	0.215	1.2
23...	1345	573	240	7.55	8.0	4.40	4.40	0.200	0.200	1.3
DEC										
17...	1030	432	240	7.60	3.0	3.52	3.52	0.090	0.085	0.75
JAN										
19...	1230	1120	225	8.10	3.0	3.96	3.96	0.120	0.120	0.92
19...	1640	2320	200	7.80	3.0	2.86	2.86	0.145	0.130	1.9
19...	2030	3290	185	7.80	2.0	2.86	2.86	0.145	0.135	1.5
20...	0050	5700	180	8.10	2.0	3.30	3.30	0.160	0.160	1.4
20...	0935	4660	180	8.00	3.0	3.08	3.08	0.155	0.140	1.4
20...	1530	3110	170	7.80	3.0	3.08	3.08	0.160	0.155	1.4
21...	1315	1840	180	7.80	3.0	3.00	3.00	0.120	0.115	0.81
22...	1100	1330	165	7.70	4.0	5.06	5.06	0.225	0.225	0.91
FEB										
28...	1730	448	245	8.60	4.0	2.42	2.42	0.030	0.025	0.63
MAR										
01...	0145	820	260	8.10	4.0	3.08	2.86	0.065	0.065	0.51
01...	1030	3670	260	7.90	5.0	2.64	2.42	0.150	0.150	0.93
01...	1430	6230	195	7.80	5.0	2.42	2.42	0.230	0.205	1.2
01...	1850	7640	185	8.05	5.5	2.42	2.42	0.265	0.245	1.0
01...	2223	8720	176	7.80	5.5	2.42	2.42	0.340	0.310	1.4
02...	0215	9020	190	7.85	4.5	2.40	2.40	0.395	0.365	1.0
02...	0600	7070	160	7.65	5.5	2.40	2.40	0.375	0.340	1.0
02...	1145	4790	165	7.35	4.0	2.40	2.40	0.315	0.295	0.90
03...	1410	2160	185	7.50	6.0	2.86	2.86	0.140	0.130	0.94
04...	1410	1450	264	7.50	--	3.60	3.24	0.040	0.040	1.0
05...	1720	1010	200	7.85	5.0	3.36	3.36	0.060	0.055	0.80
06...	1630	884	210	7.75	7.0	3.48	3.48	0.025	0.025	0.53
07...	0730	827	208	7.50	--	3.60	3.60	0.025	0.025	0.59
09...	1115	732	215	7.70	13.0	3.60	3.60	0.025	0.025	0.61
30...	1420	254	235	8.90	15.0	1.56	1.56	0.040	0.040	0.41
APR										
03...	1925	555	278	8.30	10.5	1.74	1.74	0.025	0.025	0.72
04...	0214	732	209	8.05	9.0	1.80	1.80	0.045	0.045	0.60
04...	0930	988	224	7.40	10.5	1.96	1.96	0.050	0.050	0.53
04...	1455	1220	224	7.15	12.0	1.80	1.80	0.060	0.060	0.69
05...	0115	3030	190	7.05	10.0	1.72	1.72	0.075	0.075	1.3
05...	0845	2300	190	7.50	10.0	1.80	1.80	0.275	0.275	1.1
05...	1950	1880	200	7.50	8.5	1.94	1.94	0.200	0.200	0.82
06...	1115	3080	200	7.60	7.5	2.42	2.42	0.210	0.210	0.64
06...	1624	3830	220	7.50	9.5	2.00	1.96	0.230	0.180	[a]0.50
06...	1740	3960	160	8.20	8.0	2.00	2.00	0.180	0.180	0.62
06...	2000	4170	185	7.35	9.0	2.00	1.98	--	0.220	--
06...	2336	4210	190	7.00	8.5	2.42	2.42	0.220	0.190	0.53
07...	1715	2490	180	7.85	11.0	2.64	2.64	0.260	0.230	0.64
08...	1222	1680	185	7.85	12.0	2.64	2.64	0.200	0.170	[a]0.33
09...	1230	1170	205	7.95	14.0	2.86	2.86	0.120	0.120	0.33
10...	1100	958	200	7.75	14.5	2.16	--	0.020	0.020	0.56
13...	1310	935	200	7.90	13.0	2.00	2.00	0.025	0.025	0.45
28...	1200	421	200	8.10	15.5	1.40	1.20	0.050	0.050	0.68
MAY										
18...	1045	205	245	8.67	23.0	1.34	1.32	0.030	0.030	0.60
JUN										
03...	1145	154	250	8.10	25.0	1.38	1.38	0.040	0.040	0.69
30...	1330	75	300	8.50	28.5	1.06	1.04	0.035	0.030	0.95
AUG										
04...	1230	25	550	9.00	33.0	0.520	0.520	0.040	--	0.72

(a) Results within limits of analytical precision.

01574000 WEST CONEWAGO CREEK NEAR MANCHESTER, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHOROUS TOTAL (MG/L AS P)	PHOSPHOROUS DISSOLVED (MG/L AS P)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
OCT										
07...	0.97	1.0	1.0	1.7	0.300	0.220	0.140	6.3	44	7.7
NOV										
05...	0.67	0.72	0.72	1.2	0.200	0.110	0.084	8.5	20	3.3
20...	0.68	1.3	0.80	4.6	0.370	0.250	0.190	7.3	275	486
20...	1.3	3.1	1.5	5.7	1.43	0.410	0.320	6.8	992	5570
21...	0.29	1.2	0.46	3.2	1.43	0.290	0.220	6.2	1130	7680
21...	1.1	1.7	1.2	3.6	0.820	0.260	0.210	7.3	559	3050
21...	1.1	1.4	1.2	4.0	0.610	0.240	0.130	8.0	418	2730
21...	1.2	1.8	1.5	4.9	0.820	0.330	0.230	7.2	489	4500
21...	1.2	1.5	1.4	4.8	0.800	0.280	0.180	6.7	417	3700
21...	0.61	1.2	0.79	4.5	0.710	0.210	0.160	6.9	325	1980
22...	1.1	1.2	1.2	4.8	0.460	0.200	0.140	6.0	149	486
22...	0.96	1.4	1.2	5.8	0.340	0.180	0.120	6.7	68	138
23...	0.50	1.5	0.70	5.9	0.270	0.190	0.110	7.8	44	68
DEC										
17...	0.67	0.84	0.76	4.4	0.120	0.100	0.089	5.1	5	6.4
JAN										
19...	0.81	1.0	0.93	5.0	0.150	0.080	0.068	6.3	49	148
19...	0.80	2.0	0.93	4.9	0.280	0.120	0.081	6.6	384	2410
19...	0.59	1.6	0.73	4.5	0.300	0.110	0.090	6.2	285	2530
20...	0.67	1.5	0.83	4.8	0.290	0.160	0.140	6.0	281	4330
20...	0.79	1.5	0.93	4.6	0.280	0.150	0.129	7.8	187	2350
20...	0.88	1.5	1.0	4.6	0.320	0.150	0.109	7.1	128	1070
21...	0.81	0.93	0.93	3.9	0.190	0.110	0.095	6.1	43	216
22...	0.70	1.1	0.93	6.2	0.070	0.050	0.037	7.6	16	57
FEB										
28...	0.50	0.66	0.53	3.1	0.100	--	0.065	6.8	7	9.1
MAR										
01...	0.48	0.58	0.55	3.7	0.110	0.110	0.046	9.5	45	99
01...	0.86	1.1	1.0	3.7	0.220	0.120	0.025	10	318	3160
01...	0.72	1.5	0.93	3.9	0.530	0.150	0.074	11	422	7090
01...	0.75	1.3	1.0	3.7	0.280	0.180	0.044	12	397	8190
01...	0.84	1.8	1.2	4.2	0.490	0.200	0.140	11	398	9370
02...	0.81	1.4	1.2	3.8	0.400	0.280	0.051	9.9	326	7950
02...	0.81	1.4	1.2	3.8	0.350	0.200	0.047	11	252	4820
02...	0.80	1.2	1.1	3.6	0.310	0.170	0.140	9.6	137	1780
03...	0.77	1.1	0.90	3.9	0.220	0.090	0.025	6.3	41	241
04...	0.69	1.0	0.73	4.6	0.100	0.050	0.017	6.4	21	83
05...	0.64	0.86	0.69	4.2	0.080	0.040	0.036	5.3	12	33
06...	0.39	0.56	0.41	4.0	0.070	[a]0.060	[a]0.067	7.3	7	17
07...	0.47	0.62	0.50	4.2	0.060	0.050	0.031	7.1	9	20
09...	0.45	0.64	0.47	4.2	0.080	0.060	0.040	7.2	16	31
30...	0.36	0.45	0.40	2.0	0.180	0.090	0.026	18	23	15
APR										
03...	0.72	0.75	0.75	2.5	0.150	0.090	0.055	8.9	11	16
04...	0.39	0.65	0.44	2.4	0.150	0.090	0.052	9.1	21	42
04...	0.48	0.58	0.53	2.5	0.100	0.100	0.068	9.2	32	87
04...	0.55	0.75	0.61	2.5	0.170	0.110	0.055	8.3	183	601
05...	0.73	1.3	0.81	3.1	0.190	0.110	0.048	9.3	182	1490
05...	0.76	1.3	1.0	3.1	0.290	0.160	0.091	10	227	1410
05...	0.41	1.0	0.61	3.0	0.300	0.180	0.100	11	96	488
06...	0.39	0.85	0.60	3.3	0.300	0.170	0.100	8.8	89	744
06...	[a]0.52	0.73	0.70	2.7	0.260	0.150	0.096	8.7	124	1290
06...	0.45	0.80	0.63	2.8	0.310	0.150	0.091	8.1	119	1280
06...	0.51	0.83	0.73	2.8	0.250	0.150	0.091	8.0	122	1370
06...	0.34	0.75	0.53	3.2	0.310	0.150	0.094	8.2	114	1290
07...	0.45	0.90	0.68	3.5	0.260	0.160	0.088	6.8	66	444
08...	[a]0.36	0.53	0.53	3.2	0.230	0.130	0.079	6.6	43	195
09...	0.29	0.45	0.41	3.3	0.180	--	0.052	6.5	25	78
10...	0.49	0.58	0.51	2.7	0.120	0.090	0.042	6.2	20	51
13...	0.45	0.48	0.48	2.5	0.110	0.080	0.029	7.3	23	59
28...	0.60	0.73	0.65	2.1	0.170	0.110	0.084	9.1	36	41
MAY										
18...	0.41	0.63	0.44	2.0	0.140	0.050	0.050	2.9	16	8.9
JUN										
03...	0.50	0.73	0.54	2.1	0.220	0.140	0.044	3.5	27	11
30...	0.61	0.98	0.64	2.0	0.290	0.250	0.200	4.3	23	4.7
AUG										
04...	--	0.76	--	1.3	0.330	0.260	0.005	6.2	28	1.9

(a) Results within limits of analytical precision.

01574000 WEST CONEWAGO CREEK NEAR MANCHESTER, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)
SEP										
08...	1510	95	430	7.60	21.0	1.86	1.86	0.125	0.100	0.77
08...	2050	254	380	7.80	22.0	3.74	3.52	0.105	0.105	0.79
09...	0300	345	327	7.60	20.5	3.08	3.08	0.080	0.080	1.3
09...	0845	3250	295	7.50	22.0	1.20	1.16	0.205	0.205	0.89
09...	1430	2240	245	7.30	23.5	2.42	2.20	0.720	0.570	0.38
09...	2010	1420	200	7.40	22.0	2.86	2.64	0.600	0.480	0.44
10...	0345	806	205	7.40	22.0	3.52	3.30	0.360	0.360	0.54
10...	1215	532	205	--	24.0	3.30	3.30	0.185	0.185	0.73
11...	1355	250	220	7.40	26.0	3.24	3.12	0.080	0.080	1.5

DATE	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
SEP										
08...	0.80	0.90	0.90	2.8	0.340	0.280	0.200	4.0	34	8.7
08...	0.69	0.90	0.80	4.6	0.500	0.430	0.350	3.4	44	30
09...	1.0	1.4	1.1	4.5	0.540	0.410	0.240	7.8	89	83
09...	0.69	1.1	0.90	2.3	0.560	0.260	0.170	5.9	379	3330
09...	0.29	1.1	0.86	3.5	0.440	0.240	0.170	5.0	290	1750
09...	0.32	1.0	0.80	3.9	0.530	0.250	0.180	5.8	260	997
10...	0.34	0.90	0.70	4.4	0.460	0.300	0.230	6.4	129	281
10...	0.45	0.92	0.64	4.2	0.420	0.300	0.240	7.4	74	106
11...	0.82	1.6	0.90	4.8	0.310	0.220	0.150	9.0	47	32

01574500 CODORUS CREEK AT SPRING GROVE, PA

LOCATION.--Lat 39°52'43", long 76°51'13", York County, Hydrologic Unit 02050306, on right bank 15 ft downstream from county highway bridge No. 132, 0.1 mi downstream from small left-bank tributary, 0.3 mi downstream from east boundary of Spring Grove, and 7.0 mi southwest of York.

DRAINAGE AREA.--75.5 mi^2.

PERIOD OF RECORD.--May 1929 to September 1964, November 1965 to current year. Monthly discharge only for some periods, published in WSP 1302. October 1962 to September 1968, published as West Branch Codorus Creek at Spring Grove.

REVISED RECORDS.--WSP 1302: 1929-30. WSP 1502: 1932(M), 1933, 1935(M), 1940, 1942(M), 1943, 1944-46(M), 1951(M), 1955(m).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 430.86 ft above National Geodetic Vertical Datum of 1929. Prior to Jan. 18, 1930, nonrecording gage, Jan. 18, 1930, to Sept. 9, 1941, water-stage recorder at site 0.9 mi upstream, and Sept. 10, 1941, to Sept. 30, 1964, water-stage recorder at site 0.8 mi upstream, all at datum 5.64 ft higher. Nov. 1 to Dec. 20, 1965, nonrecording gage about 40 ft downstream at unknown datum, Dec. 21, 1965, to Mar. 31, 1966, nonrecording gage at present site and datum.

REMARKS.--No estimated daily discharges. Records good. Daily discharges include water diverted around station by waste treatment plant of P.H. Glatfelter Company. Flow regulated by dam on Lake Marburg (station 01574390) about 20 miles upstream. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

COOPERATION.--Records of change in lake contents and daily diversion furnished by P.H. Glatfelter Company.

AVERAGE DISCHARGE.--56 years (1929-64, 1966-87), 78.6 ft^3/s, 14.14 in/yr, adjusted for diversion since March 1961, and for storage since 1966.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,400 ft^3/s, June 22, 1972, gage height, 15.57 ft, from floodmark in gage shelter, from rating curve extended above 1,400 ft^3/s on basis of computations of flow over dam at gage height 6.80 ft and at peak flow; no flow for part of Oct. 26, 1947; minimum daily, 0.6 ft^3/s, Sept. 4, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,190 ft^3/s, Dec. 25, gage height, 5.80 ft; minimum daily, 24 ft^3/s, July 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	36	37	51	54	442	61	49	51	62	51	113
2	82	36	54	65	59	263	49	50	51	57	51	49
3	48	36	232	59	82	168	63	64	50	82	51	49
4	48	37	71	52	100	129	111	111	82	43	51	46
5	47	47	50	46	88	108	95	78	63	57	53	47
6	44	66	41	43	79	98	155	60	49	46	57	54
7	46	42	37	35	86	89	140	52	48	54	52	51
8	46	49	36	48	89	86	110	48	48	52	53	218
9	42	37	65	46	82	83	94	43	52	51	51	162
10	43	34	62	43	66	74	83	44	51	53	51	58
11	42	64	46	58	64	66	71	47	47	51	49	47
12	42	50	51	52	67	64	74	54	52	49	51	47
13	44	34	43	50	62	63	77	54	53	54	52	107
14	43	40	35	57	57	59	63	49	50	33	51	40
15	39	36	40	109	52	59	59	64	48	27	51	45
16	37	36	36	99	46	56	60	53	50	24	51	50
17	38	35	37	78	48	53	78	47	49	25	53	47
18	39	45	93	79	48	50	63	52	47	26	53	104
19	36	103	71	251	45	49	68	61	48	30	53	48
20	37	81	51	190	44	49	71	123	55	60	53	47
21	37	146	43	130	41	47	51	65	55	49	55	51
22	42	44	39	110	44	44	48	53	54	51	54	54
23	39	36	36	109	59	43	46	52	53	61	54	48
24	37	39	127	83	54	46	87	51	49	48	52	46
25	37	34	511	78	51	47	78	48	48	48	53	46
26	44	58	139	76	48	49	55	54	54	48	53	47
27	37	64	98	64	48	44	49	58	57	49	52	45
28	37	38	79	60	51	57	49	52	50	47	53	46
29	37	38	68	61	---	47	48	50	47	48	47	46
30	36	35	62	62	---	48	52	47	61	49	45	49
31	35	---	57	59	---	88	---	47	---	51	59	---
TOTAL	1315	1476	2447	2403	1714	2668	2208	1780	1572	1485	1615	1907
MEAN	42.4	49.2	78.9	77.5	61.2	86.1	73.6	57.4	52.4	47.9	52.1	63.6
MAX	82	146	511	251	100	442	155	123	82	82	59	218
MIN	35	34	35	35	41	43	46	43	47	24	45	40
MEAN‡	11.0	50.9	119	119	89.8	125	105	68.3	23.3	11.6	5.3	55.3
CFSM‡	.15	.67	1.58	1.58	1.19	1.65	1.38	.90	.31	.15	.07	.73
IN.‡	.17	.75	1.82	1.82	1.24	1.90	1.54	1.04	.35	.17	.08	.81

CAL YR 1986 TOTAL 23877 MEAN 65.4 MAX 511 MIN 32 MEAN‡ 61.6 CFSM‡ .82 IN.‡ 11.07
WTR YR 1987 TOTAL 22590 MEAN 61.9 MAX 511 MIN 24 MEAN‡ 65.1 CFSM‡ .86 IN.‡ 11.86

‡ Adjusted for change in contents in Lake Marburg.

01575000 SOUTH BRANCH CODORUS CREEK NEAR YORK, PA

LOCATION.--Lat 39°55'14", long 76°44'57", York County, Hydrologic Unit 02050306, on right bank 100 ft downstream from dam at pumping station of York Water Co., 200 ft upstream from Conrail bridge, 0.5 mi upstream from mouth, and 3.0 mi southwest of York.

DRAINAGE AREA.--117 mi².

PERIOD OF RECORD.--October 1927 to current year. Monthly discharge only, prior to October 1931, published in WSP 1302. May 1925 to September 1927 (gage heights and discharge measurements only), in reports of Pennsylvania Department of Forests and Waters.

REVISED RECORDS.--WSP 1302: 1931. WSP 1502: 1932-33, 1941, 1948.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 373.03 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 21, 1928, nonrecording gage at site 180 ft upstream at datum 5.00 ft higher. June 22, 1972, to Jan. 12, 1973, nonrecording gage at present site.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Regulation at low flow by pumping station upstream. Some regulation during entire period of record from reservoirs of York Water Co., combined capacity, 8,092 acre feet. Diversion above station for municipal supply of City of York. Several measurements of water temperature were made during the year.

COOPERATION.--Records of diversion provided by York Water Co.

AVERAGE DISCHARGE.--60 years, 135 ft³/s, 15.67 in/yr, adjusted for diversion and, since October 1966, for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,700 ft³/s, June 22, 1972, gage height, 22.62 ft, from floodmarks, from rating curve extended above 6,300 ft³/s on basis of contracted-opening measurement at gage height 17.97 ft and contracted-opening and flow-over-road measurement at peak flow; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,490 ft³/s, Dec. 25, gage height, 7.70 ft; minimum daily, 0.59 ft³/s, Oct. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	5.4	34	110	109	842	125	103	49	41	2.5	e15
2	40	6.1	51	144	104	527	119	125	44	46	1.9	e1.3
3	2.0	7.6	359	121	132	301	144	181	50	65	1.5	1.0
4	.97	6.5	131	104	160	291	201	204	67	40	3.7	1.5
5	.86	15	104	92	156	226	211	157	93	87	2.3	1.3
6	.99	72	57	69	136	208	278	126	55	40	8.9	6.8
7	1.4	11	38	77	142	193	235	114	52	30	1.7	11
8	1.3	30	47	83	148	188	188	105	50	43	1.9	177
9	.69	29	98	81	141	179	175	94	45	26	2.0	673
10	.72	16	113	93	122	155	157	88	57	36	5.2	65
11	.75	41	79	108	121	141	155	87	40	29	1.6	28
12	.75	107	84	98	122	138	168	81	42	74	1.4	27
13	.91	24	73	84	113	130	137	95	53	298	1.2	161
14	2.1	13	57	88	110	129	133	75	45	43	1.5	79
15	.59	11	51	127	101	130	131	97	38	49	1.5	35
16	.70	11	48	152	86	113	150	99	35	30	1.5	28
17	.70	11	47	128	90	107	138	75	28	27	1.5	23
18	.72	10	138	137	86	101	129	67	24	18	1.9	193
19	.74	170	146	386	84	99	114	77	23	21	1.8	81
20	.78	64	106	355	76	97	106	271	23	17	2.1	56
21	1.1	293	90	255	80	92	100	142	59	12	2.1	45
22	.87	84	76	229	84	91	92	114	93	8.7	1.7	43
23	1.1	41	64	232	121	82	133	103	118	4.8	7.9	32
24	1.7	45	130	174	93	80	257	99	72	5.2	1.4	28
25	1.4	37	1110	181	86	79	144	94	6.4	4.0	1.9	18
26	2.2	67	280	158	78	80	124	80	7.0	8.7	2.2	19
27	10	138	203	138	81	82	111	78	17	5.4	2.4	18
28	2.7	72	169	138	91	102	113	76	14	1.6	1.3	17
29	3.1	53	146	125	---	80	100	71	6.3	1.4	2.1	14
30	1.3	45	133	125	---	95	97	65	4.6	2.9	1.5	15
31	4.3	---	118	119	---	244	---	64	---	7.8	e1.3	---
TOTAL	88.84	1535.6	4380	4511	3053	5402	4465	3307	1310.3	1122.5	73.4	1912.9
MEAN	2.87	51.2	141	146	109	174	149	107	43.7	36.2	2.37	63.8
MAX	40	293	1110	386	160	842	278	271	118	298	8.9	673
MIN	.59	5.4	34	69	76	79	92	64	4.6	1.4	1.2	1.0
(†)	26.7	26.1	26.4	26.9	28.1	27.6	25.9	27.5	29.1	28.1	29.5	27.1
MEAN‡	35.4	77.3	167	173	137	202	175	134	70.1	66.2	27.3	96.3
CFSM‡	.30	.66	1.43	1.48	1.17	1.72	1.49	1.15	.60	.57	.23	.82
IN.‡	.35	.74	1.65	1.71	1.22	1.98	1.66	1.33	.67	.66	.26	.92

CAL YR 1986 TOTAL 30083.77 MEAN 82.4 MAX 1110 MIN .59 MEAN‡ 110 CFSM‡ .94 IN.‡ 12.75
WTR YR 1987 TOTAL 31161.46 MEAN 85.4 MAX 1110 MIN .59 MEAN‡ 113 CFSM‡ .97 IN.‡ 13.15

e Estimated
† Diversion for municipal supply of City of York, equivalent in cubic feet per second.
‡ Adjusted for diversion and change in reservoir contents.

01575500 CODORUS CREEK NEAR YORK, PA

LOCATION.--Lat 39°56'46", long 76°45'20", York County, Hydrologic Unit 02050306, on left bank 0.5 mi upstream from Richland Avenue bridge, 2.0 mi downstream from South Branch Codorus Creek, and 2.0 mi southwest of York.

DRAINAGE AREA.--222 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1940 to current year. October 1915 to August 1923, August 1926 to September 1932 (gage heights and discharge measurements only), in reports of Pennsylvania Department of Forests and Waters. Published as "at York" 1915-32.

REVISED RECORDS.--WDR PA-83-2: 1982(M).

GAGE.--Water-stage recorder. Datum of gage is 356.39 ft above National Geodetic Vertical Datum of 1929 (Corps of Engineers benchmark). Prior to Sept. 30, 1932, nonrecording gage at site 1.6 mi downstream at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Regulation at low flows by mills and pumping station upstream. Diversion above station for municipal supply of City of York. Flood flows regulated by Indian Rock Dam (station 01574700) and by 3 reservoirs, combined capacity, 65,650 acre-ft. U.S. Army Corps of Engineers satellite and landline telemeters at station.

COOPERATION.--Records of diversion provided by York Water Co.

AVERAGE DISCHARGE.--47 years, 245 ft³/s, 14.99 in/yr, adjusted for storage and diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,000 ft³/s, June 22, 1972, gage height, 26.36 ft, from floodmark in gage shelter, from rating curve extended above 6,600 ft³/s on basis of slope-area measurement at gage height 20.11 ft; minimum, 3.0 ft³/s, Oct. 25, 1966, gage height, 1.40 ft, result of upstream shutoff.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,040 ft³/s, Dec. 25, gage height, 8.19 ft; minimum daily, 48 ft³/s, Oct. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	52	86	193	196	1160	292	161	115	127	56	184
2	146	53	101	253	189	1090	182	165	109	121	56	61
3	62	54	669	227	250	571	206	200	110	160	54	54
4	58	55	261	191	319	503	331	304	132	102	55	52
5	57	74	185	165	306	392	337	293	193	152	56	52
6	54	171	133	140	267	354	470	207	115	96	67	65
7	54	74	101	147	278	325	501	183	109	89	56	71
8	55	108	107	155	293	311	391	171	105	104	56	357
9	54	98	167	151	282	297	325	153	104	81	55	836
10	52	71	215	167	229	264	286	146	118	93	57	134
11	52	119	152	202	223	231	256	145	96	86	54	85
12	52	223	159	177	226	227	254	148	98	116	54	79
13	55	89	144	159	212	214	267	161	114	381	53	289
14	58	68	112	168	199	203	217	138	103	86	54	136
15	53	66	112	269	182	210	210	172	91	87	54	95
16	50	63	106	326	153	195	209	168	91	61	53	90
17	49	60	104	263	166	177	250	136	84	58	54	78
18	50	e160	241	259	157	173	219	128	78	53	54	300
19	49	e300	286	655	152	164	201	140	77	53	53	145
20	48	e185	190	759	142	162	190	460	81	63	55	113
21	50	e620	162	483	144	157	173	248	137	62	55	107
22	50	e170	142	428	146	152	164	190	154	57	64	113
23	54	e100	126	414	202	148	152	171	179	61	69	92
24	49	e130	194	320	179	142	299	166	137	58	53	84
25	49	101	1650	292	161	144	391	156	64	54	54	70
26	57	132	537	293	148	146	227	146	71	58	55	71
27	65	247	387	237	152	142	197	148	90	56	56	70
28	53	137	319	223	161	176	180	143	74	53	60	67
29	54	113	274	229	---	156	178	134	62	52	54	63
30	52	99	244	230	---	147	167	125	59	53	50	67
31	51	---	217	217	---	290	---	121	---	60	52	---
TOTAL	1756	3992	7883	8392	5714	9023	7722	5527	3150	2793	1728	4080
MEAN	56.6	133	254	271	204	291	257	178	105	90.1	55.7	136
MAX	146	620	1650	759	319	1160	501	460	193	381	69	836
MIN	48	52	86	140	142	142	152	121	59	52	50	52
(†)	26.7	26.1	26.4	26.9	28.1	27.6	25.9	27.5	29.1	28.1	29.5	27.1
MEAN‡	57.8	161	320	340	261	358	313	216	102	83.8	33.9	160
CFSM‡	.26	.73	1.44	1.53	1.18	1.61	1.41	.97	.46	.38	.15	.72
IN.‡	.30	.81	1.66	1.76	1.23	1.86	1.57	1.12	.51	.44	.17	.80

CAL YR 1986 TOTAL 63952 MEAN 175 MAX 1650 MIN 44 MEAN‡ 199 CFSM‡ .90 IN.‡ 12.16
WTR YR 1987 TOTAL 61760 MEAN 169 MAX 1650 MIN 48 MEAN‡ 200 CFSM‡ .90 IN.‡ 12.25

e Estimated
† Diversion for municipal supply of City of York, equivalent in cubic feet per second.
‡ Adjusted for diversion and change in reservoir contents.

01575500 CODORUS CREEK NEAR YORK, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964, 1966-67, 1985 to current year.

REMARKS.--Samples collected from Richland Avenue Bridge.

COOPERATION.--Water-quality samples collected by Susquehanna River Basin Commission and analyzed by the Pa. Department of Environmental Resources.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)
OCT										
03...	1650	58	730	7.95	22.0	2.86	2.86	0.045	0.045	1.4
NOV										
05...	1035	66	1150	7.80	9.0	2.64	2.28	0.045	0.025	3.2
20...	1505	92	540	7.90	7.0	2.86	2.86	0.065	0.065	1.1
20...	2105	250	450	7.80	6.5	2.64	2.64	0.125	0.125	0.91
21...	0010	520	420	7.85	5.5	2.64	2.64	0.120	0.120	1.1
21...	0225	710	360	7.90	5.0	2.64	2.64	0.260	0.260	1.2
21...	0450	1050	460	7.55	6.0	2.64	2.64	0.260	0.260	1.8
21...	0720	1000	308	7.75	6.5	2.64	2.64	0.240	0.235	1.2
21...	1245	545	300	7.80	7.0	2.64	2.64	0.120	0.190	1.7
21...	1510	420	289	7.60	7.0	2.64	2.42	0.190	0.180	1.5
22...	1115	164	450	7.95	8.0	3.52	3.52	0.165	0.165	1.3
22...	2120	122	530	7.85	6.0	3.96	3.96	0.175	0.175	1.3
23...	1200	94	760	7.90	3.0	4.18	4.18	0.105	0.105	1.2
DEC										
17...	0910	99	670	7.80	7.0	4.20	4.20	0.490	0.485	1.5
JAN										
12...	1430	173	534	8.00	6.5	--	4.68	--	0.470	--
19...	1130	345	380	7.20	5.0	4.44	4.44	0.215	0.215	1.1
19...	1745	1010	320	7.65	3.0	4.18	3.74	0.240	0.240	1.7
19...	1935	1380	320	7.60	3.0	3.96	3.74	0.305	0.300	1.6
19...	2350	1370	275	7.80	3.0	3.52	3.52	0.205	0.200	1.7
20...	1055	660	273	7.90	4.0	4.18	4.18	0.200	0.200	0.96
21...	1130	488	335	7.90	5.0	4.84	4.62	0.180	0.180	0.86
22...	1015	405	270	7.50	4.0	3.52	3.52	0.080	0.080	0.75
FEB										
19...	1420	149	520	8.35	6.0	--	5.50	--	0.115	--
28...	1850	160	580	8.10	7.0	4.80	4.80	0.245	0.235	0.93
MAR										
01...	0045	226	550	8.10	6.0	4.56	4.56	0.230	0.230	1.1
01...	0900	592	525	7.80	7.0	3.96	3.72	0.350	0.350	1.2
01...	1710	2060	224	8.25	7.0	3.36	3.24	0.315	0.315	1.5
01...	2110	2210	220	7.75	8.0	3.00	3.00	0.280	0.265	0.87
02...	0114	1850	210	8.05	7.5	3.12	3.00	0.235	0.215	0.95
02...	0500	1380	215	7.85	7.5	3.48	3.36	0.200	0.185	0.83
02...	1025	974	264	7.40	6.0	3.84	3.84	0.195	0.185	0.71
03...	1300	601	352	7.40	4.0	4.40	4.40	0.160	0.160	0.69
04...	1520	477	322	7.90	--	4.92	4.80	0.110	0.100	0.75
05...	1500	383	350	8.05	7.0	4.80	4.80	0.145	0.145	0.70
06...	1400	352	370	7.90	9.0	5.16	5.16	0.110	0.110	0.79
09...	0930	299	400	7.90	12.0	4.92	4.92	0.100	0.100	0.90
17...	1000	173	600	7.70	7.0	--	5.06	--	0.125	--
30...	1520	149	660	7.90	14.0	3.12	3.12	0.085	0.085	0.83
31...	1200	222	530	7.90	13.0	3.12	3.12	0.110	0.110	0.81
APR										
03...	1815	210	465	7.90	11.5	4.84	4.84	0.030	0.030	0.84
04...	0121	220	474	7.80	10.0	4.84	4.84	0.035	0.030	0.62
04...	0800	274	470	7.70	11.0	4.84	4.84	0.040	0.040	0.64
04...	1600	392	470	7.50	13.5	4.62	4.62	0.055	0.055	0.86
06...	1500	499	330	8.05	9.0	3.96	3.96	0.090	0.090	0.52
07...	1600	463	330	8.00	12.0	3.96	3.96	0.080	0.080	0.45
08...	1115	393	352	7.95	13.0	4.40	4.18	0.090	0.090	0.48
09...	1130	328	390	7.90	12.5	4.40	4.40	0.110	0.110	0.30
10...	1010	292	395	7.80	14.0	3.74	--	0.030	0.030	0.72
27...	1315	196	460	8.00	19.0	3.08	2.86	0.030	0.020	1.3
MAY										
18...	1600	139	580	--	--	3.12	3.12	0.055	0.055	0.97
JUN										
03...	1030	106	700	8.30	26.0	3.30	3.08	0.055	--	0.95
30...	1115	55	830	8.40	25.5	4.84	4.18	0.055	0.050	0.82
AUG										
05...	1400	57	1250	7.80	25.5	1.38	1.30	0.070	0.060	1.3
SEP										
08...	1415	141	625	7.50	23.0	1.68	1.66	0.095	0.090	1.1
08...	2000	488	545	7.60	22.0	1.82	1.80	0.130	0.130	1.9
09...	0400	1990	190	7.30	21.0	1.92	1.92	0.255	0.255	1.8
09...	0800	956	217	7.30	21.5	2.16	2.02	a0.220	a0.240	1.7
09...	1530	272	280	7.50	25.0	2.40	2.40	0.450	0.450	0.57
09...	1915	210	525	--	23.0	2.86	2.64	0.120	0.120	1.0
10...	1050	129	525	--	23.0	2.64	2.64	0.090	0.090	0.93
11...	1515	92	790	7.70	26.0	2.40	2.40	0.100	0.100	1.1

(a) Results within limits of analytical precision.

01575500 CODORUS CREEK NEAR YORK, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHOROUS TOTAL (MG/L AS P)	PHOSPHOROUS DISSOLVED (MG/L AS P)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
OCT										
03...	1.2	1.5	1.3	4.3	0.250	0.190	0.089	14	21	3.2
NOV										
05...	1.1	3.2	1.1	5.9	0.270	0.110	0.083	38	16	2.9
20...	--	1.1	--	4.0	0.160	0.090	0.050	10	20	4.9
20...	--	1.0	--	3.7	0.260	0.120	0.074	8.8	93	63
21...	--	1.2	--	3.8	0.410	0.170	0.098	9.2	243	341
21...	--	1.4	--	4.0	0.760	0.140	0.070	8.8	548	1050
21...	--	2.0	--	4.7	1.54	0.110	0.066	12	1000	2860
21...	--	1.5	--	4.1	1.14	0.100	0.040	7.8	682	1850
21...	--	1.8	--	4.5	0.440	0.120	0.063	6.2	206	303
21...	--	1.7	--	4.3	0.350	0.100	0.052	7.2	139	158
22...	--	1.5	--	5.0	0.160	0.090	0.045	8.5	--	--
22...	--	1.5	--	5.4	0.150	0.090	0.040	9.5	--	--
23...	--	1.3	--	5.5	0.100	0.070	--	12	--	--
DEC										
17...	1.3	2.0	1.8	6.2	0.100	0.060	0.045	16	10	2.6
JAN										
12...	1.4	--	1.8	--	--	--	--	9.1	5	2.3
19...	0.56	1.3	0.78	5.7	0.110	0.060	0.038	9.1	30	28
19...	0.86	1.9	1.1	6.1	0.250	0.090	0.070	9.5	343	934
19...	0.80	1.9	1.1	5.8	0.240	0.100	0.078	10	466	1740
19...	0.58	1.9	0.78	5.4	0.250	0.090	0.071	8.9	267	992
20...	0.56	1.2	0.76	5.3	0.190	0.080	0.062	8.2	73	130
21...	0.75	1.0	0.93	5.9	0.100	0.050	0.038	7.9	25	34
22...	0.75	0.83	0.83	4.3	0.120	0.080	0.075	5.6	13	14
FEB										
19...	0.68	--	0.80	--	--	--	--	16	8	3.2
28...	0.87	1.2	1.1	6.0	0.090	0.050	0.030	18	10	4.4
MAR										
01...	1.1	1.3	1.3	5.9	0.120	0.060	0.010	16	20	12
01...	0.96	1.5	1.3	5.5	0.390	0.070	0.012	17	171	274
01...	1.0	1.8	1.3	5.2	0.260	0.110	0.022	10	892	4960
01...	0.68	1.2	0.95	4.1	0.190	0.090	0.026	8.8	684	4090
02...	0.86	1.2	1.1	4.3	0.350	0.080	0.012	8.6	368	1830
02...	0.80	1.0	0.98	4.5	0.220	0.080	0.013	9.0	218	816
02...	0.59	0.91	0.78	4.7	0.180	0.060	0.010	9.8	138	362
03...	0.56	0.85	0.72	5.2	0.080	0.030	0.015	5.7	34	55
04...	0.56	0.86	0.66	5.8	0.060	0.020	0.006	8.5	24	31
05...	0.47	0.84	0.62	5.6	0.060	0.030	0.005	8.2	14	14
06...	0.69	0.90	0.80	6.1	0.040	0.030	0.006	12	18	17
09...	0.46	1.0	0.56	5.9	0.060	0.040	0.006	12	13	10
17...	0.80	--	0.93	--	--	--	--	15	6	2.8
30...	0.77	0.92	0.86	4.0	0.130	0.040	0.026	34	10	4.0
31...	0.81	0.92	0.92	4.0	0.130	0.050	0.017	29	33	20
APR										
03...	0.77	0.87	0.80	5.7	0.110	0.050	0.026	16	10	5.8
04...	0.42	0.66	0.45	5.5	0.110	0.050	0.022	14	19	11
04...	0.44	0.68	0.48	5.5	0.120	0.050	0.025	15	23	17
04...	0.57	0.92	0.63	5.5	0.200	0.130	0.031	18	81	86
06...	0.28	0.61	0.37	4.6	0.130	0.070	0.025	9.3	40	54
07...	0.45	0.53	0.53	4.5	0.120	0.060	0.008	9.5	37	46
08...	0.38	0.57	0.47	5.0	0.090	0.050	0.004	8.3	23	25
09...	0.14	0.41	0.25	4.8	0.090	0.050	0.016	9.5	18	16
10...	0.67	0.75	0.70	4.5	0.070	0.050	0.010	11	20	16
27...	0.85	1.3	0.87	4.4	0.090	0.050	0.026	13	13	6.7
MAY										
18...	0.78	1.0	0.83	4.1	0.090	0.020	0.020	11	15	5.6
JUN										
03...	--	1.0	0.83	4.3	0.170	0.090	0.037	13	25	7.2
30...	0.73	0.88	0.78	5.7	0.220	0.150	--	15	19	2.9
AUG										
05...	1.2	1.4	1.2	2.7	0.230	0.180	0.095	26	20	3.1
SEP										
08...	0.81	1.2	0.90	2.9	0.290	0.180	0.110	14	60	23
08...	0.83	2.1	0.96	3.9	0.520	0.140	0.092	12	395	520
09...	0.91	2.0	1.2	4.0	0.680	0.080	0.005	6.4	544	2920
09...	0.86	1.9	1.1	4.0	0.480	0.110	0.051	6.2	300	774
09...	0.25	1.0	0.70	3.4	0.340	0.080	0.033	6.6	127	93
09...	0.66	1.1	0.78	4.0	0.270	0.090	0.040	7.5	95	54
10...	0.73	1.0	0.82	3.7	0.170	0.080	0.044	11	40	14
11...	1.0	1.2	1.1	3.6	0.160	0.080	0.055	14	24	6.0

01575585 CODORUS CREEK AT PLEASUREVILLE, PA

LOCATION.--Lat 40°01'07", long 76°41'36", York County, Hydrologic Unit 02050306, on right bank at downstream side of Sherman Street bridge, 1.0 mi northeast of Pleasureville, 2.0 mi upstream from Dee Run, and 5.0 mi upstream from mouth.

DRAINAGE AREA.--267 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1984 to current year.

REVISED RECORDS.--WDR PA-86-2: 1985 (adjusted mean, $(ft^3/s)/mi^2$, and inches).

GAGE.--Water-stage recorder. Elevation of gage is 330 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Regulation at low flow by mills and pumping station of York Water Co. upstream from gage. Flood flows regulated by Indian Rock Dam (station 01574700) and by 3 reservoirs, combined capacity, 65,650 acre-ft.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,800 ft^3/s, Feb. 12, 1985, gage height, 11.55 ft, from rating curve extended above 3,300 ft^3/s on basis of slope-area measurement of peak flow; minimum, 43 ft^3/s, July 29, 1987; minimum daily, 72 ft^3/s, Sept. 22, 1985, Sept. 4, 5, 1987.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,710 ft^3/s, Dec. 25, gage height, 6.24 ft; minimum, 43 ft^3/s, July 29; minimum daily, 72 ft^3/s, Sept. 4, 5, 1987.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	227	e93	142	276	282	1380	402	252	200	326	89	201
2	291	e97	202	338	290	1450	271	263	196	225	90	86
3	121	e102	946	332	346	736	291	285	201	261	87	73
4	103	e120	388	282	417	631	436	451	239	e190	86	72
5	94	e140	272	251	400	511	455	424	286	277	95	72
6	88	269	213	231	361	468	623	306	206	187	e115	102
7	85	135	166	232	367	418	634	259	195	e150	89	97
8	91	214	168	244	380	397	512	261	188	e190	87	435
9	e80	178	277	238	368	384	418	244	202	164	88	1190
10	e78	132	318	264	322	352	371	234	207	e180	e120	224
11	e77	239	239	290	316	319	340	226	183	161	e105	169
12	e76	317	239	262	318	312	341	268	187	281	e97	156
13	e85	158	216	246	308	300	348	253	204	e600	91	478
14	e100	123	179	252	291	288	303	224	189	135	92	243
15	e94	122	174	344	271	295	293	341	176	128	91	175
16	e90	114	169	424	239	278	293	264	182	99	90	176
17	e89	111	166	356	254	258	310	224	166	92	92	153
18	e92	195	414	354	243	253	297	251	160	86	92	411
19	e89	440	447	846	237	232	276	261	159	86	91	249
20	e88	389	284	1020	225	239	266	791	160	e115	91	203
21	e87	801	239	623	228	234	257	397	238	e110	76	194
22	e87	270	209	542	227	225	242	305	257	90	151	211
23	e95	172	193	520	288	222	229	284	e280	94	93	177
24	e90	189	421	409	286	213	571	268	238	89	85	162
25	e88	166	2230	375	252	215	543	254	e130	87	78	149
26	e96	250	697	372	239	216	331	238	184	e95	80	145
27	e140	356	501	320	240	209	299	246	e240	87	76	142
28	e100	214	415	295	262	269	276	241	e180	e83	105	138
29	e99	174	363	311	---	230	271	229	e120	e80	79	137
30	e96	158	334	313	---	214	260	218	e90	e81	74	147
31	e91	---	306	306	---	401	---	213	---	e96	91	---
TOTAL	3207	6438	11527	11468	8257	12149	10759	8975	5843	4925	2866	6567
MEAN	103	215	372	370	295	392	359	290	195	159	92.5	219
MAX	291	801	2230	1020	417	1450	634	791	286	600	151	1190
MIN	76	93	142	231	225	209	229	213	90	80	74	72
MEAN‡	77.5	217	412	412	324	432	390	301	163	125	41.2	21.6
CFSM‡	.29	.81	1.54	1.54	1.21	1.62	1.46	1.13	.61	.47	.15	.81
IN.‡	.33	.90	1.78	1.78	1.26	1.87	1.63	1.30	.68	.54	.17	.90

CAL YR 1986 TOTAL 90122 MEAN 247 MAX 2230 MIN 76 MEAN‡ 243 CFSM‡ .91 IN.‡ 12.36
WTR YR 1987 TOTAL 92981 MEAN 255 MAX 2230 MIN 72 MEAN‡ 258 CFSM‡ .97 IN.‡ 13.14

e Estimated
‡ Adjusted for change in reservoir contents.

01575585 CODORUS CREEK AT PLEASUREVILLE, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1985 to current year.

INSTRUMENTATION.--Automatic pumping sampler since November 1986.

COOPERATION.--Water-quality samples collected by Susquehanna River Basin Commission and analyzed by Pa. Department of Environmental Resources.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)
OCT										
03...	1540	116	540	7.65	21.0	2.64	2.52	0.660	0.630	1.3
NOV										
05...	0945	140	1260	7.90	9.0	3.30	3.24	2.09	1.92	2.5
18...	2100	459	825	7.60	--	--	--	1.38	1.26	6.4
18...	2130	633	820	7.60	--	--	--	1.92	1.82	6.3
18...	2200	798	760	7.55	--	--	--	1.70	1.70	9.9
18...	2230	876	650	7.50	--	--	--	0.990	0.880	4.7
18...	2315	837	555	7.50	--	--	--	0.360	0.360	4.3
19...	0045	610	400	7.50	--	1.64	1.56	0.450	0.440	1.9
19...	0215	459	350	7.30	--	1.98	1.86	0.880	0.820	1.7
19...	0345	377	335	7.30	--	2.06	1.96	0.940	0.880	1.9
19...	0545	367	362	7.40	--	2.16	2.16	0.780	0.720	1.9
19...	0615	372	495	7.40	--	3.08	2.86	0.660	0.600	2.2
19...	0715	410	600	7.50	--	3.08	2.42	0.490	0.460	1.9
19...	0945	554	635	7.60	--	2.86	2.86	0.340	0.320	2.1
19...	1115	570	585	7.55	--	3.08	3.08	0.260	0.260	2.3
19...	1215	543	540	7.55	--	2.86	2.64	0.280	0.260	2.4
19...	1415	484	490	7.60	--	3.08	2.86	0.310	0.310	2.3
19...	1615	424	560	7.50	--	3.30	3.08	0.400	0.380	1.3
19...	2045	349	475	7.55	--	3.08	2.64	0.630	0.570	0.97
20...	0045	293	420	7.30	--	2.64	2.42	0.200	0.200	1.7
20...	1415	191	545	7.60	--	3.08	2.86	0.455	0.440	1.1
20...	1830	281	500	7.70	--	3.08	2.86	0.990	0.990	1.2
20...	2005	558	510	7.50	--	3.08	2.86	1.10	1.10	1.5
20...	2045	837	500	7.50	--	2.86	2.86	1.54	1.43	1.5
20...	2115	1150	490	7.90	--	2.86	2.64	1.43	1.27	2.1
20...	2145	1370	410	7.70	--	3.74	2.64	0.990	0.660	2.3
20...	2300	1300	258	7.70	--	1.54	1.48	0.390	0.380	2.7
21...	0030	993	200	7.60	--	1.20	1.16	0.250	0.250	2.5
21...	0130	850	220	7.50	--	1.36	1.34	0.355	0.350	1.8
21...	0300	791	238	7.60	--	1.54	1.46	0.485	0.475	1.3
21...	0430	830	325	7.60	--	1.88	1.82	0.440	0.430	[a]0.56
21...	0600	1000	392	7.70	--	2.64	2.64	0.280	0.275	2.0
21...	0700	1150	390	7.70	--	3.74	2.86	0.265	0.255	1.9
21...	0800	1210	398	7.70	--	2.86	2.64	0.215	0.205	2.2
21...	0930	1170	410	7.70	--	1.90	1.86	0.115	0.110	7.1
21...	1100	1050	425	7.60	--	2.86	2.42	0.295	0.290	5.8
21...	1415	779	320	7.50	--	2.86	2.42	0.295	0.295	3.0
22...	1005	280	415	7.70	--	3.52	3.30	0.425	0.415	1.5
22...	2235	204	520	7.80	--	4.40	3.74	1.15	0.990	1.3
23...	1307	167	520	7.80	--	3.74	3.74	0.475	0.475	1.1
DEC										
15...	1510	177	550	7.60	6.0	4.40	4.40	1.10	1.10	0.90
JAN										
12...	1520	261	533	7.80	6.0	4.68	4.56	0.990	0.960	0.97
19...	1120	575	460	7.60	--	4.62	4.62	0.405	0.405	1.0
19...	1415	1010	337	7.40	--	3.52	3.52	0.390	0.385	1.7
19...	1500	1100	300	6.90	--	3.30	3.30	0.370	0.350	1.7
19...	1600	1160	270	7.40	--	2.86	2.86	0.405	0.405	1.7
19...	1700	1190	263	7.70	--	2.86	2.86	0.415	0.410	1.7
19...	1800	1190	289	7.50	--	3.08	3.08	0.435	0.435	2.1
19...	1930	1320	305	7.40	--	3.30	3.08	0.425	0.425	2.2
19...	2030	1640	313	7.70	--	3.52	3.52	0.495	0.495	2.7
20...	0535	1290	263	7.50	--	3.52	3.36	0.280	0.280	1.8
20...	0630	1210	262	7.20	--	3.48	3.48	0.260	0.255	1.6
20...	0730	1130	264	6.90	--	3.52	3.52	0.250	0.250	1.4
20...	0830	1060	268	7.10	--	3.52	3.30	0.260	0.260	1.1
20...	0930	1000	273	7.20	--	3.60	3.60	0.265	0.260	1.3
20...	1030	947	283	7.30	--	3.60	3.60	0.295	0.295	1.3
20...	1200	873	293	7.20	--	3.96	3.74	0.280	0.280	1.1
20...	1450	798	310	7.40	--	3.96	3.74	0.215	0.215	1.0
21...	1235	621	370	7.80	--	4.80	4.68	0.355	0.355	0.99
FEB										
19...	1510	238	510	7.90	5.0	5.50	5.50	0.770	0.715	0.81
27...	1145	239	570	7.50	--	4.40	4.40	0.550	0.550	1.0

(a) Results within limits of analytical precision.

01575585 CODORUS CREEK AT PLEASUREVILLE, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHOROUS TOTAL (MG/L AS P)	PHOSPHOROUS DISSOLVED (MG/L AS P)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
OCT										
03...	1.3	2.0	2.0	4.6	0.380	0.240	0.106	12	41	13
NOV										
05...	1.9	4.6	3.8	7.9	0.290	0.210	0.120	29	40	15
18...	1.7	7.8	2.9	--	1.51	0.140	0.020	--	495	614
18...	1.7	8.2	3.5	--	1.65	0.160	0.023	--	635	1090
18...	1.9	12	3.6	--	2.64	0.200	0.050	--	1250	2710
18...	1.3	5.7	2.2	--	1.10	0.120	0.021	27	457	1080
18...	1.4	4.7	1.7	--	0.750	0.100	0.017	19	362	818
19...	1.1	2.3	1.5	4.0	0.280	0.100	0.009	11	190	313
19...	0.73	2.6	1.5	4.6	0.470	0.110	0.006	8.5	120	149
19...	0.90	2.8	1.8	4.9	0.350	0.120	0.035	8.6	100	102
19...	1.1	2.7	1.8	4.9	0.290	0.130	0.048	10	99	98
19...	1.0	2.8	1.6	5.9	0.420	0.140	0.073	12	98	98
19...	0.92	2.4	1.4	5.5	0.400	0.150	0.070	14	98	109
19...	1.5	2.4	1.8	5.3	0.410	0.150	0.067	14	111	167
19...	1.2	2.5	1.4	5.6	0.510	0.120	0.058	13	142	219
19...	0.94	2.7	1.2	5.6	0.180	0.100	0.041	11	159	234
19...	0.97	2.6	1.3	5.7	0.510	0.080	0.033	11	163	213
19...	0.96	1.7	1.3	5.0	0.300	0.110	0.079	13	117	134
19...	0.68	1.6	1.2	4.7	0.350	0.110	0.047	12	69	65
20...	0.76	1.9	0.96	4.6	0.200	0.050	0.008	40	34	27
20...	0.86	1.6	1.3	4.7	0.260	0.090	0.061	11	59	31
20...	0.81	2.2	1.8	5.3	0.110	0.070	0.007	12	41	31
20...	1.3	2.6	2.4	5.7	0.170	0.170	0.016	14	75	113
20...	0.77	3.0	2.2	5.9	0.390	0.160	0.020	12	96	217
20...	1.3	3.6	2.6	6.4	0.230	0.150	0.019	13	211	655
20...	0.64	3.3	1.3	7.0	0.250	0.120	0.014	11	526	1950
20...	0.72	3.1	1.1	4.6	0.160	0.100	0.016	9.7	568	1990
21...	0.75	2.8	1.0	4.0	0.130	0.070	0.008	9.0	400	1070
21...	0.65	2.2	1.0	3.6	0.160	0.090	0.014	8.4	398	913
21...	0.72	1.8	1.2	3.3	0.300	0.120	0.014	8.2	413	880
21...	[a]0.57	1.0	1.0	2.9	0.240	0.140	0.080	9.7	251	562
21...	0.82	2.3	1.1	4.9	0.240	0.130	0.032	11	282	761
21...	0.74	2.2	1.0	5.9	0.200	0.110	0.066	12	371	1150
21...	0.89	2.4	1.1	5.3	0.170	0.090	0.016	11	524	1710
21...	0.89	7.3	1.0	9.2	0.140	0.050	0.010	11	718	2270
21...	1.0	6.1	1.3	8.9	0.180	0.080	0.015	11	662	1880
21...	1.0	3.3	1.3	6.2	0.720	0.080	0.045	7.9	404	847
22...	0.88	1.9	1.3	5.4	0.150	0.110	0.038	8.5	51	39
22...	0.92	2.5	1.9	6.9	0.200	0.160	0.048	8.7	37	21
23...	0.82	1.6	1.3	5.3	0.150	0.120	0.022	10	21	9.3
DEC										
15...	0.50	2.0	1.6	6.4	0.130	0.100	0.086	11	5	2.4
JAN										
12...	0.96	2.0	1.9	6.6	0.100	0.060	0.043	7.6	12	8.5
19...	0.92	1.4	1.3	6.0	0.070	0.040	0.014	23	118	183
19...	0.65	2.1	1.0	5.7	0.350	0.050	0.010	22	398	1080
19...	0.89	2.0	1.2	5.3	0.250	0.040	0.010	14	259	770
19...	0.59	2.1	1.0	5.0	0.210	0.040	0.024	15	270	847
19...	0.73	2.1	1.1	4.9	0.320	0.050	0.040	12	260	830
19...	0.81	2.6	1.2	5.7	0.340	0.050	0.013	16	230	814
19...	0.81	2.6	1.2	5.9	0.640	0.050	0.033	14	209	818
19...	0.95	3.2	1.5	6.7	0.510	0.060	0.034	16	267	1190
20...	0.66	2.1	0.94	5.6	0.270	0.060	0.047	11	212	743
20...	0.78	1.9	1.0	5.3	0.280	0.080	0.052	12	189	618
20...	0.69	1.7	0.94	5.2	0.250	0.070	0.024	11	158	484
20...	0.88	1.3	1.1	4.9	0.310	0.080	0.043	11	154	442
20...	0.88	1.5	1.1	5.1	0.200	0.080	0.031	12	138	374
20...	0.74	1.5	1.0	5.1	0.180	0.080	0.070	11	115	294
20...	0.55	1.3	0.83	5.3	0.170	0.080	0.038	12	103	243
20...	0.82	1.2	1.0	5.2	0.220	0.070	0.047	10	95	205
21...	0.68	1.3	1.0	6.1	0.140	0.070	0.032	10	36	61
FEB										
19...	0.79	1.6	1.5	7.1	0.100	0.040	0.017	17	7	4.5
27...	0.90	1.6	1.5	6.0	0.100	0.040	0.030	17	9	5.7

(a) Results within limits of analytical precision.

01575585 CODORUS CREEK AT PLEASUREVILLE, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)
MAR										
01...	0930	821	440	7.70	--	3.52	3.52	0.395	0.395	1.4
01...	1045	1040	435	7.80	--	3.52	3.52	0.395	0.370	1.4
01...	1100	1070	435	7.70	--	3.52	3.52	0.365	0.365	1.7
01...	1300	1300	425	8.00	--	3.36	3.24	0.335	0.330	1.2
01...	1500	1640	385	7.90	--	3.24	3.24	0.360	0.355	1.4
01...	1700	2070	312	8.00	--	3.24	3.24	0.290	0.285	0.89
01...	1900	2450	270	8.10	--	3.24	3.24	0.320	0.320	1.1
01...	1935	2540	255	7.70	--	3.12	3.12	0.345	0.340	1.0
01...	2100	2690	240	8.10	--	3.00	3.00	0.320	0.300	1.2
02...	0045	2560	228	7.80	--	3.00	3.00	0.320	0.300	1.0
02...	0245	2300	225	7.60	--	3.00	3.00	0.450	0.360	1.1
02...	0825	1460	245	7.70	--	3.48	3.36	0.340	0.330	1.2
02...	1100	1260	258	7.90	--	3.48	3.48	0.295	0.285	1.1
02...	1725	1090	292	7.80	--	3.84	3.84	0.410	0.410	0.81
03...	0815	766	320	7.70	--	4.32	4.20	0.305	0.300	1.0
04...	1620	604	362	7.70	--	4.92	4.92	0.330	0.330	0.89
05...	1615	505	415	7.85	7.0	4.92	4.90	0.570	0.540	0.87
06...	1530	464	435	7.80	9.0	5.40	5.16	0.500	0.500	0.98
07...	0810	415	422	7.80	--	5.40	5.40	0.325	0.325	1.1
09...	1045	386	430	7.75	10.0	5.40	5.40	0.390	0.390	1.1
17...	1500	257	568	8.00	11.0	5.06	5.06	0.825	0.825	1.2
30...	1710	228	600	7.80	13.5	3.60	3.60	1.50	1.50	0.44
APR										
03...	2220	281	580	7.80	11.0	3.96	3.74	0.935	0.935	1.3
03...	2330	285	570	7.70	--	3.74	3.74	0.770	0.770	1.4
04...	0100	332	530	7.70	--	3.52	3.52	0.770	0.770	1.5
04...	1200	405	445	7.80	--	3.52	3.52	0.440	0.440	1.3
04...	1400	415	460	7.80	--	3.52	3.52	0.495	0.495	1.8
04...	1630	529	460	8.10	--	3.52	3.52	0.470	0.470	1.8
04...	2100	511	480	7.90	--	3.52	3.52	0.445	0.445	1.5
05...	0730	453	395	8.10	12.0	3.52	3.52	0.255	0.255	0.95
05...	1415	395	400	7.90	--	3.96	3.96	0.550	0.550	1.3
05...	1915	469	375	8.10	--	3.74	3.74	0.590	0.570	1.3
06...	0400	537	368	8.10	8.0	3.52	3.52	0.500	0.500	0.88
06...	0800	566	384	7.80	--	4.18	3.74	0.420	0.420	1.1
06...	1945	674	378	7.70	--	3.30	3.30	0.365	0.365	1.1
08...	1745	495	408	7.70	--	3.74	3.74	0.690	0.630	0.93
27...	1350	302	460	7.85	19.0	3.36	3.36	0.460	0.460	0.87
MAY										
18...	1630	217	590	8.20	23.5	3.00	3.00	0.660	0.660	1.3
JUN										
03...	0620	194	760	7.30	23.0	3.96	3.96	1.20	1.10	1.3
30...	1230	130	1070	8.00	26.0	4.62	4.40	1.82	1.81	3.1
JUL										
01...	1915	340	580	7.70	--	3.96	--	1.70	--	3.8
01...	2010	1290	570	7.70	--	3.74	3.30	1.87	1.49	1.8
01...	2015	1340	574	7.60	--	3.96	3.08	1.92	1.49	1.6
01...	2100	1270	434	7.60	--	3.52	3.08	1.26	--	a1.9
01...	2200	843	249	7.60	--	1.76	1.72	0.880	0.720	1.3
01...	2245	638	238	7.60	--	1.66	--	0.715	--	0.89
01...	2305	604	238	7.30	--	1.82	1.64	0.880	0.660	1.3
01...	2315	537	261	7.50	--	1.72	1.66	0.825	0.770	1.8
02...	0020	378	263	7.40	--	1.82	1.82	0.825	0.660	1.8
02...	0725	194	334	7.40	--	3.96	1.98	1.65	1.10	--
12...	1935	1120	487	--	--	2.02	--	0.820	--	3.2
12...	2020	1410	224	--	--	1.38	1.36	0.410	0.360	1.6
12...	2100	1190	240	--	--	2.35	2.30	0.700	0.380	2.1
12...	2200	780	250	--	--	2.45	2.24	0.650	0.400	3.5
12...	2205	780	251	--	--	2.45	2.08	0.650	0.400	1.5
12...	2345	410	211	--	--	2.30	2.30	0.710	0.400	1.9
13...	0245	450	285	--	--	2.35	2.08	0.720	0.510	1.6
13...	0415	760	501	--	--	2.32	2.08	0.360	0.350	4.6
13...	0515	810	374	--	--	3.00	3.00	0.190	0.180	2.3
13...	0635	740	245	--	--	3.32	2.56	0.110	0.110	1.6
13...	0850	540	242	--	--	2.40	2.40	0.180	0.170	1.8
13...	1110	410	257	--	--	2.60	2.36	0.260	0.250	1.5
13...	2030	180	353	--	--	3.10	3.10	0.810	0.810	1.8
AUG										
08...	1550	87	1080	7.90	25.0	1.68	1.66	1.92	1.92	1.5

(a) Results within limits of analytical precision.

01575585 CODORUS CREEK AT PLEASUREVILLE, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
MAR										
01...	0.86	1.8	1.3	5.3	0.540	0.060	0.033	26	263	583
01...	0.95	1.8	1.3	5.3	0.470	0.060	0.043	15	298	838
01...	0.83	2.0	1.2	5.6	0.510	0.060	0.039	18	262	756
01...	0.65	1.5	0.98	4.9	0.270	0.050	0.044	17	378	1330
01...	0.98	1.7	1.3	5.0	0.570	0.060	0.050	16	544	2410
01...	--	1.2	0.38	--	0.280	0.070	0.061	14	608	3400
01...	1.1	1.4	1.4	4.6	0.310	0.080	0.068	14	706	4670
01...	0.86	1.4	1.2	4.5	0.250	0.090	0.082	12	690	4740
01...	0.65	1.5	0.95	4.5	0.380	--	0.086	12	722	5250
02...	0.68	1.3	0.98	4.3	0.400	0.070	0.055	11	513	3540
02...	0.82	1.5	1.2	4.5	0.250	0.080	0.073	12	434	2700
02...	0.65	1.5	0.98	5.0	0.310	0.110	0.093	11	287	1140
02...	0.25	1.4	0.54	4.9	0.200	0.050	0.051	10	199	678
02...	0.47	1.2	0.88	5.1	0.160	0.050	0.047	11	150	440
03...	0.80	1.3	1.1	5.6	0.100	0.040	0.035	9.	104	216
04...	0.57	1.2	0.90	6.1	0.080	0.030	0.006	8.	21	35
05...	0.74	1.4	1.3	6.4	0.080	0.030	0.008	9.	15	21
06...	0.52	1.5	1.0	6.9	0.050	0.040	0.017	14	17	21
07...	0.90	1.4	1.2	6.8	0.070	0.050	0.022	15	17	19
09...	0.67	1.5	1.1	6.9	0.060	0.040	0.018	14	20	21
17...	1.2	2.0	2.0	7.1	0.090	0.050	0.028	16	9	6.2
30...	0.44	1.9	1.9	5.5	0.180	0.090	0.047	33	19	12
APR										
03...	0.90	2.2	1.8	6.1	0.210	0.100	0.051	16	19	14
03...	1.1	2.2	1.9	5.9	0.270	0.090	0.034	17	97	74
04...	0.93	2.3	1.7	5.8	0.310	0.120	0.080	18	83	74
04...	0.74	1.7	1.2	5.2	0.320	0.080	0.026	14	100	109
04...	1.3	2.3	1.8	5.8	0.250	0.070	0.026	16	77	87
04...	1.0	2.3	1.5	5.8	0.280	0.080	0.031	15	79	114
04...	0.76	1.9	1.2	5.5	0.330	0.080	0.029	16	110	152
05...	0.72	1.2	0.98	4.7	0.210	0.070	0.028	14	54	66
05...	0.83	1.8	1.4	5.8	0.200	0.070	0.037	12	99	105
05...	0.68	1.9	1.2	5.6	0.240	0.080	0.060	12	72	91
06...	0.52	1.4	1.0	4.9	0.220	0.080	0.040	10	47	68
06...	0.66	1.5	1.1	5.7	0.160	0.090	0.043	13	--	--
06...	0.67	1.4	1.0	4.7	0.140	0.070	0.036	13	62	113
08...	0.49	1.6	1.1	5.4	0.180	0.070	0.031	13	31	42
27...	0.85	1.3	1.3	4.7	0.130	0.060	0.027	14	27	22
MAY										
18...	1.2	2.0	1.8	5.0	0.110	0.020	0.020	9.	19	11
JUN										
03...	1.2	2.5	2.3	6.4	0.200	0.140	0.069	11	32	17
30...	2.0	4.9	3.8	9.6	0.610	0.230	0.200	16	15	5.3
JUL										
01...	--	5.5	--	9.5	3.52	--	--	12	1470	1340
01...	1.4	3.7	2.9	7.5	1.10	0.330	0.068	9.	1200	4170
01...	0.93	3.5	2.4	7.5	1.21	0.330	0.130	11	1190	4290
01...	[a]2.1	3.1	2.1	--	1.21	0.330	0.140	11	1090	3730
01...	0.89	2.2	1.6	4.0	0.600	0.210	0.064	8.	622	1420
01...	--	1.6	--	3.3	0.330	--	--	7.	481	829
01...	0.75	2.2	1.4	4.0	0.340	0.160	0.059	6.	340	555
01...	0.74	2.6	1.5	4.3	0.480	0.170	0.056	6.	480	696
02...	0.65	2.6	1.3	4.4	0.670	0.150	0.053	7.	290	296
02...	1.3	2.7	2.4	6.6	0.410	0.250	0.130	7.	124	65
12...	--	4.0	--	6.0	0.330	--	--	16	647	1960
12...	1.1	2.0	1.4	3.4	0.450	0.120	0.025	13	556	2120
12...	0.80	2.8	1.2	5.2	0.740	0.100	0.023	15	1569	5040
12...	1.1	4.2	1.5	6.6	0.580	0.130	0.017	15	2260	4750
12...	1.0	2.2	1.4	4.6	0.670	0.120	0.027	13	2260	4750
12...	0.93	2.6	1.3	4.9	0.750	0.140	0.016	11	705	781
13...	0.97	2.3	1.5	4.6	0.550	0.140	0.039	11	2080	2520
13...	1.2	5.0	1.6	7.3	0.220	0.150	0.016	13	573	1180
13...	0.73	2.5	0.91	5.5	0.910	0.130	0.060	7.	1200	2610
13...	0.51	1.7	0.62	5.0	0.130	0.100	0.049	4.	456	913
13...	0.91	2.0	1.1	4.4	0.180	0.110	0.008	6.	332	484
13...	0.78	1.8	1.0	4.4	0.200	0.090	0.020	6.	307	340
13...	1.1	2.6	1.9	5.7	0.160	0.130	0.010	7.	64	31
AUG										
08...	1.1	3.5	3.0	5.1	1.65	0.620	0.380	24	42	9.9

(a) Results within limits of analytical precision.

01575585 CODORUS CREEK AT PLEASUREVILLE, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)
SEP										
08...	1340	637	590	7.60	--	1.96	1.96	0.660	0.550	0.86
08...	1600	892	340	7.80	--	1.38	1.28	0.490	0.490	1.3
08...	1810	801	250	7.50	--	1.10	1.10	0.280	0.280	1.1
08...	1920	961	303	7.80	--	1.26	1.26	0.460	0.460	0.72
08...	2300	825	288	7.50	--	1.42	1.40	0.260	0.240	0.54
09...	0130	2140	415	7.50	--	2.42	2.20	1.16	1.16	0.60
09...	0400	2440	246	7.60	--	1.90	1.90	0.260	0.240	1.1
09...	0615	2330	220	7.80	--	1.92	1.90	0.250	0.220	1.6
09...	0840	1750	213	7.80	--	1.92	1.92	0.260	0.220	1.5
09...	1100	1060	248	7.80	22.0	2.20	2.20	0.240	0.220	1.3
09...	1340	674	273	7.60	--	2.86	2.42	0.260	0.220	1.6
09...	1640	437	284	7.80	--	2.42	2.42	0.240	0.220	1.1
09...	1915	361	299	7.80	--	1.20	1.20	0.420	0.420	1.2
09...	2015	338	298	7.70	--	2.42	2.42	0.420	0.410	3.4
09...	2345	291	312	7.70	--	2.52	2.28	0.660	0.300	3.5
10...	0315	251	326	7.50	--	2.42	2.42	0.300	0.300	4.7
10...	0645	226	352	7.70	--	2.86	2.20	0.990	0.300	4.4
10...	0800	221	411	7.50	--	2.64	2.64	0.820	0.770	5.2

DATE	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
SEP										
08...	0.47	1.5	1.0	3.5	0.320	0.130	0.078	12	551	946
08...	0.53	1.8	1.0	3.1	0.370	0.110	0.055	7.5	575	1390
08...	0.32	1.3	0.60	2.4	0.490	0.110	0.077	6.4	457	988
08...	0.12	1.2	0.58	2.4	0.280	0.120	0.022	6.9	398	1040
08...	0.26	0.80	0.50	2.2	0.320	0.130	0.088	7.0	552	1230
09...	--	1.8	1.2	4.2	1.70	0.100	0.060	10	1270	7350
09...	0.31	1.3	0.55	3.2	0.220	0.090	0.028	7.0	838	5520
09...	0.86	1.8	1.1	3.7	0.290	0.080	0.026	6.9	475	3000
09...	1.3	1.8	1.5	3.7	0.300	0.100	0.011	7.1	420	1980
09...	1.1	1.6	1.4	3.8	0.260	0.110	0.042	6.7	240	688
09...	1.5	1.9	1.7	4.7	0.250	0.120	0.073	6.6	226	411
09...	0.92	1.4	1.1	3.8	0.300	0.110	0.055	7.3	185	218
09...	--	1.6	0.50	2.8	0.440	0.120	0.061	7.1	394	384
09...	1.1	3.8	1.5	6.2	0.240	0.110	0.053	6.6	127	116
09...	1.0	4.2	1.3	6.7	0.240	0.100	0.054	6.5	185	145
10...	1.4	5.0	1.7	7.4	0.260	0.100	0.054	6.9	73	50
10...	1.1	5.4	1.4	8.3	0.280	0.120	0.041	12	72	44
10...	1.1	6.0	1.9	8.6	0.240	0.120	0.064	8.2	97	58

RESERVOIRS IN CODORUS CREEK BASIN

01574390 LAKE MARBURG.--Lat 39°48'26", long 76°52'58", York County, Hydrologic Unit 02050306, at dam on West Branch Codorus Creek, 0.7 mi upstream from Codorus Creek, and 4.5 mi south of Spring Grove. DRAINAGE AREA, 23.2 mi². PERIOD OF RECORD, October 1972 to current year in reports of Geological Survey; July 1972 to September 1974 in files of P. H. Glatfelter Co., Spring Grove. Records for period December 1966 to June 1972 were lost in the flood of June 1972. GAGE, Nonrecording. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Lake is formed by earthfill dam with two bascule spillway gates. Each is 7 ft high and 106.50 ft long. Elevation of top of gates is 623.00 ft. Top of dam is at elevation 627.00 ft. Storage began in December 1966. The capacity at elevation 627.00 ft is 53,210 acre ft, and at normal pool elevation of 623.00 ft the capacity is 47,680 acre-ft. At the spillway crest the elevation is 616.00 ft and the capacity is 39,430 acre-ft. The lake is used for water supply and recreation. An average of about 3,380 acre-ft is diverted from Codorus Creek into the lake each year.

COOPERATION.--Records provided by P.H. Glatfelter Company.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 47,680 acre-ft many times each year, elevation, 623.00 ft; minimum, 35,520 acre-ft, Dec. 3, 1978, elevation, 612.20 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 47,680 acre-ft, May 28, 29, elevation, 623.00 ft; minimum, 35,530 acre-ft, Nov. 11, elevation, 612.21 ft.

01574700 INDIAN ROCK DAM.--Lat 39°55'22", long 76°45'14", York County, Hydrologic Unit 02050306, at dam on Codorus Creek, 0.1 mi upstream from mouth of South Branch Codorus Creek, 0.3 mi west of York Water Co. pumping station, and 3.0 mi southwest of York. DRAINAGE AREA, 93.7 mi². PERIOD OF RECORD, September 1962 to current year in reports of Geological Survey, September 1942 to August 1962 in files of Baltimore District, U.S. Army Corps of Engineers. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--Reservoir formed by an earth and rockfill dam with ungated concrete spillway at elevation 435.00 ft. Reservoir completed in June 1942; storage began in June 1946. Capacity at elevation 435.00 ft is 28,000 acre-ft. No dead storage. Reservoir is used for flood control. Figures given herein represent total contents. Flood storage is regulated by three vertical-lift tractor gates. Water is stored only during high flows and released when downstream conditions warrant. U.S. Army Corps of Engineers satellite telemeter at station.

COOPERATION.--Records provided by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 30,200 acre-ft, June 23, 1972, elevation, 436.44 ft; minimum, no storage many times each year.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 346 acre-ft, Dec. 25, elevation, 384.76 ft; minimum, 5.5 acre-ft, Oct. 1, elevation, 371.00 ft.

MONTHEND ELEVATION, IN FEET NGVD, AND CONTENTS AT 2400, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (equivalent in ft³/s/day)	Elevation (feet)	Contents (acre-feet)	Change in contents (equivalent in ft³/s/day)
	01574390 Lake Marburg			01574700 Indian Rock Dam		
Sept. 30	614.50	37,860	--	371.00	5.5	--
Oct. 31	612.60	35,930	-31.4	371.67	7.8	+ 0.04
Nov. 30	612.70	36,030	+ 1.7	372.11	9.6	+ 0.03
Dec. 31	615.10	38,470	+39.7	373.46	17.2	+ 0.12
CAL YR 1986	--	--	- 3.8	--	--	+ 0.01
Jan. 31	617.50	41,040	+41.8	374.90	26.0	+ 0.14
Feb. 28	619.00	42,630	+28.6	374.15	21.3	- 0.08
Mar. 31	621.00	45,030	+39.0	377.65	55.9	+ 0.56
Apr. 30	622.40	46,880	+31.1	374.07	20.8	- 0.59
May 31	622.90	47,550	+10.9	372.55	12.0	- 0.14
June 30	621.60	45,820	-29.1	372.28	10.5	- 0.03
July 31	619.90	43,590	-36.3	372.02	9.1	- 0.02
Aug. 31	617.20	40,710	-46.8	372.13	9.7	+ 0.01
Sept. 30	616.70	40,180	- 8.9	372.57	12.1	+ 0.04
WTR YR 1987	--	--	+ 3.2	--	--	+ 0.01

01576000 SUSQUEHANNA RIVER AT MARIETTA, PA

LOCATION.--Lat 40°03'16", long 76°31'52", Lancaster County, Hydrologic Unit 02050306, on left bank 420 ft upstream from Chickies Creek and 1.0 mi downstream from Marietta. Records include flow of Chickies Creek.

DRAINAGE AREA.--25,990 mi^2, approximately, includes that of Chickies Creek.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 781: 1933(M). WSP 1502: 1937.

GAGE.--Water-stage recorder. Datum of gage is 200.56 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Flow slightly regulated by 16 flood-control reservoirs, which have a combined capacity of 1,599,000 acre-ft. Some diurnal fluctuation at discharges below 8,000 ft^3/s caused by hydroelectric plant 9.7 mi upstream. National Weather Service satellite telemeter at station.

COOPERATION.--Daily discharges through Safe Harbor Dam provided by Safe Harbor Water Power Corporation.

AVERAGE DISCHARGE.--56 years, 36,880 ft^3/s, 19.27 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,080,000 ft^3/s, June 23, 1972, gage height, 64.54 ft, from floodmarks; minimum, 618 ft^3/s, Sept. 26, 1932, gage height, 30.89 ft, when York Haven powerplant was shut down to obtain current-meter measurements of low flow; minimum daily, 1,380 ft^3/s, Sept. 26, 1932.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 2, 1889, reached a stage of 58.2 ft, from floodmark, discharge, about 630,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 238,000 ft^3/s, Apr. 7, gage height, 47.02 ft; minimum, 4,190 ft^3/s, Aug. 26, gage height, 32.33 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11400	10900	106000	44400	22400	21700	54800	34000	15200	12200	7290	11600
2	12200	11600	85900	41100	22400	41900	80100	32600	15000	12100	7250	10300
3	10800	11700	90200	38800	25600	55900	94600	32000	14300	11300	6810	9070
4	10600	11300	93600	36000	26400	68000	88500	34300	14300	13900	6590	8510
5	10600	11200	94000	33400	28000	80900	112000	40400	16100	30200	6370	7800
6	14700	12400	95200	30000	27800	71000	210000	47000	18400	31900	7090	7470
7	29600	12700	84700	27300	28700	61000	233000	47300	18300	28500	7200	7390
8	33500	13700	70600	25800	29200	56200	207000	42500	18200	23400	6860	8670
9	30400	14800	61100	25300	27100	65900	182000	36700	18000	21600	6770	12900
10	25300	20800	58000	25900	25100	113000	152000	33700	16100	30400	6850	11600
11	21600	48600	60100	26200	23600	129000	124000	30600	14800	36300	6670	18300
12	18700	64300	61900	25300	23400	106000	98900	26600	13700	31400	7240	18400
13	16600	58600	61600	24400	22800	82800	84700	24000	13200	26000	7480	40500
14	15600	50600	56700	23800	20300	67400	78200	23000	13000	22500	6930	59700
15	14900	44300	50000	23400	19700	58400	82800	21900	12700	20000	6390	58900
16	14100	38900	43700	24700	16100	52600	83500	20500	14700	18900	6020	44900
17	14300	34400	38700	26300	13700	46700	76800	19200	18300	18400	5820	39800
18	14400	31100	37600	30900	14300	41900	70800	18400	16300	17600	5890	38600
19	14900	32000	42600	38300	15600	38000	67900	18100	13400	15500	5790	45300
20	14300	35600	45900	43400	16800	34900	62800	22300	12000	14200	5480	54500
21	13000	48900	44500	38900	16400	32700	56100	26700	11800	13300	5350	54700
22	12100	67600	42500	36800	16500	31200	50000	26000	10600	11600	5000	55700
23	11400	75100	38500	33100	16000	30500	44700	24200	11000	10200	5410	50500
24	11200	73300	34800	24300	15800	29900	41300	23300	11400	9060	4790	43400
25	10300	67700	53900	20500	16000	29400	39800	21200	12500	8650	4870	36800
26	10300	63000	64400	19700	16200	30600	39400	19400	13400	8140	4780	31700
27	10400	80300	69800	19300	15600	34200	41000	19000	12700	8400	4870	26800
28	10600	153000	71000	17200	15300	44000	41200	18000	11300	7610	5230	23900
29	10300	176000	64900	16600	---	53200	38400	18300	11800	7540	5830	21300
30	10700	136000	57100	17900	---	53900	35200	16900	12400	7510	6550	19200
31	10400	---	50400	20200	---	51300	---	15800	---	7260	11500	---
TOTAL	469200	1510400	1929900	879200	576800	1714100	2671500	833900	424900	535570	196970	878210
MEAN	15140	50350	62250	28360	20600	55290	89050	26900	14160	17280	6354	29270
MAX	33500	176000	106000	44400	29200	129000	233000	47300	18400	36300	11500	59700
MIN	10300	10900	34800	16600	13700	21700	35200	15800	10600	7260	4780	7390
CFSM	.58	1.94	2.40	1.09	.79	2.13	3.43	1.04	.54	.66	.24	1.13
IN.	.67	2.16	2.76	1.26	.83	2.45	3.82	1.19	.61	.77	.28	1.26

CAL YR 1986 TOTAL 14366800 MEAN 39360 MAX 367000 MIN 5320 CFSM 1.51 IN. 20.56
WTR YR 1987 TOTAL 12620600 MEAN 34580 MAX 233000 MIN 4780 CFSM 1.33 IN. 18.06

01576000 SUSQUEHANNA RIVER AT MARIETTA, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1961-74, 1976, 1987 to current year.

REMARKS.--Samples collected from bridge on State Highway 30, 1.5 miles downstream from gage.

COOPERATION.--Water-quality samples collected by Susquehanna River Basin Commission and analyzed by the Pa. Department of Environmental Resources.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)
OCT										
07...	1646	21000	355	8.40	18.0	1.14	1.14	0.020	0.020	0.94
NOV										
05...	1300	11000	324	7.90	9.5	0.860	0.800	0.035	0.035	0.24
20...	1630	36600	200	8.10	5.0	1.34	1.34	0.105	0.105	0.47
22...	1100	67200	195	--	--	1.74	1.74	0.050	0.050	0.41
23...	1130	75400	178	--	--	1.78	1.78	0.060	0.060	0.45
23...	1630	73600	165	7.50	6.0	1.48	1.48	0.060	0.060	0.44
25...	1030	68600	178	7.60	5.0	1.36	1.36	0.065	0.065	0.91
26...	1200	61900	160	--	5.5	1.24	1.24	0.065	0.065	0.27
DEC										
15...	1115	50200	180	7.50	4.0	1.34	1.34	0.075	0.075	0.46
JAN										
12...	1030	25400	237	8.90	4.0	1.66	1.64	0.090	0.090	0.34
FEB										
20...	1245	16100	280	8.40	5.0	1.80	1.80	0.040	0.040	0.34
MAR										
18...	1000	42400	174	7.80	7.0	1.24	1.24	0.040	0.040	0.69
30...	1730	53200	165	7.90	14.0	0.800	0.800	0.080	0.065	0.40
APR										
03...	1615	95600	170	8.25	11.0	0.920	0.920	0.070	0.070	0.88
03...	2400	92300	146	8.60	8.0	0.840	0.840	0.075	0.075	0.48
04...	0700	89200	165	7.50	10.0	0.940	0.940	0.075	0.075	0.62
04...	1715	86700	155	7.35	10.0	1.00	1.00	0.070	0.060	0.36
05...	1000	97500	155	7.45	10.0	1.00	1.00	0.060	0.060	0.85
05...	2130	152000	156	7.35	8.0	1.06	1.06	0.060	0.060	0.85
06...	1350	213000	150	7.15	9.5	1.08	1.08	0.065	0.065	1.5
06...	1750	226000	145	7.80	8.5	1.04	1.04	0.070	0.070	1.9
07...	1330	234000	130	7.85	12.0	1.12	1.12	0.050	0.050	1.8
08...	0930	209000	136	7.95	12.0	1.08	1.08	0.040	0.040	0.96
09...	1000	185000	117	8.20	11.0	1.08	1.08	0.050	0.050	0.40
10...	0805	157000	151	7.70	12.0	1.04	1.02	0.045	0.045	0.50
13...	1010	85300	160	7.95	11.0	1.12	1.12	0.050	0.050	0.43
14...	1230	77400	180	7.59	16.0	1.20	1.20	0.055	0.055	0.30
27...	1130	41000	195	8.10	19.0	1.20	0.960	<0.005	<0.005	--
MAY										
18...	1330	18200	270	9.10	25.5	0.740	0.720	0.050	0.050	1.2
JUN										
08...	1020	18200	297	8.50	28.0	0.940	0.940	0.070	0.065	1.1
JUL										
06...	1240	31400	410	8.00	28.5	1.22	1.18	0.030	0.030	0.53
AUG										
04...	1045	6300	400	8.80	32.0	0.260	0.260	0.080	0.080	0.97
31...	0900	11200	392	8.20	23.0	0.320	0.320	0.020	0.015	1.4
SEP										
08...	1630	14200	345	8.10	22.0	0.580	0.580	0.075	0.075	0.90
09...	0530	11400	318	7.60	22.5	0.820	0.820	0.100	0.100	1.1
09...	1700	14400	290	8.20	28.0	1.00	1.00	0.125	0.125	1.1

01576000 SUSQUEHANNA RIVER AT MARIETTA, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHOROUS TOTAL (MG/L AS P)	PHOSPHOROUS DISSOLVED (MG/L AS P)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
OCT										
07...	0.49	0.96	0.51	2.1	0.170	0.040	0.017	5.4	9	505
NOV										
05...	0.24	0.28	0.28	1.1	0.060	0.010	0.003	4.8	3	95
20...	0.44	0.58	0.55	1.9	0.100	0.040	<0.002	3.8	25	2520
22...	--	0.46	<0.20	2.2	0.130	0.040	0.004	3.8	78	14200
23...	0.22	0.51	0.28	2.3	0.140	0.030	0.004	3.2	108	22000
23...	0.26	0.50	0.32	2.0	0.120	0.030	0.014	3.6	64	12700
25...	0.23	0.98	0.30	2.3	0.080	0.030	0.007	2.0	50	2280
26...	0.12	0.34	0.18	1.6	0.070	0.030	0.004	2.5	41	2940
DEC										
15...	0.38	0.54	0.46	1.9	0.050	0.020	0.011	4.2	10	1300
JAN										
12...	0.32	0.43	0.41	2.1	0.030	0.030	0.012	1.4	6	411
FEB										
20...	0.34	0.38	0.38	2.2	0.050	0.030	0.004	5.2	7	304
MAR										
18...	0.34	0.73	0.38	2.0	0.040	0.030	0.008	3.5	16	1830
30...	0.15	0.48	0.22	1.3	0.090	0.020	0.006	10	39	5600
APR										
03...	0.33	0.95	0.40	1.9	0.120	0.030	0.002	3.8	81	20800
03...	0.21	0.56	0.29	1.4	0.110	0.020	0.002	3.3	65	16100
04...	0.23	0.70	0.31	1.6	0.110	0.020	0.002	3.6	59	14100
04...	0.34	0.43	0.40	1.4	0.110	0.020	0.002	3.6	50	11800
05...	0.56	0.91	0.62	1.9	0.080	0.030	0.002	4.6	51	13500
05...	0.10	0.91	0.16	2.0	0.150	0.030	0.002	4.2	110	45200
06...	0.55	1.5	0.62	2.6	0.290	0.030	0.002	5.0	314	181000
06...	0.63	2.0	0.70	3.0	0.160	0.040	0.003	4.8	364	222000
07...	0.33	1.8	0.38	2.9	0.140	0.030	0.003	5.2	244	154000
08...	0.32	1.0	0.36	2.1	0.170	0.040	0.002	3.2	194	110000
09...	0.30	0.45	0.35	1.5	0.120	0.030	0.002	3.3	140	69900
10...	0.50	0.55	0.55	1.6	0.120	0.040	0.003	4.5	98	41500
13...	0.43	0.48	0.48	1.6	0.080	0.040	0.002	4.5	47	10800
14...	0.12	0.36	0.18	1.6	0.090	0.040	0.004	3.9	41	8630
27...	--	0.51	0.41	1.7	0.100	0.030	0.016	4.7	27	2960
MAY										
18...	0.86	1.3	0.91	2.0	0.060	<0.010	<0.020	4.4	19	914
JUN										
08...	0.96	1.2	1.0	2.1	0.120	0.070	0.013	5.7	67	3300
JUL										
06...	0.51	0.56	0.54	1.8	0.170	0.050	0.007	2.9	32	2700
AUG										
04...	1.2	1.0	1.3	1.3	0.150	0.100	0.005	6.9	28	478
31...	0.42	1.4	0.44	1.8	0.100	0.030	0.010	4.8	17	514
SEP										
08...	0.44	0.98	0.52	1.6	0.100	0.030	0.013	2.0	16	613
09...	0.86	1.2	0.96	2.0	0.120	0.030	0.010	2.5	20	616
09...	0.92	1.3	1.0	2.3	0.140	0.040	0.010	2.3	37	1440

01576083 AGRICULTURAL FIELD RUNOFF SITE NO. 1 NEAR CHURCHTOWN, PA

LOCATION.--Lat 40°07'42", long 75°58'40", Lancaster County, Hydrologic Unit 02050306, on left bank of drainage ditch below cornfield, 500 ft west of small left-bank tributary to Conestoga River, and 1.1 mi southeast of Churchtown.

DRAINAGE AREA.--0.03 mi^2.

PERIOD OF RECORD.--Water years 1983 to current year.

INSTRUMENTATION.--Automatic sediment pumping sampler since January 1983.

COOPERATION.--Water-quality samples collected by Pa. Department of Environmental Resources, and U.S. Geological Survey. Chemical samples analyzed by Pa. Department of Environmental Resources, Bureau of Laboratories.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)
NOV							
11...	1330	0.10	0.050	--	3.10	--	0.200
11...	1425	0.14	0.070	--	3.10	--	0.180
11...	1455	0.09	0.060	--	3.50	--	0.190
18...	1955	0.14	0.070	--	4.80	--	0.340
18...	2005	0.17	--	0.040	--	4.40	--
18...	2035	0.15	0.060	--	5.10	--	0.240
18...	2140	0.54	0.070	--	3.50	--	0.320
18...	2210	0.41	--	0.040	--	3.50	--
18...	2240	0.12	0.080	--	5.10	--	0.380
26...	0740	0.17	0.060	--	0.800	--	0.140
26...	0830	0.76	0.060	--	0.960	--	0.120
26...	0900	0.73	0.070	--	1.00	--	0.140
26...	1000	0.08	0.060	--	2.40	--	0.140
APR							
04...	0809	0.04	--	--	9.20	--	--
04...	0920	0.17	--	--	6.20	--	--
04...	0950	0.19	--	--	5.50	--	--
06...	1042	0.02	--	--	5.90	--	--
MAY							
18...	2205	0.37	--	--	7.70	--	--
18...	2210	0.70	--	--	4.60	--	--
18...	2230	0.28	--	--	3.50	--	--
18...	2245	0.20	--	--	3.70	--	--
23...	0950	0.37	0.110	0.030	1.70	1.60	0.470
23...	1000	1.0	0.660	--	1.20	--	0.210
23...	1005	1.2	0.100	0.030	1.00	0.820	0.280
23...	1015	1.1	0.640	--	1.00	--	0.180
23...	1130	0.94	0.120	0.030	1.10	1.00	0.280
23...	1455	0.39	0.850	--	3.30	--	1.40
23...	1650	0.12	0.250	0.130	3.50	3.10	2.20
JUN							
22...	1850	0.54	0.140	0.130	3.70	3.10	1.20
22...	1900	5.0	0.090	--	1.80	--	1.10
22...	1905	2.6	0.090	0.080	2.60	2.40	2.00
22...	2003	0.94	0.060	--	3.10	--	1.40
22...	2015	2.9	0.080	--	1.50	--	0.830
22...	2035	4.5	0.070	--	1.40	--	1.20
22...	2040	3.6	0.080	0.070	1.50	1.50	0.830
22...	2340	0.94	0.070	--	2.90	--	0.720
23...	0510	0.90	0.090	0.080	3.10	2.20	0.770
23...	1410	0.09	0.120	0.110	4.00	3.70	0.430
JUL							
14...	1400	0.28	--	--	2.00	--	--
14...	1405	2.9	--	--	2.60	--	--
14...	1410	6.7	--	--	3.30	--	--
14...	1415	7.4	--	--	3.30	--	--
14...	1425	3.1	--	--	3.30	--	--
14...	2030	0.94	--	--	3.10	--	--
AUG							
09...	2115	0.44	--	--	1.70	--	--
09...	2120	0.87	--	--	1.50	--	--
09...	2130	0.84	--	--	1.70	--	--
09...	2140	0.32	--	--	1.90	--	--
28...	0510	0.32	--	--	1.60	--	--
28...	0515	0.67	--	--	1.40	--	--
28...	0520	0.54	--	--	1.60	--	--
28...	0535	0.08	--	--	3.10	--	--
SEP							
08...	1016	0.78	--	--	0.300	--	--
08...	1205	0.76	0.050	0.030	0.840	0.760	0.720
08...	1250	1.0	0.060	0.020	0.580	0.500	0.200
08...	1420	1.1	--	--	0.660	--	--
08...	1515	1.6	--	--	0.440	--	--
08...	1540	1.3	0.060	0.050	0.400	0.360	0.310
08...	1725	2.3	0.100	0.040	0.280	0.240	0.600
08...	1735	12	--	--	0.160	--	--
08...	1820	4.1	--	--	0.220	--	--
08...	1905	14	--	--	0.300	--	--
08...	1930	12	0.050	0.040	0.360	0.300	0.720
08...	2050	3.0	0.140	0.020	0.560	0.280	0.360

01576083 AGRICULTURAL FIELD RUNOFF SITE NO. 1 NEAR CHURCHTOWN, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)
NOV						
11...	--	2.5	--	5.6	2.60	--
11...	--	2.1	--	5.2	3.10	--
11...	--	2.5	--	6.0	2.90	--
18...	--	1.9	--	6.7	3.00	--
18...	0.280	--	2.0	--	--	2.00
18...	--	3.1	--	8.2	2.70	--
18...	--	3.1	--	6.6	3.40	--
18...	0.380	--	2.4	--	--	2.30
18...	--	4.5	--	9.6	3.90	--
26...	--	1.6	--	2.4	3.30	--
26...	--	1.4	--	2.4	3.80	--
26...	--	1.4	--	2.4	3.30	--
26...	--	2.3	--	4.7	3.70	--
APR						
04...	--	6.8	--	16	6.90	--
04...	--	4.0	--	10	5.00	--
04...	--	10	--	15	5.10	--
06...	--	4.2	--	10	5.30	--
MAY						
18...	--	1.7	--	9.4	2.60	--
18...	--	1.8	--	6.4	3.30	--
18...	--	2.2	--	5.7	3.20	--
18...	--	2.4	--	6.1	4.10	--
23...	0.470	2.0	1.2	3.7	25.0	0.190
23...	--	1.5	--	2.7	6.40	--
23...	0.280	3.0	0.96	4.0	33.0	0.190
23...	--	1.6	--	2.6	4.50	--
23...	0.270	2.9	1.0	4.0	10.0	0.400
23...	--	2.0	--	5.3	5.90	--
23...	2.20	3.1	2.3	6.6	6.00	0.280
JUN						
22...	0.880	5.6	1.8	9.3	7.80	1.40
22...	--	4.2	--	6.0	7.60	--
22...	1.20	4.1	3.0	6.7	8.00	3.20
22...	--	3.0	--	6.1	8.80	--
22...	--	2.0	--	3.5	4.80	--
22...	--	1.8	--	3.2	4.10	--
22...	0.830	2.0	1.5	3.5	7.80	3.00
22...	--	2.0	--	4.9	5.30	--
23...	0.720	1.9	1.6	5.0	5.10	2.50
23...	0.360	1.7	1.5	5.7	4.30	1.20
JUL						
14...	--	12	--	14	5.10	--
14...	--	10	--	13	4.30	--
14...	--	9.8	--	13	4.70	--
14...	--	9.2	--	12	3.70	--
14...	--	5.2	--	8.5	2.90	--
14...	--	7.3	--	10	4.70	--
AUG						
09...	--	4.3	--	6.0	4.00	--
09...	--	7.8	--	9.3	4.40	--
09...	--	4.7	--	6.4	3.30	--
09...	--	6.0	--	7.9	3.00	--
28...	--	4.2	--	5.8	1.40	--
28...	--	10	--	11	3.20	--
28...	--	4.0	--	5.6	1.80	--
28...	--	5.8	--	8.9	2.90	--
SEP						
08...	--	0.62	--	0.92	0.810	--
08...	0.300	3.5	1.8	4.3	2.30	0.800
08...	0.140	1.8	0.82	2.4	3.30	0.610
08...	--	1.3	--	2.0	1.60	--
08...	--	2.6	--	3.0	1.60	--
08...	0.260	1.8	1.1	2.2	3.00	0.680
08...	0.310	2.0	1.3	2.3	2.60	0.570
08...	--	2.6	--	2.8	0.600	--
08...	--	1.6	--	1.8	1.20	--
08...	--	1.2	--	1.5	1.50	--
08...	0.290	1.2	0.72	1.6	3.50	0.350
08...	0.080	0.94	0.82	1.5	2.40	0.400

01576083 AGRICULTURAL FIELD RUNOFF SITE NO. 1 NEAR CHURCHTOWN, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)
SEP							
09...	1015	0.78	--	--	0.300	--	--
09...	1215	0.84	--	--	0.560	--	--
09...	1715	0.26	0.020	0.010	0.220	0.160	0.080
13...	0050	0.22	--	--	0.620	--	--
13...	0055	0.14	--	--	0.640	--	--
13...	0115	0.08	--	--	1.40	--	--
13...	0303	0.32	--	--	0.600	--	--
13...	0338	0.22	--	--	0.900	--	--
17...	2247	0.81	--	--	1.10	--	--
17...	2252	6.6	--	--	1.80	--	--
17...	2257	4.5	--	--	1.90	--	--
17...	2302	2.3	--	--	1.70	--	--
17...	2307	1.5	--	--	1.50	--	--
17...	2317	1.1	--	--	1.20	--	--
18...	0002	1.0	--	--	1.10	--	--
18...	0302	0.97	--	--	1.00	--	--
18...	0402	0.64	--	--	0.880	--	--
18...	0432	0.30	--	--	0.840	--	--
18...	1740	0.41	--	--	0.840	--	--
18...	1750	0.97	--	--	1.00	--	--
18...	1800	1.1	--	--	1.30	--	--
18...	1805	1.3	--	--	1.40	--	--
18...	1810	1.2	--	--	1.30	--	--
18...	1825	1.0	--	--	1.10	--	--
18...	1925	0.32	--	--	1.00	--	--

DATE	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)
SEP						
09...	--	0.82	--	1.1	0.940	--
09...	--	4.0	--	4.6	2.90	--
09...	0.060	0.34	0.16	0.56	0.630	0.400
13...	--	1.7	--	2.3	6.10	--
13...	--	3.7	--	4.3	2.60	--
13...	--	3.2	--	4.6	3.20	--
13...	--	1.7	--	2.3	3.30	--
13...	--	2.2	--	3.1	2.20	--
17...	--	3.8	--	4.9	2.80	--
17...	--	4.8	--	6.6	1.50	--
17...	--	2.6	--	4.5	1.00	--
17...	--	5.0	--	6.7	1.30	--
17...	--	1.8	--	3.3	1.20	--
17...	--	2.9	--	4.1	0.950	--
18...	--	1.3	--	2.4	0.740	--
18...	--	1.7	--	2.7	0.830	--
18...	--	1.5	--	2.4	0.900	--
18...	--	2.0	--	2.8	0.860	--
18...	--	7.6	--	8.4	2.50	--
18...	--	3.6	--	4.6	3.50	--
18...	--	2.2	--	3.5	2.60	--
18...	--	2.5	--	3.9	2.30	--
18...	--	3.6	--	4.9	2.50	--
18...	--	2.2	--	3.3	2.20	--
18...	--	1.3	--	2.3	1.40	--

01576083 AGRICULTURAL FIELD RUNOFF SITE NO. 1 NEAR CHURCHTOWN, PA--Continued

PESTICIDE ANALYSIS, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	ALA-CHLOR TOTAL RECOVER (UG/L)	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	METOLA-CHLOR IN WHOLE WATER (UG/L)	PRO-PAZINE TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)
JUN									
22...	1855	3.0	<0.80	26	32.0	<0.80	<2.4	<2.4	<8
22...	1925	1.1	<0.40	40	60.0	<0.40	<1.2	<1.2	<4
22...	2015	2.9	<0.80	12	17.0	<0.80	<2.4	<2.4	<8
22...	2045	2.7	<0.40	24	13.0	<0.40	<1.2	<1.2	<4
23...	0010	0.94	<0.40	27	32.0	<0.40	<1.2	<1.2	<4
23...	1010	0.46	<0.40	61	92.0	<0.40	<1.2	<1.2	<4
JUL									
14...	1420	4.3	<0.10	3.4	<0.30	<0.10	<0.30	<0.30	<1
14...	2030	0.94	<1.00	5.5	<3.0	<1.00	<3.0	<3.0	<10
SEP									
08...	1220	0.99	<0.50	<3.0	<3.0	<1.00	<3.0	<3.0	<10
08...	1525	1.3	<0.50	<3.0	<3.0	<1.00	<3.0	<3.0	<10
08...	1740	8.5	<0.50	<3.0	<3.0	<1.00	<3.0	--	<10
08...	1915	11	<0.50	--	<3.0	<1.00	<3.0	<3.0	<10
08...	2040	3.7	<0.50	<3.0	<3.0	<1.00	<3.0	<3.0	<10

INSTANTANEOUS SUSPENDED-SEDIMENT DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
NOV				
11...	1320	0.14	86	0.03
11...	1350	0.09	56	0.01
11...	1425	0.14	111	0.04
11...	1455	0.09	121	0.03
18...	2000	0.14	336	0.13
18...	2140	0.54	376	0.55
18...	2240	0.12	186	0.06
20...	2015	0.15	296	0.12
20...	2030	0.44	2020	2.4
20...	2035	0.81	1660	3.6
20...	2040	1.1	1250	3.7
20...	2055	1.1	645	1.9
20...	2230	0.94	328	0.83
20...	2300	0.76	306	0.63
21...	0030	0.14	147	0.06
26...	0735	0.15	1500	0.61
26...	0800	0.24	1150	0.75
26...	0830	0.76	1120	2.3
26...	0930	0.28	443	0.33
26...	1030	0.03	210	0.02
26...	1425	0.12	321	0.10
26...	1435	0.12	222	0.07
26...	1500	0.05	1780	0.24
26...	1605	0.14	568	0.21
26...	1635	0.26	1360	0.95
26...	1705	1.8	1590	7.7
26...	1710	1.3	1220	4.3
26...	1840	0.87	841	2.0
26...	1940	0.15	141	0.06

01576083 AGRICULTURAL FIELD RUNOFF SITE NO. 1 NEAR CHURCHTOWN, PA--Continued

INSTANTANEOUS SUSPENDED-SEDIMENT DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
DEC					
02...	2030	0.19	471	0.24	--
02...	2040	0.20	407	0.22	--
02...	2045	0.20	331	0.18	--
02...	2110	0.14	178	0.07	--
02...	2140	0.15	246	0.10	--
02...	2400	0.19	844	0.43	--
03...	0010	0.44	1150	1.4	--
03...	0015	0.49	1140	1.5	--
03...	0020	0.51	1040	1.4	--
03...	0030	0.49	714	0.94	--
03...	0110	0.30	287	0.23	--
18...	0900	0.17	512	0.24	--
18...	0915	0.24	602	0.39	--
18...	0935	0.24	420	0.27	--
18...	1005	0.20	288	0.16	--
18...	1205	0.35	442	0.42	--
18...	1235	0.32	285	0.25	--
18...	1305	0.22	195	0.12	--
JAN					
19...	1120	0.12	331	0.11	--
19...	1145	0.26	391	0.27	--
19...	1155	0.32	468	0.40	--
19...	1200	0.35	401	0.38	--
19...	1230	0.28	207	0.16	--
APR					
04...	0809	0.04	163	0.02	--
04...	0810	0.04	160	0.02	--
04...	0925	0.19	644	0.33	90
04...	0955	0.17	445	0.20	--
06...	1042	0.02	24	0.00	--
MAY					
18...	2205	0.37	22800	23	--
18...	2210	0.70	12200	23	--
18...	2215	0.73	7320	14	--
18...	2230	0.28	7100	5.4	--
18...	2245	0.20	3340	1.8	--
23...	0955	0.84	13100	30	99
23...	1000	1.0	6740	18	--
23...	1015	1.1	6770	19	--
23...	1220	0.90	2490	6.1	--
23...	1345	0.67	1800	3.3	--
23...	1455	0.39	1380	1.5	--
23...	1605	0.17	1490	0.68	--
JUN					
22...	1855	3.0	2120	17	--
22...	1900	5.0	1310	18	--
22...	2003	0.94	1090	2.8	--
22...	2020	2.6	650	4.6	89
22...	2025	1.9	763	4.0	--
22...	2035	4.5	1670	20	63
22...	2340	0.94	476	1.2	--
23...	0610	0.90	189	0.46	--
23...	0740	0.49	343	0.45	--
23...	1340	0.14	532	0.20	--

01576083 AGRICULTURAL FIELD RUNOFF SITE NO. 1 NEAR CHURCHTOWN, PA--Continued

INSTANTANEOUS SUSPENDED-SEDIMENT DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
JUL					
14...	1400	0.28	1270	0.96	--
14...	1405	2.9	1790	14	--
14...	1410	6.7	1870	34	--
14...	1415	7.4	9380	187	48
14...	1420	4.3	2080	24	--
14...	1425	3.1	1990	17	--
14...	2035	0.94	640	1.6	--
AUG					
09...	2115	0.44	4110	4.9	--
09...	2120	0.87	1250	2.9	--
09...	2125	0.84	910	2.1	--
09...	2135	0.81	760	1.7	--
28...	0510	0.32	5220	4.5	--
28...	0515	0.67	2760	5.0	--
28...	0520	0.54	1860	2.7	--
28...	0530	0.17	1160	0.53	--
SEP					
08...	1210	1.5	2350	9.6	91
08...	1215	1.8	1550	7.4	--
08...	1225	1.2	1130	3.5	--
08...	1350	0.76	360	0.74	--
08...	1515	1.6	700	3.0	--
08...	1520	2.0	450	2.4	87
08...	1700	1.1	250	0.74	--
08...	1710	3.9	380	4.0	--
08...	1735	12	1410	48	--
08...	1805	2.7	640	4.7	--
08...	1815	3.8	430	4.4	--
08...	1845	10	1120	31	--
08...	1905	14	1210	47	--
08...	1910	15	1500	59	79
08...	1925	12	950	31	--
08...	2005	8.1	810	18	--
08...	2045	3.2	520	4.5	--
09...	1015	0.78	240	0.51	--
09...	1016	0.78	77	0.16	--
09...	1245	0.84	90	0.20	--
09...	1645	0.26	34	0.02	--
13...	0045	0.15	6160	2.5	--
13...	0050	0.22	2890	1.7	--
13...	0115	0.08	485	0.10	--
13...	0258	0.10	1950	0.53	--
13...	0303	0.32	2170	1.9	--
13...	0308	0.30	1050	0.85	--
13...	0338	0.22	304	0.18	--
18...	1740	0.41	4130	4.6	--
18...	1745	0.84	3840	8.7	--
18...	1750	0.97	1560	4.1	--
18...	1800	1.1	730	2.2	--
18...	1805	1.3	790	2.7	--
18...	1820	1.0	523	1.5	--
18...	1825	1.0	460	1.2	--
18...	1925	0.32	330	0.29	--

015760831 LITTLE CONESTOGA CREEK, SITE 1, NEAR MORGANTOWN, PA

LOCATION.--lat 40°09'42", long 75°55'14", Lancaster County, Hydrologic Unit 02050306, on upstream side of valley View Road bridge, 0.2 mi west of intersection of Valley View Road and Maxwell School Road, and 1.6 mi west of Morgantown.

DRAINAGE AREA.--0.34 mi^2.

PERIOD OF RECORD.--Water years 1984 to current year.

COOPERATION.--Water-quality samples collected by Pa. Department of Environmental Resources and U.S. Geological Survey. Chemical samples analyzed by Pa. Department of Environmental Resources, Bureau of Laboratories.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)
OCT									
16...	1355	0.04	76	12.0	<0.010	<0.010	2.90	2.90	<0.010
DEC									
08...	0935	0.20	83	7.0	<0.010	<0.010	3.10	3.00	0.020
29...	1330	0.30	75	6.5	<0.010	<0.010	3.10	3.10	<0.010
JAN									
27...	1420	0.56	67	4.5	0.010	0.010	3.40	3.40	0.030
FEB									
20...	1235	0.30	--	--	<0.010	<0.010	3.30	3.00	0.020
MAR									
24...	0900	0.39	70	--	0.100	0.010	3.10	3.10	0.020
APR									
14...	1350	0.25	70	13.0	<0.010	<0.010	3.10	3.10	0.020
MAY									
12...	1255	0.36	65	16.5	<0.010	<0.010	2.90	2.90	0.030
JUN									
11...	1330	0.16	70	16.5	0.010	0.010	2.60	2.40	0.020
JUL									
20...	1340	0.21	72	19.0	<0.010	<0.010	2.60	2.40	0.050
AUG									
19...	1240	0.08	75	18.5	<0.010	<0.010	2.60	2.60	0.020
SEP									
24...	1325	0.26	78	--	<0.010	<0.010	2.90	2.90	0.020

DATE	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT								
16...	<0.010	0.31	0.27	3.2	0.050	0.040	7	0.00
DEC								
08...	0.020	0.23	0.21	3.3	0.030	0.030	5	0.00
29...	<0.010	0.40	0.22	3.5	0.040	0.030	8	0.01
JAN								
27...	0.020	0.21	0.20	3.6	0.020	0.020	3	0.00
FEB								
20...	0.020	0.22	0.18	3.5	0.040	0.030	6	0.00
MAR								
24...	0.020	0.41	0.40	3.5	0.040	0.030	4	0.00
APR								
14...	0.020	0.53	0.50	3.6	0.060	0.060	10	0.01
MAY								
12...	0.030	0.28	0.12	3.2	0.050	0.030	14	0.01
JUN								
11...	0.020	0.48	0.28	3.1	0.070	0.040	--	--
JUL								
20...	0.020	0.35	0.32	3.0	0.060	0.040	14	0.01
AUG								
19...	0.020	0.35	<0.20	3.0	0.130	0.060	82	0.02
SEP								
24...	0.010	0.22	0.18	3.1	0.060	0.060	1	0.00

015760831 LITTLE CONESTOGA CREEK, SITE 1, NEAR MORGANTOWN, PA--Continued

PESTICIDE ANALYSIS, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	ALA-CHLOR TOTAL RECOVER (UG/L)	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	METOLA-CHLOR IN WHOLE WATER (UG/L)	PRO-PAZINE TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)
DEC									
29...	1330	0.30	<0.10	<0.20	<0.20	<0.10	<0.20	<0.20	<1
APR									
14...	1350	0.25	<0.10	<0.30	<0.30	<0.10	<0.30	<0.30	<1
MAY									
12...	1255	0.36	<0.10	<0.30	<0.30	<0.10	<0.30	<0.30	<1
JUN									
11...	1330	0.16	<0.10	<0.30	<0.30	<0.10	<0.30	<0.30	<1
JUL									
20...	1340	0.21	<0.10	<0.30	<0.30	<0.10	<0.30	<0.30	<1
AUG									
19...	1240	0.08	<0.10	<0.30	<0.30	<0.10	<0.30	<0.30	<1

0157608325 LITTLE CONESTOGA CREEK, SITE 2A, NEAR MORGANTOWN, PA

LOCATION.--Lat 40°08'58", long 75°55'06", Lancaster County, Hydrologic Unit 02050306, on upstream side of farm lane bridge, 0.2 mi north of farm lane intersection with State Highway 23, and 1.5 mi west of Morgantown.

DRAINAGE AREA.--0.99 mi².

PERIOD OF RECORD.--Water years 1984 to current year.

COOPERATION.--Water-quality samples collected by Pa. Department of Environmental Resources and U.S. Geological Survey. Chemical samples analyzed by Pa. Department of Environmental Resources, Bureau of Laboratories.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)
OCT									
16...	1300	0.11	174	16.0	0.080	0.060	3.30	3.30	0.120
DEC									
08...	1022	0.21	295	5.5	0.290	0.260	5.10	5.10	4.40
29...	1255	0.50	195	7.0	0.030	0.030	5.70	5.70	0.570
JAN									
27...	1330	0.58	152	3.0	0.010	0.010	5.60	5.60	0.150
FEB									
20...	1130	0.51	--	2.0	0.020	0.020	5.30	4.80	0.220
MAR									
24...	0945	0.48	125	--	0.030	0.030	4.40	4.40	0.110
APR									
14...	1315	0.70	120	19.0	0.030	0.030	4.00	3.70	0.070
MAY									
12...	1215	0.38	140	23.0	0.070	0.060	3.50	3.30	0.320
JUN									
11...	1310	0.21	150	24.0	0.140	0.120	2.60	2.60	0.220
JUL									
20...	1310	0.19	160	30.0	0.290	0.260	2.90	2.40	0.110
AUG									
19...	1205	0.12	153	26.5	0.120	0.110	2.90	2.60	0.080
SEP									
24...	1240	0.47	180	20.0	0.340	0.310	4.20	4.10	0.660

DATE	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT								
16...	0.110	2.0	0.71	5.3	0.400	0.220	207	0.06
DEC								
08...	4.40	9.2	7.4	14	1.60	1.60	12	0.01
29...	0.570	1.9	1.6	7.6	0.370	0.230	36	0.05
JAN								
27...	0.150	1.0	0.80	6.6	0.220	0.100	124	0.19
FEB								
20...	0.220	0.78	0.74	6.1	0.240	0.200	32	0.04
MAR								
24...	0.110	0.63	0.53	5.0	0.200	0.100	84	0.11
APR								
14...	0.070	0.60	0.33	4.6	0.100	0.100	77	0.15
MAY								
12...	0.320	2.0	1.9	5.5	0.260	0.160	130	0.13
JUN								
11...	0.200	4.2	3.7	6.8	0.440	0.210	100	0.06
JUL								
20...	0.110	0.94	0.82	3.8	0.320	0.260	16	0.01
AUG								
19...	0.070	0.58	0.42	3.5	0.290	0.200	31	0.01
SEP								
24...	0.600	1.5	1.4	5.7	0.170	0.150	2	0.00

0157608335 LITTLE CONESTOGA CREEK, SITE 3A, NEAR MORGANTOWN, PA

LOCATION.--Lat 40°08'47", long 75°55'37", Lancaster County, Hydrologic Unit 02050306, on right bank 10 ft upstream from culvert under farm lane, 0.2 mi north of State Highway 23, 1.0 mi upstream from small right-bank tributary, and 2.1 mi west of Morgantown.

DRAINAGE AREA.--1.42 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1984 to current year.

GAGE.--Water-stage recorder and wooden control. Elevation of gage is 640 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 620 ft³/s, Sept. 8, 1987, gage height, 6.59 ft, from rating curve extended above 66 ft³/s on basis of slope-area measurements at gage heights 4.51 ft and 5.42 ft; minimum, 0.02 ft³/s, Sept. 18, 1985, gage height, 0.82 ft, but may have been less during period of ice effect Jan. 19-23, 1985.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 70 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Sept. 8	1815	*620	*6.59	Sept. 17	2400	243	5.24

Minimum discharge, 0.04 ft³/s, Oct. 21, 27, 28, 29, 30, Nov. 3; minimum gage height 0.88 ft, Oct. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.12	.05	.28	1.2	e.92	18	.71	.77	.59	.33	.24	.17
2	.13	.06	1.6	1.3	1.3	3.7	.66	.77	.64	.56	.24	.14
3	.21	.05	2.6	1.3	1.5	2.6	.64	.77	.69	.46	.24	.14
4	.23	.06	.77	1.2	1.4	2.1	2.4	.82	.69	.38	.22	.14
5	.15	.30	.65	1.2	1.3	1.8	1.0	.77	.62	.34	.25	.14
6	.10	.48	.50	1.2	1.2	1.7	2.3	.71	.63	.37	.22	.23
7	.15	.09	.43	1.2	1.3	1.5	1.2	.64	.64	.40	.20	.21
8	.10	.42	.39	1.1	e1.2	1.3	1.0	.64	.62	.38	.20	70
9	.09	.13	1.1	1.1	e1.0	1.2	.89	.64	.64	.45	.71	2.9
10	.07	.09	.75	1.3	e.96	.98	.84	.65	.61	.35	3.8	1.1
11	.07	.89	.55	1.3	e.92	.92	.84	.64	.57	.26	.31	.88
12	.08	.33	.52	1.1	e.92	.93	.84	.64	.58	.65	.26	.82
13	.14	.15	.40	1.1	e.86	.89	.81	.64	.56	.37	.23	2.8
14	.27	.12	.30	1.1	e.80	.84	.77	.64	.47	5.0	.23	1.2
15	.10	.12	.28	1.2	e.74	.84	.77	.71	.43	.64	.23	.95
16	.10	.12	.26	1.1	e.75	.83	.78	.64	.45	.35	.23	.89
17	.09	.12	.26	1.1	e.74	.78	.84	.64	.45	.30	.21	4.9
18	.08	.81	6.5	1.3	e.72	.77	.77	.77	.49	.28	.20	19
19	.08	1.1	1.4	4.6	e.68	.77	.77	.81	.51	.28	.17	2.3
20	.07	2.8	.95	1.8	e.66	.77	.77	.87	.54	.29	.15	1.7
21	.06	2.5	.80	1.5	e.70	.77	.77	.61	.56	.33	.15	1.5
22	.06	.79	.75	1.4	e.76	.77	.77	.51	2.4	.32	.20	1.5
23	.07	.66	.70	e1.4	e.84	.77	.79	2.6	.71	.31	.19	1.4
24	.07	.93	5.8	e1.3	e.74	.77	.85	.71	.47	.29	.18	1.3
25	.05	.49	8.0	e1.3	e.72	.77	.86	.60	.40	.46	.17	1.2
26	.11	6.2	1.7	e1.2	e.70	.77	.77	.55	.44	.39	.17	1.1
27	.05	1.3	1.5	e1.1	e.75	.77	.77	.52	.40	.26	.28	1.0
28	.06	.76	1.4	e1.0	e1.0	.74	.77	.46	.34	.24	1.1	1.0
29	.05	.62	1.3	e.98	---	.70	.77	.43	.33	.23	.19	.92
30	.05	.39	1.2	e1.0	---	.74	.77	.46	.33	.24	.16	.95
31	.05	---	1.2	e.94	---	.84	---	.53	---	.25	.17	---
TOTAL	3.11	22.93	44.84	40.92	26.08	51.63	27.49	22.16	17.80	15.76	11.50	122.48
MEAN	.10	.76	1.45	1.32	.93	1.67	.92	.71	.59	.51	.37	4.08
MAX	.27	6.2	8.0	4.6	1.5	18	2.4	2.6	2.4	5.0	3.8	70
MIN	.05	.05	.26	.94	.66	.70	.64	.43	.33	.23	.15	.14
CFSM	.07	.54	1.02	.93	.66	1.17	.65	.50	.42	.36	.26	2.88
IN.	.08	.60	1.17	1.07	.68	1.35	.72	.58	.47	.41	.30	3.21

CAL YR 1986 TOTAL 389.33 MEAN 1.07 MAX 11 MIN .05 CFSM .75 IN. 10.20
WTR YR 1987 TOTAL 406.70 MEAN 1.11 MAX 70 MIN .05 CFSM .78 IN. 10.65

e Estimated

0157608335 LITTLE CONESTOGA CREEK, SITE 3A, NEAR MORGANTOWN, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1984 to current year.

INSTRUMENTATION.--Automatic sediment pumping sampler since April 1984.

COOPERATION.--Water-quality sampled collected by Pa. Department of Environmental Resources and U.S. Geological Survey. Chemical samples analyzed by Pa. Department of Environmental Resources, Bureau of Laboratories.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)
OCT									
16...	1135	0.10	385	13.0	0.050	0.040	7.00	6.60	0.060
NOV									
11...	1445	2.3	--	--	0.420	0.230	3.70	2.30	1.70
11...	1630	3.2	--	--	0.130	--	3.30	--	1.00
11...	1700	3.0	--	--	0.130	--	3.30	--	0.820
18...	2115	1.0	--	--	0.860	0.700	7.00	6.80	1.80
18...	2145	4.3	--	--	1.50	1.40	3.70	3.50	1.80
19...	0015	5.7	--	--	1.40	--	3.70	--	7.80
19...	0045	4.9	--	--	1.30	--	4.40	--	8.00
19...	0115	3.9	--	--	1.20	--	4.40	--	8.60
26...	1345	2.8	--	--	0.120	--	4.40	--	2.30
26...	1630	4.6	--	--	0.120	--	4.40	--	1.90
26...	1645	4.6	--	--	0.310	--	2.20	--	1.80
26...	1700	5.4	--	--	0.140	--	4.00	--	1.80
26...	1715	10	--	--	0.190	--	3.10	--	2.50
26...	1745	29	--	--	0.140	--	1.80	--	1.40
26...	1800	33	--	--	0.160	--	1.60	--	1.30
26...	1830	35	--	--	0.210	--	1.60	--	1.80
26...	1900	33	--	--	0.440	--	1.90	--	2.00
26...	2200	5.7	--	--	0.290	--	2.40	--	1.90
27...	0300	1.8	--	--	0.110	--	10.0	--	0.870
DEC									
08...	0844	0.42	462	6.0	0.150	0.150	11.0	10.0	1.60
29...	1140	1.4	365	7.0	0.030	0.030	10.0	10.0	0.130
JAN									
27...	1145	1.2	381	3.5	0.030	0.030	10.0	10.0	0.190
FEB									
20...	1035	0.66	390	5.0	0.040	0.040	9.90	9.90	0.080
MAR									
01...	0415	3.9	--	--	0.120	--	9.20	--	0.080
01...	0630	7.9	--	--	0.070	--	3.50	--	1.10
01...	0745	17	--	--	0.100	--	3.30	--	1.20
01...	0900	31	--	--	0.100	--	1.80	--	1.20
01...	1045	41	--	--	0.100	--	1.50	--	1.20
01...	1130	40	--	--	0.100	--	2.20	--	1.30
01...	1330	41	--	--	0.080	--	2.00	--	1.00
01...	1445	32	--	--	0.080	--	2.90	--	0.930
01...	1700	20	--	--	0.080	--	4.00	--	0.820
01...	2200	7.0	--	--	0.060	--	5.70	--	0.350
02...	0300	4.6	--	--	0.040	--	7.30	--	0.260
02...	0815	4.1	--	--	0.040	--	7.70	--	0.270
24...	1015	0.77	340	--	0.030	0.030	7.60	7.60	0.020

0157608335 LITTLE CONESTOGA CREEK, SITE 3A, NEAR MORGANTOWN, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DISSOLVED (MG/L AS P)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
OCT								
16...	0.060	1.5	1.1	8.5	0.300	0.220	43	0.01
NOV								
11...	1.10	9.9	3.3	14	4.20	1.20	--	--
11...	--	1.9	--	5.2	3.60	--	--	--
11...	--	2.9	--	6.2	2.60	--	--	--
18...	1.80	9.5	4.3	17	5.60	2.50	--	--
18...	1.60	10	6.0	14	5.40	2.40	--	--
19...	--	15	--	19	11.0	--	--	--
19...	--	15	--	19	6.90	--	--	--
19...	--	18	--	22	7.30	--	--	--
26...	--	4.6	--	9.0	3.00	--	361	2.7
26...	--	5.6	--	10	2.80	--	336	4.2
26...	--	4.4	--	6.6	2.80	--	--	--
26...	--	7.2	--	11	3.40	--	868	13
26...	--	8.4	--	12	8.20	--	2530	68
26...	--	6.2	--	8.0	2.90	--	317	25
26...	--	4.8	--	6.4	4.10	--	3510	313
26...	--	3.8	--	5.4	5.40	--	3690	349
26...	--	3.6	--	5.5	5.60	--	2750	245
26...	--	3.4	--	5.8	3.70	--	1620	25
27...	--	2.2	--	12	0.870	--	--	--
DEC								
08...	1.50	3.3	3.2	14	0.620	0.570	7	0.01
29...	0.130	0.76	0.76	11	0.170	0.160	11	0.04
JAN								
27...	0.190	0.28	0.20	10	0.110	0.080	8	0.03
FEB								
20...	0.080	0.44	0.38	10	0.150	0.080	10	0.02
MAR								
01...	--	0.64	--	9.8	0.390	--	2230	23
01...	--	2.8	--	6.3	2.20	--	1970	42
01...	--	2.5	--	5.8	2.30	--	2630	121
01...	--	2.8	--	4.6	4.70	--	2660	223
01...	--	2.3	--	3.8	5.50	--	1940	215
01...	--	3.0	--	5.2	4.20	--	1280	138
01...	--	2.1	--	4.1	2.30	--	--	--
01...	--	2.1	--	5.0	2.30	--	--	--
01...	--	2.8	--	6.8	2.00	--	--	--
01...	--	1.6	--	7.3	0.720	--	--	--
02...	--	1.3	--	8.6	0.470	--	--	--
02...	--	1.0	--	8.7	0.410	--	--	--
24...	0.020	0.50	0.41	8.1	0.080	0.060	11	0.02

0157608335 LITTLE CONESTOGA CREEK, SITE 3A, NEAR MORGANTOWN, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)
APR									
04...	0400	3.8	--	--	0.240	--	4.80	--	1.20
04...	0530	3.4	--	--	0.120	--	4.60	--	0.940
04...	0745	2.1	--	--	0.090	--	5.10	--	0.500
04...	0915	2.6	--	--	0.100	--	5.80	--	0.840
04...	1130	7.0	--	--	0.170	--	3.70	--	1.20
04...	1345	3.2	--	--	0.110	--	5.40	--	0.840
14...	1145	0.77	310	15.0	0.030	0.030	7.90	7.90	0.040
MAY									
12...	1105	0.67	323	20.0	0.140	0.140	7.30	7.30	0.840
JUN									
09...	1215	0.64	340	22.0	0.290	0.290	7.50	7.00	0.020
22...	1245	0.64	--	--	0.810	0.570	9.00	6.40	0.100
22...	1700	3.9	--	--	0.040	--	0.080	--	5.30
22...	1915	1.8	--	--	0.700	0.620	4.80	4.60	2.60
22...	2100	15	--	--	0.100	--	0.660	--	0.280
22...	2200	13	--	--	0.190	--	3.50	--	1.40
23...	0200	1.1	--	--	0.590	0.390	5.70	5.50	0.940
JUL									
14...	1215	0.35	--	--	0.810	--	7.50	--	0.170
14...	1500	28	--	--	0.170	--	1.30	--	1.60
14...	1600	32	--	--	2.40	--	2.90	--	0.820
14...	1700	13	--	--	0.140	--	3.30	--	0.430
14...	1800	8.4	--	--	2.60	--	4.20	--	0.770
14...	1900	17	--	--	0.120	--	2.90	--	0.200
14...	2115	7.7	--	--	0.130	--	4.00	--	0.240
14...	2315	1.8	--	--	0.260	--	6.80	--	1.90
20...	1135	0.28	418	26.0	0.400	0.350	9.70	8.80	0.080
AUG									
19...	1050	0.21	--	--	0.260	0.260	7.90	7.90	0.040
SEP									
07...	1145	0.21	--	--	0.880	0.310	8.40	7.50	0.040
08...	1345	12	--	--	0.060	--	6.40	--	0.550
08...	1500	8.8	--	--	0.290	0.150	2.60	1.80	0.770
08...	1600	12	--	--	0.420	--	2.20	--	1.20
08...	1700	35	--	--	0.150	--	1.30	--	0.240
08...	1745	195	--	--	0.240	--	0.740	--	0.770
08...	1815	616	--	--	0.090	--	<0.040	--	0.940
08...	1930	409	--	--	0.080	0.060	5.50	5.06	0.660
08...	2100	237	--	--	0.050	--	2.20	--	0.140
08...	2345	19	--	--	0.070	--	3.70	--	0.150
09...	0100	11	--	--	0.080	--	5.10	--	0.240
09...	0145	8.0	--	--	0.080	0.070	4.84	4.40	0.240
09...	0200	7.3	--	--	--	--	4.84	4.40	0.240
09...	0300	5.1	--	--	0.090	--	5.10	--	0.300
09...	0500	3.4	--	--	0.080	0.080	6.38	5.94	0.340
09...	0515	3.2	--	--	0.080	0.080	6.40	5.90	0.340
17...	1115	0.84	--	--	0.260	--	8.40	--	0.280
17...	2300	3.6	--	--	0.310	--	5.50	--	0.770
17...	2345	213	--	--	0.370	--	1.30	--	1.80
18...	0215	27	--	--	0.150	--	2.40	--	1.30
18...	0400	9.6	--	--	0.140	--	2.60	--	1.30
18...	0830	2.6	--	--	0.110	--	4.80	--	1.40
24...	1100	1.3	392	--	0.140	0.140	8.60	6.80	0.180

0157608335 LITTLE CONESTOGA CREEK, SITE 3A, NEAR MORGANTOWN, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DISSOLVED (MG/L AS P)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
APR								
04...	--	3.1	--	7.9	1.90	--	--	--
04...	--	4.1	--	8.7	2.30	--	--	--
04...	--	7.6	--	13	1.60	--	--	--
04...	--	4.9	--	11	1.60	--	--	--
04...	--	3.1	--	6.8	2.00	--	--	--
04...	--	5.3	--	11	1.30	--	--	--
14...	0.040	0.58	0.35	8.5	0.110	0.080	12	0.02
MAY								
12...	0.840	0.97	0.93	8.3	0.230	0.140	34	0.06
JUN								
09...	0.020	0.94	0.94	8.4	0.160	0.100	20	0.03
22...	0.080	1.5	1.1	10	0.180	0.170	--	--
22...	--	18	--	18	5.50	--	441	4.6
22...	2.50	10	6.5	15	7.40	2.00	--	--
22...	--	6.6	--	7.3	9.70	--	2380	96
22...	--	3.7	--	7.2	6.20	--	--	--
23...	0.940	4.0	3.8	9.7	2.80	1.20	--	--
JUL								
14...	--	2.4	--	9.9	0.640	--	--	--
14...	--	--	--	--	13.0	--	--	--
14...	--	4.6	--	7.5	3.60	--	--	--
14...	--	3.5	--	6.8	2.50	--	--	--
14...	--	6.5	--	11	3.50	--	--	--
14...	--	6.1	--	9.0	2.50	--	--	--
14...	--	--	--	--	1.80	--	--	--
14...	--	2.7	--	9.5	1.80	--	--	--
20...	0.080	1.0	0.78	11	0.250	0.180	14	0.01
AUG								
19...	0.040	0.45	0.33	8.3	0.240	0.180	136	0.08
SEP								
07...	0.040	0.28	0.24	8.7	0.330	0.240	--	--
08...	--	0.55	--	7.0	--	--	--	--
08...	0.300	0.83	0.36	3.4	2.50	1.50	--	--
08...	--	1.3	--	3.5	4.10	--	--	--
08...	--	6.1	--	7.4	5.40	--	1780	168
08...	--	0.78	--	1.5	3.30	--	--	--
08...	--	3.3	--	--	5.30	--	--	--
08...	0.550	2.7	1.5	8.2	0.760	0.410	--	--
08...	--	0.36	--	2.6	1.50	--	--	--
08...	--	0.18	--	3.9	1.00	--	--	--
09...	--	1.3	--	6.4	0.910	--	--	--
09...	0.200	1.3	1.3	6.2	0.820	0.490	--	--
09...	0.200	1.3	1.3	6.2	0.820	0.490	--	--
09...	--	1.8	--	6.9	0.730	--	--	--
09...	0.340	1.4	1.2	7.8	0.520	0.400	--	--
09...	0.340	1.4	1.2	7.8	0.520	0.400	--	--
17...	--	1.4	--	9.8	0.310	--	30	0.07
17...	--	6.0	--	12	1.50	--	1590	15
17...	--	10	--	11	2.10	--	--	--
18...	--	4.4	--	6.8	2.00	--	--	--
18...	--	4.4	--	7.0	1.50	--	--	--
18...	--	3.0	--	7.8	0.760	--	47	0.33
24...	0.200	0.92	0.72	9.5	0.210	0.190	7	0.02

0157608335 LITTLE CONESTOGA CREEK, SITE 3A, NEAR MORGANTOWN, PA--Continued

PESTICIDE ANALYSIS, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	ALA-CHLOR TOTAL RECOVER (UG/L)	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	METOLA-CHLOR IN WHOLE WATER (UG/L)	PRO-PAZINE TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)
DEC									
29...	1140	1.4	<0.10	<0.20	<0.20	<0.10	<0.20	<0.20	<1
MAR									
24...	1015	0.77	<0.10	<0.20	<0.20	<0.10	<0.20	<0.20	<1
MAY									
12...	1105	0.67	<0.10	<0.30	<0.20	<0.10	<0.20	<0.20	<1
24...	1035	0.75	0.19	2.4	0.66	0.41	<0.30	<0.30	<1
JUN									
22...	1745	2.6	<0.40	<5.0	<0.80	<0.40	<0.80	<0.80	<4
22...	2000	2.1	<0.80	<10	<10.0	<0.80	<10.0	<10.0	<0.8
22...	2130	19	<1.00	<12	<12.0	<1.00	<12.0	<12.0	<10
23...	0030	2.6	<0.80	11	<2.4	4.60	<2.4	<2.4	<8
JUL									
20...	1135	0.28	<0.10	<0.30	<0.30	<0.10	<0.30	<0.30	<1
AUG									
19...	1050	0.21	<0.10	<0.30	<0.30	<0.10	<0.30	<0.30	<1
SEP									
24...	1100	1.3	<0.05	<0.30	<0.30	<0.10	<0.30	<0.30	<1

INSTANTANEOUS SUSPENDED-SEDIMENT DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
16...	1135	0.10	43	0.01
NOV				
11...	1500	2.6	392	2.8
11...	1530	3.2	372	3.2
11...	1645	3.2	258	2.2
18...	2130	2.1	734	4.2
18...	2215	5.7	1050	16
18...	2230	6.7	1160	21
18...	2330	7.3	761	15
19...	0100	4.3	320	3.7
20...	2030	1.4	463	1.8
20...	2100	5.4	794	12
20...	2130	11	2650	79
20...	2145	17	2850	131
20...	2200	22	2730	162
20...	2230	28	2610	197
20...	2245	28	1880	142
20...	2400	15	1060	43
21...	0545	2.3	188	1.2
26...	0845	3.9	1730	18
26...	0930	11	3120	93
26...	0945	11	2200	65
26...	1000	11	1790	53
26...	1200	5.1	673	9.3
26...	1345	2.8	361	2.7
26...	1630	4.6	336	4.2
26...	1700	5.4	868	13
26...	1715	10	2530	68
26...	1745	29	317	25
26...	1800	33	3510	313
26...	1830	35	3690	349
26...	1900	33	2750	245
26...	1945	15	3170	128
26...	2200	5.7	1620	25
27...	0130	2.1	708	4.0
DEC				
02...	2030	4.1	534	5.9
02...	2115	7.0	818	15
02...	2230	8.8	677	16
02...	2300	8.4	769	17
03...	0100	7.3	656	13
03...	0215	8.8	692	16
03...	0245	7.7	521	11
03...	0600	2.8	142	1.1
08...	0844	0.42	7	0.01
18...	0845	3.2	696	6.0
18...	1015	8.0	1180	25

0157608335 LITTLE CONESTOGA CREEK, SITE 3A, NEAR MORGANTOWN, PA--Continued

INSTANTANEOUS SUSPENDED-SEDIMENT DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
DEC				
18...	1145	17	1420	65
18...	1215	20	1370	74
18...	1245	21	1220	69
18...	1315	22	1040	62
18...	1515	15	546	22
18...	1845	6.3	224	3.8
19...	0235	2.0	38	0.21
24...	2045	3.0	854	6.9
24...	2145	20	2390	129
24...	2300	46	3820	474
24...	2315	65	3030	532
24...	2330	67	2410	436
24...	2345	61	2180	359
25...	0045	33	1350	120
25...	0230	17	596	27
25...	0330	23	556	35
25...	1000	3.6	102	0.99
29...	1140	1.4	11	0.04
JAN				
19...	1115	3.0	1180	9.6
19...	1330	11	1150	34
19...	1445	15	1030	42
19...	1615	15	719	29
19...	1830	6.3	218	3.7
27...	1145	1.2	8	0.03
FEB				
20...	1035	0.66	10	0.02
MAR				
01...	0415	3.9	2230	23
01...	0515	5.4	1040	15
01...	0630	7.9	1970	42
01...	0745	17	2630	121
01...	0900	31	2660	223
01...	1045	41	1940	215
01...	1130	40	1280	138
01...	1315	42	924	105
01...	1415	37	792	79
01...	1500	30	836	68
01...	1645	22	682	41
01...	1930	12	392	13
01...	2030	9.6	82	2.1
01...	2145	7.3	220	4.3
02...	0800	4.1	51	0.56
24...	1015	0.77	11	0.02
APR				
04...	0445	3.8	679	7.0
04...	0615	3.0	268	2.2
04...	0830	2.1	130	0.74
04...	1045	5.9	1090	17
04...	1300	4.5	243	3.0
06...	0930	2.6	100	0.70
06...	1400	4.1	171	1.9
06...	1745	2.1	45	0.26
14...	1145	0.77	12	0.02
MAY				
12...	1105	0.67	34	0.06
18...	2315	2.1	820	4.6
18...	2345	4.3	960	11
19...	0015	2.8	670	5.1
19...	0045	1.8	140	0.68
JUN				
09...	1215	0.64	20	0.03
22...	1700	3.9	441	4.6
22...	1830	1.7	231	1.1
22...	2030	12	2060	67
22...	2100	15	2380	96
22...	2130	19	3250	167
23...	0115	1.5	168	0.68
JUL				
13...	1210	0.39	89	0.09
14...	1430	4.1	2710	30
14...	1530	31	2860	239
14...	1630	22	1080	64
14...	1730	8.8	570	14
14...	1830	15	1200	49
14...	1930	12	526	17
14...	2230	2.6	123	0.86
20...	1135	0.28	14	0.01
AUG				
19...	1050	0.21	136	0.08

0157608335 LITTLE CONESTOGA CREEK, SITE 3A, NEAR MORGANTOWN, PA--Continued

INSTANTANEOUS SUSPENDED-SEDIMENT DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
SEP					
01...	1200	0.15	30	0.01	--
02...	1145	0.13	24	0.01	--
02...	1215	0.13	24	0.01	--
03...	1200	0.13	26	0.01	--
04...	1200	0.13	15	0.01	--
05...	1200	0.13	20	0.01	--
06...	1200	0.23	10	0.01	--
08...	1145	1.3	108	0.38	--
08...	1400	13	147	5.2	94
08...	1515	9.2	362	9.0	95
08...	1615	19	1040	53	--
08...	1630	28	2620	198	86
08...	1700	35	1780	168	--
08...	1800	398	4690	5040	88
08...	1830	583	3170	4990	92
08...	1900	465	4480	5620	89
08...	1945	396	530	567	--
08...	1950	381	528	543	--
08...	2000	377	2510	2550	89
08...	2115	199	559	300	92
08...	2350	18	304	15	--
09...	0115	10	140	3.8	--
09...	0120	9.0	138	3.4	--
09...	0250	5.3	96	1.4	--
09...	0435	3.6	71	0.69	--
09...	0445	3.6	71	0.69	--
09...	1400	1.5	150	0.61	--
13...	0215	6.0	847	14	--
13...	0230	6.7	706	13	--
13...	1145	3.4	51	0.47	--
13...	1730	4.3	134	1.6	--
13...	2030	1.7	20	0.09	--
17...	1115	0.84	30	0.07	--
17...	2300	3.6	1590	15	--
18...	0130	46	69	8.6	--
18...	0230	22	469	28	--
18...	0630	3.9	82	0.86	--
18...	0830	2.6	47	0.33	--
18...	1145	1.7	42	0.19	--
18...	1845	36	2200	214	--
18...	1900	45	1870	227	--
18...	1915	49	1440	191	--
18...	1930	47	1120	142	--
18...	2100	23	370	23	--
24...	1100	1.3	7	0.02	--

015760839 UNNAMED TRIBUTARY TO LITTLE CONESTOGA CREEK, SITE 9, AT CHURCHTOWN, PA

LOCATION.--Lat 40°08'20", long 75°58'14", Lancaster County, Hydrologic Unit 02050306, on upstream side of farm lane bridge, 0.1 mi upstream from mouth, and 0.5 mi northwest of Churchtown.

DRAINAGE AREA.--1.43 mi².

PERIOD OF RECORD.--Water years 1983 to current year.

COOPERATION.--Water-quality samples collected by Pa. Department of Environmental Resources and U.S. Geological Survey. Chemical samples analyzed by Pa. Department of Environmental Reosurces, Bureau of Laboratories.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)
OCT									
16...	1050	0.40	275	11.0	0.090	0.090	2.90	2.90	0.180
DEC									
08...	1243	1.2	402	7.0	0.050	0.050	11.0	11.0	0.320
29...	1030	2.2	355	4.5	0.020	0.020	9.70	9.70	0.080
JAN									
27...	0955	2.2	351	0.0	0.020	0.020	9.50	9.50	0.060
FEB									
20...	0910	1.2	--	--	0.020	0.020	7.00	7.00	0.050
MAR									
24...	1100	1.6	400	--	0.030	0.030	6.80	6.40	0.020
APR									
14...	1035	2.5	285	11.0	0.030	0.020	5.20	5.10	0.030
MAY									
12...	0935	0.88	230	17.5	0.080	0.080	3.70	3.70	0.230
JUN									
11...	1125	0.76	280	22.0	0.160	0.150	3.70	3.70	0.060
JUL									
20...	1050	0.74	313	25.5	0.150	0.140	4.20	4.00	0.100
AUG									
19...	0955	0.53	325	22.0	0.160	0.160	2.90	2.20	0.060
SEP									
24...	1005	2.3	345	15.0	0.040	0.030	7.30	7.00	0.060

DATE	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT								
16...	0.150	1.2	0.81	4.1	0.320	0.250	10	0.01
DEC								
08...	0.320	1.4	1.2	12	0.230	0.170	19	0.06
29...	0.080	0.66	0.52	10	0.150	0.120	6	0.04
JAN								
27...	0.060	0.22	<0.20	9.7	0.300	0.250	20	0.12
FEB								
20...	0.050	0.60	0.40	7.6	0.060	0.060	4	0.01
MAR								
24...	0.020	0.58	0.58	7.4	0.710	0.660	8	0.03
APR								
14...	0.030	0.51	0.33	5.7	0.120	0.090	13	0.09
MAY								
12...	0.220	1.8	1.6	5.5	0.280	0.160	30	0.07
JUN								
11...	0.060	1.9	1.5	5.6	0.250	0.170	17	0.03
JUL								
20...	0.090	1.3	1.3	5.5	0.250	0.190	13	0.03
AUG								
19...	0.050	0.64	0.44	3.5	0.330	0.280	6	0.01
SEP								
24...	0.060	0.50	0.42	7.8	0.180	0.160	17	0.11

01576085 LITTLE CONESTOGA CREEK NEAR CHURCHTOWN, PA

LOCATION.--Lat 40°08'41", long 75°59'20", Lancaster County, Hydrologic Unit 02050306, on left bank 40 ft upstream from bridge on Smoketown Road, 0.2 mi upstream from small right-bank tributary, and 1.6 mi northwest of Churchtown.

DRAINAGE AREA.--5.82 mi², excluding unnamed spring tributary 25 ft downstream.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1982 to current year.

REVISED RECORD.--WDR PA-83-2: 1982(P).

GAGE.--Water-stage recorder and wooden control. Elevation of gage is 410 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair.

AVERAGE DISCHARGE.--5 years, 7.13 ft³/s, 16.64 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,520 ft³/s, Sept. 8, 1987, gage height, 8.83 ft, from rating curve extended above 230 ft³/s on basis of slope-conveyance study and contracted-opening measurement at gage height 8.25 ft; minimum, 0.19 ft³/s, Mar. 7, 1986, gage height, 0.68 ft, result of freezeup; minimum gage height, 0.60 ft, Sept. 3, 1983.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 16, 1982, reached a stage of 8.25 ft, from floodmarks, discharge, 1,210 ft³/s, from rating curve extended as explained above. Flood of June 1972 reached a stage of about 9.8 ft, discharge not determined, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft³/s (revised) and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Dec. 24	2315	302	5.23	Sept. 8	1945	*1,520	*8.83
July 14	1445	571	6.58	Sept. 18	0015	903	7.58

Minimum discharge, 0.70 ft³/s, Oct. 22, 24, 25, gage height, 0.77 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.92	.80	4.9	8.0	6.4	91	4.6	3.8	3.7	2.6	1.5	1.4
2	1.8	.91	11	10	6.9	27	4.1	3.8	3.5	2.9	1.5	1.1
3	1.1	.87	26	9.3	9.1	19	4.1	3.8	3.4	3.2	1.5	1.0
4	2.0	.87	9.1	8.0	10	14	22	5.2	3.6	2.5	1.3	1.0
5	1.3	2.5	7.2	7.4	8.1	12	11	4.2	3.6	2.3	1.4	.96
6	1.0	6.0	6.4	7.0	7.4	10	22	3.9	3.3	2.0	1.7	1.4
7	.94	1.9	5.9	7.1	8.1	9.4	15	3.6	3.2	2.1	1.4	1.6
8	.89	4.6	5.4	6.7	7.9	8.7	11	3.5	3.1	2.3	1.3	259
9	.89	3.0	12	6.9	6.8	8.2	9.4	3.4	3.3	2.1	2.0	25
10	.80	2.0	9.7	9.6	6.6	7.1	8.3	3.4	3.0	1.9	25	8.0
11	.79	8.6	7.4	11	6.4	6.6	7.5	3.2	2.9	1.8	2.1	5.8
12	.79	4.5	7.3	8.1	6.5	6.3	7.4	3.2	3.0	3.2	1.7	4.8
13	1.0	2.9	6.2	8.8	6.1	6.0	6.9	3.1	3.0	2.4	1.5	24
14	2.4	2.4	5.4	8.5	5.7	5.8	6.0	3.0	2.8	53	1.5	11
15	1.2	2.1	5.3	10	5.1	5.7	5.9	3.8	2.8	6.4	1.4	7.9
16	.95	2.0	5.1	8.5	5.3	5.3	5.9	3.3	2.7	3.6	1.3	7.0
17	.89	1.9	5.0	7.5	5.2	4.9	6.9	3.1	2.5	3.0	1.3	21
18	.86	5.5	43	10	5.1	4.8	5.7	3.1	2.4	2.8	1.2	123
19	.79	12	17	35	4.8	4.7	5.4	5.7	2.4	2.6	1.1	24
20	.79	16	12	20	4.7	4.6	5.1	8.8	2.5	2.4	1.0	14
21	.79	21	9.3	15	4.9	4.5	4.9	5.0	2.8	2.2	1.0	10
22	.78	6.1	8.0	e11	5.2	4.4	4.8	4.0	14	2.1	1.4	11
23	.79	4.9	7.3	e10	6.0	4.3	4.6	25	7.4	1.9	1.2	8.2
24	.79	7.2	29	e9.5	5.3	4.2	5.0	7.5	3.1	1.8	1.0	6.8
25	.79	5.2	47	9.2	5.1	4.1	4.9	5.8	2.9	2.2	.95	6.1
26	1.8	40	15	8.8	5.0	4.1	4.2	5.1	3.1	3.2	1.0	5.5
27	1.3	15	12	7.9	4.9	4.1	4.1	4.8	3.3	2.0	1.7	5.1
28	1.3	8.6	9.8	7.3	5.9	4.1	4.1	4.4	2.8	1.7	8.1	4.7
29	1.0	6.9	8.7	7.0	---	4.0	4.1	4.1	2.6	1.6	1.8	4.7
30	.95	5.8	8.4	7.1	---	4.3	3.9	3.8	2.5	1.7	1.3	4.9
31	.84	---	8.0	6.9	---	8.1	---	3.8	---	1.8	1.2	---
TOTAL	33.23	202.05	373.8	307.1	174.5	311.3	218.8	152.2	105.2	127.3	73.35	609.96
MEAN	1.07	6.73	12.1	9.91	6.23	10.0	7.29	4.91	3.51	4.11	2.37	20.3
MAX	2.4	40	47	35	10	91	22	25	14	53	25	259
MIN	.78	.80	4.9	6.7	4.7	4.0	3.9	3.0	2.4	1.6	.95	.96
CFSM	.18	1.16	2.07	1.70	1.07	1.73	1.25	.84	.60	.71	.41	3.49
IN.	.21	1.29	2.39	1.96	1.12	1.99	1.40	.97	.67	.81	.47	3.90

CAL YR 1986 TOTAL 2088.46 MEAN 5.72 MAX 52 MIN .66 CFSM .98 IN. 13.35
WTR YR 1987 TOTAL 2688.76 MEAN 7.37 MAX 259 MIN .78 CFSM 1.27 IN. 17.19

e Estimated

01576085 LITTLE CONESTOGA CREEK NEAR CHURCHTOWN, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1982 to current year.

PERIOD OF DAILY RECORD.--
SUSPENDED-SEDIMENT DISCHARGE: August 1982 to September 1983 (discontinued).

INSTRUMENTATION.--Automatic sediment pumping sampler since August 1982.

COOPERATION.--Water-quality samples collected by Pa. Department of Environmental Resources and U.S. Geological Survey. Chemical samples analyzed by Pa. Department of Environmental Resources, Bureau of Laboratories.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)
OCT									
16...	1005	1.0	430	11.0	0.100	0.100	5.00	4.60	0.110
NOV									
11...	1145	2.9	--	--	0.070	--	6.30	--	0.160
11...	1345	7.4	--	--	0.070	0.060	5.90	5.70	0.420
11...	1545	22	--	--	0.100	0.060	5.30	4.40	1.10
11...	1845	22	--	--	0.100	0.050	5.30	5.30	0.600
11...	2115	17	--	--	0.090	0.060	7.50	5.70	0.480
12...	0215	6.4	--	--	0.100	0.070	7.10	6.80	0.540
12...	0945	4.5	--	--	0.080	0.070	8.40	8.10	0.310
12...	1040	4.3	--	--	0.080	0.070	8.60	7.90	0.340
12...	1041	4.3	--	--	0.080	0.070	8.60	8.60	0.380
26...	1150	47	--	--	0.170	--	4.60	--	2.20
26...	1400	30	--	--	0.090	--	5.50	--	1.50
26...	1730	61	--	--	0.080	--	5.90	--	1.00
26...	1800	131	--	--	0.160	--	5.90	--	2.00
26...	1830	171	--	--	0.100	--	4.40	--	1.80
26...	1900	156	--	--	0.100	--	4.40	--	2.10
26...	2000	106	--	--	0.090	--	5.10	--	2.00
26...	2130	56	--	--	0.070	--	5.10	--	1.20
27...	0200	24	--	--	0.070	--	8.40	--	0.820
28...	1305	8.5	--	--	0.060	--	15.0	--	0.110
DEC									
08...	1145	5.3	530	6.5	0.070	0.070	14.0	14.0	0.240
29...	0930	8.8	512	3.0	0.020	0.020	12.0	12.0	0.060
JAN									
27...	0900	7.8	462	0.0	0.030	0.030	12.0	12.0	0.070
FEB									
20...	0830	4.3	--	--	0.040	0.040	9.90	9.50	0.050
MAR									
01...	0600	70	--	--	0.060	--	11.0	--	0.060
01...	0630	79	--	--	0.090	--	4.00	--	0.990
01...	0800	109	--	--	0.090	--	4.00	--	1.00
01...	0915	161	--	--	0.160	--	3.30	--	1.00
01...	1015	185	--	--	0.220	--	3.30	--	1.20
01...	1100	185	--	--	0.130	--	3.30	--	1.00
01...	1400	159	--	--	0.090	--	3.70	--	0.880
01...	1500	140	--	--	0.070	--	4.00	--	0.820
01...	1730	88	--	--	0.060	--	5.10	--	0.710
01...	1900	72	--	--	0.060	--	5.70	--	0.660
02...	1109	26	--	--	0.050	--	7.90	--	0.360
24...	1140	4.3	420	0.0	0.090	0.090	11.0	10.0	0.030
APR									
04...	0400	14	--	--	0.100	--	6.70	--	0.310
04...	0500	24	--	--	0.100	--	5.60	--	0.300
04...	0700	26	--	--	0.130	--	4.80	--	1.10
04...	0930	24	--	--	0.130	--	5.30	--	1.20
04...	0931	24	--	--	0.130	--	5.00	--	1.20
04...	1130	46	--	--	0.130	--	4.70	--	1.30
04...	1730	19	--	--	0.100	--	5.80	--	0.660
14...	0925	6.1	427	9.0	0.040	0.040	9.00	8.60	0.040
MAY									
12...	0850	3.2	435	19.5	0.290	0.290	6.80	6.80	0.340
JUN									
09...	1050	3.4	470	20.0	0.140	0.130	6.20	6.20	0.060
22...	1845	9.0	--	--	0.330	0.020	4.80	3.30	0.240
22...	2045	79	--	--	0.290	0.020	4.40	3.10	0.940
22...	2105	90	--	--	0.190	--	3.70	--	0.770
22...	2135	96	--	--	0.180	0.170	4.00	3.30	1.30
22...	2315	45	--	--	0.180	0.170	4.00	2.90	4.40
23...	1040	4.5	--	--	0.240	--	6.40	--	0.400

01576085 LITTLE CONESTOGA CREEK NEAR CHURCHTOWN, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT								
16...	0.100	1.7	1.4	6.7	0.460	0.380	16	0.04
NOV								
11...	--	0.95	--	7.3	0.470	--	52	0.41
11...	0.420	2.3	1.7	8.2	1.40	0.570	--	--
11...	0.880	6.1	2.7	11	3.30	1.20	--	--
11...	0.540	2.6	1.8	7.9	1.60	0.760	--	--
11...	0.450	2.9	1.5	10	1.40	0.770	--	--
12...	0.510	2.8	2.0	9.9	1.10	0.720	--	--
12...	0.300	1.8	1.3	10	0.610	0.430	--	--
12...	0.320	1.8	1.7	10	0.790	0.790	--	--
12...	0.380	2.2	1.6	11	0.640	0.460	--	--
26...	--	9.8	--	14	4.20	--	1300	165
26...	--	5.7	--	11	2.50	--	545	44
26...	--	4.3	--	10	1.90	--	1150	189
26...	--	9.8	--	16	5.20	--	3560	1260
26...	--	9.9	--	14	5.50	--	3550	1640
26...	--	4.7	--	9.1	5.20	--	3250	1370
26...	--	4.0	--	9.1	3.90	--	2650	758
26...	--	3.4	--	8.5	2.20	--	1270	192
27...	--	2.3	--	11	1.40	--	270	17
28...	--	1.5	--	17	0.190	--	31	0.71
DEC								
08...	0.240	1.2	1.1	15	0.200	0.170	12	0.17
29...	0.060	0.54	0.46	13	0.110	0.090	8	0.19
JAN								
27...	0.040	0.60	0.18	13	0.080	0.060	6	0.13
FEB								
20...	0.050	0.60	0.58	10	0.070	0.040	8	0.09
MAR								
01...	--	0.61	--	12	0.070	--	34	6.4
01...	--	4.1	--	8.1	1.90	--	--	--
01...	--	3.0	--	7.0	3.80	--	--	--
01...	--	1.9	--	5.2	2.30	--	--	--
01...	--	3.2	--	6.5	3.20	--	2970	1480
01...	--	3.8	--	7.1	2.00	--	--	--
01...	--	1.6	--	5.3	2.50	--	1580	678
01...	--	2.0	--	6.0	1.50	--	1040	393
01...	--	2.8	--	7.9	1.00	--	639	152
01...	--	2.0	--	7.7	0.810	--	1080	210
02...	--	1.3	--	9.2	0.650	--	554	39
24...	0.030	0.96	0.63	12	0.130	0.130	7	0.08
APR								
04...	--	5.1	--	12	0.850	--	252	9.5
04...	--	2.7	--	8.3	0.970	--	665	43
04...	--	2.9	--	7.7	1.50	--	460	32
04...	--	2.3	--	7.6	2.00	--	485	31
04...	--	2.1	--	7.1	1.60	--	325	21
04...	--	1.5	--	6.2	2.00	--	1660	206
04...	--	3.3	--	9.1	1.00	--	166	8.5
14...	0.040	0.58	0.33	9.6	0.110	0.090	9	0.15
MAY								
12...	0.340	1.5	1.4	8.3	0.310	0.300	110	0.95
JUN								
09...	0.060	1.5	1.5	7.7	0.180	0.180	90	0.83
22...	0.220	3.0	1.4	7.8	2.80	0.990	--	--
22...	0.940	2.5	2.0	6.9	6.60	2.00	--	--
22...	--	2.5	--	6.2	6.20	--	2190	532
22...	0.880	3.7	2.8	7.7	6.00	1.50	--	--
22...	0.720	5.2	4.6	9.2	4.10	1.20	--	--
23...	--	2.0	--	8.4	0.980	--	--	--

01576085 LITTLE CONESTOGA CREEK NEAR CHURCHTOWN, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)
JUL									
14...	1405	35	--	--	0.420	--	4.60	--	1.00
14...	1425	340	--	--	0.350	--	3.50	--	0.880
14...	1435	511	--	--	0.660	0.240	4.00	3.70	2.30
14...	1445	559	--	--	0.570	--	3.10	--	2.00
14...	1455	571	--	--	0.590	--	3.10	--	2.10
14...	1505	545	--	--	0.640	--	2.90	--	2.10
14...	1515	487	--	--	0.640	0.110	2.90	2.60	0.820
14...	1535	299	--	--	0.480	0.200	2.90	2.90	1.40
14...	1545	261	--	--	0.480	--	2.90	--	1.40
14...	1615	180	--	--	0.350	--	3.30	--	1.90
14...	1645	129	--	--	0.370	0.200	3.30	3.30	1.10
14...	1805	68	--	--	0.290	--	3.70	--	1.00
14...	1815	66	--	--	0.260	0.150	4.00	3.30	0.940
14...	1825	67	--	--	0.310	--	4.20	--	1.00
14...	1955	57	--	--	0.240	--	4.60	--	0.720
14...	2025	49	--	--	0.220	--	4.60	--	0.600
14...	2325	19	--	--	0.120	0.100	4.20	4.20	0.270
15...	0525	7.5	--	--	0.100	0.090	7.30	3.10	0.190
15...	0955	5.6	--	--	0.100	--	7.50	--	0.220
15...	1028	5.6	--	--	0.100	0.090	7.70	7.00	0.220
20...	0930	2.5	525	24.5	0.570	0.550	5.90	5.90	0.160
AUG									
19...	0855	1.1	--	--	0.330	0.330	4.40	4.40	0.270
SEP									
08...	0002	1.5	--	--	0.060	0.040	0.260	0.220	0.220
08...	0256	1.4	--	--	0.070	0.050	0.400	0.360	0.280
08...	0845	1.4	--	--	0.080	--	0.800	--	0.160
08...	1300	11	--	--	0.290	--	2.90	--	0.180
08...	1315	18	--	--	0.290	0.180	0.280	0.220	1.10
08...	1400	83	--	--	0.350	0.290	0.200	0.160	1.70
08...	1500	58	--	--	0.150	0.100	1.80	1.40	1.00
08...	1545	76	--	--	0.220	--	1.60	--	0.770
08...	1600	101	--	--	0.330	--	2.40	--	1.00
08...	1626	229	--	--	0.160	--	1.60	--	1.20
08...	1646	273	--	--	0.160	0.090	1.30	1.00	1.00
08...	1716	267	--	--	0.090	--	1.20	--	0.660
08...	1756	862	--	--	0.090	--	1.20	--	0.720
08...	1816	1080	--	--	0.350	--	1.10	--	0.880
08...	1826	1210	--	--	0.080	--	1.00	--	1.20
08...	1936	1510	--	--	0.080	0.060	1.10	1.10	0.820
08...	2056	1100	--	--	0.140	--	1.60	--	1.30
08...	2156	700	--	--	0.060	--	2.20	--	0.300
08...	2246	270	--	--	0.060	0.040	0.260	0.220	0.660
24...	0900	6.8	437	14.0	0.070	0.070	9.70	9.00	0.070

01576085 LITTLE CONESTOGA CREEK NEAR CHURCHTOWN, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
JUL								
14...	--	3.7	--	8.3	4.60	--	--	--
14...	--	2.8	--	6.3	3.60	--	2000	1840
14...	0.770	8.7	2.7	13	10.0	0.610	--	--
14...	--	8.3	--	11	8.60	--	6220	9390
14...	--	4.2	--	7.3	8.40	--	6120	9440
14...	--	4.6	--	7.5	7.50	--	5670	8340
14...	0.440	3.1	2.6	6.0	8.20	0.380	--	--
14...	0.820	8.0	2.1	11	3.40	0.480	--	--
14...	--	3.3	--	6.2	4.80	--	2720	1920
14...	--	4.4	--	7.7	4.40	--	1710	831
14...	0.770	3.3	3.0	6.6	4.50	1.20	--	--
14...	--	9.0	--	13	4.00	--	1060	195
14...	0.330	9.2	2.6	13	2.60	0.760	--	--
14...	--	7.6	--	12	2.40	--	920	166
14...	--	4.2	--	8.8	2.80	--	490	75
14...	--	2.5	--	7.1	2.60	--	480	64
14...	0.240	3.4	2.0	7.6	2.50	0.660	--	--
15...	0.160	2.2	1.6	9.5	0.620	0.440	--	--
15...	--	2.3	--	9.8	0.560	--	--	--
15...	0.170	2.1	1.3	9.8	0.600	0.370	--	--
20...	0.160	5.3	4.1	11	0.480	0.210	120	0.81
AUG								
19...	0.250	1.6	1.5	6.0	0.540	0.440	17	0.05
SEP								
08...	0.200	0.34	0.28	0.60	1.20	0.490	--	--
08...	0.260	0.32	0.30	0.72	0.720	0.440	--	--
08...	--	0.20	--	1.0	0.320	--	--	--
08...	--	1.6	--	4.5	2.10	--	740	22
08...	0.660	1.3	0.84	1.6	3.00	0.690	--	--
08...	1.70	1.8	1.6	2.0	5.00	2.50	--	--
08...	0.820	1.2	0.77	3.0	2.20	1.20	--	--
08...	--	2.6	--	4.2	3.20	--	--	--
08...	--	2.4	--	4.8	4.20	--	1370	374
08...	--	3.3	--	4.9	5.50	--	2620	1620
08...	0.660	1.3	0.80	2.6	4.10	1.50	--	--
08...	--	1.9	--	3.1	3.80	--	2060	1490
08...	--	1.3	--	2.5	3.70	--	2370	5520
08...	--	7.5	--	8.6	6.80	--	4510	13200
08...	--	3.9	--	4.9	7.40	--	5700	18600
08...	0.550	0.88	0.60	2.0	4.10	1.10	--	--
08...	--	2.3	--	3.9	2.60	--	1880	5570
08...	--	1.4	--	3.6	1.50	--	2440	4610
08...	0.210	1.2	0.28	1.5	1.80	0.550	--	--
24...	0.060	0.54	0.54	10	0.190	0.170	12	0.22

01576085 LITTLE CONESTOGA CREEK NEAR CHURCHTOWN, PA--Continued

PESTICIDE ANALYSIS, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	ALA-CHLOR TOTAL RECOVER (UG/L)	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	METOLA-CHLOR IN WHOLE WATER (UG/L)	PRO-PAZINE TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)
MAR									
24...	1140	4.3	<0.10	<0.20	<0.20	<0.10	<0.20	<0.20	<1
MAY									
12...	0850	3.2	<0.10	<0.30	<0.30	<0.10	<0.30	<0.30	<1
JUN									
22...	1945	19	4.60	23	2.8	10.0	<0.80	<0.80	<4
22...	2125	97	<0.40	21	4.0	7.00	<0.80	<0.80	<4
22...	2245	57	3.00	30	6.0	5.00	<0.80	<0.80	<4
23...	0350	11	3.00	16	3.0	3.00	<0.80	<0.80	<4
JUL									
20...	0930	2.5	<0.10	2.4	<0.30	<0.10	<0.30	<0.30	<1
AUG									
19...	0855	1.1	<0.10	0.55	<0.30	<0.10	<0.30	<0.30	<1

INSTANTANEOUS SUSPENDED-SEDIMENT DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
16...	1005	1.0	16	0.04
NOV				
11...	1145	2.9	52	0.41
11...	1315	5.8	179	2.8
11...	1415	9.6	372	9.6
11...	1615	25	738	50
11...	1815	24	412	27
11...	2145	15	189	7.7
12...	0015	7.8	117	2.5
12...	0245	6.1	84	1.4
12...	0915	4.7	47	0.60
20...	2102	12	523	17
20...	2115	16	1080	47
20...	2145	45	4060	493
20...	2155	65	4030	707
20...	2225	130	3540	1240
20...	2255	153	2750	1140
20...	2325	140	1820	688
21...	0155	54	798	116
21...	0525	23	260	16
21...	1555	9.2	60	1.5
26...	1105	59	1400	223
26...	1150	47	1300	165
26...	1400	30	545	44
26...	1700	45	527	64
26...	1730	61	1150	189
26...	1800	131	3560	1260
26...	1830	171	3550	1640
26...	1900	156	3250	1370
26...	1930	131	2610	923
26...	2000	106	2650	758
26...	2100	94	1490	378
26...	2130	56	1270	192
27...	0200	24	270	17
27...	0230	23	215	13
28...	1305	8.5	31	0.71
DEC				
02...	1845	8.1	110	2.4
02...	2045	18	621	30
02...	2115	25	736	50
02...	2145	36	778	76
02...	2215	45	778	95
02...	2345	50	618	83
03...	0045	49	568	75
03...	0115	55	713	106
03...	0145	63	653	111
03...	0245	62	499	84
03...	1145	19	72	3.7

01576085 LITTLE CONESTOGA CREEK NEAR CHURCHTOWN, PA--Continued

INSTANTANEOUS SUSPENDED-SEDIMENT DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
DEC				
08...	1145	5.3	12	0.17
09...	0930	12	67	2.2
09...	1100	12	75	2.4
09...	1630	18	108	5.2
09...	1800	19	114	5.8
09...	1930	17	96	4.4
10...	0230	10	48	1.3
10...	0630	12	36	1.2
18...	0815	15	158	6.4
18...	0945	36	701	68
18...	1115	78	1530	322
18...	1245	113	1670	510
18...	1315	118	1910	609
18...	1345	117	1870	591
18...	1445	105	1750	496
18...	1615	82	1910	423
19...	1211	16	272	12
24...	2110	21	680	39
24...	2235	228	4600	2830
24...	2305	280	5320	4020
24...	2315	302	5420	4420
24...	2325	297	5370	4310
25...	0015	232	3820	2390
25...	0025	212	3590	2050
25...	0155	110	1790	532
25...	0435	67	669	121
25...	1635	22	97	5.8
29...	0930	8.8	8	0.19
JAN				
18...	1540	17	67	3.1
18...	1910	14	49	1.9
19...	1110	19	119	6.1
19...	1340	75	1180	239
19...	1430	92	1190	296
19...	1510	100	1140	308
19...	1530	104	1040	292
19...	1700	88	637	151
19...	1940	43	272	32
19...	2340	25	89	6.0
27...	0900	7.8	6	0.13
FEB				
20...	0830	4.3	8	0.09
MAR				
01...	0600	70	34	6.4
01...	0615	76	1400	287
01...	0715	90	1790	435
01...	0845	137	2340	866
01...	1015	185	2970	1480
01...	1400	159	1580	678
01...	1500	140	1040	393
01...	1620	108	679	198
01...	1730	88	639	152
01...	1900	72	1080	210
02...	1109	26	554	39
24...	1140	4.3	7	0.08
31...	1330	14	213	8.1
31...	1400	15	320	13
31...	1430	18	372	18
31...	1530	16	219	9.5
31...	1700	11	136	4.0
APR				
04...	0400	14	252	9.5
04...	0500	24	665	43
04...	0700	26	460	32
04...	0930	24	485	31
04...	0931	24	325	21
04...	1130	46	1660	206
04...	1730	19	166	8.5
06...	1030	22	80	4.8
06...	1430	35	253	24
06...	2230	19	58	3.0
14...	0925	6.1	9	0.15
MAY				
12...	0850	3.2	110	0.95

01576085 LITTLE CONESTOGA CREEK NEAR CHURCHTOWN, PA--Continued

INSTANTANEOUS SUSPENDED-SEDIMENT DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
JUN					
09...	1050	3.4	90	0.83	--
22...	1915	15	850	34	--
22...	2015	56	1910	289	--
22...	2055	86	1910	444	96
22...	2105	90	2190	532	--
22...	2115	95	2040	523	--
22...	2215	80	1380	298	--
23...	0220	18	375	18	--
23...	1020	5.1	241	3.3	--
JUL					
12...	1830	4.3	820	9.5	--
14...	1425	340	2000	1840	--
14...	1445	559	6220	9390	--
14...	1455	571	6120	9440	--
14...	1505	545	5670	8340	--
14...	1525	403	4050	4410	93
14...	1545	261	2720	1920	--
14...	1615	180	1710	831	--
14...	1635	137	1740	644	--
14...	1805	68	1060	195	--
14...	1825	67	920	166	--
14...	1855	62	700	117	--
14...	1955	57	490	75	--
14...	2025	49	480	64	--
14...	2355	17	270	12	--
15...	0255	10	140	3.8	--
15...	0555	7.4	82	1.6	--
15...	1025	5.6	110	1.7	--
20...	0930	2.5	120	0.81	--
AUG					
19...	0855	1.1	17	0.05	--
28...	0525	3.7	769	7.7	--
28...	0725	21	1560	88	--
28...	0755	38	794	81	--
28...	0825	37	699	70	--
28...	0855	35	719	68	--
28...	1055	19	540	28	--
28...	1056	19	533	27	--
28...	1125	16	500	22	--
28...	1525	5.6	166	2.5	--
SEP					
08...	1300	11	740	22	--
08...	1420	77	1270	264	94
08...	1530	65	910	160	--
08...	1550	84	1080	245	--
08...	1600	101	1370	374	--
08...	1626	229	2620	1620	--
08...	1636	257	2320	1610	--
08...	1716	267	2060	1490	--
08...	1756	862	2370	5520	--
08...	1816	1080	4510	13200	--
08...	1826	1210	5700	18600	--
08...	1906	1410	4480	17100	89
08...	2006	1430	2510	9690	89
08...	2016	1420	2160	8250	--
08...	2056	1100	1880	5570	--
08...	2156	700	2440	4610	--
09...	0022	115	550	171	--
09...	0226	97	305	80	81
10...	0845	8.8	33	0.78	--
17...	2305	19	3080	158	--
17...	2315	56	2520	381	--
17...	2325	221	3850	2300	--
17...	2335	460	7270	9030	--
17...	2345	677	7640	14000	--
17...	2355	810	6430	14100	--
18...	0005	889	6370	15300	--
18...	0105	607	2980	4880	--
18...	0205	243	1560	1020	--
18...	0405	85	674	155	--
18...	0905	29	207	16	--
18...	1805	72	962	187	--
18...	1825	108	1900	554	--
18...	1845	210	3980	2260	--
18...	1905	320	3840	3320	--
18...	1915	348	2550	2400	--
18...	1935	291	2360	1850	--
18...	1955	177	1690	808	--
18...	2135	123	864	287	--
19...	0015	51	308	42	--
19...	0735	25	72	4.9	--
24...	0900	6.8	12	0.22	--

01576335 AGRICULTURAL FIELD RUNOFF SITE AT SPRINGVILLE, PA

LOCATION.--Lat 40°11'50", long 76°10'53", Lancaster County, Hydrologic Unit 02050306, on right bank of grassy waterway, 100 ft south of stone spring house, 200 feet west of Indian Run Creek, 0.5 mile south of Springville, and 1.9 miles north of Ephrata.

DRAINAGE AREA.--0.04 mi^2.

PERIOD OF RECORD.--Water years 1985 to current year.

INSTRUMENTATION.--Automatic sediment pumping sampler since October 1984.

COOPERATION.--Water-quality samples collected by Pa. Department of Environmental Resources and U.S. Geological Survey. Chemical samples analyzed by Pa. Department of Environmental Resources, Bureau of Laboratories.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)
NOV							
20...	2105	0.30	0.080	--	4.70	--	0.080
20...	2120	0.28	0.070	--	4.40	--	0.110
20...	2135	0.22	0.100	--	4.80	--	0.040
20...	2305	0.07	0.200	--	6.60	--	0.060
MAY							
23...	1037	0.05	0.150	--	3.10	--	0.990
23...	1052	0.16	0.330	--	16.0	--	0.770
23...	1122	0.05	0.310	--	11.0	--	0.880
23...	1137	0.03	0.290	--	7.90	--	0.770
JUL							
01...	1730	0.17	0.590	--	29.0	--	1.30
01...	1745	0.49	0.400	0.030	9.20	7.30	2.10
01...	1815	0.36	0.420	0.050	7.00	6.80	2.00
01...	1830	0.68	0.460	0.040	6.60	5.90	1.80
01...	1845	0.64	0.460	--	8.40	--	3.10
01...	1900	0.82	0.420	--	7.90	--	2.00
01...	1915	0.70	0.400	0.040	7.30	6.60	1.60
01...	2030	0.18	0.440	0.070	12.0	11.0	1.50
AUG							
28...	0510	0.06	0.790	--	5.50	--	4.00
28...	0525	0.10	0.530	--	4.60	--	2.90
28...	0540	0.09	0.970	--	3.30	--	10.0
28...	0555	0.07	1.10	--	3.30	--	10.0
28...	0625	0.02	1.10	--	4.00	--	8.90
SEP							
08...	1255	0.03	0.370	0.100	5.90	4.80	2.10
08...	1340	0.03	0.190	--	5.50	--	1.10
08...	1610	0.05	0.970	0.900	22.0	21.0	0.880
08...	1625	0.31	0.220	--	2.90	--	1.40
08...	1640	0.84	0.150	--	2.60	--	0.600
08...	1655	1.2	0.050	0.020	3.10	2.20	0.600
08...	1710	1.2	0.090	--	2.90	--	0.250
08...	1810	1.0	0.220	0.040	3.30	2.90	0.380
08...	1855	0.75	0.120	--	2.60	--	0.260
08...	1955	0.33	0.150	--	4.80	--	0.320
08...	2040	0.24	0.160	--	4.60	--	0.430
08...	2225	0.03	0.660	0.590	10.0	10.0	0.820
13...	0420	0.05	0.350	--	4.40	--	2.20
13...	0435	0.05	0.350	--	3.50	--	1.20
13...	0450	0.04	0.350	--	3.70	--	1.10
17...	2210	0.07	0.420	--	5.70	--	1.80
17...	2225	0.70	0.420	--	2.60	--	1.70
17...	2255	0.42	0.400	--	2.90	--	1.40
17...	2310	0.24	0.400	--	3.30	--	1.50
17...	2347	0.13	0.400	--	5.10	--	1.50
18...	0055	0.05	0.480	--	4.20	--	1.60
18...	0125	0.02	0.440	--	5.50	--	1.20
18...	1840	0.06	0.310	--	4.20	--	1.50
18...	2010	0.05	0.110	--	1.70	--	0.550
18...	2040	0.03	0.110	--	1.90	--	0.500

01576335 AGRICULTURAL FIELD RUNOFF SITE AT SPRINGVILLE, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)
NOV						
20...	--	1.4	--	6.1	5.50	--
20...	--	1.3	--	5.7	4.70	--
20...	--	1.6	--	6.4	4.40	--
20...	--	2.7	--	9.3	5.50	--
MAY						
23...	--	3.8	--	6.9	5.20	--
23...	--	3.4	--	19	5.60	--
23...	--	3.9	--	15	5.30	--
23...	--	3.6	--	12	6.80	--
JUL						
01...	--	6.3	--	35	5.90	--
01...	1.00	3.4	2.3	13	4.10	2.00
01...	1.40	3.0	2.5	10	4.10	2.00
01...	0.940	3.6	2.4	10	4.50	2.20
01...	--	3.8	--	12	5.20	--
01...	--	3.2	--	11	4.40	--
01...	0.900	2.6	1.9	9.9	4.00	2.10
01...	0.800	2.5	1.8	15	4.30	2.80
AUG						
28...	--	14	--	20	9.90	--
28...	--	9.3	--	14	8.20	--
28...	--	29	--	32	19.0	--
28...	--	23	--	26	14.8	--
28...	--	24	--	28	16.3	--
SEP						
08...	0.660	3.6	3.1	9.5	9.10	5.80
08...	--	4.5	--	10	8.10	--
08...	0.660	3.1	2.4	25	7.60	4.40
08...	--	4.9	--	7.8	8.50	--
08...	--	2.1	--	4.7	4.00	--
08...	0.100	1.9	1.0	5.0	5.20	2.00
08...	--	1.5	--	4.4	2.80	--
08...	0.150	1.6	1.1	4.9	4.00	1.80
08...	--	1.5	--	4.1	3.00	--
08...	--	1.3	--	6.1	3.40	--
08...	--	2.1	--	6.7	3.40	--
08...	0.720	2.8	1.5	13	2.80	1.80
13...	--	7.1	--	12	6.60	--
13...	--	3.0	--	6.5	7.00	--
13...	--	4.1	--	7.8	6.50	--
17...	--	8.6	--	14	4.60	--
17...	--	3.6	--	6.2	3.50	--
17...	--	1.5	--	4.4	2.80	--
17...	--	3.8	--	7.1	4.20	--
17...	--	2.6	--	7.7	4.20	--
18...	--	2.8	--	7.0	4.70	--
18...	--	3.9	--	9.4	4.70	--
18...	--	8.7	--	13	6.20	--
18...	--	3.7	--	5.4	6.20	--
18...	--	3.4	--	5.3	6.00	--

01576335 AGRICULTURAL FIELD RUNOFF SITE AT SPRINGVILLE, PA--Continued

INSTANTANEOUS SUSPENDED-SEDIMENT DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV					
20...	2035	0.10	790	0.21	--
20...	2120	0.28	634	0.48	--
20...	2150	0.13	404	0.14	--
20...	2250	0.07	237	0.05	--
MAY					
23...	1037	0.05	2050	0.28	--
23...	1107	0.10	960	0.26	--
23...	1122	0.05	710	0.10	--
JUL					
01...	1800	0.36	1890	1.8	--
01...	1845	0.64	2340	4.0	--
01...	1900	0.82	251	0.56	99
01...	1945	0.40	910	0.98	--
01...	2045	0.14	700	0.26	--
SEP					
08...	1310	0.05	740	0.10	--
08...	1340	0.03	402	0.03	--
08...	1625	0.31	1260	1.1	--
08...	1640	0.84	758	1.7	--
08...	1710	1.2	538	1.7	--
08...	1740	0.94	354	0.90	--
08...	1755	0.96	317	0.82	--
08...	1825	0.91	260	0.64	--
08...	1910	0.53	233	0.33	--
08...	2210	0.03	76	0.01	--

01576500 CONESTOGA RIVER AT LANCASTER, PA

LOCATION.--Lat 40°03'00", long 76°16'39", Lancaster County, Hydrologic Unit 02050306, on left bank at Penn Central Railroad bridge, 50 ft downstream from small right-bank tributary, 500 ft downstream from diversion dam at city water plant, and 0.7 mi east of Lancaster.

DRAINAGE AREA.--324 mi^2.

PERIOD OF RECORD.--September 1928 to March 1932; August, September 1932; April 1933 to current year. Monthly discharge only for some periods, published in WSP 1302. Prior to October 1973, published as Conestoga Creek at Lancaster.

REVISED RECORDS.--WSP 1202: Drainage area. WSP 1502: 1943(P).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 245.63 ft above National Geodetic Vertical Datum of 1929. Prior to May 1, 1933, at site 600 ft upstream at different datum, excluding small tributary.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Regulation at low flow by water plant and mill above station. Diversion above station for municipal supply of City of Lancaster. Several measurements of water temperature were made during the year. National Weather Service satellite telemeter at station.

COOPERATION.--Records of diversion provided by City of Lancaster.

AVERAGE DISCHARGE.--57 years, (1928-31, 1934-87), 401 ft^3/s, 16.81 in/yr, adjusted for diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 88,300 ft^3/s, June 23, 1972, gage height, 27.80 ft, from floodmark, from rating curve extended above 13,000 ft^3/s on basis of slope-area measurement at gage height 17.50 ft and contracted-opening measurement at peak flow; minimum daily, 7.0 ft^3/s, Aug. 11, 1930.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,800 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 25	[a]0800	[a]4,800	[a]8.6	Sept. 9	[a]0900	[a]*20,500	[b]16.7
Mar. 1	[a]1800	[a]4,300	[a]8.2	Sept. 18	0945	4,310	8.22

(a) Determined from partial reconstruction of hydrographs, based on comparison with records from downstream station and precipitation records.
(b) From floodmark.

Minimum discharge, 20 ft^3/s, Aug. 27, gage height, 2.47 ft, result of shutoff at diversion dam upstream; minimum daily, 72 ft^3/s, Aug. 21.

REVISIONS.--The maximum discharges reported for water years 1985 and 1986 have been revised to 10,600 ft^3/s, Feb. 12, 1985, gage height, 12.7 ft, and 11,000 ft^3/s, July 27, 1986, gage height, 13.0 ft, from graphs based on hydrographic comparison with Conestoga River at Conestoga (station 01576754); revised daily discharges, in cubic feet per second, and monthly and yearly summaries for these periods are given below. These figures supersede those published in the reports for 1985 and 1986.

				TOTAL	MEAN	MAX	MIN	‡MEAN	‡CFSM	‡IN
Feb. 12, 1985	3,360	FEBRUARY	1985	14,984	535	3,460	90	547	1.69	1.76
Feb. 13, 1985	3,460	WTR YR	1985	83,543	229	3,460	53	241	.74	10.10
July 27, 1986	4,800	JULY	1986	9,927	320	4,800	97	333	1.03	1.19
		CAL YR	1985	93,314	256	3,460	53	268	.83	11.23
		WTR YR	1986	146,259	401	4,800	95	414	1.28	17.36

‡ Adjusted for diversion.

01576500 CONESTOGA RIVER AT LANCASTER, PA--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	134	120	457	590	461	e2300	616	266	235	159	114	110
2	253	111	440	663	458	1800	368	260	224	616	109	100
3	195	124	1100	695	527	1140	356	271	215	401	112	87
4	211	119	732	605	662	958	762	397	236	239	109	80
5	221	145	552	535	617	805	829	430	258	191	98	80
6	163	499	489	492	509	734	1240	314	219	176	107	87
7	143	309	458	484	498	698	1020	274	201	162	106	117
8	131	343	440	467	526	673	773	251	197	169	99	e2300
9	122	413	573	455	498	641	655	239	197	169	117	e9800
10	120	299	809	476	415	591	588	230	201	158	532	822
11	117	339	575	647	433	524	543	229	181	159	206	511
12	111	783	530	561	430	496	536	217	173	320	136	410
13	123	377	501	487	425	489	536	210	176	250	115	1130
14	158	299	421	496	395	472	480	197	173	179	103	936
15	187	256	413	509	366	456	449	219	165	564	100	528
16	144	242	411	538	336	440	437	290	158	223	89	429
17	125	232	408	461	365	414	477	216	149	168	101	373
18	117	243	e1130	462	351	395	482	202	141	152	89	2420
19	112	823	1280	e1010	339	378	426	353	133	142	80	1520
20	113	490	752	e1260	325	364	395	682	142	141	77	871
21	111	1640	646	854	321	359	373	538	193	129	72	694
22	108	733	575	749	323	357	356	378	174	119	76	590
23	104	534	533	695	382	335	332	677	838	110	91	611
24	101	545	580	631	378	323	336	581	244	107	99	483
25	100	544	e2600	595	356	310	387	385	190	106	83	438
26	130	661	1170	586	341	310	343	341	176	237	80	394
27	189	1350	922	537	347	302	304	322	199	183	87	358
28	e170	690	817	498	341	310	286	310	195	132	284	335
29	e150	574	739	493	---	310	279	284	167	114	235	314
30	133	506	689	492	---	301	278	264	154	106	130	310
31	126	---	644	485	---	453	---	248	---	104	107	---
TOTAL	4422	14343	22386	18508	11725	18438	15242	10075	6304	6185	3943	27238
MEAN	143	478	722	597	419	595	508	325	210	200	127	908
MAX	253	1640	2600	1260	662	2300	1240	682	838	616	532	9800
MIN	100	111	408	455	321	301	278	197	133	104	72	80
(†)	15.8	9.6	9.6	12.4	14.9	14.5	11.1	11.1	15.3	8.4	10.5	8.4
MEAN‡	159	488	732	609	434	610	519	336	225	208	138	916
CFSM‡	.49	1.50	2.26	1.88	1.34	1.88	1.60	1.04	.69	.64	.43	2.83
IN.‡	.56	1.67	2.61	2.17	1.40	2.17	1.78	1.20	.77	.74	.50	3.16

CAL YR 1986 TOTAL 158144.7 MEAN 433 MAX 4800 MIN 97 MEAN‡ 446 CFSM‡ 1.38 IN.‡ 18.71
WTR YR 1987 TOTAL 158809 MEAN 435 MAX 9800 MIN 72 MEAN‡ 447 CFSM‡ 1.38 IN.‡ 18.73

e Estimated
† Diversion for municipal supply of City of Lancaster, equivalent in cubic feet per second.
‡ Adjusted for diversion.

01576697 SWARR RUN NEAR LANDISVILLE, PA

LOCATION.--Lat 40°04'19", long 76°21'26", Lancaster County, Hydrologic Unit 02050306, on left bank at Rohrerstown Road, 0.6 mi upstream from Little Conestoga Creek, and 3.7 mi east of Landisville.

DRAINAGE AREA.--8.67 mi2.

PERIOD OF RECORD.--June 1985 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 315 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Several measurements of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,150 ft^3/s, July 27, 1986, gage height, 12.29 ft, from rating curve extended above 600 ft^3/s on basis of step-backwater analysis; minimum, 0.23 ft^3/s, Aug. 20, 1987, gage height, 2.82 ft.

EXTREMES FOR CURRENT PERIOD.--Peak discharges greater than base discharge of 300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 25	0045	*423	*7.47	Sept. 8	1800	372	7.16

Minimum discharge, 0.23 ft^3/s, Aug. 20, gage height, 2.82 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.3	3.2	10	16	12	69	8.8	5.9	4.3	2.8	1.1	2.9
2	8.9	3.2	20	18	13	29	7.8	6.1	4.2	3.8	1.3	1.3
3	4.1	3.1	47	17	16	22	8.3	6.2	4.2	3.8	1.4	1.1
4	4.3	3.1	18	16	18	19	20	12	4.8	3.1	1.3	.73
5	4.5	9.8	16	15	16	17	18	7.2	4.8	2.8	1.5	.94
6	3.7	15	14	14	15	16	31	6.3	4.3	2.7	1.4	1.5
7	3.7	5.1	13	13	15	16	20	6.1	4.2	2.8	1.3	2.2
8	3.7	13	12	13	15	15	16	5.5	4.0	2.9	1.4	68
9	3.5	6.5	21	12	14	15	14	5.2	4.2	3.0	2.4	11
10	3.3	5.6	17	14	13	13	13	5.0	3.8	2.6	7.3	3.8
11	3.3	28	15	15	12	12	12	4.9	3.6	2.3	1.8	2.8
12	3.2	12	15	13	13	12	13	4.8	3.7	2.5	1.5	4.0
13	3.5	7.4	13	13	12	12	12	4.7	3.8	2.4	1.4	33
14	4.5	6.3	12	13	11	11	10	4.7	3.6	3.7	1.3	6.9
15	3.7	5.8	11	14	10	11	9.8	6.0	3.5	2.8	1.3	4.3
16	3.3	5.6	11	13	9.5	11	9.9	4.8	3.4	2.4	1.2	3.5
17	3.2	5.2	10	12	9.5	9.9	12	4.6	3.2	2.2	1.1	4.2
18	3.2	20	36	14	9.3	9.5	10	4.6	3.1	2.1	1.0	80
19	3.2	26	19	46	8.8	9.2	9.3	5.4	3.1	2.0	1.1	19
20	3.1	38	16	27	8.6	8.9	8.7	20	3.1	1.8	.70	9.8
21	3.0	37	14	21	8.6	8.6	8.1	9.9	3.2	1.7	.85	7.1
22	2.8	16	13	20	8.7	8.3	7.6	6.7	7.3	1.6	2.0	13
23	2.8	13	12	19	9.9	7.9	7.3	6.6	6.9	1.7	1.3	7.9
24	2.8	15	59	17	9.3	7.7	9.3	5.7	3.7	1.6	1.1	5.4
25	2.8	12	103	16	9.0	7.7	8.4	5.2	3.3	1.1	1.0	4.6
26	4.2	27	28	16	8.8	7.7	7.0	5.0	3.4	2.2	.97	4.1
27	4.2	18	23	14	8.8	7.4	6.6	5.3	3.8	1.5	1.2	3.7
28	6.4	15	21	14	10	7.7	6.5	4.9	3.0	1.3	1.5	3.5
29	3.5	13	19	13	---	7.1	6.3	4.6	2.9	1.3	1.1	3.3
30	3.2	11	18	13	---	7.4	6.0	4.4	2.8	1.4	1.0	3.4
31	3.2	---	17	13	---	17	---	4.3	---	1.2	1.1	---
TOTAL	119.1	398.9	673	504	323.8	432.0	336.7	192.6	117.2	71.1	45.92	316.97
MEAN	3.84	13.3	21.7	16.3	11.6	13.9	11.2	6.21	3.91	2.29	1.48	10.6
MAX	8.9	38	103	46	18	69	31	20	7.3	3.8	7.3	80
MIN	2.8	3.1	10	12	8.6	7.1	6.0	4.3	2.8	1.1	.70	.73
CFSM	.44	1.53	2.50	1.88	1.33	1.61	1.29	.72	.45	.26	.17	1.22
IN.	.51	1.71	2.89	2.16	1.39	1.85	1.44	.83	.50	.31	.20	1.36

CAL YR 1986 TOTAL 4494.57 MEAN 12.3 MAX 421 MIN 2.2 CFSM 1.42 IN. 19.28
WTR YR 1987 TOTAL 3531.25 MEAN 9.67 MAX 103 MIN .70 CFSM 1.12 IN. 15.15

01576754 CONESTOGA RIVER AT CONESTOGA, PA

LOCATION.--Lat 39°56'47", long 76°22'05", Lancaster County, Hydrologic Unit 02050306, on left bank 1,500 ft downstream from Little Conestoga Creek, 1.0 mi west of Conestoga, and 2.6 mi upstream from mouth.

DRAINAGE AREA.--470 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1984 to current year.

REVISED RECORDS.--WDR PA-86-2: 1985(M).

GAGE.--Water-stage recorder. Datum of gage is 180.45 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,000 ft³/s, Sept. 9, 1987, gage height 14.37 ft; minimum, 82 ft³/s, Aug. 22, 1987, gage height, 1.13 ft.

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

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Dec. 25	1230	5,710	6.54	Sept. 9	1200	*19,000	*14.37
Mar. 1	2300	5,130	6.16	Sept. 18	1415	5,210	6.21

Minimum discharge, 82 ft³/s, Aug. 22, gage height, 1.13 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	242	203	681	890	700	2270	916	436	374	257	172	236
2	433	191	686	955	702	3090	605	433	362	623	166	161
3	375	188	1520	1060	781	1560	542	437	349	530	161	142
4	288	202	1200	919	950	1290	812	581	367	384	170	128
5	358	259	846	829	944	1120	1250	678	415	300	161	117
6	285	672	743	763	804	1030	1440	510	366	267	174	141
7	248	564	693	733	753	989	1480	452	328	269	167	172
8	227	490	660	713	782	953	1070	424	317	262	166	2780
9	216	596	824	708	767	925	944	400	325	278	147	13500
10	207	455	1140	719	672	874	855	384	324	259	674	1370
11	204	535	887	896	667	809	795	e370	306	262	416	736
12	198	1030	789	849	658	747	775	e360	291	304	229	568
13	206	603	756	756	667	732	784	e350	306	620	186	1500
14	272	472	663	738	623	719	718	e380	300	324	172	1480
15	285	406	621	738	586	690	666	e500	282	614	149	780
16	261	380	610	799	546	674	651	431	269	394	147	592
17	221	369	608	714	551	646	698	373	263	279	145	546
18	199	401	1010	704	557	617	703	341	245	251	145	2960
19	199	1180	2280	1220	539	579	638	383	241	236	124	2310
20	180	881	1130	2110	533	576	598	912	240	216	123	1180
21	197	2380	941	1300	502	560	567	817	291	216	114	919
22	191	1170	852	1140	505	548	550	598	272	199	147	769
23	180	797	788	1030	595	536	531	739	1080	190	153	784
24	185	774	986	981	613	515	519	1040	428	180	130	668
25	170	812	4240	e890	576	494	583	578	317	172	134	594
26	229	896	1880	e840	540	488	549	502	300	205	125	558
27	256	1960	1370	e800	552	481	487	491	317	335	151	505
28	319	1050	1200	e780	546	499	464	461	316	227	144	478
29	259	842	1090	e760	---	491	450	444	278	190	431	451
30	228	740	1010	753	---	481	443	413	254	170	220	435
31	210	---	955	738	---	666	---	390	---	160	175	---
TOTAL	7528	21498	33659	27825	18211	26649	22083	15608	10123	9173	5918	37560
MEAN	243	717	1086	898	650	860	736	503	337	296	191	1252
MAX	433	2380	4240	2110	950	3090	1480	1040	1080	623	674	13500
MIN	170	188	608	704	502	481	443	341	240	160	114	117
CFSM	.52	1.52	2.31	1.91	1.38	1.83	1.57	1.07	.72	.63	.41	2.66
IN.	.60	1.70	2.66	2.20	1.44	2.11	1.75	1.24	.80	.73	.47	2.97

CAL YR 1986 TOTAL 244964 MEAN 671 MAX 8400 MIN 170 CFSM 1.43 IN. 19.39
WTR YR 1987 TOTAL 235835 MEAN 646 MAX 13500 MIN 114 CFSM 1.37 IN. 18.67

e Estimated

01576754 CONESTOGA RIVER AT CONESTOGA, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1985 to current year.

INSTRUMENTATION.--Automatic pumping sampler since October 1986.

REMARKS.--Some samples collected from bridge on River Road 1.6 miles downstream from gage.

COOPERATION.--Water-quality samples collected by Susquehanna River Basin Commission and analyzed by the Pa. Department of Environmental Resources.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)
OCT										
07...	1240	236	570	8.00	16.0	7.70	7.70	0.120	0.120	0.96
NOV										
05...	1145	218	605	8.10	10.5	6.72	6.12	0.400	0.365	0.65
21...	0020	1820	410	7.85	--	4.62	4.40	0.135	0.135	1.8
21...	0120	1780	400	7.70	--	4.84	4.40	0.140	0.140	2.2
21...	0300	1880	420	7.60	--	4.18	4.18	0.155	0.135	1.9
21...	0405	1860	410	7.90	--	4.84	4.62	0.440	0.420	2.0
21...	0600	1680	395	7.50	--	3.74	3.52	0.310	0.290	1.7
21...	0730	1630	410	7.50	--	4.84	4.62	0.230	0.230	1.9
21...	0900	2010	420	7.70	--	3.74	3.74	0.200	0.200	5.8
21...	1030	3130	395	7.55	--	4.84	4.40	0.100	0.090	6.7
21...	1200	3620	440	7.60	--	4.84	4.62	0.160	0.155	6.9
21...	1305	3660	392	7.70	--	5.94	4.84	0.260	0.230	7.0
21...	1415	3480	390	7.75	--	5.72	5.28	0.170	0.150	4.9
21...	1715	2760	345	7.75	--	4.84	4.62	0.190	0.160	3.3
21...	1930	2270	340	7.70	--	4.40	3.96	0.250	0.250	5.1
21...	2230	1850	295	7.75	--	3.96	3.96	0.300	0.260	4.2
22...	1245	1080	350	7.70	--	4.84	4.62	0.300	0.290	4.3
22...	2010	965	395	7.75	--	5.28	4.84	0.480	0.440	2.3
23...	1040	781	430	7.75	--	6.38	6.16	0.490	0.460	1.7
23...	1830	756	460	7.85	--	6.82	6.60	0.330	0.330	1.5
24...	1430	779	510	8.00	--	8.14	8.14	0.405	0.390	0.67
DEC										
15...	1345	640	500	8.20	4.0	9.24	9.24	0.490	0.490	1.1
JAN										
19...	1340	1280	525	7.95	--	8.80	8.80	0.370	0.350	1.8
19...	1508	1520	495	7.95	--	9.02	8.58	0.345	0.325	1.7
19...	1638	1660	495	7.95	--	9.02	9.02	0.330	0.325	1.3
19...	1815	1740	495	8.10	--	9.68	9.02	0.370	0.365	1.4
19...	1938	1810	495	8.20	--	9.46	9.02	0.395	0.395	1.4
19...	2108	1780	495	8.10	--	9.24	9.24	0.395	0.395	1.4
19...	2238	1720	480	8.05	--	9.24	9.24	0.350	0.350	1.2
20...	0008	1820	495	8.20	--	10.4	10.0	0.360	0.360	1.4
20...	0208	2640	500	7.90	--	8.58	8.36	0.400	0.400	2.3
20...	0423	3130	475	7.90	--	8.36	7.26	0.340	0.315	2.5
20...	1245	1930	400	8.10	--	6.60	6.16	0.305	0.290	1.8
20...	1623	1680	375	7.95	--	5.94	5.50	0.370	0.340	1.8
20...	1923	1550	370	8.00	--	5.50	5.06	0.400	0.375	1.6
20...	2223	1470	390	8.00	--	5.94	5.06	0.475	0.410	1.6
21...	0123	1400	400	8.00	--	5.94	5.94	0.475	0.460	1.6
21...	0423	1360	405	7.85	--	6.16	5.72	0.720	0.690	0.88
21...	0723	1360	423	8.00	--	6.48	5.64	0.460	0.435	1.5
21...	1400	1300	422	8.20	--	7.70	7.48	0.355	0.340	0.94
FEB										
27...	1315	534	615	8.50	--	7.70	7.70	0.355	0.350	1.0
MAR										
01...	1205	1460	520	8.00	--	7.26	7.26	0.485	0.480	1.5
01...	1230	1550	535	8.20	--	7.70	7.70	0.660	0.605	1.3
01...	1320	1820	540	7.90	--	7.48	7.48	0.525	0.525	1.3
01...	1530	2960	535	8.00	--	7.70	7.70	0.400	0.400	1.0
01...	1750	3730	530	7.90	--	7.80	7.80	0.270	0.270	1.7
01...	2010	4620	490	7.90	--	7.48	7.48	0.330	0.330	0.95
01...	2230	5090	420	7.90	--	5.94	5.94	0.450	0.450	2.4
02...	0040	5070	350	7.80	--	4.40	4.40	0.660	0.660	2.6
02...	0250	4800	295	7.90	--	3.74	3.74	0.770	0.770	3.3
02...	0510	4270	270	7.70	--	3.30	3.30	0.770	0.770	2.2
02...	0740	3650	270	7.70	--	3.52	3.52	0.825	0.770	1.8
02...	1010	3070	290	7.90	--	3.96	3.96	0.660	0.660	1.7
02...	1025	3020	285	7.70	--	3.72	3.60	0.750	0.720	2.0
02...	1545	2290	308	7.90	--	4.20	4.20	0.690	0.690	1.8
02...	2120	1910	335	7.90	--	4.80	4.80	0.690	0.660	1.9
03...	0320	1720	370	8.00	--	5.64	5.64	0.600	0.600	2.0
03...	1010	1610	405	8.00	--	6.24	6.24	0.510	0.360	1.9
04...	1730	1250	480	8.10	--	9.00	9.00	0.180	0.180	0.64
05...	1230	1120	510	8.20	--	8.64	8.64	0.245	0.245	0.63
07...	0944	985	550	8.10	--	9.72	9.72	0.210	0.205	0.79
30...	1810	494	590	7.90	13.5	7.26	7.26	0.255	0.255	0.50

01576754 CONESTOGA RIVER AT CONESTOGA, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT										
07...	0.73	1.1	0.85	8.8	0.450	0.370	0.300	9.1	15	9.4
NOV										
05...	0.51	1.0	0.88	7.8	0.480	0.440	0.327	12	2	1.5
21...	0.85	2.0	0.98	6.6	0.510	0.280	0.190	12	603	2970
21...	0.84	2.4	0.98	7.2	0.720	0.310	0.210	10	436	2100
21...	0.94	2.1	1.1	6.2	0.740	0.320	0.220	12	299	1520
21...	1.0	2.5	1.5	7.3	0.910	0.400	0.250	11	286	1430
21...	0.79	2.1	1.1	5.8	0.860	0.540	--	3.8	242	1100
21...	1.2	2.2	1.5	7.0	0.760	0.390	0.250	13	462	2040
21...	1.4	6.0	1.6	9.8	0.750	0.300	0.180	9.6	1300	7080
21...	--	6.8	--	12	0.640	0.200	0.130	11	1860	15700
21...	0.92	7.0	1.1	12	0.970	0.220	0.130	14	1810	17700
21...	1.1	7.2	1.4	13	1.43	0.200	0.036	13	1550	15300
21...	0.93	5.0	1.1	11	2.53	0.220	0.095	11	1080	10100
21...	0.61	3.4	0.77	8.3	0.770	0.230	0.110	9.0	845	6300
21...	--	5.3	--	--	0.630	0.240	0.150	9.0	778	4770
21...	0.74	4.5	1.0	8.5	0.460	0.260	0.160	10	579	2890
22...	1.0	4.6	1.3	9.5	1.32	0.300	0.240	11	594	1730
22...	0.96	2.8	1.4	8.1	0.560	0.320	0.200	11	290	756
23...	1.0	2.2	1.5	8.6	0.390	0.300	0.240	10	158	333
23...	1.1	1.8	1.4	8.6	0.440	0.240	0.210	14	77	158
24...	0.49	1.1	0.88	9.2	0.270	0.200	0.140	14	40	84
DEC										
15...	0.99	1.6	1.5	11	0.200	0.180	0.120	9.3	7	12
JAN										
19...	0.79	2.1	1.1	11	0.490	0.150	0.018	19	155	535
19...	0.61	2.0	0.94	11	0.450	0.170	0.090	18	203	831
19...	0.81	1.6	1.1	11	0.500	0.170	0.097	17	176	791
19...	0.78	1.7	1.1	11	0.480	0.180	0.091	14	161	758
19...	1.0	1.8	1.4	11	0.550	0.190	0.090	15	174	850
19...	0.55	1.8	0.94	11	0.490	0.180	0.022	13	166	800
19...	0.75	1.5	1.1	11	0.540	0.180	0.110	14	166	770
20...	0.84	1.8	1.2	12	0.500	0.180	0.057	13	178	875
20...	0.80	2.7	1.2	11	1.20	0.190	0.041	13	505	3600
20...	0.78	2.8	1.1	11	1.76	0.150	0.054	13	733	6200
20...	1.0	2.1	1.3	8.7	0.660	0.200	0.054	12	356	1860
20...	0.76	2.2	1.1	8.1	0.610	0.270	0.230	12	212	962
20...	0.72	2.0	1.1	7.5	0.720	0.270	0.210	12	170	711
20...	1.2	2.1	1.6	8.0	0.630	0.280	0.200	13	130	516
21...	0.84	2.1	1.3	8.0	0.630	0.280	0.130	16	118	446
21...	0.81	1.6	1.5	7.8	0.620	0.300	0.210	14	108	397
21...	0.86	2.0	1.3	8.5	0.560	0.270	0.130	12	102	375
21...	0.76	1.3	1.1	9.0	0.430	0.240	0.180	13	94	329
FEB										
27...	0.73	1.4	1.1	9.1	0.200	0.150	0.140	16	9	13
MAR										
01...	1.0	2.0	1.5	9.3	0.500	0.170	0.130	16	248	979
01...	0.63	2.0	1.2	9.7	0.630	0.220	0.200	16	228	956
01...	1.1	1.8	1.6	9.3	0.660	0.220	0.180	16	262	1290
01...	0.84	1.4	1.2	9.1	0.720	0.190	0.160	15	307	2460
01...	0.83	2.0	1.1	9.8	1.65	0.140	0.110	15	467	4710
01...	0.57	1.3	0.90	8.8	1.32	0.150	0.063	14	828	10300
01...	1.0	2.8	1.5	8.7	1.54	0.180	0.060	15	1130	15600
02...	1.1	3.3	1.8	7.7	1.32	0.240	0.200	15	1200	16400
02...	1.1	4.0	1.9	7.8	1.21	0.300	0.041	14	980	12700
02...	0.75	3.0	1.5	6.3	1.10	0.320	0.250	14	740	8530
02...	1.0	2.6	1.8	6.1	1.87	0.320	0.260	13	530	5220
02...	1.0	2.4	1.7	6.3	0.860	0.290	0.250	11	391	3240
02...	1.1	2.8	1.8	6.5	0.640	0.290	0.210	14	390	3180
02...	1.2	2.5	1.9	6.7	0.700	0.270	0.210	15	278	1720
02...	0.85	2.6	1.5	7.4	0.490	0.260	0.220	13	190	980
03...	1.0	2.6	1.6	8.2	0.410	0.210	0.160	14	126	587
03...	1.0	2.4	1.4	8.6	0.340	0.170	0.140	13	101	438
04...	0.44	0.82	0.62	9.8	0.150	0.080	0.068	11	25	86
05...	0.49	0.88	0.74	9.5	0.130	0.080	0.063	12	16	48
07...	0.77	1.0	0.98	11	0.130	0.110	0.049	17	13	34
30...	0.48	0.76	0.74	8.0	0.220	0.130	0.038	40	21	28

01576754 CONESTOGA RIVER AT CONESTOGA, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)
APR										
04...	0810	800	525	8.00	10.0	7.26	7.26	0.280	0.280	1.1
05...	0900	1280	450	8.10	11.0	6.60	6.60	0.165	0.165	1.2
06...	0515	1130	398	7.90	7.0	4.92	4.92	0.660	0.630	1.4
06...	1445	1560	417	7.70	--	5.50	5.50	0.370	0.370	1.3
06...	2230	1920	408	7.40	--	5.50	5.00	0.230	0.230	1.7
07...	0630	1670	373	7.50	--	4.84	4.44	0.180	0.180	1.4
08...	1700	1030	458	7.80	--	6.72	6.00	0.300	0.300	0.54
27...	1015	478	520	8.10	16.0	6.60	5.28	0.130	0.130	0.67
MAY										
18...	1130	336	475	--	--	7.92	7.70	0.075	0.075	0.98
JUN										
03...	0840	332	615	7.80	24.5	--	--	--	--	--
22...	1120	256	600	7.50	--	8.80	7.48	0.055	0.050	1.3
22...	2200	340	600	8.20	--	7.70	7.70	0.090	0.065	0.92
23...	0245	420	520	8.20	--	6.60	6.60	0.120	0.090	1.1
23...	0315	528	525	8.20	--	6.80	6.20	0.090	0.070	1.0
23...	0845	1850	575	8.10	--	6.80	6.00	0.145	0.140	1.2
23...	0915	2190	570	8.10	--	8.14	5.94	0.080	0.055	1.0
23...	0945	2340	600	8.20	--	6.40	6.40	0.165	0.115	1.4
23...	1015	2390	500	8.10	--	7.70	7.70	0.190	0.190	1.4
23...	1045	2360	520	8.10	--	7.26	7.26	0.250	0.250	1.7
23...	1145	2180	500	8.20	--	6.60	6.20	0.305	0.300	1.7
23...	1330	1760	500	8.60	--	7.92	7.92	0.180	0.180	1.6
23...	1500	1400	480	8.60	--	8.14	7.92	0.155	0.150	1.3
23...	1730	1040	460	8.40	--	7.70	7.04	0.160	0.130	1.8
23...	2000	834	440	8.30	--	8.36	8.14	0.245	0.200	1.7
23...	2300	661	350	8.80	--	5.80	5.80	0.330	0.250	[a]1.0
24...	0130	570	320	8.70	--	6.60	5.72	0.395	0.300	1.1
24...	0430	500	325	8.70	--	5.72	4.62	0.435	0.330	1.3
24...	1030	406	310	8.70	--	4.62	4.40	0.475	0.380	1.3
25...	1115	311	305	8.50	--	5.06	5.06	0.295	0.280	1.2
JUL										
06...	1115	263	425	8.10	27.0	7.92	--	--	--	--
AUG										
05...	1605	148	610	8.90	28.0	5.50	--	0.240	0.230	1.2
10...	0410	562	646	7.90	--	6.60	--	0.105	0.090	1.1
10...	0810	627	630	7.80	--	7.04	--	0.150	0.130	0.97
10...	1210	523	588	7.70	--	6.16	--	0.130	0.125	0.81
10...	1610	962	534	7.90	--	5.72	--	0.165	0.150	0.98
10...	1810	1100	626	8.00	--	6.38	--	0.085	0.065	1.5
10...	2010	993	495	7.50	--	5.72	--	0.165	0.160	0.78
11...	1120	382	537	7.80	--	7.26	--	0.190	0.180	1.0
11...	1420	339	508	7.80	--	7.26	--	0.170	0.155	0.83
12...	0850	245	451	7.80	--	5.94	--	0.195	0.190	1.2
31...	1115	161	550	8.40	23.0	5.94	--	0.055	0.055	1.1
SEP										
08...	1540	646	475	7.70	--	5.06	4.18	0.140	0.140	4.6
08...	1730	6790	312	7.70	--	3.96	3.74	0.320	0.260	4.0
08...	1900	7220	320	7.80	--	3.52	3.52	0.200	0.200	1.5
08...	2035	9720	310	7.80	--	3.30	3.08	0.420	0.380	3.6
08...	2040	9800	255	7.70	--	3.30	3.08	0.440	0.440	4.0
08...	2055	10000	275	7.80	--	3.52	2.86	1.38	0.410	1.4
08...	2200	10100	275	7.80	--	2.86	2.64	1.32	0.940	1.7
08...	2215	10300	273	7.70	--	2.42	2.20	1.70	1.32	5.9
09...	0015	11300	234	7.80	--	2.20	2.00	1.65	1.43	2.5
09...	0125	11700	228	7.70	--	2.00	2.00	1.65	0.990	4.9
09...	0145	11700	225	7.60	--	2.20	2.20	1.70	1.48	4.2
09...	0315	12200	225	7.70	--	2.20	2.20	1.82	1.54	2.4
09...	0445	12900	202	7.80	--	1.64	1.58	2.14	1.65	8.1
09...	0615	14200	188	7.70	--	1.46	1.40	2.20	1.76	6.8
09...	0945	18000	155	7.80	--	1.46	1.44	2.20	1.82	3.0
09...	1045	18700	158	7.80	--	1.38	1.30	1.98	1.60	7.8
09...	1205	19000	149	7.90	--	1.34	1.22	1.92	0.600	1.0
09...	1235	19000	140	7.70	--	1.34	1.30	0.770	0.770	2.0
09...	1400	18700	135	7.70	--	1.36	1.36	0.750	0.480	2.0
09...	1530	17700	150	7.60	--	1.42	1.40	0.420	0.420	1.7
09...	1605	17000	155	7.90	--	1.38	1.36	0.440	0.440	5.1
09...	1700	15900	155	7.60	--	1.46	1.44	0.340	0.340	1.6
09...	1900	12100	160	7.70	--	1.58	1.52	0.420	0.330	2.3
09...	2050	6830	186	7.70	--	1.76	1.70	0.280	0.240	1.7
09...	2220	4020	174	7.90	--	1.82	1.74	0.270	0.240	1.5
09...	2300	3310	199	7.70	--	1.92	1.80	0.260	0.230	[a]0.64

(a) Results within limits of analytical precision.

01576754 CONESTOGA RIVER AT CONESTOGA, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
APR										
04...	0.94	1.4	1.2	8.6	0.220	0.110	0.046	16	33	72
05...	0.70	1.3	0.86	7.9	0.250	0.110	0.006	12	42	144
06...	0.92	2.0	1.5	6.9	0.390	0.200	0.120	15	44	135
06...	0.85	1.7	1.2	7.2	0.330	0.200	0.003	16	75	317
06...	0.77	1.9	1.0	7.4	0.360	0.160	0.100	16	119	615
07...	0.74	1.6	0.92	6.5	0.450	0.170	0.086	19	95	431
08...	0.52	0.84	0.82	7.6	0.240	0.140	<0.006	15	35	97
27...	0.58	0.80	0.71	7.4	0.180	0.120	0.096	17	16	21
MAY										
18...	0.62	1.1	0.70	9.0	0.170	0.060	0.060	--	29	26
JUN										
03...	--	--	--	--	--	--	--	4.5	90	80
22...	1.1	1.3	1.1	10	0.650	0.410	0.320	4.9	110	76
22...	0.64	1.0	0.71	8.7	0.620	0.460	0.410	3.6	130	119
23...	1.0	1.2	1.1	7.8	0.790	0.460	0.360	3.4	330	374
23...	0.86	1.1	0.93	7.9	0.960	0.460	0.430	4.3	310	442
23...	0.95	1.3	1.1	8.1	0.880	0.470	0.440	1.3	350	1720
23...	0.78	1.1	0.83	9.2	1.32	0.550	0.450	3.8	970	5740
23...	1.3	1.6	1.4	8.0	1.32	0.660	0.450	4.9	410	2590
23...	1.2	1.6	1.4	9.3	1.00	0.450	0.420	3.7	310	2000
23...	1.6	2.0	1.8	9.2	0.480	0.440	0.420	4.0	270	1720
23...	1.5	2.0	1.8	8.6	0.920	0.400	0.320	4.5	230	1350
23...	1.1	1.8	1.3	9.7	0.480	0.350	0.300	4.0	170	808
23...	0.98	1.5	1.1	9.6	0.600	0.320	0.260	4.6	140	529
23...	0.92	1.9	1.0	9.6	0.510	0.350	0.300	4.4	190	534
23...	0.83	1.9	1.0	10	0.540	0.350	0.320	5.2	260	585
23...	[a]1.1	1.4	1.4	7.2	0.670	0.370	0.330	2.6	350	625
23...	0.98	1.5	1.1	9.6	0.600	0.320	0.260	4.6	140	529
23...	0.92	1.9	1.0	9.6	0.510	0.350	0.300	4.4	190	534
23...	0.83	1.9	1.0	10	0.540	0.350	0.320	5.2	260	585
23...	1.1	1.4	1.4	7.2	0.670	0.370	0.330	2.6	350	625
24...	1.0	1.5	1.3	8.1	0.730	0.400	0.360	5.0	360	554
24...	1.1	1.7	1.4	7.5	0.880	0.410	0.370	4.7	380	513
24...	1.2	1.8	1.6	6.4	0.930	0.430	0.360	6.2	380	417
25...	1.2	1.5	1.5	6.5	0.890	0.500	0.440	5.2	240	202
JUL										
06...	--	1.9	1.8	9.8	0.600	0.380	0.310	3.6	110	78
AUG										
05...	0.65	1.4	0.88	6.9	0.620	0.530	0.440	5.9	25	10
10...	0.64	1.2	0.73	7.8	0.660	0.450	0.400	4.3	110	167
10...	0.43	1.1	0.56	8.2	0.700	0.480	0.430	5.9	89	150
10...	0.51	0.94	0.64	7.1	0.560	0.410	0.360	5.1	64	90
10...	0.75	1.1	0.90	6.9	0.490	0.340	0.300	5.1	57	147
10...	0.80	1.5	0.86	7.9	0.600	0.260	0.220	6.2	88	262
10...	0.58	0.94	0.74	6.7	0.580	0.300	0.250	7.8	85	228
11...	0.62	1.2	0.80	8.5	0.410	0.320	0.270	4.6	59	61
11...	0.74	1.0	0.90	8.3	0.420	0.330	0.280	4.8	46	42
12...	0.71	1.4	0.90	7.3	0.460	0.370	0.320	5.4	56	37
31...	0.78	1.1	0.84	7.1	0.470	0.420	0.450	3.3	15	6.5
SEP										
08...	1.3	4.8	1.4	9.8	0.720	0.560	0.500	5.3	2670	4660
08...	1.8	4.3	2.0	8.2	1.10	--	0.360	9.2	6140	113000
08...	0.74	1.7	0.94	5.3	0.470	0.400	0.340	6.5	1900	37000
08...	0.84	4.0	1.2	7.3	0.920	0.270	0.150	6.3	2630	69000
08...	1.3	4.5	1.7	7.8	0.620	0.240	0.170	6.2	2700	71400
08...	0.66	2.8	1.1	6.3	2.80	0.240	0.170	6.0	2920	78800
08...	0.38	3.1	1.3	5.9	4.80	0.180	0.100	7.3	3970	108000
08...	2.7	7.6	4.0	10	2.80	0.190	0.090	7.5	4230	118000
09...	0.99	4.1	2.4	6.3	0.660	0.240	0.090	5.4	3120	95200
09...	1.4	6.5	2.4	8.5	0.650	0.300	0.110	6.5	2640	83400
09...	0.92	5.9	2.4	8.1	0.850	0.240	0.120	7.0	2600	82100
09...	0.74	4.2	2.3	6.4	1.20	0.210	0.100	6.4	2520	83000
09...	0.55	10	2.2	12	0.820	0.270	0.120	5.8	2480	86400
09...	0.0	9.0	1.8	10	0.820	0.230	0.130	7.4	2460	94300
09...	0.62	5.2	2.4	6.7	2.90	0.240	0.047	8.1	2220	108000
09...	0.83	9.8	2.4	11	0.710	0.250	0.090	8.2	2030	102000
09...	0.83	3.0	1.4	4.3	0.960	0.230	0.120	7.7	1630	83600
09...	0.97	2.8	1.7	4.1	0.620	0.250	0.140	8.4	1530	78500
09...	0.86	2.8	1.3	4.1	1.10	0.260	0.010	7.4	1270	64100
09...	1.0	2.1	1.4	3.6	0.580	0.260	0.037	9.2	1050	50200
09...	1.7	5.5	2.1	6.9	0.660	0.350	0.200	7.1	935	42900
09...	0.78	1.9	1.1	3.4	0.630	0.260	0.038	7.5	737	31600
09...	1.2	2.8	1.5	4.3	1.30	0.260	0.150	6.7	554	18100
09...	0.76	2.0	1.0	3.8	0.550	0.280	0.190	7.2	529	9760
09...	0.66	1.8	0.90	3.6	0.500	0.270	0.150	7.0	342	3710
09...	[a]0.67	0.90	0.90	2.8	0.480	0.270	0.190	6.9	338	3020

(a) Results within limits of analytical precision.

01576754 CONESTOGA RIVER AT CONESTOGA, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)
SEP										
10...	0130	2190	205	7.75	--	2.28	1.56	0.240	0.240	1.2
10...	0330	1850	220	7.70	--	2.64	2.28	0.230	0.230	1.5
10...	0630	1570	249	7.70	--	3.00	2.76	0.220	0.220	0.78
10...	0655	1540	249	7.80	--	3.00	2.88	0.240	0.220	1.4
10...	1730	1040	317	7.60	--	3.74	3.74	0.200	0.180	1.0
11...	1050	726	409	7.60	--	5.72	5.06	0.190	0.190	1.3
12...	0710	570	484	7.50	--	6.16	6.16	0.120	0.120	1.0
13...	0545	1280	494	8.20	--	6.60	6.60	0.125	0.105	0.85
13...	1500	1560	509	8.30	--	6.82	6.60	0.120	0.090	0.70
13...	2315	1900	486	8.40	--	6.38	6.38	0.135	0.110	0.85
15...	1340	745	428	8.40	--	5.06	5.06	0.170	0.155	[a]0.81
18...	0745	998	532	7.70	--	8.36	7.92	0.100	0.080	2.0
18...	0945	3130	554	7.90	24.0	8.58	8.36	0.140	0.100	1.3
18...	1215	4760	471	7.80	--	8.14	7.92	0.220	0.140	2.6
18...	1605	4620	315	7.90	--	4.62	4.62	0.260	0.190	4.7
19...	0730	2720	299	7.80	--	4.40	3.74	0.330	0.240	2.2
19...	1145	2500	324	7.80	--	4.40	4.18	0.310	0.220	2.2

DATE	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
SEP										
10...	0.86	1.4	1.1	3.7	0.620	0.250	0.110	5.6	304	1800
10...	0.87	1.7	1.1	4.4	0.490	0.260	0.087	7.3	271	1350
10...	0.58	1.0	0.80	4.0	0.420	0.280	0.190	6.7	209	886
10...	0.78	1.6	1.0	4.6	0.580	0.290	0.130	7.2	184	765
10...	0.78	1.2	0.96	5.0	0.370	0.240	0.170	5.6	97	272
11...	1.3	1.5	1.5	7.2	0.370	0.300	0.210	5.4	55	108
12...	0.78	1.1	0.90	7.3	0.310	0.260	0.180	3.5	23	35
13...	0.77	0.98	0.88	7.6	0.600	0.390	0.270	4.5	120	415
13...	0.36	0.82	0.45	7.6	0.570	0.320	0.210	3.8	101	425
13...	0.61	0.98	0.72	7.4	0.570	0.320	0.280	4.3	154	790
15...	[a]0.82	0.98	0.98	6.0	0.530	0.400	0.360	7.4	57	115
18...	0.84	2.1	0.92	10	5.17	0.280	0.270	5.2	117	315
18...	0.75	1.4	0.85	10	4.95	0.300	0.280	6.5	522	4410
18...	0.66	2.9	0.80	11	4.40	0.240	0.220	6.3	743	9550
18...	0.81	4.9	1.0	9.6	0.600	0.320	0.310	9.6	1280	16000
19...	0.66	2.5	0.90	6.9	0.600	0.320	0.350	8.6	415	3050
19...	0.58	2.5	0.80	6.9	0.530	0.360	0.340	7.5	372	2510

(a) Results within limits of analytical precision.

01577400 BALD EAGLE CREEK NEAR FAWN GROVE, PA

LOCATION.--Lat 39°44'54", long 76°27'50", York County, Hydrologic Unit 02050306, on right bank 6 feet upstream from culvert on Kunkle Road, 1,100 ft upstream from small right-bank tributary, and 1.6 mi north of Fawn Grove.

DRAINAGE AREA.--0.43 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1985 to current year.

GAGE.--Water-stage recorder and wooden control. Elevation of gage is 600 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25 ft^3/s, Sept. 18, 1987, gage height, 2.15 ft, from rating curve extended above 2.2 ft^3/s on basis of step-backwater analysis; no flow Jan. 29 to Feb. 1, 1986, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 12 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 24	2130	24	2.12	Sept. 18	0100	*25	*2.15
Sept. 8	1615	16	1.98				

Minimum discharge, 0.03 ft^3/s, Feb. 23, gage height, 1.16 ft, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.34	.16	.17	.32	.31	1.8	.40	.35	.29	.33	.22	.30
2	.25	.20	.44	.38	.37	.56	.38	.36	.29	.32	.22	.15
3	.17	.17	.57	.34	.42	.50	.40	.36	.29	.26	.20	.13
4	.17	.18	.32	.31	.42	.45	.52	.52	.34	.22	.17	.11
5	.15	.37	.29	.29	.37	.42	.48	.40	.30	.24	.35	.12
6	.11	.29	.27	.29	.36	.41	.58	.36	.27	.21	.22	.24
7	.12	.19	.26	.30	.37	.42	.50	.35	.28	.23	.19	.16
8	.12	.29	.26	.30	.37	.43	.45	.35	.28	.27	.18	2.3
9	.12	.21	.43	.29	.35	.44	.43	.34	.32	.22	.20	.44
10	.12	.17	.33	.38	.33	.40	.40	.33	.28	.22	.19	.29
11	.13	.40	.31	.35	.33	.39	.41	.34	.27	.20	.15	.25
12	.13	.26	.30	.31	.33	.39	.41	.35	.29	.62	.15	.40
13	.18	.19	.26	.32	.33	.39	.40	.33	.28	.32	.14	.84
14	.21	.21	.25	.32	.31	.38	.38	.34	.26	.53	.10	.31
15	.13	.20	.25	.35	.30	.39	.39	.37	.26	.31	.08	.27
16	.12	.20	.25	.33	.31	.37	.41	.34	.26	.28	.08	.25
17	e.12	.19	.24	.31	.29	.37	.43	.32	.25	.26	.10	.23
18	e.11	.31	.47	.38	.29	.37	.40	.33	.26	.29	.14	1.6
19	e.10	.28	.34	.70	.29	.38	.38	.43	.25	.25	.15	.44
20	e.11	.45	.29	.52	.29	.37	.37	.62	.26	.25	.14	.52
21	e.10	.35	.27	.43	.29	.37	.37	.43	.25	.24	.12	.50
22	e.11	.23	.26	e.40	.30	.36	.35	.36	.29	.23	.19	.39
23	e.10	.20	.25	e.37	.51	.38	.37	.35	.27	.22	.13	.22
24	e.10	.23	2.6	e.35	.32	.38	.40	.34	.25	.22	.11	.22
25	.13	.18	.85	e.33	.32	.38	.38	.34	.20	.22	.11	.21
26	.23	.48	.46	e.32	.32	.38	.37	.33	.20	.22	.12	.20
27	.18	.32	.38	e.30	.33	.38	.36	.34	.19	.22	.12	.23
28	.15	.25	.35	e.27	.38	.42	.36	.32	.16	.21	.13	.23
29	.13	.22	.33	e.28	---	.40	.35	.32	.13	.21	.19	.23
30	.14	.20	.32	e.27	---	.42	.35	.31	.18	.22	.14	.24
31	.13	---	.31	e.28	---	.58	---	.31	---	.21	.20	---
TOTAL	4.51	7.58	12.68	10.69	9.51	14.08	12.18	11.24	7.70	8.25	4.93	12.02
MEAN	.15	.25	.41	.34	.34	.45	.41	.36	.26	.27	.16	.40
MAX	.34	.48	2.6	.70	.51	1.8	.58	.62	.34	.62	.35	2.3
MIN	.10	.16	.17	.27	.29	.36	.35	.31	.13	.20	.08	.11
CFSM	.34	.59	.95	.80	.79	1.06	.94	.84	.60	.62	.37	.93
IN.	.39	.66	1.10	.92	.82	1.22	1.05	.97	.67	.71	.43	1.04

CAL YR 1986 TOTAL 117.78 MEAN .32 MAX 2.6 MIN .00 CFSM .75 IN. 10.19
WTR YR 1987 TOTAL 115.37 MEAN .32 MAX 2.6 MIN .08 CFSM .74 IN. 9.98

e Estimated

MUDDY CREEK BASIN

01577400 BALD EAGLE CREEK NEAR FAWN GROVE, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1986 to current year.

INSTRUMENTATION.--Automatic sediment pumping sampler since October 1985.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)
OCT							
01...	1925	0.08	3.20	--	0.11	--	7.5
01...	2005	0.99	4.30	--	1.10	--	23
01...	2145	6.0	3.20	2.80	1.30	1.30	11
01...	2225	1.3	4.30	3.80	1.10	1.10	15
02...	0005	0.5	4.20	3.50	0.84	0.77	25
02...	0150	0.42	3.60	3.20	0.57	0.55	3.8
02...	0330	0.33	3.40	3.10	0.35	0.32	2.4
02...	0930	0.25	3.40	2.90	0.11	0.06	1.4
15...	0855	0.13	4.20	4.10	<0.01	<0.01	0.9
NOV							
05...	0930	0.29	3.50	--	<0.01	--	1.3
05...	1310	0.41	4.20	--	0.40	--	4.1
05...	1710	0.34	4.30	--	0.55	--	5.0
05...	1910	0.55	4.00	--	1.00	--	22
05...	2350	0.51	3.60	--	0.73	--	5.5
06...	0750	0.3	3.90	--	0.21	--	1.9
11...	0800	0.31	3.60	--	0.06	--	1.0
11...	0840	0.44	3.70	--	0.02	--	0.9
11...	1300	0.76	2.50	--	2.70	--	4.3
DEC							
12...	0845	0.29	4.20	4.20	0.23	0.23	0.8
18...	0510	0.42	3.80	--	0.14	--	1.0
18...	0950	0.64	2.90	--	3.70	--	15
18...	1630	0.5	3.40	--	1.20	--	3.3
18...	2130	0.42	3.90	--	0.48	--	1.4
19...	0430	0.31	4.10	--	0.17	--	0.6
19...	1250	0.33	4.20	--	0.08	--	0.7
31...	1030	0.31	4.80	4.10	0.02	<0.01	0.5
JAN							
21...	1050	0.42	4.60	4.50	0.04	0.02	0.7
FEB							
19...	0930	0.29	5.30	5.30	0.04	0.04	0.9
28...	2030	0.47	4.00	--	4.90	--	11
28...	2350	0.52	0.80	--	6.70	--	19
MAR							
01...	0030	0.62	0.90	--	6.50	--	15
01...	0110	0.79	<0.10	--	6.70	--	22
01...	0250	0.89	2.80	--	3.90	--	12
01...	0610	0.79	3.40	--	2.50	--	8.9
01...	0930	2.3	1.80	--	2.20	--	13
01...	1250	6.1	1.90	--	0.86	--	15
01...	1950	0.95	3.30	--	0.57	--	1.9
12...	1000	0.40	4.90	4.90	0.04	0.04	0.5
APR							
23...	1240	0.37	4.60	4.60	0.05	0.04	0.8
MAY							
19...	2050	0.59	3.60	--	0.13	--	2.2
19...	2150	0.83	3.50	--	0.63	--	4.9
19...	2310	0.77	4.00	--	0.84	--	7.5
20...	0010	0.85	3.50	--	0.55	--	4.7
20...	0210	0.67	3.80	--	0.42	--	3.1
20...	0510	1.2	2.90	--	0.71	--	8.2
20...	1050	0.59	3.40	--	0.28	--	2.1
20...	1530	0.5	3.70	--	0.12	--	1.6
26...	0930	0.33	4.20	4.20	0.04	0.03	0.7
JUN							
11...	0936	0.27	4.10	3.90	0.04	0.04	0.4

01577400 BALD EAGLE CREEK NEAR FAWN GROVE, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHOROUS TOTAL (MG/L AS P)	PHOSPHOROUS DISSOLVED (MG/L AS P)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
OCT							
01...	--	11	0.74	--	--	130	0.03
01...	--	27	0.12	--	--	6440	17
01...	7.9	14	2.90	1.50	1.10	--	--
01...	6.2	19	4.60	1.20	0.94	--	--
02...	3.5	29	1.80	0.80	0.59	--	--
02...	2.8	7.4	0.67	0.50	0.37	--	--
02...	1.6	5.8	0.42	0.32	0.25	--	--
02...	<0.2	4.8	0.19	0.15	0.12	--	--
15...	0.9	5.1	0.03	0.03	0.03	0	0.0
NOV							
05...	--	4.8	0.12	--	--	0	0.0
05...	--	8.3	0.48	--	--	33	0.04
05...	--	9.3	0.80	--	--	28	0.03
05...	--	26	1.50	--	--	230	0.34
05...	--	9.1	1.50	--	--	50	0.07
06...	--	5.8	0.51	--	--	18	0.02
11...	--	4.6	0.29	--	--	--	--
11...	--	4.6	0.13	--	--	12	0.01
11...	--	6.8	0.05	--	--	227	0.47
DEC							
12...	0.8	5.0	0.11	0.09	0.08	1	0.0
18...	--	4.8	0.09	--	--	296	0.34
18...	--	18	2.40	--	--	190	0.33
18...	--	6.7	0.71	--	--	37	0.05
18...	--	5.3	0.25	--	--	15	0.02
19...	--	4.7	0.14	--	--	3	0.0
19...	--	4.9	0.10	--	--	1	0.0
31...	0.2	5.3	0.05	0.02	0.02	1	0.0
JAN							
21...	0.4	5.3	0.06	0.04	0.03	4	0.0
FEB							
19...	0.9	6.2	0.03	0.03	0.03	--	--
28...	--	15	0.58	--	--	64	0.08
28...	--	20	0.52	--	--	124	0.17
MAR							
01...	--	16	0.53	--	--	--	--
01...	--	--	0.79	--	--	514	1.1
01...	--	15	0.45	--	--	277	0.67
01...	--	12	0.70	--	--	87	0.19
01...	--	15	1.00	--	--	1270	7.9
01...	--	17	0.81	--	--	--	--
01...	--	5.2	0.29	--	--	--	--
12...	0.5	5.4	0.03	0.02	0.01	2	0.0
APR							
23...	0.8	5.4	0.04	0.04	0.02	6	0.01
MAY							
19...	--	5.8	0.19	--	--	209	0.33
19...	--	8.4	0.80	--	--	467	1.0
19...	--	12	1.20	--	--	201	0.42
20...	--	8.2	0.91	--	--	247	0.57
20...	--	6.9	0.63	--	--	67	0.12
20...	--	11	1.70	--	--	553	1.8
20...	--	5.5	0.41	--	--	40	0.06
20...	--	5.3	0.16	--	--	22	0.03
26...	0.7	4.9	0.05	0.03	<0.01	9	0.01
JUN							
11...	0.4	4.5	0.05	0.05	0.01	--	--

01577400 BALD EAGLE CREEK NEAR FAWN GROVE, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)
JUL							
09...	1140	0.27	3.80	3.40	0.05	0.03	1.0
13...	0300	0.37	3.10	--	0.19	--	2.0
14...	1400	3.5	2.30	--	0.56	--	4.1
14...	1420	5.8	2.10	2.10	0.98	0.98	4.1
14...	1440	2.0	2.20	--	0.71	--	4.1
14...	1500	1.7	2.20	1.80	0.58	0.50	4.8
14...	1640	0.6	2.80	--	0.39	--	3.1
14...	1700	0.59	2.80	2.60	0.36	0.31	3.1
14...	1800	0.5	2.70	--	0.35	--	2.9
14...	1820	0.53	2.70	2.50	0.45	0.45	4.1
14...	1920	0.45	2.90	--	0.26	--	2.1
14...	2000	0.4	2.90	--	0.18	--	4.1
AUG							
05...	1715	1.1	3.90	--	0.41	--	21
05...	1735	4.0	3.40	--	1.60	--	25
05...	1815	1.6	4.20	--	1.50	--	28
05...	2015	0.50	2.80	--	4.40	--	12
06...	0015	0.33	2.80	--	0.82	--	2.8
17...	0840	0.2	3.80	3.60	0.02	0.02	0.6
29...	0245	0.35	3.90	--	0.04	--	0.4
31...	2400	0.59	4.20	--	0.35	--	0.35
SEP							
01...	0020	1.5	3.80	--	0.20	--	1.4
01...	0040	1.2	2.80	--	0.32	--	<0.42
01...	0400	0.33	3.80	--	0.26	--	0.26
08...	1025	0.39	3.40	--	0.03	--	1.1
08...	1145	0.45	0.10	--	0.02	--	0.2
08...	1435	0.74	3.00	2.40	0.76	0.76	--
08...	1455	1.8	3.30	--	0.90	--	11
08...	1515	8.8	3.20	--	0.94	--	11
08...	1535	11	1.80	1.50	0.79	0.73	--
08...	1710	7.0	1.60	0.60	0.43	0.26	6.6
08...	1730	4.3	1.80	--	0.46	--	2.6
08...	2050	2.1	2.30	--	0.32	--	2.0
08...	2230	0.83	2.70	--	0.26	--	1.7
09...	0600	0.83	2.80	--	0.18	--	1.0
09...	0820	0.58	3.00	--	0.17	--	0.8
09...	1345	0.33	3.40	--	0.06	--	0.6
16...	0805	0.27	4.10	3.90	0.03	0.03	0.4
18...	0020	0.8	3.70	--	0.07	--	1.2
18...	0040	7.6	1.80	--	0.18	--	4.7
18...	0140	12	2.00	--	0.31	--	10
18...	0240	3.8	2.40	--	0.31	--	2.9

01577400 BALD EAGLE CREEK NEAR FAWN GROVE, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
JUL							
09...	0.7	4.8	0.10	0.03	0.03	9	0.01
13...	--	5.1	0.27	--	--	--	--
14...	--	6.4	2.35	--	--	8730	82
14...	3.9	6.2	3.80	0.29	0.22	--	--
14...	--	6.3	4.40	--	--	2610	14
14...	2.4	7.0	1.80	0.26	0.21	22	0.1
14...	--	5.9	0.66	--	--	228	0.37
14...	2.6	5.9	0.61	0.19	0.15	--	--
14...	--	5.6	0.48	--	--	127	0.17
14...	3.8	6.8	0.63	0.33	0.27	--	--
14...	--	5.0	0.29	--	--	--	--
14...	--	7.0	0.26	--	--	--	--
AUG							
05...	--	25	3.40	--	--	7130	21
05...	--	28	4.90	--	--	6160	67
05...	--	32	0.91	--	--	--	--
05...	--	15	0.18	--	--	--	--
06...	--	5.6	0.34	--	--	--	--
17...	0.6	4.4	0.06	0.02	<0.01	2	0.0
29...	--	4.3	0.13	--	--	27	0.03
31...	--	4.6	0.55	--	--	963	1.5
SEP							
01...	--	5.2	0.40	--	--	1620	6.6
01...	--	--	2.20	--	--	1400	4.5
01...	--	4.1	0.75	--	--	70	0.06
08...	--	4.5	0.10	--	--	68	0.07
08...	--	0.3	0.30	--	--	--	--
08...	3.2	--	0.97	0.67	0.51	--	--
08...	--	14	1.10	--	--	162	0.79
08...	--	14	2.10	--	--	227	5.4
08...	2.9	--	1.10	0.81	0.66	--	--
08...	1.0	8.2	0.88	0.17	0.12	--	--
08...	--	4.4	0.72	--	--	6390	74
08...	--	4.3	0.50	--	--	468	2.7
08...	--	4.4	0.38	--	--	112	0.25
09...	--	3.8	0.26	--	--	72	0.16
09...	--	3.8	0.20	--	--	--	--
09...	--	4.0	0.23	--	--	--	--
16...	<0.2	4.5	0.09	0.07	0.02	4	0.0
18...	--	4.9	0.56	--	--	150	0.32
18...	--	6.5	0.25	--	--	4670	96
18...	--	12	0.09	--	--	6710	217
18...	--	5.3	0.59	0.59	--	505	5.2

01577400 BALD EAGLE CREEK NEAR FAWN GROVE, PA--Continued

INSTANTANEOUS SUSPENDED-SEDIMENT DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT					
01...	1925	0.08	--	130	0.03
01...	1945	0.5	--	267	0.36
01...	2005	0.99	--	6440	17
01...	2045	1.4	--	1070	4.0
01...	2125	0.93	--	7550	19
01...	2205	2.2	--	2220	13
01...	2345	1.1	--	219	0.65
02...	0205	0.37	--	38	0.04
02...	0950	0.25	--	10	0.01
15...	0855	0.13	--	0	0.0
NOV					
05...	0930	0.29	--	0	0.0
05...	1310	0.41	--	33	0.04
05...	1710	0.34	--	28	0.03
05...	1910	0.55	--	230	0.34
05...	2350	0.51	--	50	0.07
06...	0750	0.3	--	18	0.02
07...	2340	0.26	--	9	0.01
08...	0040	0.47	--	69	0.09
08...	0600	0.29	--	15	0.01
08...	1600	0.23	--	5	0.0
11...	0820	0.36	--	6	0.01
11...	0840	0.44	--	12	0.01
11...	1300	0.76	--	227	0.47
18...	1950	0.3	118	36	0.03
18...	2030	0.72	169	348	0.68
18...	2110	1.3	379	1300	4.6
18...	2150	1.6	366	792	3.4
18...	2230	0.72	331	413	0.8
19...	0030	0.45	245	6	0.01
19...	0810	0.27	154	7	0.01
20...	1700	0.29	--	14	0.01
20...	1740	0.54	--	39	0.06
20...	1800	0.47	--	54	0.07
20...	1840	0.65	--	60	0.11
20...	2000	0.83	--	1470	3.3
20...	2020	1.5	--	5980	24
20...	2040	3.0	--	5390	44
20...	2140	1.9	--	1640	8.4
20...	2240	1.1	--	623	1.9
21...	0020	0.59	--	70	0.11
26...	0857	0.7	--	1410	2.7
26...	0927	0.52	--	690	0.97
26...	1007	0.46	--	393	0.49
26...	1027	0.43	--	299	0.35
26...	1040	0.42	--	343	0.39
26...	1100	0.4	--	182	0.2
26...	1120	0.44	--	155	0.18
26...	1245	0.37	--	74	0.07
26...	1425	0.63	--	222	0.38
26...	1525	0.57	--	213	0.33
26...	1605	0.58	--	351	0.55
26...	1645	0.97	--	491	1.3
26...	1705	1.1	--	1220	3.6
26...	1725	1.3	--	1150	4.0
26...	1745	0.97	--	927	2.4
26...	1845	0.67	--	229	0.41
26...	2025	0.57	--	52	0.08
27...	0005	0.42	--	14	0.02
27...	0525	0.36	--	7	0.01

01577400 BALD EAGLE CREEK NEAR FAWN GROVE, PA--Continued

INSTANTANEOUS SUSPENDED-SEDIMENT DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
DEC					
12...	0845	0.29	--	1	0.0
18...	0510	0.42	--	296	0.34
18...	0950	0.64	--	190	0.33
18...	1630	0.5	--	37	0.05
18...	2130	0.42	--	15	0.02
19...	0430	0.31	--	3	0.0
19...	1022	0.33	--	470	0.42
19...	1250	0.33	--	1	0.0
24...	1720	0.66	--	60	0.11
24...	1840	1.2	--	669	2.2
24...	1920	2.7	--	1450	11
24...	2000	5.7	--	4910	76
24...	2020	9.2	--	6040	150
31...	1030	0.31	103	1	0.0
JAN					
10...	1420	0.47	--	26	0.03
10...	1740	0.42	--	75	0.08
10...	2220	0.4	--	27	0.03
18...	1010	0.41	--	68	0.08
18...	1310	0.5	--	27	0.04
18...	1730	0.5	--	11	0.02
19...	0610	0.37	--	34	0.03
19...	0850	0.62	--	268	0.45
19...	1310	1.1	--	592	1.8
21...	1050	0.42	--	4	0.0
FEB					
23...	0520	0.76	--	67	0.14
23...	0640	1.9	--	26	0.13
23...	0820	1.1	--	23	0.07
23...	1240	0.37	--	14	0.01
28...	2030	0.47	--	64	0.08
28...	2350	0.52	--	124	0.17
MAR					
01...	0110	0.79	--	514	1.1
01...	0250	0.89	--	277	0.67
01...	0300	0.83	--	202	0.45
01...	0610	0.79	--	87	0.19
01...	0930	2.3	--	1270	7.9
01...	1230	4.0	--	3250	35
01...	1310	5.8	--	7310	114
01...	1850	1.0	--	113	0.31
12...	1000	0.40	103	2	0.0
APR					
23...	1240	0.37	101	6	0.01
MAY					
04...	1000	0.72	306	235	0.46
04...	1005	0.73	306	283	0.56
04...	1035	0.84	286	467	1.1
19...	2050	0.59	--	209	0.33
19...	2150	0.83	--	467	1.0
19...	2310	0.77	--	201	0.42
20...	0010	0.85	--	247	0.57
20...	0210	0.67	--	67	0.12
20...	0510	1.2	--	553	1.8
20...	1050	0.59	--	40	0.06
20...	1530	0.5	--	22	0.03
26...	0930	0.33	94	9	0.01
JUN					
09...	0905	0.46	104	610	0.76
09...	0925	0.46	107	126	0.16

01577400 BALD EAGLE CREEK NEAR FAWN GROVE, PA--Continued

INSTANTANEOUS SUSPENDED-SEDIMENT DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
JUL					
01...	1920	0.17	97	235	0.11
01...	2010	0.27	245	1640	1.2
01...	2050	3.1	243	1080	9.0
01...	2210	0.54	191	186	0.27
02...	0010	0.4	173	192	0.21
02...	2245	0.4	220	62	0.07
03...	0035	0.37	230	70	0.07
08...	0030	0.27	124	200	0.15
08...	0110	0.45	131	90	0.11
09...	1140	0.27	110	9	0.01
12...	1820	1.4	169	2040	7.7
12...	1920	1.1	216	276	0.82
12...	2100	0.59	245	110	0.18
12...	2300	0.5	175	57	0.08
13...	0140	0.4	146	38	0.04
13...	0240	0.4	144	56	0.06
14...	1300	0.27	--	20	0.02
14...	1400	3.5	130	8730	82
14...	1440	2.0	146	2610	14
14...	1500	1.7	--	22	0.1
14...	1520	1.2	141	495	1.6
14...	1600	0.76	--	27	0.05
14...	1640	0.6	157	228	0.37
14...	1800	0.5	184	127	0.17
14...	1940	0.45	155	38	0.05
AUG					
05...	1715	1.1	119	7130	21
05...	1735	4.0	287	6160	67
05...	1755	2.6	300	1420	10
05...	1955	0.52	135	103	0.14
05...	2355	0.34	--	55	0.05
17...	0840	0.2	--	2	0.0
29...	0245	0.35	--	27	0.03
31...	2400	0.59	--	963	1.5
SEP					
01...	0020	1.5	--	1620	6.6
01...	0040	1.2	--	1400	4.5
01...	0400	0.33	--	70	0.06
08...	1025	0.39	110	68	0.07
08...	1455	1.8	304	162	0.79
08...	1515	8.8	305	227	5.4
08...	1730	4.3	128	6390	74
08...	2050	2.1	138	468	2.7
08...	2230	0.83	149	112	0.25
09...	0600	0.83	138	72	0.16
16...	0805	0.27	--	4	0.0
18...	0020	0.8	--	150	0.32
18...	0040	7.6	--	4670	96
18...	0140	12	--	6710	217
18...	0240	3.8	--	505	5.2

01613050 TONOLOWAY CREEK NEAR NEEDMORE, PA

LOCATION.--Lat 39°53'54", long 78°07'57", Fulton County, Hydrologic Unit 02070004, on left bank 10 ft downstream from bridge on Legislative Route 29015, 0.2 mi upstream from Foster Creek, and 3.5 mi north of Needmore.

DRAINAGE AREA.--10.7 mi².

PERIOD OF RECORD.--Occasional discharge measurements and annual maximums, water years 1963-65. October 1965 to current year.

REVISED RECORDS.--WSP 2103: 1966-68(M).

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 688.94 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 2, 1965, crest-stage gage at same site at datum 2.0 ft higher.

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

AVERAGE DISCHARGE.--22 years, 12.4 ft³/s, 15.74 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,300 ft³/s, June 22, 1972, gage height, 9.17 ft, from rating curve extended above 540 ft³/s on basis of contracted-opening measurement of peak flow; no flow many days.

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

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 4	1414	*313	*5.42	No other peak greater than base discharge.			

Minimum daily discharge, 0.06 ft³/s, Aug. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.21	1.0	9.1	13	e10	51	74	8.8	20	2.1	.42	.26
2	.70	1.2	11	13	e11	67	44	9.6	25	2.5	.45	.23
3	.42	1.3	25	11	e11	49	29	9.2	20	2.3	.71	.19
4	.61	1.5	21	9.4	e10	33	176	17	16	1.7	.46	.15
5	.73	4.4	18	e8.8	e10	26	153	16	13	1.5	.70	.14
6	.43	5.6	15	e8.0	e11	21	121	16	10	1.5	.83	e.11
7	.33	3.2	13	e7.6	e10	19	114	15	8.8	4.8	.51	e.12
8	.36	4.1	11	e7.2	e9.0	20	73	13	7.0	1.7	.50	e.20
9	.37	6.0	24	e6.9	e8.5	20	45	12	6.7	1.4	.42	e.24
10	.34	5.6	29	e6.4	e8.0	17	31	10	5.3	1.4	.38	e.23
11	.31	8.8	e22	e6.2	e7.2	14	25	9.1	4.3	1.4	.28	e.25
12	.35	8.9	e18	e6.1	e7.0	12	23	8.2	4.6	2.7	.25	e.35
13	.71	7.7	e16	e6.0	e6.6	11	19	6.8	4.6	1.8	.23	e.70
14	1.1	6.9	e13	e6.0	e6.4	10	16	6.0	4.0	2.9	.22	e.29
15	.65	6.4	e11	e5.8	e6.2	9.9	16	6.0	3.0	2.1	.21	e.23
16	.55	5.8	e9.5	e5.6	e6.0	9.1	19	5.0	2.5	1.7	.18	e.20
17	.55	5.0	e8.7	e6.0	e5.9	8.2	43	4.3	2.1	1.6	.16	e.70
18	.53	6.2	13	e8.0	e5.8	7.4	56	11	1.8	1.4	.13	e1.8
19	.48	12	e11	25	e5.6	6.9	41	13	1.7	1.2	.09	e1.2
20	.49	12	e10	35	e5.4	6.6	30	20	8.7	1.1	.07	e.90
21	.49	23	e8.8	27	e5.3	6.2	24	19	9.6	1.0	.06	e.80
22	.49	17	e8.5	23	e5.2	5.9	20	16	8.7	.89	.27	e.60
23	.50	13	e8.5	20	e5.2	5.5	17	16	6.2	.84	.51	e.50
24	.50	10	33	e17	e5.2	5.2	18	20	4.6	.82	.24	e.40
25	.55	7.7	82	e16	e5.4	5.5	15	16	3.5	.70	.22	e.31
26	1.5	19	55	e14	e5.8	5.7	12	15	4.0	.64	.28	e.25
27	1.2	28	36	e13	7.9	5.1	11	15	3.4	.63	.46	e.22
28	.88	22	26	e12	13	6.0	12	13	2.5	.54	.45	e.20
29	.91	16	21	e11	---	5.1	11	10	2.0	.50	.65	e.21
30	.92	12	18	e10	---	21	9.6	8.8	2.0	.48	.28	e.24
31	.94	---	15	e9.5	---	72	---	7.9	---	.46	.24	---
TOTAL	19.10	281.3	620.1	373.5	213.6	561.3	1297.6	372.7	215.6	46.30	10.86	12.22
MEAN	.62	9.38	20.0	12.0	7.63	18.1	43.3	12.0	7.19	1.49	.35	.41
MAX	1.5	28	82	35	13	72	176	20	25	4.8	.83	1.8
MIN	.21	1.0	8.5	5.6	5.2	5.1	9.6	4.3	1.7	.46	.06	.11
CFSM	.06	.88	1.87	1.13	.71	1.69	4.04	1.12	.67	.14	.03	.04
IN.	.07	.98	2.16	1.30	.74	1.95	4.51	1.30	.75	.16	.04	.04

CAL YR 1986 TOTAL 4337.57 MEAN 11.9 MAX 251 MIN .10 CFSM 1.11 IN. 15.08
WTR YR 1987 TOTAL 4024.15 MEAN 11.0 MAX 176 MIN .06 CFSM 1.03 IN. 13.99

e Estimated

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 others 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 1987

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum		
					Date	Gage height (ft)	Discharge (ft^3/s)
		SUSQUEHANNA RIVER BASIN					
		CHEMUNG RIVER BASIN					
01518420	Crooked Creek below Catlin Hollow at Middlebury Center, Pa.	Lat 41°50'33", long 77°16'25", Tioga County, at single-span bridge on Township Route 586 at Middlebury Center.	74.3	1986-87	4-04-87	46.12	4,000
01519200	Cowanesque River at Elkland, Pa.	Lat 41°59'15", long 77°18'09", Tioga County, at single-span steel-truss bridge on State Route 49 at Elkland.	235	1980-87	4-04-87	24.60	10,400
		TOWANDA CREEK BASIN					
		S. BR. TOWANDA CR. BASIN					
01532200	South Branch Towanda Creek at New Albany, Pa.	Lat 41°35'23", long 76°25'58", Bradford County, at bridge on gravel road, 0.1 mi below French Creek, 0.7 mi above Beaver Run, and 0.8 mi south of New Albany.	13.3	1963-87	11-26-86	4.73	470
		TUSCARORA CREEK BASIN					
01533250	Tuscarora Creek near Silvara, Pa.	Lat 41°42'25", long 76°07'10", Bradford County, at bridge on gravel road, 1.0 mi northeast of Silvara, 1.1 mi above Mill Creek, and 4.6 mi upstream from mouth.	11.8	1963-87	4-04-87	5.53	373
		WEST BRANCH SUSQUEHANNA RIVER BASIN					
		SINNEMAHONING CREEK BASIN					
		BENNETT BRANCH SINNEMAHONING CREEK BASIN					
01542720	Wilson Run at Penfield, Pa.	Lat 41°12'58", long 78°35'00", Clearfield County, at wooden bridge 200 ft north of State Highway 153, 0.7 mi upstream from mouth, and 0.8 mi northwest of Penfield.	8.3	1962-87	11-27-86	2.68	234

Annual maximum discharge at crest-stage partial-record stations--Continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum		
					Date	Gage height (ft)	Discharge (ft^3/s)
		SUSQUEHANNA RIVER BASIN--Continued					
		WEST BRANCH SUSQUEHANNA RIVER BASIN					
01543700	First Fork Sinnemahoning Creek at Wharton, Pa.	Lat 41°31'08", long 78°01'40", Potter County, 50 ft upstream from bridge on State Highway 872 and 0.8 mi southwest of Wharton.	182	1968-80* 1982* 1984-87	11-27-86	7.89	2,770
01545800	West Branch Susquehanna River at Lock Haven, Pa.	Lat 41°08'17", long 77°26'32", Clinton County, on right bank 50 ft downstream from Jay Street bridge, and 2.3 mi upstream from Bald Eagle Creek.	3,345	1975-87	11-27-86	14.74	43,700
01553050	White Deer Hole Creek near Elimsport, Pa.	Lat 41°07'08", long 77°04'02", Lycoming County, at bridge on L.R. 41001, 2.5 mi west of Elimsport, and 12.5 mi upstream from mouth. Datum of gage is 650.84 ft, NGVD of 1929.	18.2	1961-87	11-26-86	4.29	135
		CONODOGUINET CREEK BASIN					
01569340	Newburg Run at Newburg, Pa.	Lat 40°07'40", long 77°32'50", Cumberland County, at concrete bridge on State Highway 696, 0.4 mi upstream from mouth, and 0.8 mi south of Newburg.	5.29	1964-87	9-12-87	a4.20	297
		CONESTOGA RIVER BASIN					
		COCALICO RIVER BASIN					
01576320	Stony Run at Reamstown, Pa.	Lat 40°12'44", long 76°07'30", Lancaster County, at single-span bridge 0.1 mi southeast of U.S. Highway 222, 0.1 mi northwest of Reamstown, and 0.7 mi above mouth.	3.55	1964-87	9-08-87	7.72	1,200
		CONOWINGO CREEK BASIN					
01578200	Conowingo Creek near Buck, Pa.	Lat 39°50'35", long 76°11'45", Lancaster County, at concrete bridge on L.R. 36135, 2.0 mi above Jackson Run, and 2.5 mi southeast of Buck.	8.71	1963-87	9-08-87	7.72	1,100

* Also a low-flow partial-record station.
a Using auxiliary gage.

Low-flow partial-record stations

Measurements of streamflow in the area covered by this report made at low-flow partial-record stations are given in the following table. These measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements when correlated with the simultaneous discharge of a nearby stream when continuous records are available, will give a picture of the low-flow potentiality of the stream. The column headed "Period of record" shows the water years in which measurements were made at the same, or practically the same, site.

Discharge measurements made at low-flow partial-record stations during water year 1987

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		SUSQUEHANNA RIVER BASIN				
		STARRUCCA RIVER BASIN				
01502750	Starrucca Creek near Melrose, Pa.	Lat 41°55'50", long 75°30'15", Susquehanna County, at bridge at Melrose Church, and 0.2 mi upstream from mouth.	47.0	1946-57, 1983-85, 1987	8-18-87	11
		SNAKE CREEK BASIN				
01502780	Snake Creek near Montrose, Pa.	Lat 41°55'00", long 75°50'45", Susquehanna County, at bridge at Franklin Forks, and 6 mi northeast of Montrose.	18.5	1959-69, 1983-85, 1987	8-19-87	1.6
		CHEMUNG RIVER BASIN				
01516300	Tioga River at Covington, Pa.	Lat 41°44'42", long 77°04'49", Tioga County, at bridge on L.R. 58060, 0.1 mi west of Covington.	105	1970-79, 1982-83, 1985,1987	8-19-87	13
01519500	Cowanesque River at Nelson, Pa.	Lat 41°58'25", long 77°14'35", Tioga County, at bridge on State Highway 49, 7.0 mi west of Lawrenceville.	266	1938-41, 1982-83, 1985,1987	8-19-87	8.6
01530850	Bentley Creek at Ridgebury, Pa.	Lat 41°58'25", long 76°43'12", Bradford County, at bridge on L.R. 08068 at Ridgebury, and 300 ft downstream from Three Falls Glen.	47.2	1970-80, 1982-83, 1985,1987	8-20-87	.08
		SUGAR CREEK BASIN				
01531300	Sugar Creek near West Burlington, Pa.	Lat 41°45'45", long 76°41'55", Bradford County, at bridge on dirt road, 1.3 mi west of West Burlington.	88.3	1944-57, 1982-83, 1985,1987	8-20-87	1.7
		TOWANDA CREEK BASIN				
01531900	Towanda Creek at Canton, Pa.	Lat 41°39'20", long 76°49'50", Bradford County, above mouth of Mill Creek, 1.0 mi east of Canton on State Highway 414.	22.6	1982-83, 1985,1987	8-20-87	1.3
		WYSOX CREEK BASIN				
01532600	Wysox Creek near Wysox, Pa.	Lat 41°47'10", long 76°23'00", Bradford County, at bridge on L.R. 08027 near Wysox, and 0.8 mi upstream from mouth.	98.8	1982-83, 1985,1987	8-20-87	2.0
		WYALUSING CREEK BASIN				
01532800	East Branch Wyalusing Creek at Lawton, Pa.	Lat 41°47'15", long 76°04'15", Susquehanna County, at bridge on U.S. Highway 706 at Lawton.	68.9	1958-66, 1983-85, 1987	8-19-87	3.6
01532850	Middle Branch Wyalusing Creek tributary near Birchardville, Pa.	Lat 41°51'45", long 76°00'26", Susquehanna County, on left bank 60 ft upstream from bridge on State Highway 267, 1,000 ft upstream from mouth, and 1.2 mi north of Birchardville.	5.67	1965-79‡, 1983-85, 1987	8-19-87	.04
		SUGAR RUN CREEK BASIN				
01533100	Sugar Run Creek at Sugar Run, Pa.	Lat 41°38'31", long 76°13'55", Bradford County, at bridge on rural road, 0.3 mi east of Sugar Run, and 0.4 mi upstream from mouth.	56.6	1970-79, 1982-83, 1985,1987	8-20-87	no flow
		MESHOPPEN CREEK BASIN				
01533300	Meshoppen Creek near Springville, Pa.	Lat 41°41'50", long 75°53'10", Susquehanna County, at bridge on State Highway 29, 1.8 mi east of Springville.	26.7	1946-69, 1983-85, 1987	8-19-87	1.7

‡ Operated as a continuous-record gaging station.

Discharge measurements made at low-flow partial-record stations during water year 1987

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		SUSQUEHANNA RIVER BASIN--Continued				
		MEHOOPANY CREEK BASIN				
01533500	North Branch Mehoopany Creek near Lovelton, Pa.	Lat 41°31'50", long 76°09'20", Wyoming County, 0.5 mi upstream from bridge on State Highway 87, 1.7 mi downstream from Lovelton, and 2.1 mi upstream from mouth.	35.2	1940-58, 1982-83, 1985,1987	8-20-87	.88
		TUNKHANNOCK CREEK BASIN				
01533800	Butler Creek at Gibson, Pa.	Lat 41°48'10", long 75°38'40", Susquehanna County, at bridge on State Highway 547, at Gibson.	7.38	1973-79‡, 1983-85, 1987	8-18-87	1.4
01533840	Tunkhannock Creek at Glenwood, Pa.	Lat 41°39'03", long 75°43'15", Susquehanna County, at bridge on State Highway 374 at Glenwood, and 0.4 mi upstream from East Branch Tunkhannock Creek.	107	1970-79, 1983-85, 1987	8-18-87	11
01533950	South Branch Tunkhannock Creek near Montdale, Pa.	Lat 41°34'29", long 75°38'32", Lackawanna County, on right bank 70 ft upstream from highway bridge, 16 mi upstream from mouth, and 3.5 mi northwest of Montdale.	12.6	1960-78‡, 1983-85, 1987	8-18-87	2.6
		BOWMAN CREEK BASIN				
01534050	Bowman Creek near Noxen, Pa.	Lat 41°24'55", long 76°05'30", Wyoming County, at highway bridge at Stull, and 2.1 mi west of railroad station at Noxen.	35.9	1946-57, 1983-85, 1987	8-19-87	6.6
		LACKAWANNA RIVER BASIN				
01534170	East Branch Lackawanna River at Union Dale, Pa.	Lat 41°43'08", long 75°28'49", Susquehanna County, at bridge on L.R. 57041, 0.3 mi east of intersection of State Highway 171 and L.R. 57041, and 0.7 mi east of Union Dale.	17.3	1951, 1970-79, 1983-85, 1987	8-18-87	2.9
01535540	Spring Brook near Spring Brook, Pa.	Lat 41°17'07", long 75°35'33", Lackawanna County, at bridge on private road, 1.5 mi south of Spring Brook, and 1.8 mi upstream from Watres Reservoir dam.	8.98	1970-79, 1983-85, 1987	8-18-87	2.4
		WAPWALLOPEN CREEK BASIN				
01537900	Little Wapwallopen Creek near Wapwallopen, Pa.	Lat 41°05'43", long 76°07'18", Luzerne County, at bridge on State Highway 239, 1.0 mi downstream from Pond Creek, and 2.0 mi north of Wapwallopen.	39.4	1970-74, 1976-79, 1982-85, 1987	8-19-87	2.1
		NESCOPECK CREEK BASIN				
01538500	Nescopeck Creek near St. Johns, Pa.	Lat 41°01'15", long 76°00'40", Luzerne County, at highway bridge, 0.5 mi southwest of St. Johns	49.0	1920-26‡, 1983-85, 1987	8-19-87	7.7
01538600	Nescopeck Creek at Nescopeck, Pa.	Lat 41°02'16", long 76°13'28", Luzerne County, at railroad bridge in Nescopeck.	171	1949-50, 1983-85, 1987	8-19-87	73
		FISHING CREEK BASIN				
01538900	Huntington Creek near Harveyville, Pa.	Lat 41°14'25", long 76°14'10", Luzerne County, at bridge on L.R. 40067, and 2.0 mi north of Harveyville.	29.9	1946-47, 1982-85, 1987	8-19-87	5.6
01538970	Fishing Creek at Forks, Pa.	Lat 41°06'27", long 76°21'44", Columbia County, at bridge on L.R. 19068, at Forks, 0.2 mi upstream from Huntingdon Creek.	114	1970-79, 1982-85, 1987	8-18-87	25
01539500	Little Fishing Creek at Eyers Grove, Pa.	Lat 41°04'50", long 76°30'40", Columbia County at bridge on State Highway 42, 0.2 mi southeast of Eyers Grove, 3.0 mi southeast of Millville, and 5.1 mi upstream from mouth.	56.5	1942-58‡, 1983-85, 1987	8-18-87	2.5
01540000	Fishing Creek at Bloomsburg, Pa.	Lat 41°00'10", long 76°27'50", Columbia County, at Red Rock Bridge, Railroad Street, Bloomsburg, and 2.0 mi upstream from mouth.	355	1915-28‡, 1983,1985 1987	8-18-87	43

‡ Operated as a continuous-record gaging station.

Discharge measurements made at low-flow partial-record stations during water year 1987--Continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Measurements: Date	Measurements: Discharge (ft^3/s)
		SUSQUEHANNA RIVER BASIN--Continued				
		CATAWISSA CREEK BASIN				
01540200	Trexler Run near Ringtown, Pa.	Lat 40°51'10", long 76°16'48", Schuylkill County, at bridge on L.R. 53064, and 2.5 mi west of Ringtown.	1.77	1958-81‡, 1982-85, 1987	8-18-87	.21
01540300	Tomhicken Creek near Zion Grove, Pa.	Lat 40°54'45", long 76°11'47", Schuylkill County, at bridge, 1.0 mi northeast of Zion Grove, and 1.4 mi upstream from mouth.	20.4	1959-69, 1982-83, 1985,1987	8-18-87	6.1
01540350	Catawissa Creek at Catawissa, Pa.	Lat 40°57'00", long 76°27'56", Columbia County, at bridge on Second Street in Catawissa, and 0.2 mi upstream from mouth.	149	1949-50, 1970-79, 1982-85, 1987	8-18-87	46
		ROARING CREEK BASIN				
01540410	Roaring Creek near Catawissa, Pa.	Lat 40°54'15", long 76°28'02", Columbia County, at bridge on county road at Parrs Mill, and 3.5 mi south of Catawissa.	--	1982-85, 1987	8-18-87	6.4
		WEST BRANCH SUSQUEHANNA RIVER BASIN				
01540820	Chest Creek near Mahaffey, Pa.	Lat 40°52'06", long 78°43'15", Clearfield County, 0.25 mi southeast of Mahaffey.	130	1945, 1982-83, 1985,1987	8-20-87	25
01541250*	Anderson Creek at Curwensville, Pa.	Lat 45°58'20", long 78°31'20", Clearfield County, at bridge on State Highway 453, at Curwensville, 800 ft upstream from mouth.	77.8	1945-74, 1982-83, 1985,1987	8-20-87	8.1
01541325	Clearfield Creek at Flinton, Pa.	Lat 40°43'05", long 78°31'38", Cambria County, at bridge on L.R. 11063, 0.2 mi upstream from Beaverdam Run, and 0.5 mi northwest of Flinton.	98.1	1970-79, 1983-85, 1987	8-18-87	22
01542310	Moshannon Creek near Moshannon, Pa.	Lat 41°02'12", long 78°03'28", Center County, at bridge on State Highway 53, 3.0 mi west of Moshannon, and 5.0 mi upstream from mouth.	263	1945,1949, 1975-83, 1985,1987	8-20-87	99
01542330	Black Moshannon Creek near Philipsburg, Pa.	Lat 40°52'43", long 78°04'36", Centre County, at bridge on Shirk Road, 0.5 mi southeast of Black Moshannon State Airport, and 6.0 mi east of Philipsburg.	2.33	1970-83, 1985,1987	8-20-87	.21
01542760	Trout Run at Benezette, Pa.	Lat 41°18'50", long 78°23'05", Elk County, at bridge on State Highway 555, at Benezette.	55.2	1944-57, 1982-83, 1985,1987	8-20-87	6.1
01542880	Driftwood Branch Sinnemahoning Creek at Emporium, Pa.	Lat 41°30'29", long 78°14'15", Cameron County, at Emporium.	86.3	1945, 1982-83, 1985,1987	8-20-87	9.0
01542950	Sinnemahoning Portage Creek near Emporium, Pa.	Lat 41°32'36", long 78°12'43", Cameron County, at bridge on State Highway 155, 2.6 mi north of intersection with State Highway 120, and 2.8 mi upstream from mouth.	59.8	1945, 1976-80, 1982-83, 1985,1987	8-20-87	3.8
01545610	Left Branch Young Womans Creek near Renovo, Pa.	Lat 41°22'19", long 77°42'01", Clinton County, at bridge on L.R. 18022, 400 ft upstream from mouth, and 4.0 mi northeast of Renovo.	35.9	1970-79, 1982-83, 1985,1987	8-20-87	4.0
01545680	Tangascootack Creek near Lock Haven, Pa.	Lat 41°10'32", long 77°32'53", Clinton County, at bridge on State Highway 120, 600 ft upstream from mouth, and 7.0 mi northwest of Lock Haven.	36.5	1970-83, 1985,1987	8-20-87	6.1
01547800	South Fork Beech Creek near Snow Shoe, Pa.	Lat 41°01'30", long 77°54'15", Center County, at bridge on State Highway 144, 2.5 mi east of Snow Shoe, and 4.2 mi upstream from mouth.	12.2	1959-69, 1970-81‡, 1982-83, 1985,1987	8-20-87	2.5
01548080	Fishing Creek at Mill Hall, Pa.	Lat 41°06'35", long 77°29'10", Clinton County, on Peale Street bridge at Mill Hall, and 0.9 mi upstream from mouth.	179	1962-69, 1982-83, 1985,1987	8-20-87	74

‡ Operated as a continuous-record gaging station.
* Also a miscellaneous station.

Discharge measurements made at low-flow partial-record stations during water year 1987--Continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Measurements: Date	Measurements: Discharge (ft^3/s)
		SUSQUEHANNA RIVER BASIN--Continued				
		WEST BRANCH SUSQUEHANNA RIVER BASIN				
01548300	Marsh Creek near Marsh Creek, Pa.	Lat 41°46'25", long 77°21'15", Tioga County, at mouth of Heise Run, and 2.0 mi east of Marsh Creek.	39.7	1944-57, 1982-83, 1985,1987	8-20-87	3.0
01548400	Babb Creek at Morris, Pa.	Lat 41°35'50", long 77°17'23", Tioga County, just upstream from Long Run at Morris, and 1,000 ft upstream from bridge on State Highway 287.	42.0	1958-69, 1982-83, 1985,1987	8-20-87	3.0
01549550	Little Pine Creek near English Center, Pa.	Lat 41°24'46", long 77°19'19", Lycoming County, at bridge on L.R. 41021, and 2.4 mi southwest of English Center.	135	1970-79, 1982-83, 1985,1987	8-20-87	7.9
01549790	Larrys Creek at Larrys Creek, Pa.	Lat 41°13'10", long 77°13'12", Lycoming County, at bridge on U.S. Highway 220, at Larrys Creek, and 0.2 mi upstream from mouth.	89.0	1970-79, 1982-83, 1985,1987	8-20-87	3.5
01550500	Lycoming Creek near Williamsport, Pa.	Lat 41°16'01", long 77°02'49", Lycoming County, at bridge on U.S. Highway 15, 1.0 mi downstream from Beautys Run, 3.0 mi northwest of Williamsport, and 3.5 mi upstream from mouth.	268	1908-13‡, 1982-83, 1985,1987	8-21-87	18
01551830	Loyalsock Creek near Forksville, Pa.	Lat 41°28'10", long 76°35'05", Sullivan County, at bridge on State Highway 154, at Worlds End, and 1.8 mi southeast of Forksville.	131	1970-80, 1982-83, 1985,1987	8-20-87	14
01553010	Muncy Creek near Muncy, Pa.	Lat 41°13'15", long 76°47'10", Lycoming County, near Muncy, at mouth.	216	1945,1955, 1982-83, 1985,1987	8-21-87	15
01553110	White Deer Hole Creek at Allenwood, Pa.	Lat 41°06'14", long 76°53'54", Union County, at bridge on county road, 0.4 mi south of Allenwood, and 0.9 mi upstream from mouth.	66.4	1970-79, 1982-83, 1985,1987	8-20-87	8.5
01553130	Sand Spring Run near White Deer, Pa.	Lat 41°03'31", long 77°04'37", Union County, at bridge on White Deer Creek Road, 500 ft upstream from mouth, and 11.3 mi west of White Deer.	4.93	1968-81‡, 1982-83, 1985,1987	8-20-87	1.4
01553480	Buffalo Creek at Lewisburg, Pa.	Lat 40°58'19", long 76°53'30", Union County, at bridge on U.S. Highway 15, at Lewisburg, and 0.6 mi upstream from mouth.	134	1970-79, 1982-83, 1985,1987	8-20-87	23
		SUSQUEHANNA RIVER BASIN				
01554800	Pine Creek at Woodward, Pa.	Lat 40°54'00", long 77°21'25", Center County, at bridge on State Highway 45, at Woodward.	19.8	1945-57, 1982-85, 1987	8-20-87	3.7
01555200	Middle Creek near Beavertown, Pa.	Lat 40°46'40", long 77°07'55", Snyder County, at bridge on U.S. Highway 522, and 3.4 mi east of Beavertown.	110	1958-69, 1982-85, 1987	8-20-87	10
		MAHANOY CREEK BASIN				
01555250	Mahanoy Creek at Dornsife, Pa.	Lat 40°44'40", long 76°47'28", Northumberland County, at bridge on State Highway 225 at Dornsife.	117	1949-50, 1970-74, 1983,1985, 1987	8-17-87	84
		WICONISCO CREEK BASIN				
01555570	Wiconisco Creek near Elizabethville, Pa.	Lat 40°33'40", long 76°48'30", Dauphin County, at bridge on State Highway 225, and 1.0 mi north of Elizabethville.	79.2	1949-50, 1970-79, 1982-83, 1985,1987	8-17-87	15
		JUNIATA RIVER BASIN				
01555780	Frankstown Branch Juniata River at East Freedom, Pa.	Lat 40°21'23", long 78°25'41", Blair County, at bridge on State Highway 164, 400 ft upstream from South Dry Run, and 0.2 mi east of East Freedom.	47.4	1970-80, 1983-85, 1987	8-18-87	5.6
01558100	Spruce Creek at Spruce Creek, Pa.	Lat 40°36'55", long 78°07'55", Huntingdon County, at bridge on private road, and 0.5 mi north of Spruce Creek.	108	1947-54, 1983-85, 1987	8-18-87	38

‡ Operated as a continuous-record gaging station.

Discharge measurements made at low-flow partial-record stations during water year 1987--Continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Measurements: Date	Measurements: Discharge (ft^3/s)
		SUSQUEHANNA RIVER BASIN--Continued				
		JUNIATA RIVER BASIN				
01558500	Shaver Creek near Petersburg, Pa.	Lat 40°36'40", long 78°00'25", Huntingdon County, at highway bridge, 3.5 mi northeast of Petersburg, and 4.5 mi upstream from mouth.	46.4	1930-37‡, 1982-85, 1987	8-18-87	4.2
01559500	Standing Stone Creek near Huntingdon, Pa.	Lat 40°31'25", long 77°58'15", Huntingdon County, 3.2 mi northeast of Huntingdon, and 3.5 mi upstream from mouth.	128	1929-58‡, 1983-85, 1987	8-18-87	18
01559700	Buffalo Run tributary near Manns Choice, Pa.	Lat 39°58'40", long 78°37'05", Bedford County, at bridge on State Highway 96, 2,000 ft upstream from mouth, and 2.3 mi south of Manns Choice.	5.28	1962-78‡, 1983,1985, 1987	8-19-87	.22
01559750	Raystown Branch Juniata River near Manns Choice, Pa.	Lat 40°01'02", long 78°37'07", Bedford County, at bridge on State Highway 31, 0.3 mi upstream from Shawnee Branch, and 2.0 mi northwest of Manns Choice.	50.8	1952-53, 1970-79, 1983,1985, 1987	8-19-87	.29
01559756	Shawnee Branch at Schellsburg, Pa.	Lat 40°02'17", long 78°39'16", Bedford County, at bridge on rural road, 0.3 mi upstream from mouth, and 0.9 mi southwest of Schellsburg.	18.6	1968-79, 1983,1985, 1987	8-19-87	2.2
01561000	Brush Creek at Gapsville, Pa.	Lat 39°57'20", long 78°15'15", Bedford County, at covered bridge 0.8 mi northwest of Gapsville, 1.5 mi downstream from Little Brush Creek, and 5.5 mi upstream from Shaffer Creek.	36.8	1928-58‡, 1983,1985, 1987	8-18-87	5.5
01564550	Blacklog Creek near Orbisonia, Pa.	Lat 40°13'55", long 77°52'25", Huntingdon County, at bridge on State Highway 522, 0.5 mi downstream from Shade Creek, and 1.4 mi southeast of Orbisonia.	65.0	1970-79, 1983,1985, 1987	8-19-87	3.3
01565000*	Kishacoquillas Creek at Reedsville, Pa.	Lat 40°39'15", long 77°35'00", Mifflin County, 150 ft downstream from bridge on U.S. Highway 322, and 1.0 mi southeast of Reedsville.	164	1940-70‡ 1982-83, 1984-85‡ 1987	8-19-87	38
01565700	Little Lost Creek near Oakland Mills, Pa.	Lat 40°36'19", long 77°18'42", Juniata County, on right bank at bridge on L.R. 34007, 1.0 mi upstream from mouth, and 0.8 mi south of Oakland Mills.	6.52	1964-81‡, 1983-85, 1987	8-19-87	.59
01566000	Tuscarora Creek near Port Royal, Pa.	Lat 40°30'55", long 77°25'10", Juniata County, 100 ft upstream from highway bridge, 2.0 mi southwest of Port Royal, and 3.5 mi upstream from mouth.	214	1911-58‡, 1982-85, 1987	8-19-87	15
01566900	Buffalo Creek near Newport, Pa.	Lat 40°29'37", long 77°08'20", Perry County, at bridge on L.R. 50013, 0.4 mi upstream from mouth, and 1.2 mi north of Newport.	69.5	1948, 1970-79, 1983-85, 1987	8-20-87	2.0
		CONODOGUINET CREEK BASIN				
01569300	Conodoguinet Creek at Orrstown, Pa.	Lat 40°03'40", long 77°37'00", Franklin County, at bridge on State Highway 433, and 0.3 mi northwest of Orrstown.	53.4	1943-57, 1983-85, 1987	8-20-87	3.2
		YELLOW BREECHES CREEK BASIN				
01571185	Mountain Creek at Pine Grove Furnace, Pa.	Lat 40°01'51", long 77°18'18", Cumberland County, at bridge on county road, 0.2 mi south of Pine Grove Furnace, and 0.5 mi upstream from Toms Run.	13.9	1970-80, 1983-85, 1987	8-19-87	2.6
01571190	Mountain Creek near Mount Holly Springs, Pa.	Lat 40°05'36", long 77°11'14", Cumberland County, 0.6 mi upstream from reservoir dam, and 2.0 mi south of Mount Holly Springs.	37.4	1970-79, 1982-85, 1987	8-19-87	2.7

‡ Operated as a continuous-record gaging station.
* Also a miscellaneous station.

Discharge measurements made at low-flow partial-record stations during water year 1987--Continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		SUSQUEHANNA RIVER BASIN--Continued				
		YELLOW BREECHES CREEK BASIN				
01571200	Yellow Breeches Creek at Craighead, Pa.	Lat 40°08'45", long 77°10'15", Cumberland County, at railroad bridge, at Craighead.	110	1959-62, 1982-85, 1987	8-19-87	45
		SWATARA CREEK BASIN				
01571824*	Swatara Creek at Ravine, Pa.	Lat 40°34'30", long 76°24'10", Schuylkill County, at bridge on Spittler Road, and 0.1 mi east of Ravine.	44.6	1975-80, 1982-85, 1987	8-17-87	15
01572000	Lower Little Swatara Creek at Pine Grove, Pa.	Lat 40°32'15", long 76°22'40", Schuylkill County, at bridge on State Highway 501, 0.5 mi upstream from mouth, and 0.8 mi southeast of Pine Grove.	34.3	1919-32‡, 1981-84‡ 1985,1987	8-17-87	1.8
01573086	Beck Creek near Cleona, Pa.	Lat 40°19'24", long 76°29'00", Lebanon County, on right bank at bridge on Township Road T421, 0.4 mi upstream from mouth, and 1.0 mi south of Cleona.	7.87	1963-81‡, 1983-85, 1987	8-19-87	3.4
		CODORUS CREEK BASIN				
01574800	East Branch Codorus Creek tributary near Winterstown, Pa.	Lat 39°48'57", long 76°37'59", York County, on right bank 20 ft downstream from highway bridge, 1.5 mi upstream from mouth, and 1.7 mi southwest of Winterstown.	5.17	1960-68, 1969-74‡, 1983-85, 1987	8-18-87	1.8
		CONESTOGA RIVER BASIN				
01576200	Little Muddy Creek near Reamstown, Pa.	Lat 40°11'05", long 76°04'40", Lancaster County, at bridge on Fivepointville Road, 0.2 mi east of Red Run, 0.8 mi upstream from mouth, and 3.0 mi southeast of Reamstown.	15.7	1959-69, 1983,1985, 1987	8-19-87	2.0
01576340	Cocalico Creek near Akron, Pa.	Lat 40°09'53", long 76°13'56", Lancaster County, 200 ft above junction with Middle Creek.	---	1964,1983, 1985,1987	8-19-87	16
01576750	Little Conestoga Creek near Rockhill, Pa.	Lat 39°57'20", long 76°22'16", Lancaster County, 3.0 mi south of Millersville, 0.2 mi downstream from bridge on Rockhill Road, and 0.5 mi southwest of Rockhill.	65.5	1948, 1983-84, 1985,1987	8-21-87	17
		PEQUEA CREEK BASIN				
01576766	Pequea Creek at Paradise, Pa.	Lat 40°00'39", long 76°08'07, Lancaster County, at concrete bridge on U.S. Route 30, at west end of Paradise.	---	1964-65, 1983,1985, 1987	8-20-87	31
		MUDDY CREEK BASIN				
01577500	Muddy Creek at Castle Fin, Pa.	Lat 39°46'21", long 76°18'58", York County, on right bank 200 ft upstream from highway bridge on L.R. 66062, 0.8 mi northeast of Castle Fin, and 3.4 mi upstream from mouth.	133	1928-39‡, 1969-71‡, 1983-85, 1987	8-18-87	49
		OCTORARO CREEK BASIN				
01578360	East Branch Octoraro Creek near Mt. Vernon, Pa.	Lat 39°49'50", long 76°01'05", Lancaster County, at county bridge, 0.2 mi downstream from Muddy Run, 1.0 mi upstream from Octoraro Lake, and 1.5 mi north of Mt. Vernon.	76.6	1970-78, 1983-85, 1987	8-20-87	25
01578400	Bowery Run near Quarryville, Pa.	Lat 39°53'41", long 76°06'50", Lancaster County, on left bank at single-span bridge, 1.1 mi upstream from mouth, and 2.5 mi east of Quarryville.	5.98	1962-81‡, 1983-85, 1987	8-20-87	2.4
01578440	West Branch Octoraro Creek at White Rock, Pa.	Lat 39°49'29", long 76°05'25", Lancaster County, at county bridge at White Rock, 1.0 mi upstream from Octoraro Lake, and 1.2 mi downstream from Kings Run.	39.6	1970-78, 1983-85, 1987	8-20-87	15

‡ Operated as a continuous-record gaging station.
* Also a miscellaneous station.

Discharge measurements made at low-flow partial-record stations during water year 1987--Continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		POTOMAC RIVER BASIN				
		WILLS CREEK BASIN				
01600700	Little Wills Creek at Bard, Pa.	Lat 39°55'35", long 78°39'40", Bedford County, at bridge on State Highway 96, at Bard.	10.2	1961-81, 1983,1985, 1987	8-19-87	no flow
01601000	Wills Creek below Hyndman, Pa.	Lat 39°48'43", long 78°43'00", Bedford County, 150 ft above county highway bridge, 150 ft downstream from Pennsylvania Railroad bridge, 0.4 mi downstream from Little Wills Creek, and 0.5 mi south of Hyndman.	146	1952-67‡, 1983,1985, 1987	8-19-87	2.4
		SIDELING HILL CREEK BASIN				
01610130	West Branch Sideling Hill Creek at Purcell, Pa.	Lat 39°47'11", long 78°21'53", Bedford County, at bridge on L.R. 05009, 0.2 mi south of Purcell, and 0.4 mi upstream from mouth.	21.3	1970-79, 1983,1985, 1987	8-19-87	no flow
		TONOLOWAY CREEK BASIN				
01613080	Little Tonoloway Creek at Warfordsburg, Pa.	Lat 39°45'30", long 78°11'19", Fulton County, at bridge on U.S. Highway 522, 0.2 mi upstream from Cove Run, and 0.5 mi north of Warfordsburg.	44.8	1970-79, 1983,1985, 1987	8-18-87	.42
		LICKING CREEK BASIN				
01613500	Licking Creek near Sylvan, Pa.	Lat 39°43'20", long 78°03'35", Franklin County, 200 ft upstream from Pennsylvania-Maryland state line, 10 mi upstream from mouth, and 3.0 mi southwest of Sylvan.	158	1930-42, 1983,1985, 1987	8-18-87	12
		CONOCOCHEAQUE CREEK BASIN				
01614090	Conococheaque Creek near Fayetteville, Pa.	Lat 39°55'48", long 77°26'23", Adams County, on right bank 20 ft downstream from bridge on State Highway 233, 1.3 mi upstream from Chambersburg Reservoir Dam, 12 mi east of Chambersburg, and 4.0 mi northeast of Fayetteville.	5.05	1960-81‡, 1983-85, 1987	8-20-87	.87
01614100	Birch Run near Fayetteville, Pa.	Lat 39°55'46", long 77°26'28", Adams County, at bridge on State Highway 233, 0.3 mi upstream from mouth, 2.7 mi northeast of intersection with U.S. Highway 30, and 6.0 mi east of Fayetteville.	8.13	1959-62, 1983-85, 1987	8-19-87	2.3
01614140	Back Creek near Chambersburg, Pa.	Lat 39°53'36", long 77°44'30", Franklin County, at bridge on L.R. 28052, 1.2 mi west of Turkey Foot, and 5.0 mi southwest of Chambersburg.	63.0	1968-75, 1976-78‡, 1983,1985, 1987	8-17-87	2.6
		MONOCACY RIVER BASIN				
01638800	Marsh Creek near Gettysburg, Pa.	Lat 39°49'05", long 77°17'05", Adams County, at bridge on State Highway 116, and 2.2 mi west of Gettysburg.	49.6	1943-57, 1983-85, 1987	8-19-87	2.4

‡ Operated as a continuous-record gaging station.

Special study and miscellaneous sites

Discharge measurements made at special study and miscellaneous sites during water year 1987

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements	
					Date	Discharge (ft^3/s)
		SUSQUEHANNA RIVER BASIN				
		WEST BRANCH SUSQUEHANNA RIVER BASIN				
01541250* Anderson Creek	West Branch Susquehanna River	Lat 40°58'20", long 78°31'20", Clearfield County, at bridge on State Highway 453, at Curwensville, and 800 ft upstream from mouth.	77.8	1945-74 1982-86	6-02-87	32
01542790 Bennett Branch	Driftwood Branch Sinnemahoning Creek	Lat 41°20'02", long 78°08'10", Cameron County, at county bridge at Driftwood, and 1,000 ft upstream from mouth.	367	1975-86	5-07-87	836
		JUNIATA RIVER BASIN				
Three Springs Creek	Aughwick Creek	Lat 40°12'48", long 77°55'34", Huntingdon County, 0.9 mi upstream from mouth, and 3.5 mi northeast of Three Springs.	31.4	1940-81[a] 1983	12-10-86	69
01565000* Kishacoquillas Creek	Juniata River	Lat 40°39'17", long 77°35'00", Mifflin County, on left bank 150 ft downstream from bridge on old U.S. Highway 322, 1.0 mi southeast of Reedsville, and 1.0 mi downstream from Honey Creek.	164	1940-70‡ 1984-85‡ 1986	3-09-87	560

‡ Operated as a continuous-record gaging station.
* Also a low-flow partial-record station.
a Most years during period.

Water-quality partial-record stations are particular sites where chemical-quality, biological, and/or sediment data are collected systematically over a period of years for use in hydrologic analyses. The data are collected usually less than quarterly.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (FTU)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
OCTORARO CREEK BASIN											
01578340 EAST BRANCH OCTORARO CREEK AT CHRISTIANA, PA. (LAT 39 56 57N LONG 075 59 38W)											
NOV 1986 20...	0900	4.7	260	7.50	3.0	2.8	10.8	110	58	25	11
01578343 VALLEY CREEK NEAR ATGLEN, PA. (LAT 39 56 23N LONG 075 59 06W)											
NOV 1986 20...	1300	6.1	280	7.80	4.0	1.6	12.0	110	49	30	9.2

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)
01578340 EAST BRANCH OCTORARO CREEK AT CHRISTIANA, PA. (LAT 39 56 57N LONG 075 59 38W)											
NOV 1986 20...	8.1	13	0.3	6.6	50	36	17	15	183	177	0.25
01578343 VALLEY CREEK NEAR ATGLEN, PA. (LAT 39 56 23N LONG 075 59 06W)											
NOV 1986 20...	8.7	14	0.4	5.0	64	30	19	12	162	175	0.22

DATE	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)
01578340 EAST BRANCH OCTORARO CREEK AT CHRISTIANA, PA. (LAT 39 56 57N LONG 075 59 38W)										
NOV 1986 20...	6.17	0.030	6.20	0.160	0.74	0.90	0.90	0.150	0.130	0.090
01578343 VALLEY CREEK NEAR ATGLEN, PA. (LAT 39 56 23N LONG 075 59 06W)										
NOV 1986 20...	5.07	0.030	5.10	0.160	0.74	1.1	0.90	0.140	0.100	0.080

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)
OCTORARO CREEK BASIN										
01578340 EAST BRANCH OCTORARO CREEK AT CHRISTIANA, PA. (LAT 39 56 57N LONG 075 59 38W)										
NOV 1986 20...	<10	<1	<1	<1	2	57	<5	5	74	--
01578343 VALLEY CREEK NEAR ATGLEN, PA. (LAT 39 56 23N LONG 075 59 06W)										
NOV 1986 20...	10	<1	<1	<1	2	63	<5	--	47	<0.1

DATE	NICKEL, DISSOLVED (UG/L AS NI)	SILVER, DISSOLVED (UG/L AS AG)	ZINC, DISSOLVED (UG/L AS ZN)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)
01578340 EAST BRANCH OCTORARO CREEK AT CHRISTIANA, PA. (LAT 39 56 57N LONG 075 59 38W)										
NOV 1986 20...	2	<1.0	3	3	<1.0	<0.1	4.0	3.1	4.8	3.8
01578343 VALLEY CREEK NEAR ATGLEN, PA. (LAT 39 56 23N LONG 075 59 06W)										
NOV 1986 20...	<1	<1.0	4	--	--	--	--	--	--	--

DATE	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)
01578340 EAST BRANCH OCTORARO CREEK AT CHRISTIANA, PA. (LAT 39 56 57N LONG 075 59 38W)										
NOV 1986 20...	1.2	<0.1	0.3	<0.1	0.1	<0.1	<0.1	<0.1	<1.00	<10
01578343 VALLEY CREEK NEAR ATGLEN, PA. (LAT 39 56 23N LONG 075 59 06W)										
NOV 1986 20...	--	--	--	--	--	--	--	--	--	--

ADAMS COUNTY

395846077040601. Local number, AD 146.

LOCATION.--Lat 39°58'46", long 77°04'06", Hydrologic Unit 02050306, at State Game Land Number 249.
Owner: U.S. Geological Survey.
AQUIFER.--Shale and sandstone of Gettysburg shale of Late Triassic age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in., depth 100 ft, cased to 17 ft, open hole.
INSTRUMENTATION.--Digital recorder with 60-minute recording interval. Pa. Department of Environmental Resources satellite telemeter at station.
DATUM.--Elevation of land-surface is 540 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing, 2.0 ft above land-surface datum.
REMARKS.--Water-quality records for 1973-75 are available in files of district office.
PERIOD OF RECORD.--January 1968 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 9.87 ft below land-surface datum, June 21, 1972; lowest, 13.80 ft below land-surface datum, Aug. 20, 21, 1987.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.23	12.93	12.04	11.86	11.63	11.03	11.70	12.21	---	13.04	13.60	13.34
2	13.28	12.94	11.98	11.75	11.49	11.16	11.75	12.24	---	13.00	13.58	13.34
3	13.12	12.95	11.34	11.79	11.39	11.32	11.62	12.13	---	13.02	13.60	13.40
4	13.08	13.01	11.62	11.78	11.37	11.43	11.26	11.70	---	13.04	13.64	13.43
5	12.99	13.01	11.71	11.78	11.36	11.53	11.26	11.47	---	13.12	13.65	13.43
6	12.99	12.98	11.74	11.78	11.39	11.56	11.03	---	---	13.12	13.50	13.35
7	13.04	12.99	11.77	11.83	11.59	11.53	11.28	---	---	13.10	13.50	13.18
8	13.11	12.96	11.81	11.78	11.69	11.56	11.45	---	---	12.97	13.47	12.96
9	13.09	13.00	11.73	11.74	11.68	11.72	11.56	---	---	13.04	---	11.81
10	13.06	12.70	11.48	11.64	11.74	11.83	11.65	---	---	13.06	13.57	11.99
11	13.11	12.74	11.57	11.69	11.74	11.86	11.74	---	---	13.12	13.60	12.09
12	13.12	12.67	11.60	11.72	11.79	11.86	11.75	---	12.73	---	13.63	12.12
13	13.10	12.57	11.78	11.69	11.91	11.89	11.61	---	12.73	13.08	13.66	11.45
14	13.05	12.65	11.80	11.58	11.92	11.90	11.66	---	12.77	13.07	13.68	11.47
15	13.02	12.63	11.86	11.48	11.93	11.92	11.73	---	12.83	13.12	13.68	11.60
16	12.91	12.38	11.87	11.45	11.98	11.88	11.71	---	12.88	13.20	---	11.70
17	12.96	12.53	11.82	11.57	12.03	11.89	11.54	---	12.97	13.24	13.70	11.76
18	12.97	12.52	11.28	11.53	12.02	11.94	11.61	---	12.97	13.26	13.74	11.11
19	12.99	12.54	11.49	11.49	11.99	11.95	11.67	---	12.99	13.33	13.76	11.26
20	13.01	12.64	11.63	11.10	11.93	11.96	11.74	---	12.97	13.36	13.80	11.20
21	13.18	12.52	11.70	---	11.88	12.01	11.78	---	12.89	13.42	13.80	11.26
22	---	12.18	11.75	11.38	11.80	12.07	11.91	---	12.79	13.44	13.78	11.29
23	---	11.92	11.80	11.60	---	12.09	11.90	---	12.79	13.47	13.64	11.34
24	---	11.93	11.84	11.66	---	12.13	11.91	---	12.84	13.48	13.65	11.50
25	---	11.97	11.20	11.68	11.77	12.13	11.88	---	12.87	13.50	13.64	11.65
26	---	11.94	11.47	11.75	11.73	12.10	11.96	---	12.88	13.50	13.64	11.74
27	---	11.62	11.58	11.79	11.69	12.09	12.02	---	12.82	13.54	13.58	11.82
28	---	11.77	11.68	11.80	11.64	12.10	12.05	---	12.92	13.58	13.56	11.86
29	---	11.90	11.72	11.77	---	12.13	12.05	---	12.99	---	13.53	11.88
30	---	12.02	11.80	11.82	---	12.10	12.18	---	13.06	13.58	13.56	11.84
31	---	---	11.86	11.74	---	11.93	---	---	---	13.60	13.56	---
MEAN	13.07	12.50	11.69	11.67	11.73	11.83	11.70	11.95	12.88	13.26	13.63	12.07
MAX	13.28	13.01	12.04	11.86	12.03	12.13	12.18	12.24	13.06	13.60	13.80	13.43
MIN	12.91	11.62	11.20	11.10	11.36	11.03	11.03	11.47	12.73	12.97	13.47	11.11

WTR YR 1987: HIGHEST 11.03 MARCH 1, APRIL 6, LOWEST 13.80 AUGUST 20, 21.

394916077142901. Local number, AD 177.

LOCATION.--Lat 39°49'16", long 77°14'29", Hydrologic Unit 02070009, at Gettysburg National Military Park.
Owner: National Park Service.
AQUIFER.--Gettysburg Formation of Triassic age.

WATER-LEVEL RECORDS

WELL CHARACTERISTICS.--Drilled well, diameter 8 in., depth 499 ft, cased to 32 ft, open hole.
INSTRUMENTATION.--Continuous strip-chart recorder.
DATUM.--Elevation of land-surface is 550 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing, 6.0 ft above land-surface datum.
PERIOD OF RECORD.--October 1985 to current year.
REMARKS.--Ground-water levels effected by the intermittent pumping of a nearby public supply well.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 23.37 ft below land-surface datum, Mar. 14, 1986; lowest, 48.97 ft below land-surface datum, Oct. 1, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48.97	42.79	35.67	29.32	26.89	---	26.18	24.28	24.41	36.66	42.52	47.60
2	48.68	43.07	35.48	28.96	31.47	---	26.09	24.34	24.46	36.78	42.75	47.68
3	48.27	43.05	---	28.91	34.96	---	32.10	24.43	24.56	37.01	43.02	47.83
4	48.07	42.95	---	28.95	36.39	---	33.90	24.57	24.59	37.16	43.22	48.05
5	47.96	42.62	---	28.94	37.13	---	34.89	24.46	24.61	37.01	43.43	48.22
6	48.11	42.08	---	28.90	37.28	---	---	24.25	24.66	37.19	43.45	48.31
7	48.49	---	---	28.54	37.64	---	---	24.14	24.74	36.99	43.91	48.31
8	48.52	---	---	28.60	37.91	---	---	24.18	24.67	36.13	44.17	48.31
9	47.79	---	---	28.54	38.22	---	---	24.26	25.17	37.03	44.38	48.17
10	46.43	---	---	28.50	34.10	---	---	24.22	26.48	36.97	44.57	47.97
11	45.54	---	---	28.12	---	---	---	24.30	28.64	37.50	44.76	47.92
12	44.82	---	---	28.06	28.59	---	---	24.25	29.25	37.86	44.96	47.83
13	44.13	39.78	---	28.37	---	25.10	---	24.55	28.74	37.64	45.22	47.71
14	43.61	39.78	---	28.36	---	---	---	24.60	27.90	38.09	45.38	47.49
15	43.29	39.40	31.93	28.20	---	---	---	24.44	27.13	38.22	45.49	46.88
16	43.01	38.96	31.94	28.19	---	---	25.04	24.61	27.92	38.52	45.59	46.68
17	42.86	38.70	31.78	28.24	---	---	24.82	24.56	29.85	39.11	45.66	46.40
18	42.95	38.54	31.60	28.14	---	---	24.81	24.58	31.09	39.36	46.02	46.05
19	43.33	38.24	31.17	27.77	---	---	24.73	24.75	31.91	39.70	46.37	44.99
20	43.54	38.24	31.09	27.48	---	25.50	24.63	24.78	32.49	39.92	46.53	44.92
21	43.24	37.52	31.05	27.37	---	25.52	24.49	24.77	32.97	40.29	46.66	44.85
22	42.78	37.36	31.00	27.26	---	25.68	24.46	24.72	33.28	40.67	46.65	44.81
23	43.42	37.15	30.79	26.94	---	25.82	24.39	24.64	33.65	40.96	46.92	44.75
24	43.63	37.37	29.97	27.18	---	25.89	24.29	24.55	34.06	41.11	47.07	44.60
25	43.30	38.01	29.97	27.16	---	25.88	24.41	24.54	34.38	41.26	47.15	44.53
26	43.19	37.76	29.78	27.07	---	25.95	24.43	24.53	34.74	41.40	47.19	44.58
27	43.13	36.81	29.71	27.05	---	26.02	24.39	24.50	35.04	41.54	47.25	44.54
28	43.06	36.47	29.63	27.06	---	26.14	24.21	24.44	35.45	41.72	47.32	44.54
29	43.11	35.99	29.54	27.10	---	26.25	24.11	24.37	35.92	41.86	47.50	44.44
30	42.98	35.77	29.37	26.99	---	26.20	24.18	24.36	36.37	42.08	47.58	44.19
31	42.68	---	29.32	26.84	---	25.87	---	24.36	---	42.28	---	---
MEAN	44.93	39.10	31.09	27.97	34.60	25.83	26.03	24.46	29.64	39.03	45.42	46.44
MAX	48.97	43.07	35.67	29.32	38.22	26.25	34.89	24.78	36.37	42.28	47.58	48.31
MIN	42.68	35.77	29.32	26.84	26.89	25.10	24.11	24.14	24.41	36.13	42.52	44.19

WTR YR 1987: HIGHEST 24.11 APRIL 29, LOWEST 48.97 OCTOBER 1.

394916077142901. Local number, AD 177--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1986 to July 1987 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	BENZENE TOTAL (UG/L)	BROMO-FORM TOTAL (UG/L)
OCT												
08...	1200	375	7.70	11.5	0	<0.010	1.40	0.030	0.87	0.90	--	--
JUL												
01...	1125	360	8.00	12.0	0	<0.010	0.790	<0.010	--	0.60	--	--
13...	1030	--	--	--	0	--	--	--	--	--	<0.20	<0.20

DATE	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL-CHLO-RIDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)
OCT												
08...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
01...	--	--	--	--	--	--	--	--	--	--	--	<0.10
13...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--

DATE	PCB, TOTAL (UG/L)	STYRENE TOTAL (UG/L)	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	XYLENE TOTAL WATER WHOLE TOT REC (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)
OCT												
08...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
01...	<0.1	--	--	--	--	--	--	--	--	--	--	--
13...	--	<0.2	<0.20	<0.20	<0.2	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20

DATE	1,1,2,2 TETRA-CHLORO-ETHANE TOTAL (UG/L)	1,2-DIBROMO ETHYL-ENE TOTAL (UG/L)	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	1,2-TRANSDI CHLORO-ETHENE TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)
OCT												
08...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
01...	--	--	--	--	--	--	--	--	--	--	--	--
13...	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

DATE	ALA-CHLOR TOTAL RECOVER (UG/L)	AME-TRYNE TOTAL	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)	PRO-PAZINE TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	SIME-TRYNE TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)
OCT												
08...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
01...	<0.10	<0.10	<0.10	<0.10	<0.1	<0.1	<0.10	<0.10	<0.1	<0.010	<0.1	<0.010
13...	--	--	--	--	--	--	--	--	--	--	--	--

ADAMS COUNTY

394916077142901. Local number, AD 177--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	HEPTA-CHLOR, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)
OCT											
08...	--	--	--	--	--	--	--	--	--	--	--
JUL											
01...	<0.010	<0.010	<0.01	<0.010	<0.010	<0.010	<0.01	<0.010	<0.010	<0.010	<0.01
13...	--	--	--	--	--	--	--	--	--	--	--

DATE	METH-OXY-CHLOR, TOTAL (UG/L)	METHYL PARA-THION, TOTAL (UG/L)	METHYL TRI-THION, TOTAL (UG/L)	METOLA-CHLOR WATER WHOLE TOT.REC (UG/L)	METRI-BUZIN WATER WHOLE TOT.REC (UG/L)	MIREX, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)	PER-THANE TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)	TOTAL TRI-THION (UG/L)	TRI-FLURA-LIN TOTAL RECOVER (UG/L)
OCT											
08...	--	--	--	--	--	--	--	--	--	--	--
JUL											
01...	<0.01	<0.01	<0.01	<0.1	<0.1	<0.01	<0.01	<0.1	<1	<0.01	<0.10

394755077160501. Local number, AD 255.

LOCATION.--Lat 39°47'55", long 77°16'05", Hydrologic Unit 02070009, at Eisenhower National Historic Site at Gettysburg.
Owner: National Park Service.
AQUIFER.--Gettysburg Formation of Triassic age.

WATER-LEVEL RECORDS

WELL CHARACTERISTICS.--Drilled well, diameter 10 in., depth 475 ft, cased to 14 ft, open hole.
INSTRUMENTATION.--Continuous strip-chart recorder.
DATUM.--Elevation of land-surface is 470 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing, 1.2 ft above land-surface datum.
REMARKS.--Ground-water levels effected by the intermittent pumping of a nearby public supply well.
PERIOD OF RECORD.--October 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.21 ft below land-surface datum, Dec. 2, 1985; lowest, 19.95 ft below land-surface datum, September 8, 1987.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.25	18.43	10.88	9.21	8.83	7.66	10.18	8.18	10.09	14.46	16.88	19.58
2	12.97	18.53	10.71	9.32	8.46	7.61	9.69	8.45	10.39	14.43	16.97	19.55
3	11.54	18.56	9.41	9.75	8.42	7.80	9.58	8.68	10.50	14.07	16.98	19.63
4	12.47	18.80	9.40	9.85	8.40	7.74	8.92	8.73	11.09	14.08	17.10	19.70
5	12.39	18.83	9.38	9.90	8.16	7.81	8.19	8.46	10.99	14.08	17.17	19.87
6	12.39	---	9.43	9.93	7.86	7.66	7.69	7.97	11.23	13.97	17.33	19.94
7	10.66	---	9.48	10.01	7.54	7.64	7.21	7.75	11.37	13.77	17.52	19.94
8	11.87	---	9.46	10.41	7.32	7.56	7.19	7.95	11.34	13.64	17.56	19.95
9	11.80	---	9.61	10.33	7.51	7.93	7.17	8.15	11.50	13.60	17.57	19.49
10	12.28	---	9.16	10.02	7.58	8.07	7.10	8.23	11.58	13.76	17.62	18.11
11	13.28	---	9.23	9.79	7.60	8.07	7.17	8.45	11.78	13.95	17.91	16.90
12	13.89	---	9.07	9.95	7.54	---	7.16	8.82	11.77	---	18.02	16.39
13	14.28	15.60	9.23	9.81	7.72	8.27	7.35	9.10	11.94	13.96	17.93	16.26
14	14.73	15.51	9.23	9.98	7.86	8.65	7.47	9.24	12.25	14.13	18.18	14.93
15	15.13	15.20	9.03	9.48	8.06	8.72	7.45	9.38	12.50	14.41	18.26	12.60
16	15.45	15.05	9.24	9.19	8.22	8.91	7.38	9.54	12.97	14.62	18.41	12.40
17	16.00	15.17	9.55	9.21	8.55	9.04	7.23	9.68	13.46	14.93	18.47	12.04
18	16.38	15.17	9.54	9.35	8.90	9.13	6.99	9.87	13.63	15.11	18.56	11.69
19	16.48	14.78	9.03	8.77	9.03	9.11	7.26	10.18	13.82	15.29	18.62	10.88
20	16.62	13.81	9.18	8.34	9.09	9.26	6.86	10.14	13.58	15.44	18.75	10.52
21	16.80	12.57	9.48	8.11	9.12	9.38	6.82	9.87	13.47	15.56	18.90	10.02
22	16.99	12.26	9.45	7.86	9.36	9.72	6.97	9.66	13.42	15.77	18.84	9.91
23	17.20	11.96	9.60	7.86	9.49	9.95	7.02	9.51	13.65	15.88	19.00	9.82
24	17.41	11.55	9.90	8.19	9.50	10.15	7.07	9.60	13.74	15.92	19.20	9.83
25	17.49	11.57	8.99	8.23	9.47	10.23	7.31	9.60	13.82	16.03	19.26	10.05
26	17.48	11.41	8.95	8.14	9.39	10.42	7.41	9.42	13.83	16.08	19.28	10.40
27	17.49	11.06	9.03	8.15	9.16	10.52	7.49	9.54	14.03	16.24	19.24	10.77
28	17.81	10.97	8.86	8.30	8.53	10.74	7.49	9.61	14.22	16.39	19.35	11.28
29	17.88	10.70	8.71	8.33	---	10.85	7.57	9.75	14.31	16.53	19.37	11.45
30	18.26	10.83	8.83	8.27	---	10.77	7.96	9.81	14.38	16.63	19.57	11.50
31	18.51	---	9.23	8.42	---	10.42	---	9.94	---	16.75	---	---
MEAN	15.07	14.27	9.36	9.11	8.45	8.99	7.61	9.14	12.56	14.98	18.26	14.51
MAX	18.51	18.83	10.88	10.41	9.50	10.85	10.18	10.18	14.38	16.75	19.57	19.95
MIN	10.66	10.70	8.71	7.86	7.32	7.56	6.82	7.75	10.09	13.60	16.88	9.82

WTR YR 1987: HIGHEST 6.82 APRIL 21, LOWEST 19.95 SEPTEMBER 8.

394755077160501. Local number, AD 255--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1986 to July 1987 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	HARDNESS TOTAL (MG/L AS CACO3)	HARDNESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO
OCT 07...	1500	420	7.40	12.5	190	23	58	11	13	13	0.4
JUL 01...	0935	425	8.00	13.0	--	--	--	--	--	--	--

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)
OCT 07...	1.8	167	18	9.9	0.10	29	259	0.35	0.0	<0.010	4.00
JUL 01...	--	--	--	--	--	--	--	--	--	<0.010	3.90

DATE	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)	NAPHTHALENES, POLYCHLOR. TOTAL (UG/L)	PCB, TOTAL (UG/L)	ALACHLOR TOTAL RECOVER (UG/L)	AMETRYNE TOTAL	ATRAZINE, TOTAL (UG/L)	CYANAZINE TOTAL (UG/L)
OCT 07...	0.030	0.57	0.60	35	1	--	--	--	<0.10	<0.10	<0.10
JUL 01...	<0.010	--	0.70	--	--	<0.10	<0.1	<0.10	<0.10	<0.10	<0.10

DATE	PROMETONE TOTAL (UG/L)	PROMETRYNE TOTAL (UG/L)	PROPAZINE TOTAL (UG/L)	SIMAZINE TOTAL (UG/L)	SIMETRYNE TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLORDANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DIAZINON, TOTAL (UG/L)
OCT 07...	<0.1	<0.1	<0.10	<0.10	<0.1	--	--	--	--	--	--
JUL 01...	<0.1	<0.1	<0.10	<0.10	<0.1	<0.010	<0.1	<0.010	<0.010	<0.010	<0.01

DATE	DIELDRIN TOTAL (UG/L)	ENDOSULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	HEPTACHLOR, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALATHION, TOTAL (UG/L)	METHOMYL TOTAL (UG/L)	METHOXYCHLOR, TOTAL (UG/L)	METHYL PARATHION, TOTAL (UG/L)
OCT 07...	--	--	--	--	--	--	--	--	<2.0	--	--
JUL 01...	<0.010	<0.010	<0.010	<0.01	<0.010	<0.010	<0.010	<0.01	--	<0.01	<0.01

DATE	METHYL TRITHION, TOTAL (UG/L)	METOLACHLOR WATER WHOLE TOT.REC (UG/L)	METRIBUZIN WATER WHOLE TOT.REC (UG/L)	MIREX, TOTAL (UG/L)	PARATHION, TOTAL (UG/L)	PERTHANE TOTAL (UG/L)	PROPHAM TOTAL (UG/L)	SEVIN, TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	TOTAL TRITHION (UG/L)	TRIFLURALIN TOTAL RECOVER (UG/L)
OCT 07...	--	<0.1	--	--	--	--	<2.0	<2.0	--	--	--
JUL 01...	<0.01	<0.1	<0.1	<0.01	<0.01	<0.1	--	--	<1	<0.01	<0.10

394851077130301. Local number, AD 589.

LOCATION.--Lat 39°48'51", long 77°13'03", Hydrologic Unit 02070009, at Gettysburg National Military Park.
Owner: National Park Service.
AQUIFER.--Diabase Sill of Triassic age.

WATER-LEVEL RECORDS

WELL CHARACTERISTICS.--Drilled well, depth 34 ft.
INSTRUMENTATION.--Continuous strip-chart recorder.
DATUM.--Elevation of land-surface is 475 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing, 1.7 ft above land-surface datum.
PERIOD OF RECORD.--November 1985 to September 1987 (discontinued).
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.21 ft below land-surface datum, Dec. 1, 1985; lowest, 5.50 ft below land-surface datum, Aug. 22, 1987.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.34	3.88	2.30	1.84	2.02	1.17	1.87	2.08	2.44	3.65	4.75	4.91
2	4.23	3.79	2.24	1.80	1.93	1.19	1.75	2.12	2.62	3.58	4.77	4.89
3	3.94	3.81	1.43	1.85	1.85	1.43	1.81	2.07	2.61	3.51	4.77	4.82
4	3.92	3.78	1.67	1.81	1.79	1.49	1.40	2.09	2.24	3.53	4.82	4.85
5	3.96	---	1.86	1.83	1.62	1.57	1.04	1.41	2.37	3.55	4.89	4.88
6	4.07	---	1.92	1.81	1.45	1.61	1.02	1.55	2.60	3.56	4.89	4.91
7	4.09	---	1.96	1.88	1.39	1.63	1.04	1.76	2.71	3.54	4.77	4.91
8	4.04	---	2.10	1.86	1.45	1.66	1.26	1.83	2.72	3.56	4.69	4.73
9	4.12	---	2.08	1.79	1.62	1.92	1.43	1.88	---	3.65	4.69	4.48
10	4.19	---	1.73	1.69	1.66	1.98	1.54	1.99	3.09	3.68	4.79	3.86
11	4.17	---	1.73	1.75	1.68	1.97	1.62	2.02	3.09	3.76	4.88	3.71
12	4.09	---	1.70	1.79	1.76	1.94	1.70	2.11	3.09	3.83	4.93	3.75
13	4.04	2.93	1.95	1.86	1.82	1.97	1.75	2.03	3.11	3.81	5.06	3.78
14	3.96	2.91	1.88	1.76	1.79	2.01	1.78	2.04	3.21	3.91	5.10	3.47
15	3.95	2.85	1.83	1.67	1.93	2.07	1.76	2.03	3.32	3.96	5.16	3.03
16	3.95	2.98	1.88	1.76	1.94	2.08	1.76	2.05	3.38	4.04	5.19	3.10
17	4.01	3.08	1.95	1.79	1.95	2.11	1.59	2.08	3.54	4.10	5.25	3.14
18	4.06	3.12	1.90	1.73	2.04	2.15	1.44	2.08	3.53	4.10	5.32	3.13
19	4.04	2.56	1.53	1.71	2.10	2.13	1.51	2.12	3.54	4.16	5.37	2.58
20	4.00	2.32	1.65	1.28	2.09	2.18	1.60	2.19	3.55	4.19	5.43	2.55
21	4.00	1.88	1.77	1.42	2.03	2.23	1.66	2.27	3.48	4.28	5.46	2.35
22	4.04	2.06	1.82	1.42	2.05	2.29	1.88	2.29	3.41	4.32	5.50	2.41
23	4.02	2.08	1.88	1.81	2.11	2.30	1.88	2.17	3.54	4.36	5.24	2.57
24	4.06	2.22	1.88	1.82	2.04	2.30	1.84	1.45	3.55	4.41	5.11	2.68
25	4.06	2.27	1.15	1.80	1.81	2.30	1.66	1.58	3.62	4.45	5.07	2.90
26	3.95	2.21	1.35	1.86	1.73	2.28	1.73	1.65	3.65	4.47	5.08	3.00
27	3.74	1.83	1.46	1.89	1.62	2.33	1.77	1.29	3.49	4.51	5.10	3.10
28	3.82	1.89	1.58	1.92	1.56	2.32	1.87	1.62	3.60	4.56	5.14	3.14
29	3.82	2.11	1.64	1.97	---	2.34	1.87	1.84	3.63	4.64	4.97	3.14
30	3.92	2.26	1.76	1.88	---	2.29	2.08	2.19	3.68	4.68	4.94	3.11
31	3.96	---	1.88	2.03	---	2.13	---	2.30	---	4.72	---	---
MEAN	4.02	2.67	1.79	1.78	1.82	1.98	1.63	1.94	3.19	4.03	5.04	3.60
MAX	4.34	3.88	2.30	2.03	2.11	2.34	2.08	2.30	3.68	4.72	5.50	4.91
MIN	3.74	1.83	1.15	1.28	1.39	1.17	1.02	1.29	2.24	3.51	4.69	2.35

WTR YR 1987: HIGHEST 1.02 APRIL 6, LOWEST 5.50 AUGUST 22.

394851077130301. Local number, AD 589--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--June 1987 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)
JUN 08...	1305	265	7.40	11.0	<0.010	<0.100	0.030	0.47	0.50

395049077145701. Local number, AD 590.

LOCATION.--Lat 39°50'49", long 77°14'57", Hydrologic Unit 02070009, at Gettysburg National Military Park.
Owner: National Park Service.
AQUIFER.--Gettysburg Formation of Triassic age.

WATER-LEVEL RECORDS

WELL CHARACTERISTICS.--Drilled well, depth 120 ft.
INSTRUMENTATION.--Continuous strip-chart recorder.
DATUM.--Elevation of land-surface is 565 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing, 0.8 ft above land-surface datum.
PERIOD OF RECORD.--November 1985 to September 1987 (discontinued).
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 13.76 ft below land-surface datum, Feb. 21, 1986; lowest, 31.97 ft below land-surface datum, Nov. 5, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31.03	31.91	---	21.39	---	17.89	20.95	19.10	20.29	23.88	25.92	29.59
2	30.99	31.85	---	21.36	---	16.03	20.93	19.14	20.65	23.86	25.95	29.75
3	31.19	31.89	---	21.65	---	17.17	20.75	19.12	20.79	23.40	26.14	29.89
4	31.46	31.95	---	21.72	---	17.70	18.79	17.94	20.76	23.58	26.32	30.06
5	31.46	31.97	---	21.82	---	17.95	17.12	17.51	20.45	23.68	26.55	30.17
6	31.51	---	---	21.77	---	17.99	15.26	17.82	20.73	23.64	26.76	30.21
7	31.51	---	---	21.79	---	17.90	15.42	17.74	20.92	23.34	26.82	30.21
8	31.50	---	---	21.89	---	17.81	16.11	17.93	20.89	23.41	26.84	30.13
9	31.51	---	---	21.89	---	18.30	16.77	17.97	21.13	23.46	26.86	28.21
10	31.57	---	---	21.73	---	18.77	16.88	17.99	21.38	23.49	27.20	27.28
11	31.60	---	---	21.40	---	18.88	17.21	18.28	21.52	23.54	27.30	27.90
12	31.57	---	---	21.58	19.29	18.88	17.24	18.93	21.43	---	27.56	28.03
13	31.50	30.80	---	21.70	19.49	19.19	18.10	19.21	21.58	23.50	27.83	26.78
14	31.42	30.85	---	21.68	19.52	19.28	18.26	19.18	21.70	23.56	27.94	24.91
15	31.43	30.79	23.50	21.45	19.83	19.60	18.39	19.43	21.88	23.68	28.06	25.46
16	31.46	30.74	23.52	21.39	19.89	19.84	18.30	19.52	22.18	23.81	28.11	25.14
17	31.58	30.73	23.53	21.27	19.80	20.03	17.18	19.45	22.58	23.90	28.20	24.95
18	31.70	30.81	23.46	20.98	20.15	20.13	17.10	19.69	22.78	23.90	28.36	23.19
19	31.69	29.37	22.29	20.52	20.47	20.14	17.15	19.95	22.87	23.81	28.59	23.35
20	31.64	29.47	22.41	18.43	20.77	20.33	17.19	19.00	22.96	23.92	28.76	22.54
21	31.67	27.74	22.56	19.03	20.72	20.43	17.17	18.83	22.95	24.25	28.91	22.45
22	31.72	28.43	22.59	19.05	20.61	20.76	17.43	19.14	23.32	24.39	28.94	22.47
23	31.75	28.51	22.55	19.51	20.51	20.99	17.67	19.17	23.51	24.55	29.08	22.50
24	31.82	28.48	22.56	19.87	20.66	21.15	17.87	19.15	23.58	24.78	29.17	22.54
25	31.84	28.41	19.16	---	20.65	21.22	18.01	19.28	23.68	24.85	29.25	22.76
26	31.80	28.35	20.29	---	20.72	21.46	18.03	19.44	23.75	24.94	29.34	22.83
27	31.58	---	20.67	---	20.65	21.55	18.05	19.55	23.52	25.08	29.41	22.95
28	31.76	---	20.86	---	20.51	21.67	18.30	19.58	23.68	25.24	29.46	23.01
29	31.76	---	20.92	---	---	21.81	18.23	19.72	23.81	25.39	29.53	23.09
30	31.89	---	21.04	---	---	21.72	19.09	19.92	23.97	25.53	29.55	23.03
31	31.95	---	21.39	---	---	21.20	---	20.08	---	25.84	---	---
MEAN	31.58	30.16	21.96	21.04	20.25	19.61	17.83	18.99	22.17	24.14	27.96	25.85
MAX	31.95	31.97	23.53	21.89	20.77	21.81	20.95	20.08	23.97	25.84	29.55	30.21
MIN	30.99	27.74	19.16	18.43	19.29	16.03	15.26	17.51	20.29	23.34	25.92	22.45

WTR YR 1987: HIGHEST 15.26 APRIL 6, LOWEST 31.97 NOVEMBER 5.

395049077145701. Local number, AD 590--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--June 1987 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)
JUN 08...	0930	500	7.70	12.0	<0.010	1.40	0.040	0.36	0.40

394807077150101. Local number, AD 600.

LOCATION.--Lat 39°48'07", long 77°15'01", Hydrologic Unit 02070009, at Gettysburg National Military Park.
Owner: National Park Service.
AQUIFER.--Gettysburg Formation of Triassic age.
WELL CHARACTERISTICS.--Drilled well, depth 48 ft.
INSTRUMENTATION.--Continuous strip-chart recorder.
DATUM.--Elevation of land-surface is 560 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing, 0.5 ft above land-surface datum.
PERIOD OF RECORD.--March 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 22.64 ft below land-surface datum, Dec. 26, 1986; lowest, 34.33 ft below land-surface datum, Nov. 5, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34.24	34.22	28.54	26.00	28.00	---	---	---	---	32.23	33.51	33.78
2	34.06	34.24	28.71	26.29	28.12	---	---	---	---	32.32	33.54	33.82
3	32.71	34.28	23.46	26.30	27.70	---	---	---	---	31.53	33.53	32.59
4	32.82	34.28	23.27	26.78	25.98	---	---	28.10	---	30.71	33.55	33.45
5	33.12	34.33	24.09	27.22	25.43	---	---	---	---	30.84	33.59	33.81
6	33.64	---	24.83	27.51	25.68	---	---	---	---	31.19	33.56	33.99
7	33.96	---	25.44	27.77	25.83	---	---	---	---	31.53	33.32	34.04
8	34.05	---	25.97	27.88	25.90	---	---	---	---	28.45	33.55	28.35
9	34.16	---	26.03	27.88	26.18	---	---	---	---	29.96	33.60	27.10
10	34.20	---	25.30	27.86	26.50	---	---	---	32.17	31.27	33.65	26.43
11	34.20	---	25.64	27.45	26.83	---	---	30.62	32.28	32.10	33.69	27.40
12	34.21	---	25.81	27.27	26.91	---	---	30.77	32.25	32.33	33.74	28.55
13	34.20	29.50	26.33	27.59	---	28.00	26.21	30.15	32.29	32.42	33.80	29.19
14	34.21	31.27	26.75	27.60	---	---	26.72	---	32.40	32.62	33.82	27.95
15	32.35	32.22	27.10	27.60	---	---	---	---	32.51	32.51	33.84	27.97
16	33.43	32.68	27.41	27.80	---	---	---	---	32.56	32.58	33.86	28.16
17	33.91	32.97	27.72	27.99	---	---	---	---	32.71	32.85	33.86	28.70
18	34.15	33.05	27.77	28.00	---	---	26.36	---	32.78	32.98	33.90	28.66
19	34.19	32.02	25.75	27.61	---	---	26.82	---	32.79	33.11	33.91	28.09
20	34.21	27.88	26.19	24.03	---	30.19	27.20	---	32.82	33.15	33.98	28.12
21	34.21	27.14	26.65	24.47	---	30.39	27.42	---	29.79	33.19	33.94	27.91
22	34.21	26.44	27.02	24.68	---	30.71	27.73	---	30.02	33.25	33.92	28.34
23	34.29	27.06	27.30	25.18	---	30.89	27.94	---	31.83	33.25	32.81	28.58
24	34.32	27.17	27.46	25.66	---	31.07	28.09	---	32.31	33.29	33.25	29.66
25	34.32	27.72	22.79	26.10	---	31.14	27.85	---	32.55	33.34	33.65	30.86
26	34.32	27.91	22.64	26.51	---	31.25	28.09	---	32.62	33.33	33.86	31.72
27	31.30	26.55	23.27	26.93	---	31.38	---	---	30.10	33.35	33.90	32.12
28	32.89	26.99	23.88	27.27	---	31.41	---	---	30.45	33.37	33.93	32.39
29	33.67	27.49	24.47	27.58	---	31.34	---	---	31.95	33.44	33.01	32.49
30	34.01	27.96	24.99	27.71	---	31.43	---	---	32.33	33.45	33.52	32.50
31	34.19	---	25.58	27.82	---	---	---	---	---	33.48	---	---
MEAN	33.80	30.23	25.75	26.91	26.59	30.77	27.31	29.91	31.98	32.37	33.65	30.22
MAX	34.32	34.33	28.71	28.00	28.12	31.43	28.09	30.77	32.82	33.48	33.98	34.04
MIN	31.30	26.44	22.64	24.03	25.43	28.00	26.21	28.10	29.79	28.45	32.81	26.43

WTR YR 1987: HIGHEST 22.64 DECEMBER 26, LOWEST 34.33 NOVEMBER 5.

400217078281901. Local number, BD 150.

LOCATION.--Lat 40°02'17", long 78°28'19", Hydrologic Unit 02050303, at Bedford.
Owner: U.S. Geological Survey.
AQUIFER.--Shaley limestone of Onondaga limestone of Middle Devonian age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in., depth 150 ft, cased to 47 ft, open hole.
INSTRUMENTATION.--Continuous strip-chart recorder.
DATUM.--Elevation of land-surface is 1,160 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 3.0 ft above land-surface datum.
PERIOD OF RECORD.--July 1965 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.71 ft above land-surface datum, Apr. 7, 1984; lowest, 41.42 ft below land-surface datum, Feb. 12, 13, 1966.

DEPTH BELOW LAND SURFACE (WATER LEVEL)(FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28.60	30.39	25.60	19.54	16.95	16.29	11.80	5.06	10.07	16.10	20.48	24.58
2	28.69	30.46	25.60	19.63	16.81	15.26	10.18	5.39	10.33	16.24	20.58	24.73
3	28.69	30.50	24.90	20.03	16.35	14.30	9.37	5.73	10.56	16.38	20.70	24.88
4	28.73	30.60	24.26	20.24	15.65	13.46	8.88	5.76	10.84	16.56	20.85	25.01
5	28.83	30.60	23.87	20.43	14.75	12.91	7.50	4.58	11.11	16.78	21.01	25.10
6	28.94	30.67	23.77	20.46	13.99	12.60	6.49	3.08	11.40	16.92	21.21	25.16
7	29.01	30.69	23.60	20.63	13.26	12.33	4.77	2.55	11.57	17.05	21.33	25.24
8	29.06	30.67	23.64	20.72	12.63	12.03	5.40	2.63	11.74	17.23	21.47	25.25
9	29.15	30.62	23.62	20.70	12.47	11.85	4.41	2.86	12.01	17.38	21.54	25.42
10	29.23	30.62	22.80	20.43	12.50	12.10	4.24	3.17	12.27	17.52	21.72	25.53
11	29.26	30.45	22.20	20.06	12.54	12.16	4.26	3.43	12.42	17.67	21.90	25.60
12	29.28	30.28	21.56	20.04	12.65	12.18	4.41	3.87	12.56	17.78	22.06	25.60
13	29.32	29.95	21.67	20.13	12.91	12.30	4.50	4.40	12.74	17.85	22.21	25.69
14	29.37	29.85	21.60	20.09	13.17	12.38	4.49	4.73	12.95	18.06	22.34	25.82
15	29.46	29.69	21.77	19.91	13.57	12.58	4.23	5.13	13.15	18.23	22.45	25.89
16	29.49	29.71	22.03	19.76	13.71	12.76	4.07	5.52	13.38	18.41	22.56	25.95
17	29.59	29.83	22.15	19.54	13.96	12.85	3.45	5.86	13.67	18.59	22.68	25.98
18	29.65	29.87	22.21	19.30	14.35	12.88	2.51	6.19	13.85	18.69	22.84	26.00
19	29.67	29.91	22.23	---	14.75	12.81	2.10	6.60	14.01	18.83	22.98	26.08
20	29.71	29.61	22.18	18.02	15.03	12.78	1.85	---	14.10	18.96	23.18	26.12
21	29.76	28.71	22.24	17.55	15.14	12.81	1.79	---	14.25	19.11	23.28	26.21
22	29.84	28.14	22.28	16.88	15.31	13.02	2.11	---	14.42	19.22	23.36	26.27
23	29.92	27.68	22.34	16.16	---	13.11	2.43	---	14.68	19.36	23.57	26.33
24	29.98	27.30	22.37	16.29	16.12	13.20	2.81	---	14.90	19.53	23.71	26.41
25	30.00	27.28	21.72	16.29	16.42	13.23	3.16	---	15.01	19.63	23.82	26.53
26	30.03	27.14	21.13	16.26	16.63	13.43	3.57	8.68	15.15	19.70	23.92	26.62
27	30.10	26.60	20.50	16.34	16.73	13.53	3.76	8.91	15.35	19.81	24.00	26.71
28	30.17	26.03	19.88	16.61	16.73	13.72	4.10	9.15	15.62	19.95	24.09	26.74
29	30.18	25.59	19.58	16.67	---	13.84	4.22	9.40	15.79	20.08	24.27	26.78
30	30.32	25.44	19.35	16.57	---	13.82	4.79	9.60	15.96	20.19	24.37	26.75
31	30.39	---	19.53	16.92	---	13.52	---	9.84	---	20.35	24.46	---
MEAN	29.50	29.16	22.33	18.74	14.63	13.10	4.72	5.68	13.20	18.33	22.55	25.83
MAX	30.39	30.69	25.60	20.72	16.95	16.29	11.80	9.84	15.96	20.35	24.46	26.78
MIN	28.60	25.44	19.35	16.16	12.47	11.85	1.79	2.55	10.07	16.10	20.48	24.58

WTR YR 1987: HIGHEST 1.79 APRIL 21; LOWEST 30.69 NOVEMBER 7.

402452078271301. Local number, BA 74.

LOCATION.--Lat 40°24'52", long 78°27'13", Hydrologic Unit 02050302, at National Park Land.
Owner: U.S. Geological Survey.
AQUIFER.--Shale of Brallier Formation of Late Devonian age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in., depth 150 ft, cased to 14 ft, open hole.
INSTRUMENTATION.--Continuous strip-chart recorder.
DATUM.--Elevation of land-surface is 1,130 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.8 ft above land-surface datum.
PERIOD OF RECORD.--August 1969 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 9.76 ft below land-surface datum, Apr. 10, 1983; lowest, 18.65 ft below land-surface datum, Oct. 29, 30, 1969.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.82	13.59	11.55	11.58	11.54	11.32	10.95	11.08	11.44	11.92	12.82	13.80
2	14.74	13.45	11.58	11.49	11.52	10.95	10.79	11.17	11.59	11.82	12.85	13.88
3	14.66	13.44	11.16	11.78	11.51	10.97	10.87	11.25	11.67	11.39	12.90	14.00
4	14.37	13.43	11.22	11.84	11.41	10.99	10.71	11.02	11.75	11.29	12.94	14.06
5	14.00	13.43	11.39	11.88	11.14	10.98	10.31	10.66	11.84	11.41	12.99	14.11
6	13.76	13.15	11.43	11.86	10.99	10.92	10.23	10.41	11.98	11.48	13.11	14.06
7	13.75	13.08	11.42	11.80	11.12	10.83	10.24	10.51	12.01	11.43	13.16	13.93
8	13.67	12.93	11.43	11.85	11.18	10.92	10.36	10.63	12.02	10.97	13.18	13.79
9	13.57	12.47	11.43	11.82	11.21	11.12	10.46	10.73	12.11	10.92	13.15	13.57
10	13.67	12.34	11.18	11.70	11.17	11.12	10.54	10.88	12.25	10.99	13.14	13.57
11	13.69	12.16	11.19	11.62	11.23	11.12	10.65	10.95	12.34	11.10	13.16	13.56
12	13.64	11.90	11.23	11.75	11.26	11.16	10.67	11.29	12.16	11.21	13.14	13.51
13	13.52	11.87	11.61	11.89	11.50	11.17	10.66	11.41	12.24	11.28	13.23	13.46
14	13.44	11.87	11.61	11.86	11.60	11.28	10.66	11.44	12.16	11.13	13.23	13.51
15	13.33	11.67	11.59	11.75	11.58	11.31	10.55	11.36	12.20	11.06	13.26	13.52
16	13.29	11.59	11.66	11.64	11.68	11.25	10.48	11.37	12.30	11.17	13.27	13.49
17	13.29	11.73	11.66	11.59	11.86	11.16	10.37	11.36	12.47	11.29	13.35	13.44
18	13.53	11.73	11.66	11.46	12.01	11.03	10.35	11.36	12.52	11.35	13.44	13.20
19	13.55	11.69	11.59	11.27	11.98	11.04	10.42	10.90	12.20	11.44	13.47	12.94
20	13.42	11.67	11.65	11.24	12.02	11.02	10.50	10.54	12.23	11.54	13.66	12.75
21	13.39	11.30	11.74	11.18	11.96	11.08	10.52	10.38	12.15	11.69	13.74	12.60
22	13.38	11.41	11.74	11.14	11.95	11.22	10.65	10.28	12.20	11.80	13.63	12.50
23	13.45	11.41	11.69	11.21	12.02	11.30	10.73	10.38	12.28	11.90	13.73	12.46
24	13.53	11.46	11.70	11.35	12.05	11.34	10.81	10.57	12.48	12.05	13.81	12.50
25	13.57	11.53	11.42	11.48	12.00	11.34	10.90	10.72	12.06	12.17	13.83	12.64
26	13.51	11.53	11.41	11.50	11.92	11.45	10.96	10.84	12.05	12.18	13.83	12.73
27	13.34	11.26	11.39	11.63	11.82	11.50	10.96	10.94	11.93	12.29	13.76	12.82
28	13.43	11.26	11.36	11.57	11.67	11.60	10.93	11.00	11.92	12.44	13.77	12.85
29	13.45	11.34	11.34	11.57	---	11.64	10.91	11.10	11.97	12.55	13.87	12.84
30	13.52	11.48	11.39	11.70	---	11.56	11.06	11.20	11.96	12.60	13.89	12.64
31	13.61	---	11.58	11.61	---	11.21	---	11.32	---	12.76	13.82	---
MEAN	13.67	12.11	11.48	11.60	11.60	11.19	10.64	10.94	12.08	11.63	13.39	13.29
MAX	14.82	13.59	11.74	11.89	12.05	11.64	11.06	11.44	12.52	12.76	13.89	14.11
MIN	13.29	11.26	11.16	11.14	10.99	10.83	10.23	10.28	11.44	10.92	12.82	12.46

WTR YR 1987: HIGHEST 10.23 APRIL 6; LOWEST 14.82 OCTOBER 1.

414330076280501. Local number, BR 92.

LOCATION.--Lat 41°43'30", long 76°28'05", Hydrologic Unit 02050106, at Monroeton.
Owner: U.S. Geological Survey.
AQUIFER.--Shale of Gardeau Formation of Late Devonian age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in., depth 117 ft, cased to 55 ft, open hole.
INSTRUMENTATION.--Continuous strip-chart recorder.
DATUM.--Elevation of land-surface is 750 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing, 3.0 ft above land-surface datum.
PERIOD OF RECORD.--May 1966 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.33 ft below land-surface datum, Apr. 6, 1984; lowest, 11.86 ft below land-surface datum, Oct. 23, 24, 1980.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11.15	10.93	6.35	7.09	7.83	9.17	7.46	6.91	9.43	9.72	9.94	10.78
2	11.14	10.93	6.38	7.22	7.89	8.36	7.24	7.15	9.35	9.71	10.02	10.82
3	11.10	10.94	6.28	7.38	7.95	6.96	7.24	7.23	8.07	9.58	10.10	10.85
4	11.01	10.97	6.00	7.49	7.98	6.26	7.16	7.19	7.80	9.16	10.18	10.86
5	10.76	10.97	6.00	7.60	8.00	5.94	4.15	7.24	---	9.19	10.24	10.88
6	10.68	10.98	6.13	7.66	7.98	5.81	3.12	7.39	---	9.24	10.29	10.90
7	10.67	10.98	6.28	7.82	8.00	5.48	2.56	7.56	---	9.27	10.33	10.93
8	10.64	10.91	6.44	7.92	8.00	4.68	2.51	7.72	7.99	7.53	10.40	10.94
9	10.65	10.82	6.51	8.02	8.04	4.01	2.70	7.86	8.15	9.12	10.44	10.95
10	10.67	10.52	6.61	8.04	8.11	3.97	2.97	8.04	8.31	6.67	10.49	10.97
11	10.68	10.37	6.74	8.11	8.16	4.22	3.29	8.18	8.47	6.63	10.52	10.98
12	10.67	10.31	6.95	8.16	8.20	4.40	3.36	8.37	8.61	6.81	10.57	10.98
13	10.68	10.26	7.09	8.24	8.31	4.60	3.09	8.47	8.68	7.03	10.61	10.96
14	10.68	10.20	7.27	8.28	8.41	4.82	3.03	8.57	8.60	7.28	10.67	10.66
15	10.72	10.19	7.44	8.25	8.50	5.06	3.34	8.70	8.62	7.49	10.71	10.54
16	10.70	10.18	7.61	7.78	8.58	5.30	3.57	8.79	8.76	7.71	10.73	10.49
17	10.72	10.19	7.71	7.04	8.68	5.55	3.73	8.90	8.91	7.97	10.77	10.48
18	10.74	10.20	7.75	6.83	8.76	5.75	4.04	8.99	9.02	8.14	10.82	10.46
19	10.75	10.18	7.83	6.73	8.86	6.01	4.28	9.02	9.15	8.36	10.85	10.44
20	10.76	10.05	7.95	6.78	8.83	6.30	4.55	8.99	9.25	8.51	10.89	10.30
21	10.78	9.74	8.03	6.84	8.90	6.49	4.84	9.03	9.34	8.69	10.88	10.23
22	10.79	9.04	8.11	6.84	8.93	6.72	5.14	9.07	9.40	8.86	10.93	10.20
23	10.81	8.68	8.23	6.94	9.02	6.93	5.43	9.15	9.38	9.00	10.95	10.18
24	10.83	8.44	8.27	7.06	9.08	7.10	5.62	9.21	9.17	9.15	10.97	10.22
25	10.85	8.03	8.24	7.15	9.12	7.21	5.61	9.27	9.19	9.27	11.00	10.24
26	10.85	7.66	7.54	7.27	9.16	7.29	5.84	9.35	9.26	9.37	11.02	10.30
27	10.85	6.85	7.12	7.35	9.18	7.36	6.02	9.41	9.39	9.46	10.98	10.35
28	10.87	6.29	6.94	7.49	9.20	7.51	6.24	9.43	9.48	9.57	10.91	10.38
29	10.87	6.11	6.88	7.56	---	7.60	6.44	9.42	9.56	9.66	10.80	10.41
30	10.90	6.23	6.91	7.65	---	7.67	6.68	9.40	9.64	9.77	10.78	10.45
31	10.92	---	7.04	7.77	---	7.70	---	9.45	---	9.86	10.77	---
MEAN	10.80	9.61	7.12	7.50	8.49	6.20	4.71	8.50	8.93	8.64	10.63	10.60
MAX	11.15	10.98	8.27	8.28	9.20	9.17	7.46	9.45	9.64	9.86	11.02	10.98
MIN	10.64	6.11	6.00	6.73	7.83	3.97	2.51	6.91	7.80	6.63	9.94	10.18

WTR YR 1987: HIGHEST 2.51 APRIL 8; LOWEST 11.15 OCTOBER 1.

412732078034201. Local number, CM 13.

LOCATION.--Lat 41°27'32", long 78°03'42", Hydrologic Unit 02050202, at Sinnemahoning State Park.
Owner: U.S. Geological Survey.
AQUIFER.--Sandstone of Catskill Formation of Late Devonian age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in., depth 102 ft, cased to 57 ft, open hole.
INSTRUMENTATION.--Digital recorder with 60-minute recording interval. Pa. Department of Environmental Resources satellite telemeter at station.
DATUM.--Elevation of land-surface is 1,010 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 3.1 ft above land-surface datum.
PERIOD OF RECORD.--October 1967 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 18.53 ft below land-surface datum, Feb. 16, 1984; lowest, 25.98 ft below land-surface datum, Sept. 10, 1972.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.59	23.74	23.15	22.94	23.05	23.06	22.83	22.87	23.31	23.49	23.88	23.67
2	23.61	23.64	23.06	22.70	22.90	22.92	22.76	22.94	23.29	23.43	23.93	23.73
3	23.57	23.57	22.75	22.87	23.11	23.05	22.84	22.97	23.30	23.24	23.69	23.84
4	23.34	23.51	22.66	22.94	23.27	23.09	22.74	22.96	23.35	23.24	23.70	23.92
5	23.30	23.51	22.77	22.97	23.31	23.08	22.58	22.96	23.43	23.30	23.76	23.95
6	23.41	23.50	22.87	22.93	23.23	23.08	22.54	22.84	23.57	23.31	23.85	23.95
7	23.42	23.57	22.84	22.81	23.05	22.98	22.49	22.78	23.54	23.24	23.91	23.74
8	23.42	23.54	22.66	22.86	22.97	22.86	22.57	22.85	23.39	23.25	24.02	23.65
9	23.44	23.36	22.61	22.89	23.18	22.76	22.61	23.00	23.35	23.28	24.00	23.52
10	23.56	23.36	22.63	22.83	23.19	22.90	22.66	22.93	23.46	23.21	23.85	23.59
11	23.62	23.30	22.65	22.71	23.19	22.90	22.76	22.89	23.48	23.25	23.91	23.62
12	23.62	23.19	22.57	22.84	23.09	22.84	22.74	22.93	23.35	23.25	23.94	23.53
13	23.40	23.27	22.89	23.01	23.16	22.82	22.84	23.06	23.33	23.21	24.05	23.44
14	23.22	23.29	22.85	22.97	23.21	22.80	22.86	23.03	23.31	23.23	24.12	23.43
15	23.30	23.22	22.80	23.00	23.32	22.85	22.75	23.03	23.25	23.32	24.23	23.46
16	23.30	23.04	22.80	23.11	23.30	22.89	22.73	23.16	23.31	23.46	24.17	23.42
17	23.47	23.00	22.79	23.18	23.22	22.88	22.81	23.09	23.42	23.50	24.09	23.33
18	23.67	23.05	22.71	23.00	23.30	22.86	23.01	23.02	23.46	23.50	24.19	23.17
19	23.65	23.09	22.70	22.88	23.37	22.82	23.08	23.06	23.46	23.51	24.27	23.20
20	23.48	22.91	22.72	22.93	23.39	22.78	23.01	23.10	23.49	23.47	24.34	23.19
21	23.41	22.89	22.94	---	23.29	22.84	23.02	23.23	23.49	23.51	24.38	23.02
22	23.42	23.03	22.95	22.89	23.19	22.91	22.90	23.23	23.37	23.56	24.38	23.02
23	23.47	23.01	22.89	22.86	23.08	22.95	22.92	23.28	23.38	23.65	24.14	22.97
24	23.65	22.99	22.85	23.08	---	22.95	22.99	23.32	23.44	23.69	24.16	23.05
25	23.65	23.02	22.72	23.10	---	22.92	23.04	23.31	23.45	23.76	24.16	23.13
26	23.57	22.97	22.82	23.07	---	22.88	23.05	23.33	23.39	23.71	24.17	23.23
27	23.36	22.75	22.86	23.08	---	22.94	22.96	23.32	23.36	23.78	24.09	23.23
28	23.46	22.81	22.86	23.09	---	22.97	22.77	23.32	23.48	23.85	23.84	23.21
29	23.48	23.05	22.84	23.11	---	23.00	22.76	23.36	23.54	23.89	23.89	23.12
30	23.64	23.19	22.83	22.88	---	22.90	22.83	23.46	23.53	23.89	23.86	22.92
31	23.74	---	22.96	23.06	---	22.75	---	23.46	---	23.95	23.77	---
MEAN	23.49	23.21	22.81	22.95	23.19	22.91	22.82	23.10	23.41	23.48	24.02	23.41
MAX	23.74	23.74	23.15	23.18	23.39	23.09	23.08	23.46	23.57	23.95	24.38	23.95
MIN	23.22	22.75	22.57	22.70	22.90	22.75	22.49	22.78	23.25	23.21	23.69	22.92

WTR YR 1987: HIGHEST 22.49 APRIL 7; LOWEST 24.38 AUGUST 21, 22.

404518077575501. Local number, CE 118.

LOCATION.--Lat 40°45'18", long 77°57'55", Hydrologic Unit 02050302, at State Game Land Number 176.
Owner: U.S. Geological Survey.
AQUIFER.--Sandstone and dolomite of Gatesburg Formation of Upper Cambrian age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in., depth 130 ft, cased to 40 ft, open hole.
INSTRUMENTATION.--Continuous strip-chart recorder.
DATUM.--Elevation of land-surface is 1,150 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 2.5 ft above land-surface datum.
PERIOD OF RECORD.--January 1968 to June 1981, July 1984 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 51.91 ft below land-surface datum, Sept. 8, 12, 16, 1978; lowest, 80.14 ft below land-surface datum, March 26, 1970.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67.55	67.94	68.20	---	68.12	67.87	67.73	67.00	66.37	65.86	65.57	65.55
2	67.55	67.96	68.20	---	68.11	67.87	67.72	66.99	66.35	65.85	65.57	65.55
3	67.56	67.97	68.17	---	68.10	67.87	67.72	66.98	66.33	65.84	65.56	65.56
4	67.56	67.97	68.17	---	68.09	67.87	67.72	66.96	66.32	65.83	65.56	65.57
5	67.57	67.98	68.17	---	68.09	67.87	67.70	66.96	66.30	65.83	65.56	65.57
6	67.59	67.98	68.17	---	68.09	67.87	67.68	66.92	66.28	65.82	65.56	65.57
7	67.60	68.01	68.17	---	68.09	67.87	67.62	66.89	66.26	65.81	65.56	65.57
8	67.60	68.01	68.17	---	68.08	67.87	67.58	66.87	66.23	65.81	65.56	65.57
9	67.61	68.01	68.17	---	68.08	67.86	67.54	66.85	66.21	65.81	65.56	65.57
10	67.63	68.02	68.15	---	68.07	67.85	67.50	66.82	66.20	65.78	65.54	65.59
11	67.64	68.02	68.14	---	68.07	67.85	67.46	66.80	66.19	65.77	65.54	65.59
12	67.64	68.02	68.14	---	68.07	67.85	67.45	66.77	66.16	65.76	65.54	65.59
13	67.65	68.02	68.15	---	68.07	67.85	67.40	66.75	66.13	65.75	65.54	65.59
14	67.65	68.07	68.14	---	68.07	67.84	67.40	66.74	66.11	65.74	65.54	65.60
15	67.65	68.07	68.14	---	68.07	67.84	67.38	66.70	66.10	65.73	65.54	65.61
16	67.66	68.07	68.12	---	68.07	67.84	67.36	66.68	66.07	65.73	65.55	65.61
17	67.66	68.07	---	---	68.07	67.83	67.33	66.66	66.06	65.73	65.55	65.61
18	67.67	68.07	---	---	68.07	67.83	67.31	66.63	66.06	65.72	65.55	65.61
19	67.73	68.08	---	---	68.07	67.82	67.30	66.61	66.04	65.72	65.54	65.62
20	67.74	68.09	---	68.12	68.08	67.82	67.28	66.60	66.02	65.71	65.55	65.64
21	67.74	68.09	---	68.13	68.07	67.80	67.26	66.58	65.99	65.71	65.55	65.66
22	67.74	68.10	---	68.13	68.07	67.80	67.22	66.57	65.98	65.71	65.55	65.67
23	67.90	68.11	---	68.12	---	67.80	67.14	66.53	65.96	65.70	65.54	65.67
24	67.91	68.11	---	68.12	67.88	67.80	67.14	66.51	65.95	65.67	65.55	65.67
25	67.91	68.21	---	68.12	67.87	67.79	67.14	66.49	65.87	65.66	65.55	65.69
26	67.91	68.21	---	68.12	67.88	67.78	67.13	66.45	65.87	65.66	65.55	65.71
27	67.91	68.20	---	68.12	67.88	67.73	67.12	66.45	65.87	65.57	65.54	65.71
28	67.92	68.20	---	68.12	67.88	67.73	67.06	66.45	65.87	65.57	65.54	65.72
29	67.92	68.20	---	68.12	---	67.73	67.05	66.43	65.87	65.57	65.55	65.74
30	67.93	68.20	---	68.12	---	67.73	67.00	66.41	65.86	65.57	65.55	65.74
31	67.94	---	---	68.12	---	67.72	---	66.38	---	65.57	65.55	---
MEAN	67.72	68.07	68.16	68.12	68.04	67.82	67.38	66.69	66.10	65.73	65.55	65.62
MAX	67.94	68.21	68.20	68.13	68.12	67.87	67.73	67.00	66.37	65.86	65.57	65.74
MIN	67.55	67.94	68.12	68.12	67.87	67.72	67.00	66.38	65.86	65.57	65.54	65.55

WTR YR 1987: HIGHEST 65.54 AUGUST 10, 11, 12, 13, 14, 15, 19, 23, 27, 28; LOWEST 68.21 NOVEMBER 25, 26.

CLINTON COUNTY

411424077462201. Local number, CN 1.

LOCATION.--Lat 41°14'24", long 77°46'22", Hydrologic Unit 02050203, at Sproul State Forest.
Owner: Commonwealth of Pennsylvania.
AQUIFER.--Sandstone of Pocono Formation of Late Mississippian age.
WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in., depth 78 ft, cased to 38 ft, open hole.
INSTRUMENTATION.--Continuous strip-chart recorder.
DATUM.--Elevation of land-surface is 2,050 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of platform, 0.2 ft above land-surface datum.
PERIOD OF RECORD.--August 1950 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 44.00 ft below land-surface datum, Jan. 13, 1951; lowest, 57.24 ft below land-surface datum, Dec. 21, 1964.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49.53	49.83	48.34	48.10	---	---	48.89	47.64	48.28	48.59	49.10	49.39
2	49.54	49.83	48.27	48.07	---	---	48.77	47.69	48.34	48.59	49.11	49.39
3	49.51	49.83	47.97	48.25	---	---	48.76	47.78	48.39	48.48	49.15	49.43
4	49.45	49.88	47.94	48.26	---	---	48.59	47.81	48.43	48.41	49.16	49.45
5	49.42	49.88	47.92	48.31	---	---	48.49	47.79	48.45	48.37	49.22	49.46
6	49.42	49.96	47.90	48.30	---	---	48.37	47.73	48.48	48.34	49.26	49.44
7	49.44	49.97	47.83	48.34	---	---	48.21	47.70	48.47	48.30	49.28	49.44
8	49.40	49.96	47.73	48.40	---	---	48.12	47.73	48.45	48.27	49.30	49.43
9	49.44	49.81	47.68	48.46	---	---	48.01	47.75	48.52	48.24	49.31	49.43
10	49.47	49.78	47.62	48.42	---	---	47.96	47.78	48.57	48.20	49.32	49.45
11	49.48	49.67	47.61	48.45	---	---	47.85	47.79	48.59	48.15	49.33	49.45
12	49.45	49.58	47.55	48.56	---	---	47.84	47.89	48.55	48.11	49.30	49.41
13	49.42	49.55	47.65	48.66	---	---	47.85	47.94	48.56	48.07	49.30	49.29
14	49.41	49.54	47.65	48.70	---	---	47.82	47.95	48.50	48.10	49.32	49.20
15	49.45	49.43	47.60	48.79	---	---	47.74	48.00	48.43	48.14	49.33	49.15
16	49.45	49.34	47.65	48.82	---	---	47.67	48.03	48.40	48.22	49.33	49.08
17	49.50	49.29	47.67	48.83	---	---	47.60	48.06	48.40	48.25	49.36	49.01
18	49.54	49.27	47.59	48.76	---	---	47.63	48.12	48.41	48.26	49.43	48.90
19	49.53	49.29	47.69	48.74	---	---	47.64	48.19	48.39	48.31	49.48	48.85
20	49.50	49.25	47.80	48.78	---	---	47.62	48.22	48.39	48.36	49.55	48.72
21	49.49	49.13	47.86	48.78	49.87	---	47.55	48.24	48.38	48.42	49.59	48.44
22	49.51	49.09	47.86	48.73	---	---	47.59	48.24	48.41	48.47	49.59	48.42
23	49.54	49.06	47.88	---	---	49.15	47.59	48.24	48.48	48.56	49.66	48.28
24	49.58	48.98	47.88	48.64	---	49.16	47.65	---	48.50	48.60	49.68	48.18
25	49.59	48.96	47.93	---	---	49.13	47.68	---	48.48	---	49.71	48.14
26	49.57	48.82	47.97	---	---	49.12	47.69	---	48.47	---	49.73	48.11
27	49.60	48.64	47.99	---	---	49.12	47.67	48.22	48.48	---	49.71	48.10
28	49.67	48.53	48.01	---	---	49.11	47.59	48.22	48.54	---	49.66	48.08
29	49.68	48.39	48.01	---	---	49.11	47.59	48.22	48.56	---	49.57	48.05
30	49.80	48.34	48.02	---	---	49.05	47.64	48.26	48.59	---	49.54	47.92
31	49.83	---	48.11	---	---	48.90	---	48.26	---	---	49.39	---
MEAN	49.52	49.36	47.84	48.53	49.87	49.09	47.92	47.98	48.46	48.33	49.41	48.90
MAX	49.83	49.97	48.34	48.83	49.87	49.16	48.89	48.26	48.59	48.60	49.73	49.46
MIN	49.40	48.34	47.55	48.07	49.87	48.90	47.55	47.64	48.28	48.07	49.10	47.92

WTR YR 1987: HIGHEST 47.55 DECEMBER 12, APRIL 21; LOWEST 49.97 NOVEMBER 7.

400209077183301. Local number, CU 2.

LOCATION.--Lat 40°02'09", long 77°18'33", Hydrologic Unit 02050305, at Michaux State Forest.
Owner: Commonwealth of Pennsylvania.
AQUIFER.--Metarhyolite of Precambrian age.
WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in., depth 37 ft, casing information not available.
INSTRUMENTATION.--Continuous strip-chart recorder.
DATUM.--Elevation of land-surface is 955 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing, 1.5 ft above land-surface datum.
PERIOD OF RECORD.--June 1951 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 9.51 ft below land-surface datum, Apr. 18, 1961; lowest, 33.50 ft below land-surface datum, Feb. 3, 1955.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27.78	29.14	28.26	21.96	20.11	19.84	17.68	14.99	16.98	21.03	24.77	27.74
2	27.86	29.18	28.18	21.88	20.00	19.25	17.54	15.10	17.16	21.14	24.88	27.81
3	27.89	29.21	27.69	21.61	20.00	18.83	17.52	15.23	17.32	21.27	24.99	27.90
4	27.95	29.26	26.78	21.64	---	18.67	17.32	15.27	17.48	21.42	25.12	27.99
5	28.01	29.30	26.50	21.65	---	18.48	16.90	15.21	17.60	21.55	25.25	28.06
6	28.08	29.32	26.39	21.61	---	18.34	16.46	15.07	17.74	21.65	25.36	28.14
7	28.13	29.34	26.27	21.57	---	18.14	15.76	15.14	17.81	21.76	25.46	28.21
8	28.17	29.37	26.16	21.43	---	17.89	15.37	15.19	17.93	21.89	25.56	28.25
9	28.23	29.37	26.07	21.48	---	17.64	15.12	15.22	18.09	22.02	25.64	28.32
10	28.28	29.38	25.87	21.44	---	17.66	14.92	15.27	18.25	22.13	25.77	28.38
11	28.34	29.40	25.71	21.37	---	17.62	14.75	15.31	18.32	22.23	25.86	28.43
12	28.38	29.41	25.52	21.29	---	17.53	14.69	15.51	18.43	22.34	25.96	28.45
13	28.43	29.41	25.40	21.33	---	17.43	14.72	15.64	18.57	22.43	26.08	28.23
14	28.49	29.42	25.35	21.38	---	17.40	14.72	15.67	18.68	22.58	26.17	28.04
15	28.51	29.41	25.19	21.37	---	17.38	14.57	15.86	18.84	22.71	26.28	28.01
16	28.58	29.41	25.09	21.31	---	17.38	14.49	15.96	18.99	22.86	26.35	27.94
17	28.63	29.41	24.98	21.35	---	17.36	14.41	16.11	19.16	22.98	26.47	27.91
18	28.69	29.39	24.82	21.34	---	17.37	14.45	16.27	19.27	23.08	26.58	27.86
19	28.72	29.39	24.75	21.22	---	17.30	14.49	16.49	19.37	23.21	26.68	27.84
20	28.76	29.39	24.62	---	---	17.32	14.46	16.47	19.51	23.30	26.78	27.81
21	28.69	29.27	24.54	---	---	17.36	14.44	16.44	19.64	23.43	26.86	27.77
22	28.73	---	24.44	20.65	---	17.46	14.48	16.37	19.76	23.54	26.96	27.71
23	28.78	---	24.30	20.57	---	17.49	14.51	16.32	19.94	23.67	27.08	27.67
24	28.82	28.78	24.19	20.57	---	17.50	14.54	16.30	20.07	23.79	27.16	27.64
25	28.87	28.77	23.58	20.54	20.09	17.57	14.62	---	20.24	23.91	27.24	27.61
26	28.89	28.70	22.89	20.39	20.11	17.62	14.66	16.42	20.35	24.04	27.33	27.60
27	28.96	28.62	22.60	20.36	20.13	17.66	14.67	16.46	20.51	24.17	27.35	27.57
28	28.98	28.54	22.38	20.29	20.09	17.76	14.67	16.48	20.68	24.29	27.43	27.53
29	29.03	28.42	22.24	20.27	---	17.80	14.67	16.57	20.78	24.41	27.53	27.47
30	29.08	28.37	22.05	20.13	---	17.79	14.92	16.69	20.91	24.53	27.59	27.58
31	29.11	---	21.93	20.10	---	17.66	---	16.84	---	24.66	27.67	---
MEAN	28.51	29.16	24.99	21.11	20.08	17.82	15.22	15.86	18.95	22.84	26.33	27.92
MAX	29.11	29.42	28.26	21.96	20.13	19.84	17.68	16.84	20.91	24.66	27.67	28.45
MIN	27.78	28.37	21.93	20.10	20.00	17.30	14.41	14.99	16.98	21.03	24.77	27.47

WTR YR 1987: HIGHEST 14.41 APRIL 17; LOWEST 29.42 NOVEMBER 14.

402118076462201. Local number, DA 350.

LOCATION.--Lat 40°21'18", long 76°46'22", Hydrologic Unit 02050305, at R. D. 1, Linglestown.
Owner: William R. Miller.
AQUIFER.--Shale of Hamburg sequence of Middle Ordovician age.
WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in., depth 225 ft, cased to 19 ft, open hole.
INSTRUMENTATION.--Digital recorder with 60-minute recording interval. Pa. Department of Environmental Resources satellite telemeter at station.
DATUM.--Elevation of land-surface is 450 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing, 1.3 ft above land-surface datum.
PERIOD OF RECORD.--September 1964 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.15 ft below land-surface datum, June 22, 1972; lowest, 6.95 ft below land-surface datum, Sept. 11, 1966.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.66	5.45	4.62	4.42	4.66	3.85	4.44		---	5.74	6.19	5.81
2	5.64	5.44	4.60	4.44	4.63	3.84	4.40		---	5.69	6.17	5.85
3	5.61	5.47	4.14	4.44	4.58	3.93	4.30		---	5.70	6.17	5.89
4	5.39	5.45	4.25	4.47	4.51	4.02	3.96		---	5.74	6.23	---
5	5.39	5.51	4.33	4.47	4.48	4.06	4.00		---	5.82	6.21	---
6	5.45	5.06	4.34	4.45	4.43	4.05	3.58		---	5.80	6.05	---
7	5.44	5.07	4.39	4.52	4.40	4.08	3.79		---	5.78	6.05	---
8	5.45	4.99	4.47	4.53	4.43	4.13	3.94		---	5.78	---	---
9	5.46	4.81	4.47	4.53	4.60	4.28	4.04		---	5.80	---	---
10	5.53	4.86	4.31	4.46	4.59	4.35	4.13		---	5.86	6.07	---
11	5.55	4.84	4.30	4.53	4.57	4.37	4.19		---	---	6.11	---
12	5.55	4.66	4.37	4.55	4.60	4.40	4.20		---	---	6.14	---
13	5.53	4.78	4.49	4.55	4.63	4.45	4.11		5.40	5.88	6.17	---
14	5.39	4.78	4.46	4.54	4.68	4.49	4.17		5.44	5.86	6.19	---
15	5.24	4.79	4.52	4.48	4.72	4.52	4.22		5.48	5.88	6.21	---
16	5.26	4.85	4.54	4.32	4.70	4.56	4.26		5.50	5.93	---	---
17	5.33	4.91	4.53	4.28	4.70	4.57	4.19		5.56	5.97	6.31	---
18	5.36	4.90	3.96	4.26	4.78	4.60	4.24		5.58	5.97	6.39	---
19	5.37	4.58	4.15	4.24	4.79	4.62	4.27		5.58	6.01	6.47	---
20	5.38	4.58	4.24	4.15	4.80	4.63	4.34		5.56	6.01	6.21	---
21	5.44	4.29	4.32	4.25	4.78	4.68	4.41		5.52	---	6.21	---
22	5.45	4.37	4.33	4.23	4.77	4.76	4.53		5.52	6.07	6.17	---
23	5.45	4.43	4.39	4.42	4.62	4.76	---		5.56	6.11	6.15	---
24	5.47	4.48	4.42	4.47	4.61	4.79	---		5.60	6.09	6.17	---
25	5.49	4.52	3.92	4.46	4.57	4.84	---		5.64	6.11	6.17	---
26	5.47	4.51	4.08	4.53	4.51	4.90	---		5.64	6.01	6.19	---
27	5.39	4.34	4.19	4.55	4.49	4.90	---		5.66	6.05	6.15	---
28	5.39	4.40	4.26	4.60	4.47	4.94	---		5.72	6.11	6.13	---
29	5.39	4.49	4.31	4.60	---	4.96	---		5.76	---	5.87	4.87
30	5.46	4.59	4.39	4.60	---	4.93	---		5.78	6.15	5.91	4.87
31	5.47	---	4.47	4.69	---	4.79	---		---	6.17	5.91	---
MEAN	5.45	4.81	4.34	4.45	4.61	4.49	4.17		5.58	5.93	6.16	5.46
MAX	5.66	5.51	4.62	4.69	4.80	4.96	4.53		5.78	6.17	6.47	5.89
MIN	5.24	4.29	3.92	4.15	4.40	3.84	3.58		5.40	5.69	5.87	4.87

WTR YR 1987: HIGHEST 3.58 APRIL 6; LOWEST 6.47 AUGUST 19.

394731077411701. Local number, FR 332.

LOCATION.--Lat 39°47'31", long 77°41'17", Hydrologic Unit 02070004, near Greencastle.
Owner: Borough of Greencastle.
AQUIFER.--Stonehenge Formation of Early Ordovician age.
WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 in., depth 296 ft, cased to 92 ft, open hole.
INSTRUMENTATION.--Digital recorder with 60-minute recording interval. Pa. Department of Environmental Resources satellite telemeter at station.
DATUM.--Elevation of land-surface is 730 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing, 1.0 ft above land-surface datum.
PERIOD OF RECORD.--March 1975 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.30 ft below land-surface datum, Sept. 27, 1975; lowest, 36.68 ft below land-surface datum, Sept. 6, 1976.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33.16	33.49	30.68	27.90	28.43	28.25	28.54	26.50	29.57	29.00	29.86	---
2	32.94	33.51	30.67	28.10	28.42	25.64	28.70	26.64	29.52	28.98	29.81	---
3	32.40	33.59	30.25	28.23	28.43	25.32	28.79	26.81	29.55	28.84	29.81	---
4	32.45	33.60	29.93	28.36	28.35	25.15	28.74	26.81	29.35	---	29.92	---
5	32.55	33.63	29.90	28.52	28.19	25.15	22.95	26.91	29.22	---	29.99	31.30
6	32.78	33.03	29.79	28.53	28.18	25.41	22.33	27.15	29.29	---	29.70	31.31
7	32.81	32.95	29.64	28.21	28.13	25.73	21.12	27.40	29.32	---	29.65	30.53
8	32.79	32.95	29.58	28.57	27.78	25.94	20.08	27.56	---	---	29.72	30.38
9	32.91	32.92	29.47	28.76	27.63	26.03	20.71	27.66	---	---	29.84	29.88
10	33.03	32.88	29.03	28.86	27.58	26.25	21.40	27.74	---	---	29.97	---
11	33.08	32.66	28.96	28.98	27.69	26.40	21.99	27.84	---	---	30.08	---
12	33.18	32.01	28.67	29.07	27.89	26.57	22.34	27.94	---	---	30.24	---
13	33.17	32.21	28.91	29.18	28.07	26.74	22.79	28.02	---	---	30.35	---
14	33.03	32.23	28.94	29.16	28.15	26.85	22.99	28.08	---	---	30.41	---
15	32.81	32.47	29.09	29.14	28.26	27.01	23.16	28.16	---	---	30.44	---
16	33.05	32.63	29.21	29.14	28.25	27.08	23.40	28.27	---	---	30.47	---
17	33.18	32.77	29.31	29.16	28.24	27.16	23.57	28.34	---	---	30.51	---
18	33.22	32.76	29.18	29.13	28.32	27.38	23.64	28.38	---	---	30.56	---
19	33.08	32.13	29.10	29.19	28.38	27.54	23.81	28.41	---	---	30.61	---
20	33.01	31.41	29.04	27.83	28.37	27.72	24.09	28.30	---	---	30.69	---
21	33.11	30.42	29.08	---	28.31	27.95	24.29	28.32	---	---	30.80	29.56
22	33.13	30.19	29.08	27.01	28.56	28.13	24.49	28.41	---	---	30.79	29.60
23	33.20	30.25	29.07	27.26	28.73	28.12	24.71	28.54	---	---	30.63	29.78
24	33.24	30.65	29.08	27.47	28.73	28.19	24.88	28.57	---	---	---	29.88
25	33.27	30.78	28.12	27.59	28.65	28.39	25.19	28.62	28.82	---	---	30.10
26	33.24	30.82	27.19	27.81	28.70	28.37	25.41	28.77	28.86	---	---	30.18
27	33.10	30.47	26.90	27.97	28.79	28.49	25.57	28.86	28.83	29.56	---	30.24
28	33.24	30.55	26.99	28.09	28.82	28.59	25.75	28.89	28.93	29.65	---	30.41
29	33.31	30.55	27.14	28.18	---	28.62	25.95	29.13	28.91	29.72	---	30.43
30	33.40	30.70	27.46	28.27	---	28.65	26.30	29.32	28.98	29.76	---	30.40
31	33.49	---	27.81	28.43	---	28.66	---	29.53	---	29.83	---	---
MEAN	33.04	32.04	28.94	28.40	28.29	27.14	24.26	28.06	29.17	29.42	30.21	30.27
MAX	33.49	33.63	30.68	29.19	28.82	28.66	28.79	29.53	29.57	29.83	30.80	31.31
MIN	32.40	30.19	26.90	27.01	27.58	25.15	20.08	26.50	28.82	28.84	29.65	29.56

WTR YR 1987: HIGHEST 20.08 APRIL 8; LOWEST 33.63 NOVEMBER 5.

400302078090401. Local number, FU 93.

LOCATION.--Lat 40°03'02", long 78°09'04", Hydrologic Unit 02050304, at Buchanan State Forest.
Owner: Commonwealth of Pennsylvania.
AQUIFER.--Sandstone of Pocono Formation of Early Mississippian age.
WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in., depth 191 ft, cased to 45 ft, open hole.
DATUM.--Elevation of land-surface is 1,180 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.
PERIOD OF RECORD.--July 1965 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.00 ft above land-surface datum, Feb. 22, 1971; lowest, -4.46 ft below land-surface datum, Sept. 12, 1966.

WATER LEVEL, IN FEET ABOVE OR BELOW (-) LAND SURFACE DATUM , WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	-3.04	-2.89	-0.86	.44	.24	---	1.00	.49	-0.57	-1.37	-2.23	-2.74
2	-2.94	-2.85	-0.67	.32	.26	---	1.22	.43	-0.62	-1.35	-2.25	-2.78
3	-2.94	-2.85	-0.67	.15	.29	---	1.10	.37	-0.63	-1.32	-2.25	-2.87
4	-2.84	-2.83	-0.63	.02	.50	---	1.19	.49	-0.63	-1.37	-2.33	-2.92
5	-2.81	-2.85	-0.62	.02	.57	---	---	1.01	-0.62	-1.45	-2.40	-2.94
6	-2.83	-2.65	-0.63	-0.07	.42	---	---	1.25	-0.62	-1.42	-2.37	-2.86
7	-2.89	-2.67	-0.63	-0.12	.35	---	---	1.17	-0.69	-1.36	-2.38	-2.79
8	-2.88	-2.60	-0.61	-0.13	.29	---	---	1.03	-0.76	-1.40	-2.39	-2.72
9	-2.86	-2.49	---	-0.03	---	---	---	.92	-0.84	-1.45	-2.39	-2.59
10	-2.91	-2.54	---	-0.10	---	---	---	.78	-0.90	-1.51	-2.40	-2.63
11	-2.92	-2.48	---	-0.23	---	---	---	.59	-0.96	-1.62	-2.45	-2.64
12	-2.89	-2.37	---	-0.31	---	---	---	.28	-1.11	-1.66	-2.50	-2.60
13	-2.84	-2.39	---	-0.27	---	---	---	-0.08	-1.13	-1.69	-2.52	-2.45
14	-2.78	-2.39	---	-0.13	---	---	1.25	-0.11	-1.13	-1.72	---	-2.37
15	-2.79	-2.30	---	-0.10	---	---	.88	---	-1.11	-1.75	---	-2.38
16	-2.80	-2.31	-0.26	-0.03	---	---	---	---	-1.02	-1.78	---	-2.38
17	-2.86	-2.34	-0.27	.08	---	---	---	---	-1.02	-1.82	---	-2.38
18	-2.86	-2.34	-0.26	.18	---	---	---	---	-1.11	-1.85	---	-2.31
19	-2.88	-2.15	-0.14	---	---	---	---	---	-1.20	-1.88	---	-2.33
20	-2.85	-1.89	-0.19	.35	---	---	---	---	-1.32	-1.91	---	-2.27
21	-2.84	-1.77	-0.19	.45	---	---	---	---	-1.36	-1.94	---	-2.21
22	-2.84	-1.70	-0.19	.55	---	---	---	---	-1.40	-1.97	---	-2.22
23	-2.78	-1.70	-0.19	.35	---	---	---	---	-1.05	-2.01	---	-2.22
24	-2.82	-1.64	-0.19	.32	-0.49	---	---	---	-0.79	-2.04	---	-2.26
25	-2.84	-1.55	.33	.28	-0.49	---	---	---	-0.82	-2.07	---	-2.35
26	-2.78	-1.32	.75	.07	---	---	1.25	-0.34	-0.90	-2.10	---	-2.38
27	-2.74	-1.17	.77	.10	---	-0.16	.88	-0.35	-0.99	-2.10	-2.73	-2.41
28	-2.79	-1.11	.73	.16	---	-0.21	.79	-0.35	-1.16	-2.14	-2.73	-2.43
29	-2.79	-1.26	.69	.02	---	-0.24	.78	-0.38	-1.24	-2.17	-2.71	-2.42
30	-2.86	-1.25	.51	.03	---	-0.18	.56	-0.44	-1.33	-2.20	-2.74	-2.24
31	-2.89	---	.36	.14	---	.39	---	-0.53	---	-2.22	-2.73	---
MEAN	-2.85	-2.16	-0.13	.08	.19	-0.08	.99	.31	-0.97	-1.76	-2.47	-2.50
MAX	-2.74	-1.11	.77	.55	.57	.39	1.25	1.25	-0.57	-1.32	-2.23	-2.21
MIN	-3.04	-2.89	-0.86	-0.31	-0.49	-0.24	.56	-0.53	-1.40	-2.22	-2.74	-2.94

WTR YR 1987: HIGHEST 1.25 APRIL 14; LOWEST -3.04 OCTOBER 1.

401843078075401. Local number, HU 301.

LOCATION.--Lat 40°18'43", long 78°07'54", Hydrologic Unit 02050303, at Trough Creek State Park.
Owner: U.S. Geological Survey.
AQUIFER.--Sandstone of Pocono Formation of Early Mississippian age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in., depth 105 ft, cased to 18 ft, open hole.
INSTRUMENTATION.--Digital recorder with 60-minute recording interval. Pa. Department of Environmental Resources satellite telemeter at station.
DATUM.--Elevation of land-surface is 970 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 3.3 ft above land-surface datum.
PERIOD OF RECORD.--August 1969 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 48.82 ft below land-surface datum, June 23, 1972; lowest, 55.96 ft below land-surface datum, Aug. 28, 30, 1981.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53.67	---	52.83	52.29	52.35	52.90	52.23	52.12	52.81	52.98	53.62	53.47
2	53.72	---	52.82	52.39	52.33	52.49	51.95	52.19	52.89	52.91	53.61	53.52
3	53.72	---	52.50	52.58	52.46	52.36	51.96	52.25	52.91	52.82	53.56	53.63
4	53.58	---	52.39	52.65	52.51	52.31	51.78	52.11	52.89	52.76	53.58	53.69
5	53.51	---	52.49	52.66	52.52	52.24	50.93	51.86	52.94	52.83	53.63	53.68
6	53.61	---	52.50	52.63	52.42	52.19	50.65	51.63	53.00	52.90	53.64	53.59
7	53.66	---	52.49	52.58	52.27	52.11	50.45	51.62	53.05	52.87	53.62	53.56
8	53.63	---	52.52	52.66	52.23	52.00	50.61	51.71	53.08	52.82	53.60	53.45
9	53.60	---	52.51	52.70	52.49	52.06	50.80	51.79	53.12	52.85	53.58	53.40
10	53.70	---	52.39	52.60	52.52	52.25	50.97	51.86	53.31	52.88	53.55	53.42
11	53.74	---	52.32	52.67	52.52	52.28	51.18	52.01	53.32	52.92	53.59	53.42
12	53.66	---	52.37	52.80	52.51	52.30	51.31	52.16	53.26	52.95	53.58	53.41
13	53.58	---	52.63	52.91	52.60	52.34	51.52	52.36	53.27	52.95	53.61	53.34
14	53.51	---	52.55	52.86	52.65	52.37	51.62	52.42	53.28	52.95	53.65	53.36
15	53.55	---	52.61	52.82	52.75	52.45	51.66	52.39	53.29	53.03	53.67	53.40
16	53.55	---	52.64	52.80	52.78	52.50	51.69	52.47	53.34	53.08	53.66	53.39
17	53.64	---	52.62	52.73	52.67	52.53	51.60	52.47	53.43	53.16	53.66	53.37
18	53.71	---	52.57	52.71	52.76	52.55	51.59	52.51	53.45	53.18	53.73	53.10
19	53.71	---	52.66	---	52.90	52.53	51.62	52.49	53.45	53.20	53.76	52.99
20	53.64	---	52.75	52.42	52.94	52.56	51.65	52.41	53.45	53.24	53.84	52.92
21	53.62	---	52.80	52.39	52.86	52.64	51.68	52.36	53.03	53.30	53.89	52.85
22	53.60	---	52.81	52.31	52.90	52.75	51.81	52.31	52.85	53.36	53.77	52.83
23	53.57	---	52.77	52.37	---	52.79	51.86	52.33	52.77	53.40	53.84	52.85
24	---	---	52.74	52.54	53.15	52.83	51.86	52.40	52.80	53.45	53.86	52.91
25	---	---	52.30	52.52	53.17	52.80	51.90	52.48	52.78	53.47	53.86	53.06
26	---	52.76	52.14	52.51	53.19	52.85	51.94	52.57	52.76	53.41	53.85	53.10
27	---	52.70	52.09	52.51	53.18	52.83	51.94	52.60	52.78	53.50	53.68	53.14
28	---	52.63	52.11	52.44	53.12	52.90	51.91	52.61	52.87	53.57	53.68	53.15
29	---	52.66	52.11	52.37	---	52.91	51.85	52.65	52.93	53.58	53.54	53.12
30	---	52.79	52.23	52.21	---	52.85	52.05	52.71	52.98	53.59	53.53	52.91
31	---	---	52.38	52.31	---	52.49	---	52.77	---	53.60	53.45	---
MEAN	53.63	52.71	52.50	52.56	52.69	52.51	51.55	52.28	53.07	53.15	53.67	53.27
MAX	53.74	52.79	52.83	52.91	53.19	52.91	52.23	52.77	53.45	53.60	53.89	53.69
MIN	53.51	52.63	52.09	52.21	52.23	52.00	50.45	51.62	52.76	52.76	53.45	52.83

WTR YR 1987: HIGHEST 50.45 APRIL 7; LOWEST 53.89 AUGUST 21.

402411077374801. Local number, JU 351.

LOCATION.--Lat 40°24'11", long 77°37'48", Hydrologic Unit 02050304, at State Game Land Number 215.
Owner: U.S. Geological Survey.
AQUIFER.--Shale of Mahantango Formation of Middle Devonian age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in., depth 110 ft, cased to 18 ft, open hole.
INSTRUMENTATION.--Continuous strip-chart recorder.
DATUM.--Elevation of land-surface is 635 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of plywood cover, 3.6 ft above land-surface datum.
PERIOD OF RECORD.--June 1968 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 11.20 ft below land-surface datum, May 15, 1978; lowest, 15.44 ft below land-surface datum, Oct. 8, 10, 1983.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.07	14.31	13.18	---	---	13.07	12.54	12.85	13.11	14.75	15.10	14.61
2	14.91	14.33	13.15	---	---	12.57	12.53	12.88	13.19	14.66	15.11	14.66
3	14.84	14.31	12.71	---	---	12.42	12.64	12.89	13.24	14.53	14.93	14.75
4	14.58	14.14	12.62	---	---	12.46	12.49	12.63	13.19	14.49	14.94	14.82
5	14.09	14.15	12.78	---	---	12.55	11.57	12.29	13.19	14.53	14.97	14.86
6	14.11	14.00	12.87	---	---	12.62	11.46	12.36	13.33	14.60	14.45	14.80
7	14.15	13.57	12.94	---	---	12.65	11.72	12.49	13.45	14.59	14.17	14.70
8	14.19	13.45	13.00	---	---	12.64	12.04	12.60	13.60	14.61	14.15	14.56
9	14.27	13.22	12.84	---	---	12.75	12.27	12.67	13.74	14.66	14.19	14.29
10	14.33	13.14	12.66	---	---	12.89	12.49	12.75	13.93	14.70	14.22	14.11
11	14.38	13.16	12.72	---	---	12.94	12.56	12.85	14.06	14.74	14.30	14.05
12	14.43	13.04	12.84	---	---	12.97	12.62	12.93	14.10	14.77	14.37	14.02
13	14.44	13.22	13.04	---	---	13.01	12.52	13.06	14.15	14.77	14.44	13.72
14	14.34	13.29	13.05	---	---	13.02	12.61	13.11	14.20	14.75	14.51	13.49
15	14.16	13.33	13.15	---	---	13.04	12.65	13.01	14.23	14.76	14.58	13.51
16	14.09	13.37	13.03	---	---	13.02	12.67	13.02	14.28	14.78	14.64	13.57
17	14.14	13.37	---	---	---	13.05	12.53	13.06	14.36	14.84	14.68	13.62
18	14.20	13.37	---	---	---	13.09	12.49	13.14	14.41	14.87	14.78	13.03
19	14.21	13.24	---	---	---	13.09	12.53	13.06	14.47	14.90	14.84	12.61
20	14.24	12.95	---	12.61	---	13.09	12.58	12.75	14.54	14.94	14.93	12.67
21	14.27	12.68	---	---	---	13.12	12.62	12.71	14.46	14.98	14.99	12.83
22	14.31	12.73	---	---	---	13.16	12.71	12.74	14.50	15.03	14.91	12.96
23	14.31	12.81	---	---	---	13.19	12.72	12.81	14.52	15.06	14.94	13.08
24	14.34	12.86	---	---	13.29	13.21	12.66	12.66	14.60	15.10	14.99	13.22
25	14.37	12.87	---	---	13.27	13.19	12.64	12.72	14.60	15.12	15.00	13.35
26	14.35	12.82	---	---	13.26	13.16	12.70	12.78	14.61	15.10	15.00	13.46
27	14.30	12.48	---	---	13.24	13.08	12.73	12.82	14.60	15.06	14.92	13.54
28	14.32	12.65	---	---	13.23	13.11	12.73	12.85	14.67	15.08	14.90	13.57
29	14.31	12.87	---	---	---	13.16	12.71	12.90	14.70	15.09	14.73	13.63
30	14.34	13.08	---	---	---	13.12	12.82	12.96	14.74	15.08	14.69	13.43
31	14.36	---	---	---	---	12.91	---	13.03	---	15.08	14.64	---
MEAN	14.35	13.29	12.91	12.61	13.26	12.95	12.49	12.82	14.09	14.84	14.71	13.78
MAX	15.07	14.33	13.18	12.61	13.29	13.21	12.82	13.14	14.74	15.12	15.11	14.86
MIN	14.09	12.48	12.62	12.61	13.23	12.42	11.46	12.29	13.11	14.49	14.15	12.61

WTR YR 1987: HIGHEST 11.46 APRIL 6; LOWEST 15.12 JULY 25.

400506076235201. Local number, LN 514.

LOCATION.--Lat 40°05'06", long 76°23'52", Hydrologic Unit 02050306, near Landisville.
Owner: Benjamin Landis.
AQUIFER.--Shale and limestone of Kinzers Formation of Early Cambrian age.
WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in., depth 260 ft, casing information not available.
INSTRUMENTATION.--Continuous strip-chart recorder.
DATUM.--Elevation of land-surface is 415 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing, 1.0 ft above land-surface datum.
PERIOD OF RECORD.--January 1964 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 16.92 ft below land-surface datum, Mar. 28, 1978; lowest, 35.47 ft below land-surface datum, Nov. 15, 1967.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	31.12	27.85	31.02	---	32.74	32.96	32.97	33.10	33.26	33.15
2		---	31.16	28.12	31.03	---	32.78	32.88	33.01	33.07	33.24	33.22
3		---	30.11	28.43	31.07	---	32.76	32.88	33.02	33.02	33.22	33.23
4		---	29.47	---	31.25	29.32	32.70	32.83	32.99	33.06	33.22	33.24
5		---	29.43	---	---	29.33	32.63	32.79	32.98	33.09	33.24	33.25
6		---	29.59	---	---	29.44	32.34	32.84	33.00	33.11	33.24	33.24
7		---	29.77	---	---	29.55	31.67	32.87	33.00	33.12	33.30	33.20
8		---	30.07	---	---	29.68	31.27	32.89	33.08	33.13	33.25	33.19
9		---	30.07	---	---	29.86	31.23	32.91	33.04	33.08	33.25	32.98
10		---	30.03	---	---	30.13	31.30	32.92	33.05	33.12	33.19	33.08
11		---	30.15	---	---	30.39	31.41	32.93	33.06	33.20	33.21	33.11
12		---	30.26	---	---	30.58	31.49	32.96	33.06	33.14	33.23	33.11
13		---	30.54	---	---	30.78	31.65	33.03	33.05	33.15	33.22	32.93
14		---	30.70	---	---	31.00	31.78	32.97	33.06	33.13	33.25	32.99
15		---	30.91	---	---	31.20	31.88	32.92	33.09	33.13	33.27	33.04
16		---	31.11	---	---	31.40	31.95	32.95	33.06	33.13	33.27	33.06
17		---	31.29	---	---	31.60	31.98	32.96	33.07	33.13	33.24	33.10
18		---	31.13	---	---	31.81	32.11	32.96	33.07	33.18	33.30	32.82
19		---	30.38	---	---	31.96	32.22	32.93	33.07	33.17	33.30	32.49
20		---	30.10	---	---	32.09	32.31	32.68	33.08	33.16	33.32	32.70
21		---	30.14	---	---	32.25	32.40	32.70	33.09	33.17	33.32	32.83
22		---	30.25	28.96	---	32.38	32.49	32.79	33.11	33.19	33.26	32.87
23		---	30.46	29.54	---	32.47	32.65	32.84	33.05	33.19	33.26	32.87
24		30.92	30.55	30.09	---	32.60	32.67	32.87	33.08	33.27	33.32	32.88
25		31.15	28.28	30.26	32.68	32.63	32.69	32.91	33.09	33.22	33.29	32.98
26		31.22	26.60	30.48	---	32.68	32.76	32.93	33.10	33.12	33.24	33.01
27		30.75	26.49	30.69	---	32.71	32.80	32.89	33.10	---	33.22	33.01
28		30.49	26.73	30.87	---	32.86	32.82	33.00	33.10	33.21	33.22	33.03
29		30.63	26.97	30.97	---	32.86	32.84	32.97	33.10	33.22	33.22	---
30		30.86	27.25	31.00	---	32.78	32.86	32.98	33.11	33.26	33.23	33.11
31		---	27.62	31.03	---	32.71	---	32.98	---	33.25	33.23	---
MEAN		30.86	29.64	29.87	31.41	31.39	32.24	32.90	33.06	33.15	33.25	33.02
MAX		31.22	31.29	31.03	32.68	32.86	32.86	33.03	33.11	33.27	33.32	33.25
MIN		30.49	26.49	27.85	31.02	29.32	31.23	32.68	32.97	33.02	33.19	32.49

WTR YR 1987: HIGHEST 26.49 DECEMBER 27; LOWEST 33.32 AUGUST 20, 21, 24.

400741075584301. Local number, LN 1643.

LOCATION.--Lat 40°07'41", long 75°58'43", Hydrologic Unit 02050306, 1.1 mi southeast of Churchtown.
Owner: U.S. Geological Survey.
AQUIFER.--Dolomite of Zooks Corner Formation of Cambrian age.

WATER-LEVEL RECORDS

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 100 ft, cased to 69 ft, open hole.
INSTRUMENTATION.--Continuous strip-chart recorder.
DATUM.--Elevation of land-surface is 465 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of plywood cover, 3.1 ft above land-surface datum.
PERIOD OF RECORD.--October 1982 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 33.66 ft below land-surface datum, Dec. 14, 1983; lowest, 38.75 ft below land-surface datum, Nov. 17, 1982.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37.74	37.86	37.07	36.79	36.78	37.06	37.09	37.24	37.25	37.23	37.44	37.42
2	37.73	37.86	37.10	36.79	36.79	36.05	37.12	37.24	37.27	37.23	37.45	37.44
3	37.71	37.87	37.12	36.83	36.80	36.11	37.14	37.25	37.27	37.24	37.45	37.45
4	37.70	37.65	37.15	36.87	36.78	36.19	37.14	37.25	37.27	37.26	37.47	37.46
5	37.72	---	37.14	36.91	36.79	36.25	36.94	37.23	37.27	37.28	37.47	37.47
6	37.74	---	37.04	36.93	36.81	36.28	36.90	37.25	37.30	37.29	37.47	37.47
7	37.75	---	37.06	36.95	36.84	36.32	36.80	37.26	37.30	37.29	37.47	37.44
8	37.76	---	37.07	36.98	36.85	36.38	36.87	37.28	37.32	37.30	37.47	37.44
9	37.76	---	37.12	37.00	36.85	36.45	36.91	37.29	37.32	37.31	37.49	35.90
10	37.78	---	37.14	37.00	36.94	36.54	36.94	37.31	37.33	37.31	37.37	36.41
11	37.78	---	37.16	36.88	36.95	36.59	36.98	37.31	37.34	37.34	37.40	36.81
12	37.78	37.60	37.17	36.92	36.96	36.62	36.99	37.32	37.34	37.35	37.43	36.93
13	37.79	37.66	37.18	36.94	36.98	36.66	37.01	37.34	37.35	37.35	37.43	36.92
14	37.78	37.69	37.18	36.92	37.00	36.70	37.02	37.34	37.35	37.36	37.46	36.76
15	37.76	37.71	36.77	36.91	37.03	36.74	37.04	37.34	37.37	37.10	37.48	36.84
16	37.78	37.74	36.82	36.92	37.04	36.79	37.05	37.32	37.38	37.17	37.49	36.90
17	37.79	37.76	36.88	36.94	37.06	36.82	37.04	37.33	37.40	37.19	37.51	36.96
18	37.80	37.76	36.90	36.95	37.06	36.85	37.06	37.35	37.41	37.24	37.53	36.97
19	37.81	37.56	36.94	36.86	37.09	36.88	37.08	37.29	37.42	37.27	37.54	36.41
20	37.81	37.56	36.95	36.70	37.10	36.90	37.10	37.28	37.43	37.29	37.55	36.36
21	37.82	37.38	36.49	36.50	37.10	36.93	37.11	37.22	37.42	37.31	37.56	36.46
22	37.82	37.44	36.51	36.50	37.11	36.96	37.14	37.25	36.81	37.33	37.55	36.53
23	37.83	37.47	36.55	36.55	37.09	36.98	37.14	37.28	36.83	37.35	37.56	36.61
24	37.83	37.43	36.60	36.58	37.11	37.01	37.15	37.05	36.97	37.36	37.56	36.69
25	37.83	37.45	36.65	36.60	37.13	37.02	37.16	37.10	37.07	37.38	37.57	36.76
26	37.83	37.33	36.67	36.61	37.13	37.04	37.16	37.13	37.12	37.38	37.57	36.82
27	37.79	37.06	36.67	36.64	37.12	37.05	37.17	37.17	37.13	37.39	37.55	36.88
28	37.80	37.11	36.69	36.67	37.12	37.07	37.18	37.20	37.14	37.41	37.37	36.94
29	37.81	36.93	36.69	36.70	---	37.08	37.19	37.21	37.18	37.43	37.39	36.96
30	37.84	37.02	36.70	36.71	---	37.14	37.22	37.22	37.22	37.44	37.40	37.04
31	37.85	---	36.76	36.75	---	37.10	---	37.24	---	37.44	37.41	---
MEAN	37.78	37.52	36.90	36.80	36.98	36.73	37.06	37.25	37.25	37.31	37.48	36.92
MAX	37.85	37.87	37.18	37.00	37.13	37.14	37.22	37.35	37.43	37.44	37.57	37.47
MIN	37.70	36.93	36.49	36.50	36.78	36.05	36.80	37.05	36.81	37.10	37.37	35.90

WTR YR 1987: HIGHEST 35.90 SEPTEMBER 9, LOWEST 37.87 NOVEMBER 3.

400741075584301. Local number, LN 1643--Continued

WATER-QUALITY RECORDS

REMARKS.--Water-quality samples bailed adjacent to major water-bearing zone.
COOPERATION.--Chemical samples analyzed by Pa. Department of Environmental Resources, Bureau of Laboratories.
PERIOD OF RECORD.--February 1983 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)
OCT					
10...	1230	37.78	655	13.0	0.52
NOV					
06...	0935	37.65	705	14.0	0.30
08...	0815	37.63	685	15.0	0.28
DEC					
06...	0845	37.09	685	17.0	0.40
JAN					
06...	0920	36.92	740	18.0	0.38
FEB					
07...	0950	36.85	847	19.0	0.48
28...	1200	37.12	785	19.0	0.43
MAR					
03...	1020	36.07	820	19.0	0.52
05...	0900	36.23	735	19.0	0.35
07...	0850	36.31	800	19.0	0.38
12...	0830	36.62	822	18.0	0.56
APR					
15...	0845	37.04	815	21.0	0.22
MAY					
11...	0830	37.31	806	18.0	0.45
JUN					
11...	1020	37.34	790	17.0	0.34
25...	1005	37.04	745	17.0	0.34
JUL					
01...	0945	37.22	710	21.0	0.40
09...	0840	37.31	835	17.0	0.41
SEP					
10...	1010	36.24	740	13.0	0.52
11...	0950	36.71	835	18.0	0.28

400746075584301. Local number, LN 1645.

LOCATION.--Lat 40°07'46", long 75°58'43", Hydrologic Unit 02050306, 1.1 mi southeast of Churchtown.
Owner: U.S. Geological Survey.
AQUIFER.--Dolomite of Zooks Corner Formation of Cambrian age.

WATER-LEVEL RECORDS

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 80 ft, cased to 24 ft, open hole.
INSTRUMENTATION.--Continuous strip-chart recorder.
DATUM.--Elevation of land-surface is 483 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of plywood cover, 2.8 ft above land-surface datum.
PERIOD OF RECORD.--November 1982 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 49.00 ft below land-surface datum, Dec. 15, 1983; lowest, 54.53 ft below land-surface datum, Nov. 2, 3, 4, 5, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54.44	54.52	52.12	51.76	51.70	52.01	51.88	52.01	52.09	52.07	52.19	52.30
2	54.44	54.53	52.13	51.76	51.77	51.51	51.90	52.02	52.10	52.07	52.20	52.31
3	54.42	54.53	52.05	51.79	51.77	51.24	51.92	52.03	52.11	52.08	52.20	52.32
4	54.42	54.53	52.01	51.83	51.80	51.18	51.91	52.02	52.11	52.09	52.21	52.32
5	54.42	54.53	52.02	51.85	51.81	51.19	51.86	52.03	52.12	52.10	52.21	52.32
6	54.43	54.49	52.02	51.88	51.82	51.21	51.85	52.03	52.12	52.11	52.22	52.33
7	54.44	54.48	52.03	51.92	51.82	51.24	51.78	52.04	52.12	52.12	52.22	52.32
8	54.44	54.48	52.05	51.94	51.85	51.30	51.79	52.04	52.13	52.13	52.23	52.31
9	54.45	54.45	52.05	51.93	51.85	51.36	51.80	52.07	52.13	52.14	52.24	51.45
10	54.45	54.48	52.01	51.91	51.87	51.44	51.81	52.07	52.14	52.15	52.23	51.72
11	54.45	54.48	52.02	51.91	51.90	51.50	51.82	52.07	52.15	52.15	52.19	51.83
12	54.46	54.41	52.02	51.93	51.91	51.53	51.82	52.07	52.15	52.17	52.19	51.87
13	54.46	54.44	52.05	51.91	51.92	51.57	51.83	52.08	52.15	52.17	52.21	51.85
14	54.46	54.46	52.05	51.90	51.93	51.60	51.85	52.08	52.15	52.18	52.21	51.78
15	54.45	54.46	52.06	51.89	51.94	51.65	51.85	52.08	52.16	52.04	52.22	51.80
16	54.46	54.47	52.07	51.87	51.94	51.68	51.85	52.08	52.16	52.06	52.23	51.83
17	54.46	54.47	52.07	51.74	51.95	51.71	51.85	52.09	52.17	52.08	52.24	51.86
18	54.47	54.49	52.07	51.89	51.95	51.74	51.86	52.09	52.19	52.10	52.25	51.68
19	54.48	54.40	51.87	51.87	51.96	51.76	51.87	52.07	52.20	52.11	52.26	51.36
20	54.48	54.40	51.82	51.73	51.97	51.79	51.88	52.06	52.19	52.12	52.28	51.34
21	54.49	54.31	51.84	51.61	51.98	51.82	51.88	52.05	52.20	52.13	52.28	51.41
22	54.49	54.31	51.86	51.56	51.98	51.85	51.90	52.07	52.21	52.14	52.28	51.45
23	54.50	54.32	51.88	51.53	51.98	51.87	51.90	52.07	51.86	52.15	52.28	51.51
24	54.50	54.31	51.89	51.55	51.99	51.89	51.91	51.93	51.92	52.16	52.29	51.57
25	54.50	54.31	51.59	51.56	52.00	51.91	51.91	51.97	51.98	52.16	52.29	51.64
26	54.50	54.31	51.57	51.57	52.00	51.92	51.91	51.99	52.00	52.16	52.29	51.69
27	54.48	54.09	51.58	51.59	52.00	51.94	51.92	52.01	52.02	52.17	52.29	51.74
28	54.49	54.08	51.61	51.62	52.01	51.95	51.92	52.02	52.04	52.19	52.27	51.78
29	54.49	52.08	51.63	51.63	---	51.96	51.93	52.07	52.06	52.18	52.27	51.80
30	54.52	52.11	51.67	51.66	---	51.90	52.00	52.07	52.07	52.19	52.29	51.85
31	54.52	---	51.73	51.69	---	51.88	---	52.08	---	52.19	52.30	---
MEAN	54.47	54.26	51.92	51.77	51.91	51.65	51.87	52.05	52.11	52.13	52.24	51.84
MAX	54.52	54.53	52.13	51.94	52.01	52.01	52.00	52.09	52.21	52.19	52.30	52.33
MIN	54.42	52.08	51.57	51.53	51.70	51.18	51.78	51.93	51.86	52.04	52.19	51.34

WTR YR 1987: HIGHEST 51.18 MARCH 4, LOWEST 54.53 NOVEMBER 2, 3, 4, 5.

400746075584301. Local number, LN 1645--Continued

WATER-QUALITY RECORDS

REMARKS.--Water-quality samples bailed adjacent to major water-bearing zone.
COOPERATION.--Chemical samples analyzed by Pa. Department of Environmental Resources, Bureau of Laboratories.
PERIOD OF RECORD.--February 1983 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)
OCT					
10...	1245	54.45	570	14.0	0.22
NOV					
06...	0945	54.47	575	13.0	0.29
08...	0830	54.46	555	13.0	0.13
DEC					
06...	0900	51.02	554	14.0	0.15
JAN					
06...	0935	51.90	535	12.0	0.33
FEB					
07...	1010	51.77	637	12.0	0.22
28...	1215	52.00	592	13.0	0.30
MAR					
03...	1010	51.20	580	13.0	0.40
05...	0905	51.19	647	12.0	0.35
07...	0900	51.22	595	12.0	<0.20
12...	0845	51.51	608	11.0	0.30
APR					
15...	0921	51.86	610	12.0	0.12
MAY					
11...	0845	52.06	574	11.0	0.22
JUN					
11...	1000	52.14	560	12.0	0.28
25...	1020	51.95	560	13.0	0.14
JUL					
01...	1000	52.07	545	12.0	0.32
09...	0845	52.14	625	12.0	0.61
AUG					
10...	1000	52.15	618	13.0	0.48
SEP					
09...	1030	50.94	630	13.0	0.36
10...	1030	51.55	530	12.0	0.20
11...	0915	51.76	630	15.0	0.15
14...	1220	51.77	615	11.0	0.14

PESTICIDE ANALYSIS, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	ALA-CHLOR TOTAL RECOVER (UG/L)	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	METOLA-CHLOR IN WHOLE WATER (UG/L)	PRO-PAZINE TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)
OCT									
10...	1245	54.45	0.20	0.50	<0.20	<0.10	<0.20	<0.20	<1
NOV									
06...	0945	54.47	<0.10	<0.50	<0.20	<0.10	<0.20	<0.20	<1
08...	0830	54.46	0.20	0.40	<0.20	<0.10	<0.20	<0.20	<1
DEC									
06...	0900	51.02	<0.10	0.50	<0.20	<0.10	<0.20	<0.20	<1
JAN									
06...	0935	51.90	0.10	0.50	<0.20	<0.10	<0.20	<0.20	<1
MAY									
11...	0845	52.06	0.10	0.80	<0.20	<0.10	<0.20	<0.20	<1
JUN									
11...	1000	52.14	0.10	<0.30	0.20	<0.10	<0.30	<0.30	<1
25...	1020	51.95	0.20	<0.20	<0.20	<0.10	<0.20	<0.20	<1
JUL									
01...	1000	52.07	0.10	0.50	<0.20	<0.10	<0.20	<0.20	<1
09...	0845	52.14	0.10	<0.30	<0.20	<0.10	<0.20	<0.20	<1
SEP									
11...	0915	51.76	0.10	0.32	<0.30	<0.10	<0.30	<0.30	<1

400744075584701. Local number, LN 1646.

LOCATION.--Lat 40°07'44", long 75°58'47", Hydrologic Unit 02050306, 1.1 mi southeast of Churchtown.
Owner: U.S. Geological Survey.
AQUIFER.--Dolomite of Zooks Corner Formation of Cambrian age.

WATER-LEVEL RECORDS

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 125 ft, cased to 99 ft, open hole.
INSTRUMENTATION.--Continuous strip-chart recorder.
DATUM.--Elevation of land-surface is 503 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of plywood cover, 2.6 ft above land-surface datum.
PERIOD OF RECORD.--November 1982 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 69.47 ft below land-surface datum, Dec. 15, 1983; lowest, 74.15 ft below land-surface datum, Nov. 4, 5, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	74.06	74.13	72.82	72.27	72.31	72.58	72.52	73.44	73.49	73.48	73.67	73.73
2	74.06	74.13	72.82	72.27	72.34	72.05	72.54	73.45	73.51	73.47	73.68	73.73
3	74.04	74.14	72.75	72.28	72.36	71.77	72.55	73.46	73.52	73.48	73.68	73.74
4	74.04	74.15	72.69	72.29	72.38	71.72	72.54	73.46	73.53	73.49	73.69	73.75
5	74.05	74.15	72.70	72.32	72.39	71.72	72.48	73.46	73.53	73.51	73.70	73.75
6	74.05	74.11	72.71	72.37	72.41	71.73	72.48	73.46	73.53	73.52	73.70	73.75
7	74.06	74.09	72.71	72.50	72.41	71.77	72.41	73.47	73.54	73.53	73.70	73.75
8	74.06	74.09	72.72	72.53	72.41	71.83	72.43	73.48	73.56	73.54	73.73	73.76
9	74.07	74.06	72.72	72.57	72.43	71.90	72.44	73.49	73.57	73.54	73.66	72.79
10	74.08	74.06	72.70	72.57	72.46	71.98	72.45	73.50	73.57	73.55	73.62	73.12
11	74.08	74.08	72.70	72.55	72.47	72.04	72.45	73.51	73.59	73.57	73.64	73.28
12	74.08	74.01	72.70	72.53	72.47	72.07	72.47	73.51	73.59	73.57	73.64	73.33
13	74.08	74.03	72.71	72.54	72.49	72.10	72.48	73.51	73.59	73.57	73.65	73.30
14	74.08	74.05	72.72	72.55	72.50	72.15	72.48	73.51	73.59	73.45	73.66	73.29
15	74.08	74.06	72.74	72.53	72.51	72.19	72.48	73.51	73.60	73.47	73.67	73.21
16	74.08	74.07	72.74	72.53	72.53	72.23	72.48	73.51	73.60	73.49	73.68	73.26
17	74.08	74.09	72.75	72.53	72.53	72.27	72.50	73.51	73.61	73.51	73.70	73.29
18	74.09	74.09	72.75	72.53	72.55	72.30	72.51	73.53	73.63	73.52	73.71	73.32
19	74.10	74.04	72.55	72.50	72.56	72.32	72.52	73.51	73.63	73.53	73.72	73.05
20	74.11	74.00	72.49	72.37	72.57	72.35	72.53	73.49	73.64	73.55	73.72	72.73
21	74.11	73.94	72.49	72.22	72.58	72.38	72.54	73.49	73.64	73.56	73.72	72.78
22	74.12	73.90	72.51	72.17	72.59	72.41	72.54	73.50	73.65	73.58	73.73	72.85
23	74.12	73.91	72.53	72.14	72.60	72.43	72.55	73.49	73.29	73.59	73.73	72.90
24	74.12	73.91	72.54	72.16	72.60	72.46	72.56	73.35	73.38	73.61	73.73	72.99
25	74.12	73.91	72.41	72.18	72.61	72.48	72.56	73.39	73.44	73.63	73.73	73.06
26	74.12	73.90	72.25	72.19	72.62	72.49	72.57	73.42	73.45	73.64	73.73	73.12
27	74.12	73.72	72.22	72.20	72.60	72.51	72.57	73.43	73.47	73.65	73.72	73.17
28	74.12	73.66	72.22	72.22	72.60	72.52	72.58	73.45	73.49	73.67	73.70	73.21
29	74.12	72.76	72.24	72.23	---	72.54	72.59	73.48	73.50	73.67	73.70	73.26
30	74.12	72.79	72.26	72.24	---	72.52	73.44	73.49	73.47	73.67	73.72	73.32
31	74.13	---	72.27	72.27	---	72.52	---	73.49	---	73.67	73.73	---
MEAN	74.09	73.93	72.58	72.37	72.50	72.20	72.54	73.48	73.54	73.56	73.70	73.29
MAX	74.13	74.15	72.82	72.57	72.62	72.58	73.44	73.53	73.65	73.67	73.73	73.76
MIN	74.04	72.76	72.22	72.14	72.31	71.72	72.41	73.35	73.29	73.45	73.62	72.73

WTR YR 1987: HIGHEST 71.72 MARCH 4, 5, LOWEST 74.15 NOVEMBER 4, 5.

400744075584701. Local number, LN 1646--Continued

WATER-QUALITY RECORDS

REMARKS.--Water-quality samples bailed adjacent to major water-bearing zone.
COOPERATION.--Chemical samples analyzed by Pa. Department of Environmental Resources, Bureau of Laboratories.
PERIOD OF RECORD.--February 1983 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)
OCT					
10...	1250	74.07	550	8.80	0.86
NOV					
06...	0955	74.28	544	8.60	0.25
08...	0839	74.28	535	9.00	0.11
DEC					
06...	0910	72.70	532	11.0	0.70
JAN					
06...	0940	72.50	486	7.90	0.72
FEB					
07...	1015	72.40	556	7.70	0.60
28...	1225	72.60	559	7.00	0.78
MAR					
03...	0950	71.74	550	10.0	0.50
05...	0915	71.72	593	8.60	0.52
07...	0910	71.76	565	12.0	0.24
12...	0850	72.06	596	8.40	0.33
APR					
15...	0947	72.47	513	7.30	0.32
MAY					
11...	0850	73.50	544	7.30	0.43
JUN					
25...	1034	73.56	575	9.50	0.35
JUL					
01...	1010	73.47	532	8.60	1.9
09...	0900	73.54	603	7.90	0.47
AUG					
10...	0945	73.59	710	6.60	0.74
SEP					
09...	1015	72.29	590	11.0	0.30
11...	0935	72.35	605	10.0	0.38
14...	1155	73.23	580	5.30	0.34

PESTICIDE ANALYSIS, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	ALA-CHLOR TOTAL RECOVER (UG/L)	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	METOLA-CHLOR IN WHOLE WATER (UG/L)	PRO-PAZINE TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)
OCT									
10...	1250	74.07	0.12	<0.20	<0.20	<0.10	<0.20	<0.20	<1
NOV									
06...	0955	74.28	<0.20	<0.40	<0.20	<0.10	<0.20	<0.20	<1
08...	0839	74.28	<0.10	<0.50	<0.20	<0.10	<0.20	<0.20	<1
DEC									
06...	0910	72.70	0.10	0.50	<0.20	<0.10	<0.20	<0.20	<1
JAN									
06...	0940	72.50	0.10	0.40	<0.20	<0.10	<0.20	<0.20	<1
MAY									
11...	0850	73.50	0.10	0.80	<0.20	<0.10	<0.20	<0.20	<1
JUN									
25...	1034	73.56	0.10	<0.20	0.50	0.10	<0.20	<0.20	<1
JUL									
01...	1010	73.47	<0.10	0.40	<0.20	<0.10	<0.20	<0.20	<1
09...	0900	73.54	0.10	0.60	<0.20	<0.10	<0.20	<0.20	<1

400741075585101. Local number, LN 1650.

LOCATION.--Lat 40°07'41", long 75°58'51", Hydrologic Unit 02050306, 1.1 mi southeast of Churchtown.
Owner: U.S. Geological Survey.
AQUIFER.--Dolomite of Zooks Corner Formation of Cambrian age.

WATER-LEVEL RECORDS

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 125 ft, cased to 90 ft, open hole.
INSTRUMENTATION.--Continuous strip-chart recorder.
DATUM.--Elevation of land-surface is 505 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of plywood cover, 3.3 ft above land-surface datum.
PERIOD OF RECORD.--November 1982 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 70.14 ft below land-surface datum, Apr. 19, 1983; lowest, 74.57 ft below land-surface datum, Nov. 5, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	74.40	74.55	74.07	73.55	73.39	73.83	73.72	73.84	73.93	73.91	74.08	74.18
2	74.39	74.55	74.07	73.57	73.42	73.23	73.74	73.85	73.94	73.91	74.09	74.18
3	74.39	74.56	74.01	73.61	73.45	72.94	73.75	73.85	73.95	73.92	74.10	74.19
4	74.38	74.56	73.94	73.65	73.48	72.83	73.75	73.85	73.95	73.93	74.11	74.20
5	74.39	74.57	73.95	73.68	73.51	72.84	73.73	73.85	73.96	73.95	74.11	74.20
6	74.40	74.52	73.97	73.70	73.53	72.84	73.73	73.86	73.97	73.96	74.12	74.20
7	74.41	74.51	73.98	73.70	73.54	72.87	73.61	73.87	73.97	73.97	74.12	74.20
8	74.41	74.51	73.99	73.77	73.55	72.92	73.63	73.88	73.98	73.98	74.13	74.20
9	74.42	74.51	73.99	73.79	73.59	72.99	73.64	73.89	73.98	74.00	74.14	73.07
10	74.42	74.52	73.95	73.79	73.61	73.08	73.64	73.90	73.99	74.01	74.14	73.49
11	74.43	74.53	73.95	73.76	73.63	73.13	73.66	73.92	74.00	74.03	74.11	73.56
12	74.43	74.48	73.96	73.77	73.65	73.19	73.66	73.93	74.00	74.04	74.10	73.65
13	74.44	74.49	73.97	73.79	73.66	73.23	73.67	73.94	74.00	74.04	74.11	73.65
14	74.44	74.51	73.98	73.77	73.68	73.28	73.68	73.94	74.01	74.04	74.12	73.54
15	74.43	74.52	73.99	73.76	73.70	73.33	73.71	73.94	74.02	73.92	74.13	73.56
16	74.44	74.53	73.99	73.75	73.72	73.37	73.70	73.94	74.03	73.93	74.14	73.59
17	---	74.54	74.00	73.75	73.73	73.42	73.71	73.95	74.04	73.94	74.15	73.64
18	---	74.55	73.99	73.75	73.74	73.45	73.71	73.96	74.05	73.96	74.16	73.62
19	---	74.50	73.84	73.72	73.76	73.49	73.73	73.94	74.06	73.97	74.18	73.23
20	---	74.47	73.81	73.58	73.77	73.53	73.75	73.92	74.06	73.98	74.19	73.02
21	---	74.40	73.80	73.42	73.77	73.56	73.75	73.92	74.06	73.99	74.19	73.05
22	---	74.36	73.80	73.35	73.78	73.60	73.77	73.93	74.07	74.00	74.20	73.09
23	---	74.36	73.81	73.31	73.79	73.64	73.77	73.94	73.72	74.01	74.20	73.15
24	---	74.36	73.80	73.31	73.80	73.67	73.78	73.85	73.74	74.03	74.22	73.23
25	74.49	74.35	73.73	73.32	73.81	73.70	73.78	73.84	73.82	74.04	74.22	73.30
26	74.49	74.34	73.50	73.31	73.82	73.72	73.79	73.85	73.84	74.04	74.22	73.37
27	74.50	74.17	73.42	73.31	73.82	73.74	73.79	73.86	73.85	74.05	74.22	73.43
28	74.50	74.09	73.42	73.34	73.84	73.76	73.80	73.87	73.87	74.06	74.14	73.49
29	74.53	74.03	73.43	73.30	---	73.77	73.80	73.90	73.88	74.07	74.15	73.52
30	74.54	74.06	73.49	73.32	---	73.72	73.83	73.91	73.90	74.08	74.16	73.62
31	74.54	---	73.53	73.36	---	73.71	---	73.92	---	74.08	74.17	---
MEAN	74.44	74.43	73.84	73.58	73.66	73.37	73.73	73.90	73.95	73.99	74.15	73.61
MAX	74.54	74.57	74.07	73.79	73.84	73.83	73.83	73.96	74.07	74.08	74.22	74.20
MIN	74.38	74.03	73.42	73.30	73.39	72.83	73.61	73.84	73.72	73.91	74.08	73.02

WTR YR 1987: HIGHEST 72.83 MARCH 4, LOWEST 74.57 NOVEMBER 5.

400741075585101. Local number, LN 1650--Continued

WATER-QUALITY RECORDS

REMARKS.--Water-quality samples bailed adjacent to major water-bearing zone.
COOPERATION.--Chemical samples analyzed by Pa. Department of Environmental Resources, Bureau of Laboratories.
PERIOD OF RECORD.--February 1983 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)
OCT					
10...	1305	74.42	510	13.0	0.24
NOV					
06...	1005	74.51	496	12.0	0.21
08...	0950	74.51	497	12.0	0.24
DEC					
06...	0920	73.95	472	12.0	0.35
JAN					
06...	0955	73.68	449	10.0	0.38
FEB					
07...	1030	73.52	490	10.0	0.32
28...	1240	73.82	426	11.0	0.20
MAR					
03...	0940	73.00	490	11.0	0.18
05...	0925	72.94	549	10.0	0.20
07...	0920	72.95	--	10.0	0.22
12...	0905	73.25	515	8.80	0.16
APR					
15...	1011	73.71	543	9.90	0.12
MAY					
11...	0905	73.91	525	9.70	0.24
JUN					
11...	0930	74.00	560	11.0	0.14
25...	1049	73.79	515	12.0	0.10
JUL					
01...	1025	73.90	510	10.0	0.22
09...	0917	73.99	560	9.90	0.33
AUG					
10...	0930	74.07	665	6.40	0.42
SEP					
09...	1000	72.77	515	12.0	0.24
10...	1100	73.28	620	11.0	<0.20
11...	1050	73.50	570	13.0	0.30
14...	1140	73.54	610	10.0	0.54

400739075585101. Local number, LN 1651.

LOCATION.--Lat 40°07'39", long 75°58'51", Hydrologic Unit 02050306, 1.1 mi southeast of Churchtown.
Owner: U.S. Geological Survey.
AQUIFER.--Dolomite of Zooks Corner Formation of Cambrian age.

WATER-LEVEL RECORDS

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 105 ft, cased to 72 ft, open hole.
INSTRUMENTATION.--Continuous strip-chart recorder.
DATUM.--Elevation of land-surface is 505 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of plywood cover, 3.3 ft above land-surface datum.
PERIOD OF RECORD.--November 1982 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 62.65 ft below land-surface datum, Apr. 19, 1983; lowest, 72.28 ft below land-surface datum, Mar. 24, 1985.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70.96	71.41	70.32	68.57	68.08	69.75	69.38	69.64	69.84	69.73	70.03	70.29
2	70.97	71.42	70.30	68.62	68.19	69.50	69.41	69.66	69.85	69.74	70.04	70.30
3	70.98	71.43	70.27	68.74	68.33	68.50	69.43	69.67	69.86	69.75	70.04	70.32
4	70.99	71.44	70.20	68.89	68.49	67.80	69.43	69.69	69.87	69.77	70.06	70.35
5	71.00	71.44	70.16	69.01	68.62	67.63	69.44	69.69	69.88	69.79	70.07	70.36
6	71.02	71.45	70.13	69.09	68.72	67.56	69.43	69.70	69.90	69.80	70.08	70.37
7	71.03	71.43	70.11	69.18	68.79	67.54	69.43	69.71	69.90	69.82	70.08	70.37
8	71.05	71.42	70.09	69.29	68.85	67.53	69.40	69.73	69.92	69.83	70.09	70.38
9	71.06	71.41	70.08	69.36	68.97	67.56	69.41	69.74	69.93	69.83	70.10	70.18
10	71.08	---	70.07	69.37	69.11	67.61	69.41	69.76	69.94	69.84	70.11	69.59
11	71.09	---	70.06	69.39	69.19	67.66	69.42	69.77	69.96	69.85	70.09	69.36
12	71.11	71.39	70.05	69.41	69.23	67.70	69.43	69.78	69.96	69.87	70.09	69.35
13	71.13	71.35	70.06	69.44	69.28	67.77	69.44	69.80	69.97	69.87	70.09	69.41
14	71.14	---	70.05	69.43	69.31	67.87	69.45	69.81	69.98	69.88	70.09	69.36
15	71.15	---	70.05	69.44	69.34	68.00	69.46	69.81	69.99	69.88	70.10	69.22
16	71.16	71.34	70.05	69.44	69.37	68.14	69.47	69.82	70.00	69.78	70.11	69.21
17	71.18	71.36	70.05	69.45	69.39	68.27	69.47	69.83	70.01	69.75	70.12	69.29
18	71.20	71.37	70.05	69.44	69.41	68.42	69.48	69.84	70.02	69.75	70.13	69.30
19	71.22	71.37	70.00	69.43	69.44	68.56	69.50	69.84	70.03	69.77	70.15	68.90
20	71.23	71.33	69.94	69.35	69.47	68.70	69.51	69.84	70.04	69.78	70.17	68.20
21	71.25	71.26	69.86	69.00	69.48	68.85	69.51	69.84	70.04	69.80	70.18	67.73
22	71.27	71.13	69.81	68.64	69.50	69.00	69.52	69.84	70.05	69.82	70.20	67.61
23	71.29	71.03	69.76	68.29	69.52	69.11	69.54	69.85	70.05	69.84	70.20	67.61
24	71.30	70.95	69.72	68.08	69.55	69.19	69.55	69.83	69.86	69.86	70.22	67.69
25	71.32	70.91	69.68	67.90	69.57	69.24	69.56	69.77	69.74	69.88	70.22	67.88
26	71.34	70.89	69.40	67.75	69.59	69.27	69.57	69.74	69.74	69.88	70.23	68.07
27	71.35	70.80	69.01	67.66	69.71	69.32	69.58	69.75	69.75	69.90	70.23	68.30
28	71.36	70.62	68.90	67.67	69.75	69.36	69.59	69.76	69.77	69.92	70.28	68.50
29	71.38	70.39	68.61	67.77	---	69.40	69.60	69.80	69.79	70.00	70.27	68.68
30	71.39	70.36	68.50	67.83	---	69.34	69.63	69.81	69.74	70.02	70.28	69.01
31	71.40	---	68.53	67.94	---	69.36	---	69.82	---	70.02	70.28	---
MEAN	71.17	71.18	69.80	68.80	69.15	68.50	69.48	69.77	69.91	69.84	70.14	69.17
MAX	71.40	71.45	70.32	69.45	69.75	69.75	69.63	69.85	70.05	70.02	70.28	70.38
MIN	70.96	70.36	68.50	67.66	68.08	67.53	69.38	69.64	69.74	69.73	70.03	67.61

WTR YR 1987: HIGHEST 67.53 MARCH 8, LOWEST 71.45 NOVEMBER 6.

400739075585101. Local number, LN 1651--Continued

WATER-QUALITY RECORDS

REMARKS.--Water-quality samples bailed adjacent to major water-bearing zone.
COOPERATION.--Chemical samples analyzed by Pa. Department of Environmental Resources, Bureau of Laboratories.
PERIOD OF RECORD.--February 1983 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)
OCT					
10...	1310	71.08	637	13.0	0.58
NOV					
06...	1015	71.44	620	11.0	0.18
08...	0900	71.42	620	11.0	0.18
DEC					
06...	0925	70.12	620	14.0	0.15
JAN					
06...	1001	69.05	622	11.0	0.42
FEB					
07...	1045	68.77	676	11.0	0.22
28...	1250	69.71	691	12.0	0.21
MAR					
03...	0925	68.02	580	8.00	0.22
05...	0930	67.58	725	13.0	0.35
07...	0925	67.54	619	11.0	0.18
12...	0915	67.70	643	10.0	0.31
APR					
15...	1027	69.46	640	11.0	<0.20
MAY					
11...	0915	69.77	633	11.0	0.28
JUN					
11...	0910	69.94	660	12.0	0.34
25...	1057	69.73	625	12.0	0.26
JUL					
01...	1035	69.74	590	11.0	0.28
09...	0925	69.83	675	12.0	0.51
AUG					
10...	0930	70.10	560	12.0	0.44
SEP					
09...	0945	69.88	700	11.0	0.38
10...	1040	69.47	670	12.0	0.26
11...	1010	69.25	703	13.0	0.24
14...	1130	69.27	610	12.0	0.18

401152076105501. Local number, LN 1667.

LOCATION.--Lat 40°11'52", long 76°10'55", Hydrologic Unit 02050306, 1.5 mi north of Ephrata.
Owner: Aaron Stauffer.
AQUIFER.--Dolomite of Snitz Creek Formation of Cambrian age.
WELL CHARACTERISTICS.--Hand-dug stone-lined domestic well, depth 15 ft.
DATUM.--Elevation of land-surface is 352 ft above National Geodetic Vertical Datum of 1929.
COOPERATION.--Chemical samples analyzed by Pa. Department of Environmental Resources, Bureau of Laboratories.
PERIOD OF RECORD.--October 1984 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)
OCT						
21...	1140	685	20.0	0.20	--	--
NOV						
20...	1053	618	20.0	0.26	--	--
26...	0900	793	24.0	0.32	--	--
28...	0940	607	24.0	0.34	--	--
DEC						
22...	1220	1060	16.0	0.38	0.020	0.020
FEB						
05...	1210	757	21.0	0.24	--	--
27...	0955	725	20.0	0.45	--	--
MAR						
03...	0930	765	24.0	0.22	--	--
06...	1105	775	25.0	0.60	--	--
12...	0815	755	21.0	0.85	--	--
APR						
14...	1340	734	21.0	0.22	--	--
21...	0955	750	23.0	0.28	<0.010	0.030
MAY						
11...	0830	733	20.0	0.41	--	--
JUN						
11...	0950	780	22.0	0.28	--	--
JUL						
08...	1100	740	22.0	0.45	--	--
14...	1000	800	21.0	0.44	0.030	0.020
AUG						
19...	1053	765	20.0	0.21	--	--
SEP						
09...	1340	790	21.0	0.32	--	--
10...	1105	900	24.0	0.30	--	--
11...	1135	705	23.0	0.28	--	--
15...	1305	602	24.0	0.45	--	--
23...	1145	793	23.0	0.34	0.020	0.020

401149076105501. Local number, LN 1669.

LOCATION.--Lat 40°11'49", long 76°10'55", Hydrologic Unit 02050306, 1.6 mi north of Ephrata.
Owner: U.S. Geological Survey.
AQUIFER.--Dolomite of Snitz Creek Formation of Cambrian age.

WATER-LEVEL RECORDS

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 100 ft, cased to 11 ft, open hole.
INSTRUMENTATION.--Continuous strip-chart recorder.
DATUM.--Elevation of land-surface is 358 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of shelter platform, 1.0 ft above land-surface datum.
PERIOD OF RECORD.--January 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 10.38 ft below land-surface datum, Feb. 22, 1986; lowest, 19.20 ft below land-surface datum, Sept. 24, 1985.

DEPTH BELOW LAND SURFACE (WATER LEVEL)(FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.21	18.56	15.80	16.00	16.87	16.19	17.44	17.66	17.13	18.42	18.59	18.70
2	18.21	18.56	15.95	16.16	16.87	12.80	17.41	17.73	17.22	18.00	18.58	18.76
3	17.99	18.56	15.90	16.36	16.89	12.36	17.46	17.74	17.32	16.53	18.64	18.83
4	17.94	18.59	15.98	16.46	16.87	12.70	17.51	17.73	17.36	16.78	18.69	18.87
5	17.80	18.59	16.11	16.61	16.79	13.51	17.05	17.58	17.42	17.05	18.74	18.91
6	17.90	18.45	16.18	16.72	16.75	14.72	16.79	17.57	17.49	17.28	18.74	18.96
7	17.96	17.73	16.22	16.85	16.68	15.64	15.94	17.63	17.59	17.40	18.75	18.93
8	18.00	17.60	16.37	16.95	16.71	15.82	15.31	17.69	17.67	17.53	18.79	18.86
9	18.06	17.27	16.38	17.00	16.88	16.11	15.47	17.78	17.71	---	18.81	15.57
10	18.12	16.74	16.31	17.00	16.93	16.32	15.69	17.80	17.73	17.71	18.79	15.91
11	18.16	16.81	16.35	16.94	16.93	16.47	15.92	17.87	17.78	17.79	18.56	---
12	18.17	16.30	16.37	16.89	16.92	---	16.06	---	---	17.87	18.63	---
13	18.19	15.82	16.49	16.92	16.99	---	16.26	---	---	17.91	18.70	14.40
14	18.16	16.10	16.51	16.93	17.04	---	16.36	---	---	---	18.76	---
15	18.07	16.34	16.61	16.85	17.12	---	16.47	---	---	---	18.81	---
16	18.11	16.59	16.72	16.77	17.22	---	16.59	---	---	17.96	18.83	---
17	18.17	16.81	16.80	16.80	17.23	---	16.67	---	---	18.03	18.92	---
18	18.23	16.91	16.32	16.79	17.27	---	16.77	---	---	18.08	18.96	14.40
19	18.25	16.85	15.05	16.71	17.34	---	16.87	---	---	18.02	18.97	13.37
20	18.28	16.43	14.70	16.31	17.38	---	16.97	---	---	18.18	18.96	16.59
21	---	---	15.08	15.10	17.40	---	17.04	---	---	18.25	18.96	13.52
22	---	13.82	15.31	14.94	17.40	16.98	17.10	---	---	18.21	18.96	14.20
23	---	14.44	15.63	15.29	17.41	17.23	17.17	---	18.19	18.19	18.95	14.80
24	18.51	15.00	15.79	15.70	17.41	17.29	17.23	---	18.26	18.30	18.95	---
25	18.53	15.46	14.97	15.96	17.40	17.27	17.28	---	18.28	18.40	18.93	---
26	18.53	15.58	13.71	16.14	17.38	17.26	17.33	---	18.33	18.39	18.92	---
27	18.42	15.16	14.13	16.29	---	17.27	17.39	---	18.31	18.29	18.91	---
28	18.36	14.40	14.65	16.45	18.45	17.29	17.43	---	18.37	18.37	18.93	---
29	18.32	16.08	15.14	16.58	---	17.31	17.47	16.64	18.40	18.43	18.70	---
30	18.35	15.40	15.30	16.64	---	17.65	17.50	16.82	18.44	18.48	18.57	---
31	18.53	---	15.75	16.80	---	17.61	---	16.97	---	18.57	18.65	---
MEAN	18.20	16.58	15.76	16.45	17.13	15.99	16.80	17.52	17.84	18.61	18.80	16.68
MAX	18.53	18.59	16.80	17.00	18.45	17.65	17.51	17.87	18.44	18.57	18.97	18.96
MIN	17.80	13.82	13.71	14.94	16.68	12.36	15.31	16.64	17.13	16.53	18.56	13.37

WTR YR 1987: HIGHEST 12.36 MARCH 3, LOWEST 18.97 AUGUST 19.

401149076105501. Local number, LN 1669--Continued

WATER-QUALITY RECORDS

REMARKS.--Water-quality samples bailed from recovering water after well pumped dry.
COOPERATION.--Chemical samples analyzed by Pa. Department of Environmental Resources, Bureau of Laboratories.
PERIOD OF RECORD.--November 1984 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)
OCT							
21...	1040	18.38	640	12.0	0.72	--	--
NOV							
20...	1105	16.29	703	11.0	0.10	--	--
28...	1015	14.37	514	12.0	0.28	--	--
DEC							
22...	1215	15.06	1050	14.0	0.46	<0.010	0.010
FEB							
05...	1110	16.76	615	13.0	0.26	--	--
27...	1110	17.37	648	16.0	0.25	--	--
MAR							
03...	0938	12.34	667	15.0	0.38	--	--
06...	1254	16.52	760	13.0	0.46	--	--
12...	1035	10.52	565	16.0	0.38	--	--
APR							
21...	1008	17.00	665	15.0	0.60	0.010	0.030
MAY							
11...	1245	17.84	697	14.0	0.26	--	--
JUN							
11...	0951	17.74	727	14.0	0.28	--	--
JUL							
08...	1100	17.84	630	13.0	0.18	--	--
14...	1140	17.92	703	12.0	0.25	0.020	0.020
AUG							
19...	1055	19.00	687	12.0	0.25	--	--
SEP							
10...	1112	13.44	780	11.0	0.20	--	--
15...	1253	14.83	506	13.0	0.28	--	--
23...	1137	14.50	683	14.0	0.28	0.020	0.010

401156076105701. Local number, LN 1670.

LOCATION.--Lat 40°11'56", long 76°10'57", Hydrologic Unit 02050306, 1.5 mi north of Ephrata.
Owner: U.S. Geological Survey
AQUIFER.--Dolomite of Snitz Creek Formation of Cambrian age.

WATER-LEVEL RECORDS

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 75 ft, cased to 9 ft, open hole.
INSTRUMENTATION.--Continuous strip-chart recorder.
DATUM.--Elevation of land-surface is 367 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of shelter platform, 3.5 ft above land-surface datum.
PERIOD OF RECORD.--November 1984 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 8.67 ft below land-surface datum, Mar. 2, 1987; lowest, 19.70 ft below land-surface datum, Dec. 12, 1984.

DEPTH BELOW LAND SURFACE (WATER LEVEL)(FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.90	14.67	9.52	10.43	10.43	11.29	12.01	12.14	10.50	11.05	10.14	11.67
2	13.90	14.70	9.53	10.48	10.49	8.67	12.09	12.24	10.59	9.84	10.27	11.90
3	13.80	14.71	9.53	10.58	10.61	9.81	12.13	12.34	10.65	9.96	10.49	12.11
4	13.70	14.83	9.50	10.59	10.70	9.92	12.12	12.41	10.74	10.15	10.57	12.26
5	13.55	14.84	9.50	10.63	10.73	10.03	12.12	12.39	10.82	10.30	10.80	12.39
6	13.49	14.71	9.54	10.70	10.69	10.06	12.11	12.39	10.88	10.47	10.94	12.50
7	13.45	14.73	9.61	10.85	10.63	10.10	9.51	12.44	11.02	10.55	11.01	12.72
8	13.38	14.68	9.67	10.92	10.59	10.14	9.73	12.53	11.11	10.67	10.77	12.76
9	13.35	13.81	9.66	11.00	10.56	10.27	9.82	12.59	11.19	10.72	10.28	9.27
10	13.37	13.03	9.67	11.01	10.60	10.30	9.90	12.69	11.30	10.81	10.72	9.77
11	13.37	---	9.64	11.01	10.61	10.32	9.94	12.72	11.35	10.88	11.02	9.92
12	13.37	---	9.57	11.00	10.59	10.35	10.00	12.85	11.45	10.98	11.18	10.00
13	13.41	---	9.64	10.70	10.65	10.43	10.07	12.94	11.54	11.06	11.35	9.98
14	13.48	---	9.64	10.55	10.69	10.53	10.07	12.98	11.66	11.25	11.41	9.45
15	13.62	---	9.67	10.42	10.75	10.62	10.10	13.06	11.71	11.49	10.96	9.68
16	13.62	---	9.69	10.45	10.78	10.72	10.14	13.12	11.71	11.52	10.05	9.80
17	13.73	---	9.72	10.46	10.84	10.78	10.23	13.15	11.80	11.47	9.98	9.91
18	13.81	---	8.79	10.44	10.90	10.85	10.32	13.24	11.83	11.48	10.02	9.16
19	13.89	---	9.09	10.42	10.99	10.92	10.40	13.33	11.83	11.55	10.24	9.11
20	13.98	---	9.12	9.50	11.07	11.00	10.45	13.33	11.37	11.60	10.56	9.59
21	14.09	---	9.39	9.60	11.13	11.10	10.52	13.25	10.62	11.71	10.87	9.75
22	14.18	---	9.43	9.78	11.20	11.26	10.59	13.21	10.84	11.76	11.08	9.85
23	14.30	---	---	9.88	11.19	11.35	10.65	13.09	10.31	11.84	11.35	9.91
24	14.45	---	10.59	10.08	11.22	11.45	10.70	10.56	10.41	11.89	11.47	9.95
25	14.52	---	9.46	10.11	11.23	11.52	10.76	10.30	10.60	10.05	11.56	9.99
26	14.57	---	9.75	10.16	11.24	11.63	10.81	10.37	10.10	10.03	11.63	10.03
27	14.58	---	9.93	10.22	11.46	11.71	10.86	10.40	10.33	10.16	11.69	10.06
28	14.67	---	10.04	10.29	11.46	11.84	10.91	10.45	10.67	10.31	11.73	10.09
29	14.69	9.36	10.12	10.23	---	11.92	10.96	10.51	10.83	11.24	10.91	10.12
30	---	9.47	10.30	10.23	---	11.85	12.11	10.41	10.96	11.38	11.14	10.15
31	---	---	10.42	10.35	---	11.95	---	10.50	---	11.46	11.41	---
MEAN	13.87	13.63	9.66	10.42	10.86	10.80	10.74	12.19	11.02	10.96	10.89	10.46
MAX	14.69	14.84	10.59	11.01	11.46	11.95	12.13	13.33	11.83	11.89	11.73	12.76
MIN	13.35	9.36	8.79	9.50	10.43	8.67	9.51	10.30	10.10	9.84	9.98	9.11

WTR YR 1987: HIGHEST 8.67 MARCH 2, LOWEST 14.84 NOVEMBER 5.

401156076105701. Local number, LN 1670--Continued

WATER-QUALITY RECORDS

REMARKS.--Water-quality samples bailed from recovering water after well pumped dry.
COOPERATION.--Chemical samples analyzed by Pa. Department of Environmental Resources, Bureau of Laboratories.
PERIOD OF RECORD.--November 1984 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)
DEC							
22...	1125	9.83	1200	72.0	0.30	0.020	0.010
APR							
21...	1105	9.54	1000	64.0	0.60	0.010	0.030
JUL							
14...	1130	11.15	972	55.0	0.56	0.030	0.020
SEP							
23...	1245	9.86	985	40.0	0.54	0.030	0.010

401148076110301. Local number, LN 1673.

LOCATION.--Lat 40°11'48", long 76°11'03", Hydrologic Unit 02050306, 1.5 mi north of Ephrata.
Owner: U.S. Geological Survey.
AQUIFER: Dolomite of Snitz Creek Formation of Cambrian age.

WATER-LEVEL RECORDS

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 46 ft, cased to 14 ft, open hole.
INSTRUMENTATION.--Continuous strip-chart recorder.
DATUM.--Elevation of land surface is 382 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of shelter platform, 2.2 ft above land-surface datum.
PERIOD OF RECORD.--November 1984 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.60 ft below land-surface datum, Feb. 20, 1986; lowest, 10.68 ft below land-surface datum, Sept. 5, 6, 7, 8, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL)(FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.59	10.61	9.28	9.61	9.66	6.63	10.07	10.06	9.93	10.40	10.59	10.67
2	10.58	10.61	9.43	9.69	9.68	6.85	10.12	10.08	9.96	9.35	10.60	10.67
3	10.57	10.61	9.43	9.75	9.70	8.34	10.12	10.10	9.98	9.73	10.60	10.67
4	10.56	10.61	9.30	9.82	9.80	8.65	10.12	10.10	9.99	9.86	10.61	10.67
5	10.54	10.61	9.34	9.88	9.89	8.81	9.87	10.08	10.01	9.90	10.61	10.68
6	10.56	10.34	9.44	9.93	9.90	9.23	9.69	10.11	10.04	9.96	10.61	10.68
7	10.56	10.00	9.54	9.93	9.89	9.43	8.73	10.13	10.05	10.01	10.61	10.68
8	10.56	10.00	9.63	9.90	9.88	9.57	8.81	10.16	10.08	10.06	10.61	10.68
9	10.57	9.69	9.65	9.93	9.90	9.66	9.01	10.16	10.10	10.08	10.61	8.19
10	10.57	9.66	9.60	9.93	9.90	9.72	9.22	10.18	10.13	10.11	10.61	8.78
11	10.57	9.68	9.60	9.90	9.91	9.77	9.41	10.14	10.14	10.14	10.61	9.23
12	10.58	---	9.57	9.88	9.92	9.82	9.52	10.17	10.18	10.17	10.62	9.67
13	10.58	---	9.62	9.87	9.94	9.85	9.60	10.18	10.19	10.20	10.62	9.67
14	10.57	---	9.65	9.86	9.94	9.87	9.65	10.18	10.21	10.23	10.62	8.86
15	10.57	9.52	9.70	9.83	9.95	9.90	9.69	10.18	10.22	10.24	10.62	8.74
16	10.57	9.67	9.74	9.79	9.96	9.91	9.73	10.19	10.24	10.30	10.63	8.97
17	10.58	9.75	9.77	9.74	9.98	9.92	9.76	10.20	10.26	10.33	10.63	9.30
18	10.58	9.79	9.77	9.72	10.00	9.94	9.79	10.22	10.29	10.35	10.63	---
19	10.58	---	8.53	9.70	10.02	9.96	9.81	10.22	10.30	10.39	10.61	---
20	10.58	---	8.70	8.80	10.04	9.98	9.83	10.12	10.32	10.41	10.61	---
21	10.58	9.15	8.84	8.75	10.05	10.01	9.86	9.96	10.34	10.44	10.61	---
22	10.59	8.45	9.06	8.82	10.05	10.03	9.86	9.92	10.36	10.47	10.61	---
23	10.59	8.70	9.30	8.99	10.03	10.05	9.87	9.88	10.37	10.49	10.61	9.17
24	10.60	8.88	9.44	9.22	10.02	10.07	9.89	8.91	10.38	10.52	10.61	9.41
25	10.60	9.13	8.34	9.38	10.02	10.08	9.91	9.11	10.41	10.54	10.61	9.60
26	10.60	9.19	8.52	9.52	10.02	10.10	9.93	9.35	10.43	10.55	10.62	9.69
27	10.59	8.51	8.72	9.63	9.99	10.11	9.94	9.53	10.45	10.55	10.61	9.74
28	10.58	8.65	8.83	9.70	10.00	10.13	9.95	9.61	10.45	10.57	10.65	9.78
29	10.58	8.79	9.04	9.55	---	10.14	9.97	9.82	10.46	10.58	10.62	9.80
30	10.59	9.02	9.28	9.59	---	10.13	10.03	9.86	10.38	10.59	10.65	9.82
31	10.61	---	9.50	9.63	---	10.12	---	9.90	---	10.59	10.66	---
MEAN	10.58	9.58	9.30	9.62	9.93	9.57	9.73	9.96	10.22	10.26	10.62	9.75
MAX	10.61	10.61	9.77	9.93	10.05	10.14	10.12	10.22	10.46	10.59	10.66	10.68
MIN	10.54	8.45	8.34	8.75	9.66	6.63	8.73	8.91	9.93	9.35	10.59	8.19

WTR YR 1987: HIGHEST 6.63 MARCH 1, LOWEST 10.68 SEPTEMBER 5, 6, 7, 8.

401148076110301. Local number, LN 1673--Continued

WATER-QUALITY RECORDS

REMARKS.--Water-quality samples bailed from recovering water after well pumped dry.
COOPERATION.--Chemical samples analyzed by Pa. Department of Environmental Resources, Bureau of Laboratories.
PERIOD OF RECORD.--November 1984 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)
OCT							
21...	0945	10.59	1000	50.0	0.38	--	--
NOV							
20...	0910	9.17	1060	51.0	0.36	--	--
28...	0900	8.55	916	51.0	<0.20	--	--
DEC							
22...	0930	8.88	1090	53.0	0.34	0.020	0.020
FEB							
05...	1035	9.68	1040	50.0	0.40	--	--
27...	0920	9.99	1000	50.0	0.38	--	--
MAR							
03...	0837	8.22	1000	48.0	0.45	--	--
06...	1000	9.05	1040	51.0	0.55	--	--
12...	1003	9.85	1030	52.0	0.50	--	--
APR							
21...	0909	9.86	810	46.0	0.32	0.010	0.030
MAY							
11...	0938	10.18	1000	46.0	0.22	--	--
JUN							
11...	0850	10.03	1150	44.0	0.52	--	--
JUL							
08...	0900	10.02	860	48.0	0.38	--	--
14...	0930	10.22	960	52.0	0.52	0.050	0.020
AUG							
19...	0954	10.60	960	46.0	0.30	--	--
SEP							
10...	0945	8.65	940	49.0	0.32	--	--
15...	1019	8.78	809	46.0	0.37	--	--
23...	0920	9.00	1010	39.0	0.52	0.020	0.020

401152076110101. Local number, LN 1676.

LOCATION.--Lat 40°11'52", long 76°11'01", Hydrologic Unit 02050306, 1.5 mi north of Ephrata.
Owner: U.S. Geologcial Survey.
AQUIFER.--Dolomite of Snitz Creek Formation of Cambrian age.

WATER-LEVEL RECORDS

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 40 ft, cased to 9 ft, open hole.
INSTRUMENTATION.--Continuous strip-chart recorder.
DATUM.--Elevation of land-surface is 367 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of shelter platform, 1.0 ft above land-surface datum.
PERIOD OF RECORD.--April 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 18.46 ft below land-surface datum, Feb. 22, 1986; lowest, 24.82 ft below land-surface datum, Sept. 29, 1985.

DEPTH BELOW LAND SURFACE (WATER LEVEL)(FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24.10	24.38	22.37	---	22.88	23.50	23.55	23.60	23.42	24.19	24.27	24.49
2	24.11	24.38	22.47	---	22.91	21.10	23.59	23.62	23.46	23.49	24.28	24.50
3	24.02	24.38	22.48	---	22.95	20.00	23.61	23.64	23.50	23.16	24.30	24.51
4	24.02	24.39	22.48	---	22.94	20.08	23.61	23.64	23.53	23.37	24.30	24.52
5	24.05	24.39	22.53	---	23.01	20.65	23.33	23.62	23.56	23.51	24.31	24.53
6	24.08	24.30	22.58	---	23.01	21.24	23.33	23.63	23.60	23.62	24.32	24.55
7	24.11	23.83	22.64	---	23.01	21.64	22.67	23.66	23.62	23.70	24.33	24.55
8	24.13	23.62	22.70	---	23.02	---	22.37	23.68	23.65	23.76	24.34	24.54
9	24.13	23.42	22.71	---	23.06	---	22.43	23.70	23.67	23.81	24.34	21.38
10	24.16	23.26	22.67	---	23.09	---	22.55	23.70	23.72	23.85	24.28	21.45
11	24.18	23.12	22.68	---	23.12	22.63	22.66	23.71	23.76	23.89	24.33	21.69
12	24.18	23.01	22.68	---	23.14	22.72	22.76	23.75	23.78	23.93	24.35	---
13	24.20	22.95	22.74	---	23.18	22.78	22.86	23.75	23.81	23.96	24.36	---
14	24.20	23.10	22.75	---	23.21	22.85	22.93	23.79	23.85	23.92	24.38	---
15	24.20	23.26	22.81	---	23.26	22.93	23.00	23.79	23.88	23.96	24.39	22.45
16	24.21	23.40	22.86	---	23.29	22.99	23.06	23.79	23.90	24.01	24.39	22.68
17	24.24	23.52	22.91	---	23.32	23.06	23.09	23.80	23.93	24.03	24.38	22.87
18	24.25	23.29	22.91	---	23.36	23.10	23.16	23.82	23.96	24.06	24.37	21.00
19	24.26	23.59	21.96	---	23.39	23.14	23.20	23.82	23.97	24.09	24.39	20.30
20	24.28	23.27	21.44	---	23.42	23.19	23.25	23.82	23.98	24.10	24.42	20.87
21	24.30	---	21.61	---	23.44	23.23	23.27	23.64	24.00	24.13	24.44	21.51
22	24.32	22.41	21.93	---	23.45	23.27	23.31	23.64	24.02	24.13	24.45	22.02
23	24.33	22.47	22.17	---	23.45	23.33	23.34	23.64	24.01	24.13	24.46	22.36
24	24.31	---	22.29	---	23.45	23.36	23.37	23.13	24.03	24.13	24.47	22.60
25	24.34	---	21.82	---	23.47	23.39	23.41	22.81	24.05	24.12	24.48	22.72
26	24.34	---	20.70	---	23.49	23.41	23.44	22.91	24.05	24.15	24.49	22.79
27	24.34	---	20.83	---	23.49	23.45	23.47	23.04	24.08	24.17	24.49	22.87
28	24.34	22.45	21.19	22.59	23.50	23.47	23.49	23.15	24.11	24.17	24.38	22.97
29	24.35	21.78	21.52	22.69	---	23.51	23.52	23.25	24.13	24.24	24.42	23.03
30	24.36	22.14	21.62	22.74	---	23.60	23.58	23.30	24.18	24.26	24.45	23.10
31	24.38	---	---	22.83	---	23.60	---	23.35	---	24.28	24.48	---
MEAN	24.22	23.36	22.24	22.71	23.23	22.69	23.17	23.55	23.84	23.95	24.38	22.85
MAX	24.38	24.39	22.91	22.83	23.50	23.60	23.61	23.82	24.18	24.28	24.49	24.55
MIN	24.02	21.78	20.70	22.59	22.88	20.00	22.37	22.81	23.42	23.16	24.27	20.30

WTR YR 1987: HIGHEST 20.00 MARCH 3, LOWEST 24.55 SEPTEMBER 5, 6.

401152076110101. Local number, LN 1676--Continued

WATER-QUALITY RECORDS

REMARKS.--Water-quality samples bailed from recovering water after well pumped dry.
COOPERATION.--Chemical samples analyzed by Pa. Department of Environmental Resources, Bureau of Laboratories.
PERIOD OF RECORD.--March 1985 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)
OCT							
21...	1015	24.29	1160	74.0	0.21	--	--
NOV							
20...	0915	23.22	1280	68.0	0.50	--	--
28...	0930	21.53	1100	62.0	0.30	--	--
DEC							
22...	0945	21.81	1100	63.0	0.54	0.040	23.0
FEB							
05...	1045	22.94	1120	74.0	0.18	--	--
27...	0925	23.50	1150	68.0	0.72	--	--
MAR							
03...	0858	19.94	1060	50.0	0.52	--	--
06...	1012	21.53	1100	63.0	0.60	--	--
12...	1018	23.78	1210	69.0	<0.20	--	--
APR							
21...	1000	23.27	1000	72.0	0.72	0.040	1.00
MAY							
11...	1038	23.71	1520	70.0	0.43	--	--
JUN							
11...	0941	23.77	1180	65.0	0.52	--	--
JUL							
08...	0925	23.73	990	65.0	0.66	--	--
14...	0940	23.97	1210	78.0	0.60	0.060	2.70
AUG							
19...	1017	24.39	1230	66.0	0.40	--	--
SEP							
10...	1015	21.05	1240	67.0	2.4	--	--
13...	1025	22.30	961	64.0	0.52	--	--
23...	0938	21.69	1030	62.0	0.74	0.020	1.90

401156076110501. Local number, LN 1677.

LOCATION.--Lat 40°11'56", long 76°11'05", Hydrologic Unit 02050306, 1.5 mi north of Ephrata.
Owner: U.S. Geological Survey.
AQUIFER.--Dolomite of Snitz Creek Formation of Cambrian age.

WATER-LEVEL RECORDS

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 50 ft, casing 30 ft, open hole.
INSTRUMENTATION.--Continuous strip-chart recorder.
DATUM.--Elevation of land-surface is 377 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of shelter platform, 1.4 ft above land-surface datum.
PERIOD OF RECORD.--April 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 24.65 ft below land-surface datum, Feb. 23, 1986; lowest, 32.37 ft below land-surface datum, Sept. 26, 1985.

DEPTH BELOW LAND SURFACE (WATER LEVEL)(FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31.42	31.82	28.70	27.97	29.11	27.75	30.18	30.33	---	31.33	31.62	31.97
2	31.42	31.83	28.86	28.15	29.20	26.10	30.22	30.37	---	30.61	31.65	31.98
3	31.38	31.84	28.87	28.33	29.27	26.09	30.26	30.40	---	29.84	31.67	32.00
4	31.36	31.85	28.89	28.47	29.30	26.52	30.25	30.40	---	30.07	31.68	32.00
5	31.34	31.85	28.93	28.60	29.31	27.21	30.06	30.40	---	30.27	31.71	32.03
6	31.38	31.75	29.00	28.69	29.32	27.53	29.91	30.43	---	30.45	31.72	32.06
7	31.41	31.51	29.07	28.79	29.35	27.85	29.12	30.47	---	30.57	31.73	32.06
8	31.44	31.47	29.17	28.90	29.35	28.09	28.70	30.50	---	30.73	31.74	32.05
9	31.48	31.14	29.19	29.00	29.39	28.36	28.68	30.53	---	30.93	31.75	29.31
10	31.51	30.97	29.18	29.04	29.44	28.56	28.79	30.58	---	31.02	31.73	28.41
11	31.54	30.96	29.19	29.07	29.48	28.71	28.93	30.61	30.79	31.08	31.73	28.94
12	31.56	30.60	29.17	29.10	29.51	28.83	29.06	30.64	30.84	31.14	31.76	29.41
13	31.57	29.92	29.23	29.13	29.56	28.97	29.21	30.67	30.88	31.19	31.78	29.44
14	31.57	30.10	29.25	29.13	29.62	29.08	29.29	30.69	30.92	31.23	31.80	29.01
15	31.59	30.29	29.29	29.14	29.68	29.19	29.38	30.71	30.96	31.25	31.80	29.05
16	31.61	30.47	29.38	29.16	29.73	29.29	29.46	30.72	31.00	31.30	31.82	29.28
17	31.64	---	29.44	29.16	29.78	29.38	29.54	30.74	31.04	31.34	31.82	29.49
18	31.66	---	29.44	29.16	29.84	29.46	29.61	30.78	31.08	31.38	31.82	29.29
19	31.68	30.50	28.50	29.14	29.90	29.54	29.67	30.80	31.10	31.41	31.84	27.28
20	31.70	30.21	27.85	28.79	29.94	29.60	29.75	30.80	31.14	31.44	31.85	26.73
21	31.71	29.20	27.86	28.10	29.98	29.68	29.80	30.61	31.16	31.48	31.86	27.19
22	31.72	28.00	28.09	27.80	29.99	29.75	29.87	30.59	31.19	31.52	31.87	27.69
23	31.74	28.22	28.30	27.90	29.99	29.83	29.93	30.58	31.19	31.54	31.88	28.15
24	31.76	28.61	28.43	28.08	30.04	29.89	29.99	30.03	31.23	31.56	31.88	28.48
25	31.77	28.91	26.90	28.20	30.06	29.95	30.04	30.04	31.25	31.59	31.89	28.79
26	31.77	28.96	26.60	28.40	30.10	30.00	30.09	30.08	31.28	31.59	31.90	29.04
27	31.76	28.49	26.74	28.53	30.12	30.06	30.14	30.07	31.32	31.55	31.90	29.21
28	31.78	28.00	27.03	28.66	30.15	30.12	30.17	30.05	31.35	31.57	31.92	29.36
29	31.78	28.20	27.30	28.83	---	30.17	30.21	30.02	31.39	31.58	31.89	29.51
30	31.80	28.45	27.50	28.91	---	30.16	30.29	---	31.31	31.60	31.93	29.64
31	31.81	---	27.78	29.00	---	30.18	---	---	---	31.62	31.95	---
MEAN	31.60	30.15	28.49	28.69	29.66	28.90	29.69	30.47	31.12	31.15	31.80	29.63
MAX	31.81	31.85	29.44	29.16	30.15	30.18	30.29	30.80	31.39	31.62	31.95	32.06
MIN	31.34	28.00	26.60	27.80	29.11	26.09	28.68	30.02	30.79	29.84	31.62	26.73

WTR YR 1987: HIGHEST 26.09 MARCH 3, LOWEST 32.06 SEPTEMBER 6, 7.

401156076110501. Local number, LN 1677--Continued

WATER-QUALITY RECORDS

REMARKS.--Water-quality samples bailed adjacent to major water-bearing zone.
COOPERATION.--Chemical samples analyzed by Pa. Department of Environmental Resources, Bureau of Laboratories.
PERIOD OF RECORD.--March 1985 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)
OCT							
21...	1135	32.70	750	25.0	0.31	--	--
NOV							
20...	1130	30.15	772	25.0	0.20	--	--
26...	0925	28.86	812	32.0	0.20	--	--
28...	1101	27.96	755	35.0	0.34	--	--
DEC							
22...	1115	27.96	1080	30.0	0.48	0.020	0.040
FEB							
05...	1100	29.31	812	31.0	0.40	--	--
27...	1015	30.12	815	29.0	0.25	--	--
MAR							
03...	1010	26.01	835	30.0	0.56	--	--
06...	1220	27.41	815	31.0	0.36	--	--
12...	0945	28.79	822	31.0	0.33	--	--
APR							
14...	1350	29.29	805	29.0	0.20	--	--
21...	1035	29.81	790	30.0	0.34	<0.010	--
MAY							
11...	1104	30.60	785	26.0	0.30	--	--
JUN							
11...	1010	30.79	825	25.0	0.46	--	--
JUL							
08...	1025	30.72	740	24.0	0.36	--	--
14...	1040	31.21	812	26.0	0.28	0.020	0.030
AUG							
19...	1135	31.84	908	21.0	0.15	--	--
SEP							
09...	1320	28.33	840	24.0	0.54	--	--
10...	1130	28.18	915	27.0	0.30	--	--
11...	1150	28.64	910	31.0	0.28	--	--
15...	1205	28.95	635	25.0	0.28	--	--
23...	1040	27.92	837	27.0	0.40	0.020	0.030

401152076105701. Local number, LN 1679

LOCATION.--Lat 40°11'52", long 76°10'57", Hydrologic Unit 02050306, 1.5 mi north of Ephrata.
OWNER: U.S. Geological Survey.
AQUIFER.--Dolomite of Snitz Creek Formation of Cambrian Age.

WATER-LEVEL RECORDS

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 60 ft, cased to 13 ft, open hole.
INSTRUMENTATION.--Continuous strip-chart recorder.
DATUM.--Elevation of land-surface is 364 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of plywood cover, 2.2 ft above land-surface datum.
PERIOD OF RECORD.--March 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 17.60 ft below land-surface datum, Mar. 3, 1987; lowest, 21.22 ft below land-surface datum, Sept. 6, 7, 1987.

DEPTH BELOW LAND SURFACE (WATER LEVEL)(FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.78	21.04	19.23	19.09	19.62	20.13	20.20	20.28	20.12	20.81	20.85	21.16
2	20.69	21.04	19.31	19.17	19.65	18.30	20.24	20.30	20.15	19.90	20.85	21.17
3	20.73	21.05	19.26	19.25	19.68	17.60	20.27	20.31	20.17	19.81	20.90	21.19
4	20.67	21.06	19.32	19.32	19.66	18.00	20.14	20.31	20.20	19.98	20.90	21.20
5	20.69	21.06	19.35	19.37	19.66	18.40	19.97	20.26	20.23	20.12	20.92	21.21
6	20.75	20.72	19.39	19.41	19.68	---	19.84	20.30	20.26	20.22	20.93	21.22
7	20.78	20.70	19.43	19.46	19.69	---	19.41	20.32	20.28	20.30	20.95	21.22
8	20.80	20.64	19.47	19.50	19.69	---	19.25	20.34	20.31	20.37	20.96	21.20
9	20.83	20.40	19.47	19.56	19.74	19.29	19.31	20.36	20.33	20.42	20.96	18.26
10	20.85	20.33	19.45	19.57	19.77	19.41	19.39	20.37	20.36	20.46	20.86	18.63
11	20.87	19.34	19.46	19.54	19.80	19.47	19.47	20.41	20.42	20.50	20.93	19.19
12	20.88	19.88	19.45	19.57	19.81	19.52	19.54	20.41	20.45	20.53	20.99	19.48
13	20.89	19.75	19.50	19.59	19.85	19.59	19.62	20.43	20.47	20.57	21.01	19.37
14	20.89	19.87	19.52	19.59	19.88	19.64	19.68	20.44	20.51	20.59	21.02	19.18
15	20.89	19.99	19.57	19.59	19.92	19.71	19.73	20.44	20.54	20.61	21.04	19.30
16	20.91	20.12	19.61	19.61	19.95	19.77	19.77	20.44	20.57	20.64	21.03	19.46
17	20.94	20.20	19.65	19.60	19.98	19.81	19.81	20.45	20.60	20.68	21.00	19.58
18	20.96	20.25	19.65	19.60	20.01	19.85	19.86	20.48	20.63	20.71	21.00	19.00
19	20.98	19.99	18.93	19.57	20.04	19.89	19.90	20.47	20.64	20.73	21.01	17.90
20	20.98	19.92	18.57	19.17	20.07	19.94	19.94	20.45	20.64	20.76	21.10	17.65
21	20.97	19.00	18.74	18.93	20.09	19.97	19.98	20.27	20.66	20.79	21.14	18.09
22	20.96	18.46	18.92	18.84	20.10	20.02	20.02	20.29	20.68	20.80	21.16	18.56
23	20.98	18.75	19.10	19.01	20.10	20.09	20.05	20.30	20.66	20.82	21.16	18.89
24	20.99	19.07	19.16	19.12	20.11	20.13	20.07	19.86	20.70	20.83	21.18	19.26
25	21.00	19.28	18.45	19.22	20.11	20.16	20.11	19.63	20.72	20.83	21.19	19.40
26	21.00	19.30	17.86	19.30	20.13	20.19	20.14	19.70	20.71	20.80	21.20	19.51
27	20.97	18.90	18.04	19.37	20.15	20.21	20.16	19.80	20.74	20.82	21.21	19.60
28	20.98	18.66	18.31	19.42	20.16	20.23	20.18	19.88	20.77	20.85	21.00	19.69
29	20.99	18.85	18.56	19.47	---	20.25	20.20	19.96	20.81	20.84	21.06	19.76
30	21.01	19.08	18.74	19.51	---	20.24	20.25	20.01	20.80	20.87	21.11	19.85
31	21.03	---	18.96	19.58	---	20.24	---	20.06	---	20.88	21.15	---
MEAN	20.89	19.89	19.11	19.38	19.90	19.64	19.88	20.24	20.50	20.58	21.02	19.64
MAX	21.03	21.06	19.65	19.61	20.16	20.25	20.27	20.48	20.81	20.88	21.21	21.22
MIN	20.67	18.46	17.86	18.84	19.62	17.60	19.25	19.63	20.12	19.81	20.85	17.65

WTR YR 1987: HIGHEST 17.60 MARCH 3, LOWEST 21.22 SEPTEMBER 6, 7.

401152076105701. Local number, LN 1679--Continued

WATER-QUALITY RECORDS

REMARKS.--Water-quality samples bailed from recovering water after well pumped.
COOPERATION.--Chemical samples analyzed by Pa. Department of Environmental Resources, Bureau of Laboratories.
PERIOD OF RECORD.--December 1985 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)
OCT							
21...	1125	20.96	780	25.0	0.25	--	--
NOV							
20...	0950	19.90	778	27.0	0.52	--	--
26...	0910	19.26	942	23.0	0.24	--	--
28...	1047	18.66	761	20.0	0.32	--	--
DEC							
22...	1022	18.79	1070	21.0	0.52	0.010	0.090
FEB							
05...	0925	19.66	730	19.0	0.46	--	--
27...	1048	20.14	750	22.0	0.41	--	--
MAR							
03...	1025	17.59	765	22.0	0.35	--	--
06...	1144	18.64	760	22.0	0.42	--	--
12...	1050	19.49	758	20.0	0.40	--	--
APR							
14...	1335	19.69	748	18.0	0.24	--	--
21...	1025	20.02	800	27.0	0.48	<0.010	0.030
MAY							
11...	1128	20.39	764	22.0	0.30	--	--
JUN							
11...	1015	20.40	833	29.0	0.28	--	--
JUL							
08...	1045	20.37	740	24.0	0.36	--	--
14...	1124	20.58	780	16.0	0.38	0.020	0.020
AUG							
19...	1125	21.08	875	36.0	0.43	--	--
SEP							
09...	1330	18.22	950	33.0	0.30	--	--
10...	1148	18.31	930	24.0	0.26	--	--
11...	1140	18.89	865	26.0	0.15	--	--
15...	1137	19.25	647	25.0	0.35	--	--
23...	1045	18.72	788	21.0	0.40	0.020	0.020

400744075583901. Local number, LN SP 58.

LOCATION.--Lat 40°07'44", long 75°58'39", Hydrologic Unit 02050306, 1.1 mi southeast of Churchtown.
Owner: Harry Krappenbach
AQUIFER.--Dolomite of Zooks Corner Formation of Cambrian age.
DATUM.--Elevation of land-surface is 427 ft above National Geodetic Vertical Datum of 1929, from topographic map.
REMARKS.--Hillside spring used for domestic purposes.
COOPERATION.--Chemical samples analyzed by Pa. Department of Environmental Resources, Bureau of Laboratories.
PERIOD OF RECORD.--February 1982 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N)
NOV				
06...	1035	582	13.0	0.23
08...	0909	572	13.0	<0.20
DEC				
06...	0930	572	14.0	0.33
JAN				
06...	1025	565	12.0	0.25
FEB				
07...	1055	643	13.0	0.30
28...	1300	635	17.0	0.31
MAR				
03...	0900	650	13.0	0.20
05...	0950	647	14.0	0.22
07...	0945	595	8.10	0.28
APR				
15...	1223	613	11.0	<0.20
MAY				
11...	0925	604	13.0	0.15
JUN				
11...	0840	520	12.0	0.32
25...	1020	576	15.0	0.30
JUL				
01...	1305	640	12.0	0.22
09...	0945	647	13.0	0.47
AUG				
10...	0900	758	13.0	<0.20
SEP				
09...	0930	500	11.0	0.30
10...	0945	500	13.0	0.18
11...	1035	692	15.0	0.28
14...	1115	630	13.0	0.38

401152076105301. Local number, LN SP 61.

LOCATION.--Lat 40°11'52", long 76°10'53", Hydrologic Unit 02050306, 1.5 mi north of Ephrata.
Owner: Aaron Stauffer.
AQUIFER.--Dolomite of Snitz Creek Formation of Cambrian age.
DATUM.--Elevation of land-surface is 340 ft above National Geodetic Vertical Datum of 1929, from topographic map.
REMARKS.--Abandoned spring once used for domestic supply.
COOPERATION.--Chemical samples analyzed by Pa. Department of Environmental Resources, Bureau of Laboratories.
PERIOD OF RECORD.--October 1984 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)
OCT						
21...	1145	665	20.0	0.31	--	--
NOV						
20...	1100	711	20.0	0.18	--	--
26...	0855	796	24.0	0.44	--	--
28...	0945	647	25.0	<0.20	--	--
DEC						
22...	1225	1070	21.0	0.32	0.010	0.020
FEB						
05...	0845	680	22.0	0.45	--	--
27...	0950	725	20.0	0.38	--	--
MAR						
03...	0933	790	27.0	0.35	--	--
06...	1103	790	26.0	0.44	--	--
12...	0820	770	20.0	0.56	--	--
APR						
14...	1335	658	21.0	0.24	--	--
21...	1000	700	21.0	0.32	0.010	0.020
MAY						
11...	0825	722	18.0	0.50	--	--
JUN						
11...	0945	675	17.0	0.36	--	--
JUL						
08...	1050	720	18.0	0.53	--	--
14...	1000	780	21.0	0.48	0.050	0.020
AUG						
19...	1046	734	18.0	0.15	--	--
SEP						
09...	1350	760	21.0	0.44	--	--
10...	1104	725	25.0	0.26	--	--
11...	1120	955	25.0	0.50	--	--
13...	1305	649	22.0	0.35	--	--
23...	1135	788	24.0	0.40	0.020	0.030

411800076162501. Local number, LU 243.

LOCATION.--Lat 41°18'00", long 76°16'25", Hydrologic Unit 02050107, at Ricketts Glen Park, Fairmount Township.
Owner: Commonwealth of Pennsylvania.
AQUIFER.--Sandstone of Catskill Formation of Late Devonian age.
WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in., depth 160 ft, cased to 40 ft, open hole.
INSTRUMENTATION.--Continuous strip-chart recorder.
DATUM.--Elevation of land-surface is 1,266 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.3 ft above land-surface datum.
PERIOD OF RECORD.--November 1948 to July 1950, July 1955 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 36.08 ft below land-surface datum, Mar. 31, 1950; lowest, 58.70 ft below land-surface datum, Oct. 5, 1957.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55.21	54.16	50.37	51.26	53.31	52.78	51.20	51.86	---	53.94	53.81	54.16
2	55.26	54.08	50.37	51.30	53.35	52.38	51.15	51.87	---	53.89	53.85	54.30
3	55.24	54.03	50.37	51.51	53.42	51.99	51.08	51.94	---	53.69	53.69	54.32
4	55.00	54.02	---	51.61	53.49	51.73	50.92	51.89	---	53.85	53.79	54.43
5	54.70	54.03	---	51.74	53.53	51.47	50.38	51.89	---	53.81	53.85	54.61
6	54.53	53.94	---	51.82	53.89	51.26	49.68	52.11	---	53.65	53.89	54.48
7	54.39	53.95	50.64	51.94	53.56	51.12	49.32	52.00	---	53.63	53.98	54.64
8	54.28	53.90	50.80	52.06	53.54	51.03	49.53	52.02	---	53.44	54.05	54.41
9	54.28	53.61	50.73	52.18	53.67	50.80	49.43	52.24	---	53.20	54.16	54.20
10	54.29	53.09	50.81	52.20	53.67	50.59	49.52	52.31	---	52.91	54.06	54.09
11	54.34	52.04	50.78	52.34	53.64	50.39	49.75	52.28	---	52.89	54.12	54.03
12	54.33	52.19	50.72	52.47	53.61	50.20	49.79	52.31	---	52.82	54.16	53.99
13	54.33	52.04	50.92	52.60	53.69	50.25	49.87	52.39	---	52.55	54.19	53.73
14	54.25	52.01	50.96	52.64	53.73	50.38	49.96	52.45	---	52.30	54.23	52.79
15	54.22	51.92	51.09	52.72	53.74	50.57	49.98	52.46	---	52.28	54.38	52.27
16	54.22	51.96	51.19	52.75	---	50.65	49.99	52.75	---	52.27	54.44	51.83
17	54.15	52.03	51.30	52.81	---	50.67	50.08	52.80	---	52.31	54.62	51.61
18	54.15	52.07	51.30	52.79	---	50.78	50.27	52.67	---	52.58	54.42	51.49
19	54.23	52.06	51.29	---	---	50.90	50.44	52.66	---	52.79	54.47	51.33
20	54.31	52.29	51.30	---	---	50.95	50.61	52.67	---	52.64	54.47	51.11
21	54.12	51.54	51.33	52.80	---	51.16	50.61	52.76	---	52.67	54.54	51.00
22	54.09	50.89	51.31	52.79	---	51.31	50.75	52.71	---	52.79	54.53	50.99
23	54.07	50.63	51.31	52.79	53.51	51.18	50.84	52.87	---	---	54.74	51.06
24	54.60	50.56	51.32	52.89	53.31	51.36	50.92	52.95	---	---	54.89	51.11
25	54.74	50.67	51.26	52.95	53.12	51.27	51.15	---	53.71	---	54.70	51.22
26	54.18	50.66	51.20	53.28	53.04	51.18	51.24	52.96	53.71	---	54.69	51.38
27	54.13	50.45	51.08	53.09	52.94	51.17	51.31	---	53.86	---	54.46	51.54
28	54.79	50.12	51.04	53.12	52.88	51.24	51.36	---	53.96	53.40	54.40	51.58
29	55.15	50.00	51.05	53.12	---	51.37	51.39	---	53.99	53.48	54.28	51.59
30	54.68	50.21	51.10	53.10	---	51.32	51.55	---	53.95	53.55	54.32	51.64
31	54.68	---	51.24	53.27	---	51.19	---	---	---	53.66	54.24	---
MEAN	54.48	52.17	51.01	52.48	53.46	51.12	50.47	52.39	53.86	53.12	54.27	52.70
MAX	55.26	54.16	51.33	53.28	53.89	52.78	51.55	52.96	53.99	53.94	54.89	54.64
MIN	54.07	50.00	50.37	51.26	52.88	50.20	49.32	51.86	53.71	52.27	53.69	50.99

WTR YR 1987: HIGHEST 49.32 APRIL 7; LOWEST 55.26 OCTOBER 2.

412427076594401. Local number, LY 112.

LOCATION.--Lat 41°24'27", long 76°59'44", Hydrologic Unit 02050206, at State Game Land Number 133, near Trout Run.
Owner: U.S. Geological Survey.
AQUIFER.--Shale of Catskill Formation of Late Devonian age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in., depth 200 ft, cased to 23 ft, open hole.
INSTRUMENTATION.--Continuous strip-chart recorder.
DATUM.--Elevation of land-surface is 1,400 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of plywood cover, 3.1 ft above land-surface datum.
PERIOD OF RECORD.--October 1967 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 76.10 ft below land-surface datum, June 23, 1972; lowest, 95.32 ft below land-surface datum, Oct. 23, 24, 1980.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	88.30	89.75	85.46	86.44	88.54	88.71	88.21	87.78	90.16	91.94	91.31	91.23
2	88.42	89.76	85.55	86.63	88.61	87.31	86.86	87.99	90.20	91.94	91.33	90.86
3	88.43	89.76	85.53	87.08	88.78	85.94	86.42	88.16	90.25	91.86	91.42	90.69
4	88.37	89.87	84.63	87.35	88.98	85.81	86.33	88.17	90.29	91.33	91.48	90.75
5	87.43	89.88	84.78	87.50	89.07	86.04	85.28	88.01	90.31	91.10	91.56	90.82
6	86.75	89.91	85.13	87.53	89.06	86.13	84.24	87.85	90.37	91.05	91.66	90.89
7	86.77	89.93	85.39	87.66	88.93	86.13	84.19	87.82	90.44	91.04	91.72	90.95
8	86.91	89.87	85.84	87.91	88.71	85.88	84.08	87.99	90.47	91.03	91.77	90.93
9	87.17	89.36	85.96	88.09	88.62	85.75	84.61	88.12	90.56	91.01	91.82	90.92
10	87.45	87.87	85.96	88.08	88.71	86.15	85.06	88.22	90.71	91.01	91.92	90.98
11	87.61	86.66	85.73	88.18	88.72	86.44	85.57	88.36	90.81	91.03	92.00	91.03
12	87.70	86.34	85.44	88.42	88.72	86.71	85.88	88.51	90.79	91.03	92.10	91.03
13	87.82	86.52	85.92	88.65	88.70	86.98	86.19	88.70	90.81	90.86	92.19	90.42
14	87.92	86.59	86.07	88.71	88.76	87.23	86.28	88.79	90.84	90.52	92.23	88.69
15	88.07	86.58	86.40	88.68	88.90	87.51	86.32	88.81	90.91	90.34	92.27	87.80
16	88.17	86.71	86.67	88.59	88.95	87.71	86.38	88.93	91.01	90.38	92.31	87.77
17	88.36	86.87	86.85	87.59	88.96	87.91	86.47	89.00	91.12	90.48	92.36	87.85
18	88.54	86.91	86.84	86.80	89.06	88.06	86.45	89.08	91.19	90.53	92.45	87.62
19	88.61	87.04	86.83	86.45	89.20	88.16	86.15	89.21	91.22	90.61	92.51	86.55
20	88.66	86.59	86.17	---	89.27	88.30	85.93	89.29	91.27	90.67	92.60	85.58
21	88.66	85.54	85.83	86.82	89.27	88.44	86.00	89.34	91.31	90.76	92.69	85.25
22	88.80	85.14	85.90	86.83	89.16	88.67	86.27	89.37	91.36	90.84	92.68	85.32
23	88.89	85.07	86.10	87.06	88.76	88.80	86.48	89.42	91.48	90.91	92.78	85.32
24	89.06	---	86.21	87.48	88.85	88.89	86.73	89.54	91.57	90.98	92.85	85.23
25	89.10	84.67	86.18	87.69	88.94	88.91	86.92	---	91.61	91.07	92.92	85.66
26	89.10	84.64	85.30	87.81	88.98	88.87	87.09	89.74	91.63	91.04	92.96	86.09
27	89.10	84.23	84.87	87.97	88.97	88.83	87.20	89.85	91.68	91.10	92.94	86.48
28	89.28	83.84	85.18	88.14	88.91	88.74	87.27	89.91	91.75	91.13	92.91	86.67
29	89.34	84.40	85.49	88.24	---	88.81	87.35	89.96	91.84	91.17	92.54	86.91
30	89.59	85.00	85.83	88.24	---	88.79	87.61	90.05	91.90	91.19	91.80	86.91
31	89.75	---	86.30	88.46	---	88.70	---	90.09	---	91.26	91.45	---
MEAN	88.33	87.08	85.82	87.70	88.90	87.59	86.19	88.87	91.00	91.01	92.18	88.44
MAX	89.75	89.93	86.85	88.71	89.27	88.91	88.21	90.09	91.90	91.94	92.96	91.23
MIN	86.75	83.84	84.63	86.44	88.54	85.75	84.08	87.78	90.16	90.34	91.31	85.23

WTR YR 1987: HIGHEST 83.84 NOVEMBER 28; LOWEST 92.96 AUGUST 26.

404140077354001. Local number, MF 344.

LOCATION.--Lat 40°41'40", long 77°35'40", Hydrologic Unit 02050304, at Roseann.
Owner: Ira Huron
AQUIFER.--Dolomite of Bellefonte Formation of Lower Ordovician age.
WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 200 ft, cased to 42 ft, open hole.
INSTRUMENTATION.--Continuous strip-chart recorder.
DATUM.--Elevation of land-surface is 800 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of shelter platform, 1.0 ft above land-surface datum.
PERIOD OF RECORD.--September 1983 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 21.29 ft below land-surface datum, Feb. 15, 1984; lowest, 77.13 ft below land-surface datum, Oct. 11, 1983.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64.87	65.72	42.08	46.11	54.31	---	52.18	50.70	46.70	57.72	---	65.10
2	65.12	65.92	42.46	46.40	54.40	---	51.96	51.07	47.28	57.72	---	65.44
3	65.12	65.98	41.21	47.26	54.59	---	51.97	51.26	47.49	56.25	---	65.78
4	62.69	66.35	40.44	48.37	54.36	---	51.06	50.10	47.31	56.59	---	66.01
5	62.43	66.44	41.33	48.78	53.62	---	46.73	49.04	47.32	57.00	---	66.23
6	62.44	65.94	42.21	48.98	52.56	---	44.91	48.11	47.59	57.31	61.82	66.25
7	62.43	66.21	42.84	49.59	51.50	---	41.35	47.35	47.78	57.43	62.08	66.08
8	62.44	65.17	43.92	50.21	50.24	---	39.30	47.27	48.05	57.65	62.34	65.56
9	62.44	62.43	44.08	50.69	50.27	---	39.59	47.33	48.48	57.85	62.55	65.67
10	62.55	60.46	44.45	51.03	51.28	---	40.26	47.18	48.81	58.01	62.64	66.06
11	62.67	60.04	44.57	51.49	51.31	---	41.47	47.14	49.66	58.19	62.66	66.28
12	62.79	58.96	44.58	52.14	51.70	---	42.32	48.71	50.16	58.55	63.01	65.88
13	62.80	57.28	45.17	52.68	51.87	---	43.24	49.51	50.57	58.72	63.24	64.51
14	62.78	56.89	45.36	52.79	52.47	---	43.84	50.01	51.05	58.57	63.54	64.91
15	61.93	56.43	45.89	53.17	52.59	---	44.44	50.40	51.58	58.12	63.91	65.39
16	62.28	56.32	46.23	53.34	52.68	---	44.78	50.94	52.16	58.39	64.19	65.67
17	62.55	56.38	46.55	53.38	53.05	---	45.02	51.35	52.87	58.61	64.37	65.75
18	62.85	56.43	46.55	53.03	53.57	---	45.50	51.55	53.23	58.79	64.90	61.36
19	63.07	54.52	46.83	---	53.80	---	45.92	49.77	53.41	59.00	65.21	59.86
20	63.19	52.52	47.23	52.34	53.80	---	46.14	48.12	53.47	59.17	65.58	59.74
21	63.61	49.50	47.88	52.33	53.80	---	46.45	46.24	53.71	59.60	65.82	62.54
22	63.86	46.28	48.01	52.18	53.29	---	46.95	45.85	54.56	59.91	65.84	62.78
23	64.10	46.22	48.25	51.84	---	---	47.22	45.89	55.09	59.93	66.40	63.02
24	64.35	46.29	48.34	52.59	52.80	---	48.00	43.93	55.55	59.93	66.73	63.15
25	64.48	46.51	46.93	52.65	52.48	---	48.43	43.53	56.01	59.93	66.97	63.46
26	64.62	46.50	46.47	52.85	---	---	48.70	43.60	56.34	60.55	67.16	63.68
27	64.50	38.80	45.70	53.10	---	53.63	48.78	43.99	56.61	59.29	67.02	63.83
28	65.31	37.48	45.42	53.37	---	54.05	49.11	44.58	56.92	59.62	66.60	62.83
29	65.51	38.91	45.42	53.36	---	54.34	49.31	45.16	57.20	59.98	64.64	62.92
30	65.51	40.37	45.77	53.82	---	54.39	50.27	45.70	57.50	---	64.93	62.76
31	65.60	---	46.03	54.20	---	53.71	---	46.22	---	---	65.09	---
MEAN	63.58	55.11	45.10	51.47	52.76	54.02	46.17	47.79	51.82	58.56	64.59	64.28
MAX	65.60	66.44	48.34	54.20	54.59	54.39	52.18	51.55	57.50	60.55	67.16	66.28
MIN	61.93	37.48	40.44	46.11	50.24	53.63	39.30	43.53	46.70	56.25	61.82	59.74

WTR YR 1987: HIGHEST 37.48 NOVEMBER 28; LOWEST 67.16 AUGUST 26.

402339077074502. Local number, PE 518.

LOCATION.--Lat 40°23'39", long 77°07'45", Hydrologic Unit 02050305, at State Game Land Number 256.
Owner: U.S. Geological Survey.
AQUIFER.--Shale of Mahantango Formation of Middle Devonian age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in., depth 138 ft, cased to 17 ft, open hole.
INSTRUMENTATION.--Continuous strip-chart recorder.
DATUM.--Elevation of land-surface is 590 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of plywood cover, 3.0 ft above land-surface datum.
PERIOD OF RECORD.--July 1975 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.75 ft below land-surface datum, Apr. 5, 1984; lowest, 19.51 ft below land-surface datum, Aug. 19, 1975.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11.32	11.52	10.18	9.28	9.66	8.61	9.63	9.66	10.36	10.86	11.00	10.89
2	11.24	11.26	10.18	9.50	9.76	8.24	9.64	9.79	10.36	10.69	10.98	10.94
3	11.16	11.40	9.72	9.87	9.76	8.71	9.60	9.89	10.36	10.61	10.83	10.98
4	10.81	11.32	9.06	9.82	9.43	8.71	9.13	9.75	10.24	10.56	11.06	11.16
5	10.92	11.27	9.06	9.76	9.08	8.61	8.71	9.46	10.38	10.61	11.15	11.11
6	11.21	11.50	9.58	9.71	9.36	8.64	8.43	9.32	10.82	10.68	10.83	11.06
7	11.46	11.96	9.60	9.81	8.98	9.35	8.06	9.29	10.64	10.71	10.77	10.96
8	11.25	12.04	9.68	9.81	9.49	9.09	8.47	9.60	10.11	10.75	10.64	10.62
9	11.13	11.22	9.71	9.77	9.40	9.06	8.48	10.05	10.21	10.75	10.59	10.12
10	11.17	10.78	9.74	9.80	9.31	9.40	8.77	10.14	10.41	10.70	11.06	10.36
11	11.21	10.65	9.74	9.76	9.32	9.50	8.98	10.02	10.40	10.71	11.12	10.36
12	11.36	10.41	9.52	10.07	9.34	9.42	8.99	10.13	10.23	10.66	11.05	10.18
13	11.24	10.46	10.03	10.08	9.48	9.32	9.42	10.29	10.10	10.56	11.08	9.42
14	11.19	10.55	10.06	10.09	9.52	9.48	9.63	10.15	9.98	10.45	11.30	8.76
15	11.34	10.56	9.96	9.87	9.48	9.75	9.41	10.16	10.46	10.61	11.65	9.19
16	11.16	10.48	9.87	9.35	9.34	9.68	9.42	10.22	10.84	10.59	12.03	9.44
17	11.15	10.68	9.89	9.26	9.89	9.67	9.44	10.03	11.08	10.45	11.75	9.73
18	11.76	10.68	9.90	9.26	9.56	9.68	9.65	10.04	11.09	10.99	11.22	9.63
19	11.60	10.34	9.45	---	9.80	9.68	10.00	10.04	11.00	10.92	11.04	9.21
20	11.26	10.21	10.13	9.09	9.95	9.46	10.02	9.84	10.82	10.93	11.17	9.25
21	11.11	9.61	10.02	9.05	9.14	9.90	9.91	9.49	10.77	11.15	11.16	9.29
22	11.26	9.72	9.85	9.04	8.83	9.83	10.02	9.44	10.54	11.15	11.18	9.41
23	11.10	9.98	9.59	9.05	---	9.93	9.95	10.00	10.51	11.07	11.18	9.50
24	11.07	10.07	9.57	9.56	9.23	10.12	9.67	9.75	10.92	11.20	11.06	9.51
25	11.20	10.20	9.24	9.51	9.13	10.05	9.98	9.94	10.63	11.38	11.09	9.67
26	10.98	10.01	8.73	9.80	8.88	9.71	9.96	9.83	10.61	11.35	11.00	9.88
27	11.05	9.90	9.08	9.63	8.83	9.76	9.98	9.87	10.59	10.91	10.82	10.07
28	11.67	9.73	9.04	9.47	8.69	9.96	9.66	10.03	10.90	10.82	10.82	10.09
29	11.61	9.98	9.11	9.23	---	9.94	9.52	10.13	11.05	11.03	10.91	10.17
30	11.60	10.20	9.14	9.69	---	9.77	9.72	10.31	10.97	10.99	10.94	9.72
31	11.66	---	9.27	9.79	---	9.44	---	10.31	---	10.97	10.83	---
MEAN	11.27	10.62	9.60	9.59	9.36	9.43	9.41	9.90	10.58	10.83	11.07	10.02
MAX	11.76	12.04	10.18	10.09	9.95	10.12	10.02	10.31	11.09	11.38	12.03	11.16
MIN	10.81	9.61	8.73	9.04	8.69	8.24	8.06	9.29	9.98	10.45	10.59	8.76

WTR YR 1987: HIGHEST 8.06 APRIL 7; LOWEST 12.04 NOVEMBER 8.

414640077493801. Local number, PO 72.

LOCATION.--Lat 41°46'40", long 77°49'38", Hydrologic Unit 02050205, at Denton Hill State Park.
Owner: U.S. Geological Survey.
AQUIFER.--Shale of Catskill Formation of Late Devonian age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in., depth 110 ft, cased to 21 ft, open hole.
INSTRUMENTATION.--Continuous strip-chart recorder.
DATUM.--Elevation of land-surface is 1,810 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of plywood cover, 1.1 ft above land-surface datum.
PERIOD OF RECORD.--October 1967 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 5.20 ft below land-surface datum, Mar. 23, 1968; lowest, 32.18 ft below land-surface datum, Oct. 31, 1982.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.37	19.29	13.51	16.71	20.43	24.85	8.63	13.08	20.59	21.26	25.68	26.38
2	21.65	19.10	13.82	16.82	20.45	17.44	9.31	13.98	17.72	21.26	25.75	26.91
3	21.65	19.08	12.19	17.08	20.88	15.75	10.56	14.20	16.30	12.14	25.76	27.33
4	15.34	19.27	10.15	17.07	21.30	16.16	11.08	12.68	16.19	13.03	25.93	27.68
5	14.29	19.34	10.63	17.57	21.52	16.41	9.80	11.27	13.22	14.76	26.10	---
6	15.53	18.82	12.23	17.96	21.61	16.51	8.78	12.17	14.58	15.75	26.17	---
7	16.34	18.53	13.40	18.27	21.66	16.32	8.18	13.43	15.49	16.43	26.29	---
8	16.88	18.17	14.19	18.37	21.66	11.51	8.79	14.32	15.95	16.35	26.43	---
9	17.41	16.74	14.33	18.73	22.26	7.91	10.13	15.09	16.82	16.66	26.53	---
10	17.84	13.60	13.86	19.17	22.53	8.92	11.78	15.87	17.52	16.82	26.62	---
11	18.37	13.82	13.13	19.36	22.78	10.71	12.93	16.54	18.00	17.22	26.89	---
12	18.77	14.38	13.35	19.36	22.79	12.54	13.34	16.92	18.08	17.64	27.11	---
13	18.90	15.24	14.15	19.52	23.17	13.68	12.87	17.47	17.91	18.11	27.27	---
14	18.90	15.64	14.65	19.74	23.46	14.49	11.44	17.77	10.90	18.50	27.42	---
15	17.90	16.00	15.34	20.27	23.90	15.31	11.77	17.44	12.18	19.31	27.63	---
16	17.93	16.29	15.86	20.37	24.07	15.86	12.95	17.11	14.34	19.95	27.70	---
17	18.11	16.59	16.24	20.10	21.97	16.32	13.80	17.36	15.77	20.58	27.77	---
18	18.37	16.67	16.43	18.87	21.90	16.67	14.51	17.56	16.77	20.97	27.97	---
19	18.49	16.77	16.95	18.79	22.45	16.87	15.10	17.92	17.48	21.40	28.10	---
20	19.18	16.77	17.43	18.28	24.00	16.96	15.53	17.48	18.03	21.92	28.29	---
21	19.49	15.84	17.81	17.94	24.47	17.03	15.94	17.34	18.77	22.43	28.55	---
22	19.17	14.96	18.03	17.93	24.61	17.14	16.34	17.20	18.77	22.91	28.58	---
23	19.47	14.83	18.34	18.20	24.66	17.15	16.57	17.30	18.98	23.38	28.44	15.86
24	19.85	14.59	18.46	18.86	24.98	16.85	16.42	17.64	---	24.00	28.79	16.63
25	20.10	11.57	17.61	19.04	25.24	16.31	12.84	18.06	---	24.68	29.04	17.43
26	20.10	10.35	17.61	19.03	25.25	14.07	11.58	18.40	---	24.79	29.27	17.99
27	19.83	7.98	16.27	19.02	25.14	12.75	12.55	18.84	---	24.11	29.27	18.73
28	19.55	8.79	15.92	19.47	25.28	12.95	12.40	19.31	---	25.12	21.69	19.36
29	19.47	10.50	15.82	19.71	---	13.27	11.56	19.82	---	25.54	24.41	19.66
30	19.33	12.75	15.95	19.81	---	13.34	12.17	20.16	20.89	25.67	25.55	19.39
31	19.36	---	16.27	20.21	---	10.19	---	20.21	---	25.32	26.08	---
MEAN	18.74	15.41	15.16	18.76	23.02	14.91	12.32	16.58	16.72	20.26	27.00	21.11
MAX	23.37	19.34	18.46	20.37	25.28	24.85	16.57	20.21	20.89	25.67	29.27	27.68
MIN	14.29	7.98	10.15	16.71	20.43	7.91	8.18	11.27	10.90	12.14	21.69	15.86

WTR YR 1987: HIGHEST 7.91 MARCH 9; LOWEST 29.27 AUGUST 26, 27.

403939076591001. Local number, SN 130.

LOCATION.--Lat 40°39'39", long 76°59'10", Hydrologic Unit 02050301, at State Game Land Number 194.
Owner: U.S. Geological Survey.
AQUIFER.--Trimmers Rock Formation of Late Devonian age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in., depth 100 ft, cased to 40 ft, open hole.
INSTRUMENTATION.--Continuous strip-chart recorder.
DATUM.--Elevation of land-surface is 740 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of plywood cover, 3.6 ft above land-surface datum.
PERIOD OF RECORD.--June 1968 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.45 ft below land-surface datum, Sept. 26, 1975; lowest, 19.57 ft below land-surface datum, Nov. 23, 1980.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.34	19.23	18.71	18.72	19.03	18.71	18.86	19.06	19.15	19.33	19.38	19.39
2	19.34	19.21	18.70	18.78	19.03	17.43	18.75	19.08	19.16	19.31	19.38	19.42
3	19.32	19.23	18.66	18.86	19.01	17.77	18.79	19.09	19.17	19.31	19.38	19.43
4	19.22	19.25	18.00	18.91	18.90	18.00	18.72	19.04	19.18	19.32	19.38	19.45
5	18.98	19.22	18.30	18.94	18.80	18.18	18.41	18.93	19.19	19.34	19.39	19.45
6	19.02	19.15	18.45	18.93	18.69	18.30	18.36	18.82	19.21	19.35	19.41	19.42
7	19.07	18.84	18.56	18.96	18.62	18.34	17.80	18.83	19.22	19.34	19.42	19.41
8	19.11	18.85	18.67	19.00	18.58	18.40	18.10	18.87	19.21	19.34	19.42	19.39
9	19.15	18.36	18.71	19.03	18.65	18.50	18.29	18.91	19.21	19.36	19.40	19.41
10	19.19	18.45	18.65	19.00	18.72	18.64	18.43	18.94	19.23	19.36	19.40	19.41
11	19.21	18.55	18.49	18.95	18.76	18.70	18.56	18.99	19.25	19.36	19.40	19.41
12	19.22	18.53	18.55	18.97	18.79	18.76	18.65	19.01	19.22	19.37	19.41	19.42
13	19.22	18.58	18.70	19.01	18.84	18.79	18.78	19.07	19.23	19.37	19.39	19.27
14	19.20	18.68	18.75	18.97	18.88	18.85	18.82	19.08	19.24	19.34	19.41	19.02
15	19.12	18.75	18.81	18.83	18.94	18.88	18.86	19.08	19.23	19.36	19.41	19.07
16	19.07	18.83	18.84	18.44	18.94	18.92	18.88	19.09	19.24	19.36	19.40	19.11
17	19.12	18.89	18.91	18.22	18.96	18.94	18.89	19.09	19.26	19.37	19.40	19.14
18	19.18	18.89	18.91	18.34	18.99	18.95	18.91	19.11	19.25	19.38	19.41	19.15
19	19.18	18.66	18.38	---	19.04	18.95	18.90	19.12	19.25	19.38	19.43	18.63
20	19.19	18.25	18.39	---	19.06	18.98	18.91	19.12	19.24	19.38	19.43	18.35
21	19.21	17.59	18.53	18.71	19.05	18.99	18.90	18.92	19.25	19.39	19.44	18.55
22	19.20	18.04	18.61	18.71	19.03	19.03	18.94	18.95	19.24	19.40	19.40	18.66
23	19.21	18.24	18.68	18.78	19.02	19.06	18.92	18.96	19.26	19.39	19.43	18.65
24	19.24	18.37	18.71	18.88	19.06	19.06	18.94	18.98	19.28	19.40	19.45	18.71
25	19.24	18.63	18.30	18.94	19.02	19.07	18.98	19.02	19.29	19.40	19.45	18.83
26	19.23	18.63	17.78	18.96	18.99	19.10	19.02	19.08	19.30	19.39	19.45	18.92
27	19.21	18.28	18.10	19.01	18.96	19.12	19.02	19.11	19.29	19.39	19.39	18.99
28	19.22	18.19	18.31	19.02	18.93	19.14	19.01	19.12	19.33	19.39	19.39	18.99
29	19.21	18.42	18.46	19.03	---	19.15	18.99	19.13	19.33	19.39	19.40	19.02
30	19.20	18.58	18.59	19.00	---	19.13	19.03	19.15	19.33	19.40	19.42	19.04
31	19.23	---	18.70	19.04	---	19.07	---	19.15	---	19.38	19.42	---
MEAN	19.19	18.65	18.55	18.86	18.90	18.74	18.75	19.03	19.24	19.37	19.41	19.10
MAX	19.34	19.25	18.91	19.04	19.06	19.15	19.03	19.15	19.33	19.40	19.45	19.45
MIN	18.98	17.59	17.78	18.22	18.58	17.43	17.80	18.82	19.15	19.31	19.38	18.35

WTR YR 1987: HIGHEST 17.43 MARCH 2; LOWEST 19.45 AUGUST 24, 25, 26, SEPTEMBER 4, 5.

413026076352901. Local number, SU 34.

LOCATION.--Lat 41°30'26", long 76°35'29", Hydrologic Unit 02050206, near Forksville.
Owner: U.S. Geological Survey.
AQUIFER.--Shale of Catskill Formation of Late Devonian age.
WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in., depth 50 ft, cased to 34 ft, open hole.
INSTRUMENTATION.--Digital recorder with 60-minute recording interval. Pa. Department of Environmental Resources satellite telemeter at station.
DATUM.--Elevation of land-surface is 1,060 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.
PERIOD OF RECORD.--April 1965 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.42 ft below land-surface datum, June 23, 1972; lowest, 31.12 ft below land-surface datum, Sept. 4, 1966.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26.47	28.51	24.37	25.53	---	26.52	26.41	27.19	24.23	28.77	28.34	28.42
2	26.46	28.55	24.74	25.83	---	23.11	25.92	27.29	24.30	28.81	28.42	28.38
3	26.11	28.56	24.74	25.98	---	21.95	25.34	27.39	22.81	28.54	28.52	28.48
4	25.60	28.60	24.32	26.11	---	22.67	24.39	27.37	23.37	28.11	28.67	28.61
5	23.89	28.64	24.84	26.23	---	23.24	17.77	27.11	24.02	28.31	28.83	28.81
6	23.59	28.64	25.20	26.30	26.77	23.54	19.37	26.92	24.74	28.47	28.88	28.93
7	24.02	28.36	25.44	26.47	26.72	23.43	20.83	26.81	25.30	28.53	28.97	28.93
8	24.51	28.16	25.69	26.64	26.65	23.12	22.03	26.69	25.60	28.46	29.04	28.93
9	24.92	27.88	25.73	26.79	26.65	22.50	22.98	26.66	25.97	28.23	29.10	28.89
10	25.18	25.58	25.45	26.83	26.69	23.03	23.77	26.69	26.18	28.02	29.10	28.64
11	25.46	24.30	25.13	26.84	26.68	23.62	24.48	26.79	26.41	26.75	29.01	28.71
12	25.76	24.41	25.37	26.88	26.71	24.31	24.85	26.90	26.59	26.20	29.14	28.74
13	25.90	24.49	25.73	26.93	26.74	24.95	24.83	27.13	26.75	26.50	29.25	28.67
14	25.96	24.86	25.91	26.94	26.82	25.39	24.80	27.26	26.95	26.97	29.33	26.43
15	25.92	25.10	26.09	26.94	26.92	25.69	25.13	27.32	27.13	27.09	29.39	25.52
16	26.05	25.35	26.24	26.84	26.99	25.97	25.45	27.45	27.32	27.40	29.45	25.91
17	26.23	25.54	26.34	26.33	27.07	26.15	25.70	27.57	27.50	27.75	29.50	26.04
18	26.47	25.70	26.36	25.79	27.16	26.27	25.84	27.69	27.68	28.10	29.54	25.31
19	26.53	25.71	25.65	25.49	27.23	26.33	26.01	27.76	27.86	28.29	29.59	23.83
20	26.69	25.45	24.62	25.75	27.25	26.40	26.18	28.10	27.97	28.21	29.64	23.85
21	26.84	22.07	24.82	25.90	27.25	26.45	26.22	28.05	28.07	28.20	29.67	24.33
22	28.18	21.63	25.10	25.91	27.26	26.54	26.32	28.12	28.12	28.66	29.71	24.79
23	28.30	22.30	25.36	26.00	27.20	26.55	26.45	28.17	28.11	28.80	29.71	25.10
24	28.38	22.70	25.51	26.08	27.10	26.55	26.59	28.16	28.04	28.89	29.71	25.50
25	28.42	23.16	25.45	---	26.99	26.59	26.62	28.26	28.20	28.94	29.76	25.89
26	28.42	23.27	22.95	---	26.88	26.58	26.73	28.33	28.33	28.67	29.79	26.19
27	28.30	18.12	23.07	---	26.76	26.41	26.85	28.38	28.42	27.65	---	26.51
28	28.29	20.50	23.65	---	26.64	26.43	26.95	28.36	28.49	26.98	---	26.81
29	28.33	22.12	24.26	---	---	26.51	27.05	20.14	28.62	27.22	---	---
30	28.40	23.41	24.76	---	---	26.54	27.12	21.97	28.73	27.60	---	---
31	28.48	---	25.22	---	---	26.58	---	23.28	---	28.01	---	---
MEAN	26.52	25.06	25.10	26.31	26.92	25.16	24.97	26.95	26.73	27.97	29.23	26.97
MAX	28.48	28.64	26.36	26.94	27.26	26.59	27.12	28.38	28.73	28.94	29.79	28.93
MIN	23.59	18.12	22.95	25.49	26.64	21.95	17.77	20.14	22.81	26.20	28.34	23.83

WTR YR 1987: HIGHEST 17.77 APRIL 5; LOWEST 29.79 AUGUST 26.

415323077451301. Local number, SQ 61.

LOCATION.--Lat 41°53'23", long 77°45'13", Hydrologic Unit 02050101, at State Game Land Number 175.
Owner: U.S. Geological Survey.
AQUIFER.--Sandstone and shale of Susquehanna Group of Late Devonian age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in., depth 175 ft, cased to 80 ft, open hole.
INSTRUMENTATION.--Continuous strip-chart recorder.
DATUM.--Elevation of land-surface is 1,270 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 3.0 ft above land-surface datum.
PERIOD OF RECORD.--July 1972 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 21.49 ft below land-surface datum, Apr. 3, 1978; lowest, 37.24 ft below land-surface datum, Aug. 30, 1982.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32.64	32.14	23.85	25.64	28.17	29.35	25.20	26.67	30.53	---	29.45	31.69
2	32.58	32.11	23.93	25.68	28.21	29.18	25.08	26.85	30.54	---	29.65	31.65
3	32.52	32.10	23.89	25.91	28.29	28.25	24.96	27.08	30.55	---	29.84	31.66
4	32.33	32.04	23.96	26.15	28.35	27.24	24.87	27.34	30.56	---	30.01	31.70
5	31.63	32.01	24.13	26.33	28.46	26.60	24.55	27.42	30.47	---	30.19	31.68
6	31.36	31.88	24.24	26.47	28.43	26.22	24.13	27.46	30.26	---	30.36	31.77
7	31.31	31.83	24.39	26.65	28.40	25.95	23.79	27.54	30.21	---	30.55	31.94
8	31.24	31.66	24.56	26.88	28.50	25.77	23.64	27.67	30.12	---	30.64	31.95
9	31.17	31.46	24.63	27.09	28.60	25.40	23.54	27.76	29.99	---	30.85	31.86
10	31.14	30.83	24.76	27.26	28.58	24.96	23.48	27.97	29.92	---	30.98	31.70
11	31.16	30.83	24.74	27.43	28.55	24.61	23.50	28.17	29.86	---	31.08	31.64
12	31.16	---	24.73	27.60	28.50	24.34	23.67	28.31	29.76	---	31.25	31.63
13	31.24	---	24.89	27.73	28.51	24.20	23.84	28.50	29.79	---	31.38	31.69
14	31.24	---	25.03	27.77	28.59	24.25	23.79	28.61	29.85	---	31.52	30.94
15	31.32	---	25.17	27.87	28.73	24.50	23.62	28.74	29.87	---	31.67	29.65
16	31.44	---	25.29	27.78	28.74	24.82	23.56	28.94	29.87	---	31.90	28.75
17	31.60	---	25.43	27.77	28.68	25.02	23.53	29.17	29.89	---	32.07	28.16
18	31.75	---	25.50	27.48	28.68	25.26	23.67	29.37	29.98	---	32.23	27.81
19	31.94	---	25.59	27.25	28.73	25.43	23.88	29.37	30.06	---	32.37	27.60
20	31.98	26.93	25.94	26.95	28.74	25.54	24.11	29.64	30.13	25.84	32.53	27.54
21	31.97	26.76	26.03	26.89	28.73	25.52	24.42	29.73	30.25	---	32.64	27.57
22	31.99	26.20	26.13	26.87	28.84	25.60	24.67	29.83	30.45	---	32.54	28.33
23	32.04	25.59	26.18	26.81	28.83	25.60	24.88	29.98	30.37	---	32.72	28.32
24	32.09	25.17	26.22	27.04	28.95	25.57	25.13	30.13	29.72	---	32.91	28.32
25	32.15	24.92	26.23	27.26	29.09	25.36	25.39	30.31	---	---	32.92	28.39
26	32.17	24.66	26.16	27.41	29.21	25.16	25.72	30.42	---	---	32.94	28.60
27	32.22	24.31	25.96	27.59	29.31	25.02	25.99	30.44	27.15	28.11	32.92	28.86
28	32.18	24.05	25.78	27.72	29.36	24.90	26.14	30.43	---	28.40	32.80	28.99
29	32.19	23.82	25.66	27.82	---	24.94	26.25	30.39	---	28.67	32.38	29.10
30	32.15	23.80	25.53	27.88	---	25.13	26.47	30.38	---	28.90	31.85	29.25
31	32.16	---	25.59	28.03	---	25.14	---	30.36	---	29.19	31.76	---
MEAN	31.81	28.41	25.17	27.13	28.67	25.64	24.52	28.87	30.01	28.19	31.58	29.96
MAX	32.64	32.14	26.23	28.03	29.36	29.35	26.47	30.44	30.56	29.19	32.94	31.95
MIN	31.14	23.80	23.85	25.64	28.17	24.20	23.48	26.67	27.15	25.84	29.45	27.54

WTR YR 1987: HIGHEST 23.48 APRIL 10; LOWEST 32.94 AUGUST 26.

414513077333701. Local number, TI 100.

LOCATION.--Lat 41°45'13", long 77°33'37", Hydrologic Unit 02050205, at State Game Land Number 208.
Owner: U.S. Geological Survey.
AQUIFER.--Sandstone of Lock Haven Formation of Late Devonian age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in., depth 77 ft, cased to 67 ft, open hole.
INSTRUMENTATION.--Continuous strip-chart recorder.
DATUM.--Elevation of land-surface is 1,310 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 4.0 ft above land-surface datum.
REMARKS.--Water-quality records for 1973-75 are available in files of district office.
PERIOD OF RECORD.--July 1972 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 31.02 ft below land-surface datum, Mar. 27, 1978; lowest, 34.93 ft below land-surface datum, Feb. 12, 1984.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	33.13	32.26	32.04	32.33	32.08	32.13	32.27	32.35	32.48	32.42	---
2	---	32.96	32.24	31.87	32.26	32.28	31.86	31.91	32.27	32.61	32.42	---
3	---	32.99	31.83	31.93	32.39	32.30	32.27	32.11	32.23	32.26	32.42	---
4	---	33.00	32.02	32.08	32.58	32.28	31.72	32.21	32.35	32.28	32.46	---
5	---	33.09	32.20	32.22	32.70	32.39	31.75	32.05	32.39	32.58	32.55	---
6	---	33.13	32.08	---	32.50	32.27	31.63	31.83	32.38	32.61	32.58	---
7	---	33.07	31.92	---	32.39	31.95	31.51	31.93	32.26	32.52	32.63	---
8	---	32.98	32.06	---	32.31	31.76	31.53	31.96	32.29	32.35	32.63	---
9	---	32.99	31.96	---	32.61	31.83	31.62	31.79	32.35	32.35	32.62	---
10	---	32.75	31.97	---	32.61	31.85	31.58	31.83	32.41	32.40	32.65	---
11	---	32.78	32.03	---	32.58	31.81	31.49	32.16	32.38	32.31	32.76	---
12	---	32.95	31.86	---	32.55	31.80	31.65	32.13	32.33	32.39	32.81	---
13	---	32.86	32.17	---	32.57	31.74	31.65	32.20	32.26	32.29	32.76	---
14	---	32.58	32.17	---	32.53	31.62	31.84	32.14	32.28	32.18	32.77	---
15	---	32.60	32.07	---	32.82	31.77	31.68	31.99	32.40	32.29	32.76	---
16	---	32.64	32.13	---	32.70	31.84	31.54	32.09	32.36	32.40	32.74	---
17	---	32.71	32.12	---	32.61	31.78	31.49	32.02	32.68	32.34	32.89	---
18	---	32.96	31.97	---	32.63	31.71	31.69	32.08	32.57	32.23	33.09	---
19	---	32.80	32.01	---	32.77	31.69	31.83	32.13	32.42	32.30	33.05	---
20	---	32.67	32.11	---	32.70	31.68	31.82	32.30	32.45	32.48	33.23	---
21	---	32.72	32.20	---	32.59	31.75	31.75	32.23	32.43	32.52	33.13	---
22	---	32.62	32.18	---	32.80	31.97	31.85	32.21	32.62	32.48	32.95	32.70
23	---	32.50	32.08	---	32.84	31.96	31.92	32.21	32.37	32.43	33.05	32.86
24	---	32.56	32.05	---	32.85	31.87	31.96	32.19	32.56	32.42	33.13	32.78
25	---	32.23	31.95	---	32.83	32.20	31.77	32.19	32.63	32.48	33.29	32.78
26	---	---	32.01	32.35	32.91	32.41	31.92	32.19	32.56	32.50	33.18	32.74
27	33.02	32.23	32.10	32.34	32.36	32.32	31.72	32.36	32.44	32.49	---	33.70
28	33.30	32.17	32.05	32.29	32.37	32.40	31.88	32.23	32.42	32.94	---	33.06
29	33.19	32.06	31.92	32.43	---	32.35	31.88	32.18	32.45	32.60	---	32.89
30	33.17	32.24	31.96	32.23	---	32.16	32.04	32.38	33.04	32.63	---	32.76
31	32.98	---	32.03	32.32	---	32.12	---	32.31	---	32.43	---	---
MEAN	33.13	32.72	32.06	32.19	32.60	32.00	31.77	32.12	32.43	32.44	32.81	32.92
MAX	33.30	33.13	32.26	32.43	32.91	32.41	32.27	32.38	33.04	32.94	33.29	33.70
MIN	32.98	32.06	31.83	31.87	32.26	31.62	31.49	31.79	32.23	32.18	32.42	32.70

WTR YR 1987: HIGHEST 31.49 APRIL 11, 17; LOWEST 33.70 SEPTEMBER 27.

405928077115501. Local number, UN 51.

LOCATION.--Lat 40°59'28", long 77°11'55", Hydrologic Unit 02050206, at Raymond B. Winter Park.
Owner: U.S. Geological Survey.
AQUIFER.--Shale of Reedsville Formation of Late Ordovician age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in., depth 115 ft, cased to 91 ft, open hole.
INSTRUMENTATION.--Digital recorder with 60-minute recording interval. Pa. Department of Environmental Resources satellite telemeter at station.
DATUM.--Elevation of land-surface is 1,550 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of plywood cover, 3.6 ft above land-surface datum.
PERIOD OF RECORD.--October 1967 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 25.26 ft below land-surface datum, Apr. 10, 1978; lowest, 42.24 ft below land-surface datum, Jan. 29 to Feb. 1, 1981.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40.15	39.44	33.42	36.44	---	39.74	35.47	35.90	38.30	39.44	39.75	40.20
2	40.19	39.40	32.90	36.30	---	39.76	35.06	36.08	38.31	39.45	39.77	40.24
3	40.18	39.40	32.46	36.34	---	39.77	34.69	36.30	38.32	39.43	39.79	40.25
4	40.14	39.39	32.38	36.35	---	39.77	34.20	36.45	38.36	39.43	39.81	40.26
5	40.15	39.39	32.30	36.36	---	39.77	33.72	36.57	38.38	39.43	39.84	40.27
6	40.08	39.39	32.21	36.33	---	39.76	33.22	36.71	38.43	39.44	39.87	40.28
7	40.06	39.39	32.04	36.47	---	39.77	32.55	36.85	38.45	39.45	39.90	40.29
8	40.02	39.36	31.99	36.55	---	39.74	31.99	37.01	38.49	39.46	39.91	40.30
9	40.03	39.29	32.05	36.65	---	39.66	31.57	37.12	38.55	39.46	39.92	40.31
10	40.03	39.25	32.40	36.70	---	39.62	31.37	37.23	38.62	39.45	39.95	40.32
11	40.02	39.16	32.59	36.83	---	39.56	31.46	37.31	38.63	39.48	39.96	40.33
12	39.98	39.12	32.94	37.02	---	39.47	31.64	37.44	38.68	39.48	39.97	40.33
13	39.94	39.05	33.39	37.13	---	39.38	32.06	37.51	38.72	39.48	40.00	40.28
14	39.92	38.97	33.62	37.23	39.24	39.24	32.35	37.56	38.74	39.50	40.03	40.12
15	39.90	38.82	33.93	37.37	39.30	39.04	32.70	37.65	38.80	39.51	40.05	40.02
16	39.84	38.66	34.19	37.51	39.30	38.82	33.05	37.70	38.84	39.53	40.07	39.95
17	39.82	38.50	34.43	37.59	39.35	38.57	33.46	37.74	38.90	39.54	40.10	39.87
18	39.79	38.33	34.60	37.66	39.41	38.36	33.81	37.80	38.94	39.54	40.12	39.74
19	39.76	38.15	34.89	---	39.45	38.15	34.10	37.86	38.99	39.54	40.15	39.54
20	39.71	37.95	35.13	---	39.48	37.97	34.32	37.89	39.02	39.56	40.18	39.19
21	39.66	37.69	35.36	---	39.49	37.80	34.48	37.91	39.06	39.58	40.19	38.72
22	39.63	37.56	35.55	---	39.49	37.66	34.64	37.94	39.08	39.59	40.22	38.12
23	39.63	37.39	35.72	---	39.65	37.54	34.74	37.97	39.14	39.60	40.23	37.44
24	39.61	37.20	35.84	---	39.69	37.43	34.87	38.05	39.16	39.62	40.26	36.59
25	39.59	---	36.02	---	39.73	37.32	34.99	38.10	39.18	39.64	40.29	35.98
26	39.54	---	36.16	---	39.75	37.24	35.10	38.12	39.22	39.65	40.30	35.55
27	39.50	---	36.27	---	39.77	37.16	35.23	38.15	39.27	39.68	40.29	35.31
28	39.50	36.08	36.36	---	39.77	36.94	35.36	38.19	39.32	39.68	40.29	35.18
29	39.47	35.19	36.39	---	---	36.68	35.48	38.22	39.37	39.71	40.26	35.18
30	39.47	34.20	36.44	---	---	36.24	35.71	38.25	39.41	39.72	40.22	35.24
31	39.47	---	36.44	---	---	35.77	---	38.27	---	39.74	40.19	---
MEAN	39.83	38.36	34.21	36.82	39.52	38.51	33.78	37.48	38.82	39.54	40.06	38.85
MAX	40.19	39.44	36.44	37.66	39.77	39.77	35.71	38.27	39.41	39.74	40.30	40.33
MIN	39.47	34.20	31.99	36.30	39.24	35.77	31.37	35.90	38.30	39.43	39.75	35.18

WTR YR 1987: HIGHEST 31.37 APRIL 10; LOWEST 40.33 SEPTEMBER 11, 12.

400320076451501. Local number, YO 180.

LOCATION.--Lat 40°03'20", long 76°45'15", Hydrologic Unit 02050306, near Zions View.
Owner: New York Wire Cloth Company.
AQUIFER.--Shale of New Oxford Formation of Late Triassic age.
WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 in., depth 490 ft, casing information not available.
INSTRUMENTATION.--Continuous strip-chart recorder.
DATUM.--Elevation of land-surface is 360 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of casing at land-surface datum.
PERIOD OF RECORD.--March 1962 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 15.84 ft below land-surface datum, May 7, 1987; lowest, 37.55 ft below land-surface datum, Nov. 3, 4, 1963.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.17	23.87	18.96	---	---	16.72	18.59	16.10	---	21.00	22.22	23.27
2	23.16	23.80	18.74	---	---	16.35	18.53	16.10	---	20.86	22.29	23.30
3	23.16	23.82	18.24	---	---	16.32	18.62	16.15	---	20.77	22.34	23.36
4	22.97	23.80	18.20	---	---	16.37	18.21	16.19	---	20.70	22.44	23.45
5	22.91	23.92	18.19	---	---	16.31	18.13	16.09	---	20.78	22.57	23.44
6	22.99	23.74	18.19	---	---	16.20	17.87	15.88	---	20.86	22.66	23.38
7	23.09	23.76	18.04	---	---	16.01	17.54	15.84	---	20.87	22.64	23.29
8	23.06	23.47	17.85	---	---	15.86	17.36	15.90	---	20.91	22.52	23.12
9	22.98	23.08	17.79	---	---	15.95	17.26	15.99	---	20.92	22.43	22.92
10	23.13	23.02	17.64	---	---	16.19	17.18	16.00	---	20.92	22.39	22.94
11	23.21	22.77	17.61	---	---	16.22	17.10	16.16	---	20.98	22.44	22.84
12	23.19	22.40	17.52	---	---	16.17	17.05	16.22	---	20.95	22.42	22.78
13	23.16	22.16	17.78	---	---	16.18	17.11	16.54	---	20.80	22.48	22.57
14	23.14	22.05	17.59	---	---	16.25	17.15	16.60	---	20.64	22.51	22.38
15	23.23	21.75	17.58	---	---	16.37	17.01	16.52	---	20.73	22.53	22.26
16	23.21	21.41	17.56	---	---	16.44	16.87	16.75	---	20.76	22.56	22.08
17	23.29	21.29	17.53	---	---	16.52	16.77	16.79	---	20.85	22.74	21.91
18	23.41	21.22	17.15	---	---	16.62	16.86	16.93	---	20.87	22.74	21.75
19	23.43	21.06	17.15	---	---	16.65	16.95	17.16	---	20.89	22.89	21.64
20	23.38	20.98	17.18	---	---	16.79	16.99	17.09	---	20.99	23.03	21.39
21	23.39	20.35	17.20	---	---	16.98	16.97	17.02	---	21.08	23.17	21.13
22	23.46	20.22	---	15.94	---	17.27	17.12	16.94	---	21.22	23.10	20.88
23	23.51	20.09	---	16.19	---	17.46	17.13	16.83	---	21.35	23.20	20.61
24	23.67	19.68	---	16.33	---	17.65	17.13	16.74	20.31	21.50	23.28	20.41
25	23.75	19.69	---	16.33	17.31	17.78	16.99	16.74	20.46	21.60	23.28	20.36
26	23.71	19.49	---	---	17.30	17.97	16.77	15.99	20.54	21.52	23.26	20.31
27	23.68	19.20	---	---	17.21	18.11	16.55	---	20.58	---	23.17	20.30
28	23.74	19.08	---	---	17.14	18.30	16.26	---	20.80	21.89	23.17	20.30
29	23.75	18.97	---	---	---	18.44	16.11	---	20.95	22.03	23.33	20.18
30	23.81	19.02	---	---	---	18.44	16.08	---	21.00	22.08	23.35	19.96
31	23.87	---	---	---	---	18.46	---	---	---	22.16	23.32	---
MEAN	23.34	21.64	17.79	16.20	17.24	16.88	17.21	16.43	20.66	21.12	22.79	21.95
MAX	23.87	23.92	18.96	16.33	17.31	18.46	18.62	17.16	21.00	22.16	23.35	23.45
MIN	22.91	18.97	17.15	15.94	17.14	15.86	16.08	15.84	20.31	20.64	22.22	19.96

WTR YR 1987: HIGHEST 15.84 MAY 7; LOWEST 23.92 NOVEMBER 5.

ANALYSES OF GROUND-WATER SAMPLES COLLECTED AT MISCELLANEOUS SITES

Ground-water miscellaneous sites are well or spring sites where limited water-quality data are collected on a random basis for use in hydrologic studies.

REMARKS.--All samples were collected at the well head or residential spigot prior to any treatment in a user distribution systems. Wells were pumped to waste until constant pH, temperature, and specific conductance were obtained before sample collection.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

LOCAL IDENTIFIER	STATION NUMBER	GEOLOGIC UNIT	DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DEPTH OF WELL, TOTAL (FEET)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)
				ADAMS COUNTY					
591	395025077135501	231GBRG	10-15-86	0920	--	--	505	455	7.60
593	395046077142701	231GBRG	10-15-86	1040	54.00	295.00	530	790	7.40
593	395046077142701	231GBRG	06-03-87	1110	--	295.00	530	820	7.20
594	395058077145501	231GBRG	10-06-86	1345	38.50	200.00	570	825	7.30
596	395038077151201	231GBRG	06-03-87	1450	--	--	580	580	7.70
596	395038077151201	231GBRG	10-16-86	0900	--	--	580	560	7.30
596	395038077151201	231GBRG	10-06-86	1245	47.00	--	580	570	7.00
596	395038077151201	231GBRG	06-02-87	1450	--	--	580	580	7.70
598	394908077143901	231GBRG	10-08-86	1015	50.00	--	550	385	7.70
598	394908077143901	231GBRG	07-01-87	1030	--	--	550	370	8.10
598	394908077143901	231GBRG	07-13-87	0930	--	--	550	--	--
601	394806077150901	231GBRG	10-07-86	1130	56.00	89.00	560	720	7.20
601	394806077150901	231GBRG	10-07-86	1130	56.00	89.00	560	720	7.20
601	394806077150901	231GBRG	06-29-87	0910	--	89.00	560	780	7.80
608	394825077133401	231DIBS	06-02-87	1030	--	--	510	270	7.60
608	394825077133401	231DIBS	10-16-86	1200	--	--	510	280	7.20
609	394748077145701	231DIBS	10-15-86	1500	--	--	540	415	7.30
612	394730077142801	231DIBS	06-01-87	0845	--	57.00	500	250	7.30
612	394730077142801	231DIBS	10-08-86	0900	--	57.00	500	255	7.60
618	395050077135201	231GBRG	06-03-87	0845	--	60.74	505	570	7.30
618	395050077135201	231GBRG	10-07-86	0900	36.00	60.74	505	550	7.30
620	394722077155301	231GBRG	11-17-86	1330	--	135.00	530	230	7.50
620	394722077155301	231GBRG	10-15-86	1200	--	135.00	530	215	6.70
620	394722077155301	231GBRG	06-29-87	1010	--	135.00	530	220	7.60
623	394935077134501	231GBRG	10-16-86	1100	--	--	525	410	7.20
625	394727077145001	231DIBS	06-01-87	1000	--	--	490	370	7.20
625	394727077145001	231DIBS	10-15-86	1400	--	--	490	380	6.90
625	394727077145001	231DIBS	06-08-87	1345	--	--	490	370	7.20
631	395112077142801	231GBRG	10-15-86	1530	--	--	560	540	7.40
631	395112077142801	231GBRG	06-02-87	1415	--	--	560	560	7.70
636	395027077142701	231GBRG	10-16-86	1000	--	65.00	530	615	7.10
636	395027077142701	231GBRG	06-03-87	1325	--	65.00	530	500	7.70
638	394854077150001	231GBRG	06-29-87	--	--	62.40	560	345	8.00
638	394854077150001	231GBRG	10-08-86	1345	--	62.40	560	320	7.40
638	394854077150001	231GBRG	06-29-87	1240	--	62.40	560	345	8.00
639	394838077151601	231GBRG	06-29-87	1115	--	63.20	521	410	7.90
639	394838077151601	231GBRG	10-06-86	0945	49.00	63.20	521	410	7.00
643	394851077134801	231DIBS	10-07-86	1030	21.00	--	545	370	7.10
643	394851077134801	231DIBS	06-01-87	1145	--	--	545	390	7.80
647	394723077150501	231GBRG	11-17-86	1130	--	--	530	750	7.60
647	394723077150501	231GBRG	06-02-87	0910	--	--	530	800	7.80
630	395040077132901	231GBRG	05-28-87	1430	--	174.50	495	500	7.50
273	395051077135701	231GBRG	06-03-87	1030	--	126.00	505	620	7.60
632	395017077150701	231GBRG	07-01-87	1340	--	--	565	385	7.90
592	395051077134601	231GBRG	06-03-87	1200	--	--	500	880	7.20
592	395051077134601	231GBRG	06-03-87	--	--	--	500	880	7.20
599	394840077142501	231GBRG	07-02-87	1015	--	--	595	610	7.70
649	394835077135001	231DIBS	06-02-87	1330	--	--	550	510	7.80

GEOLOGIC UNIT (AQUIFER)
231GBRG - Gettysburg Formation.
231Dibs - Diabase.

ANALYSIS OF GROUND-WATER SAMPLES COLLECTED AT MISCELLANEOUS SITES--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

LOCAL IDENTIFIER	TEMPERATURE WATER (DEG C)	HARDNESS TOTAL (MG/L AS CACO3)	HARDNESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)
				ADAMS COUNTY--Continued						
591	12.0	--	--	--	--	--	--	--	--	--
593	12.0	380	120	110	26	19	10	0.4	0.50	262
593	13.0	--	--	--	--	--	--	--	--	--
594	12.0	--	--	--	--	--	--	--	--	--
596	13.0	--	--	--	--	--	--	--	--	--
596	12.0	--	--	--	--	--	--	--	--	--
596	12.0	--	--	--	--	--	--	--	--	--
596	13.0	--	--	--	--	--	--	--	--	--
598	12.0	170	5	43	15	14	15	0.5	2.0	164
598	12.5	--	--	--	--	--	--	--	--	--
598	--	--	--	--	--	--	--	--	--	--
601	12.5	320	110	81	29	25	14	0.6	3.0	215
601	12.5	--	--	--	--	--	--	--	--	--
601	13.0	--	--	--	--	--	--	--	--	--
608	13.0	--	--	--	--	--	--	--	--	--
608	12.0	140	41	31	15	5.0	7	0.2	0.30	98
609	12.0	180	24	52	13	14	14	0.5	0.90	160
612	11.0	--	--	--	--	--	--	--	--	--
612	10.0	120	28	26	14	3.8	6	0.2	0.50	95
618	13.0	--	--	--	--	--	--	--	--	--
618	11.5	260	63	49	33	25	17	0.7	1.0	196
620	12.0	--	--	--	--	--	--	--	--	--
620	11.0	--	--	--	--	--	--	--	--	--
620	13.0	--	--	--	--	--	--	--	--	--
623	13.0	--	--	--	--	--	--	--	--	--
625	12.0	--	--	--	--	--	--	--	--	--
625	13.0	--	--	--	--	--	--	--	--	--
625	12.0	--	--	--	--	--	--	--	--	--
631	13.0	290	34	69	29	9.8	7	0.3	0.90	258
631	13.0	--	--	--	--	--	--	--	--	--
636	12.0	--	--	--	--	--	--	--	--	--
636	12.0	--	--	--	--	--	--	--	--	--
638	13.0	--	--	--	--	--	--	--	--	--
638	12.5	--	--	--	--	--	--	--	--	--
638	13.0	--	--	--	--	--	--	--	--	--
639	12.5	--	--	--	--	--	--	--	--	--
639	11.5	--	--	--	--	--	--	--	--	--
643	12.5	180	51	46	17	6.7	7	0.2	1.0	134
643	11.0	--	--	--	--	--	--	--	--	--
647	13.0	330	110	83	31	18	10	0.4	1.8	229
647	14.0	--	--	--	--	--	--	--	--	--
630	12.0	--	--	--	--	--	--	--	--	--
273	15.0	--	--	--	--	--	--	--	--	--
632	20.0	--	--	--	--	--	--	--	--	--
592	14.0	--	--	--	--	--	--	--	--	--
592	14.0	--	--	--	--	--	--	--	--	--
599	13.0	--	--	--	--	--	--	--	--	--
649	13.0	--	--	--	--	--	--	--	--	--

ANALYSIS OF GROUND-WATER SAMPLES COLLECTED AT MISCELLANEOUS SITES--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

LOCAL IDENT-I-FIER	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)
					ADAMS COUNTY--Continued					
591	--	--	--	--	--	--	--	<0.010	2.90	<0.010
593	33	86	<0.10	39	480	0.65	--	<0.010	2.00	<0.010
593	--	--	--	--	--	--	--	<0.010	1.90	0.030
594	--	--	--	--	--	--	--	<0.010	0.260	0.130
596	--	--	--	--	--	--	--	--	--	--
596	--	--	--	--	--	--	--	--	--	--
596	--	--	--	--	--	--	3.18	0.020	3.20	0.030
596	--	--	--	--	--	--	--	<0.010	4.30	<0.010
598	17	8.6	0.30	28	241	0.33	--	<0.010	3.30	0.030
598	--	--	--	--	--	--	--	<0.010	2.90	<0.010
598	--	--	--	--	--	--	--	--	--	--
601	31	79	<0.10	38	440	0.60	--	<0.010	5.50	0.020
601	--	--	--	--	--	--	--	--	--	--
601	--	--	--	--	--	--	--	<0.010	2.70	0.030
608	--	--	--	--	--	--	--	<0.010	1.50	<0.010
608	23	11	<0.10	56	209	0.28	--	<0.010	2.00	<0.010
609	19	23	<0.10	26	253	0.34	--	<0.010	2.10	<0.010
612	--	--	--	--	--	--	--	<0.010	6.60	<0.010
612	10	2.9	<0.10	53	195	0.27	--	<0.010	6.30	0.030
618	--	--	--	--	--	--	--	--	--	--
618	60	30	<0.10	20	340	0.46	0.900	0.020	0.920	0.050
620	--	--	--	--	--	--	--	--	--	--
620	--	--	--	--	--	--	--	<0.010	6.80	<0.010
620	--	--	--	--	--	--	--	<0.010	5.50	<0.010
623	--	--	--	--	--	--	--	<0.010	2.60	<0.010
625	--	--	--	--	--	--	--	<0.010	9.00	<0.010
625	--	--	--	--	--	--	--	<0.010	12.0	<0.010
625	--	--	--	--	--	--	--	--	--	--
631	40	6.1	<0.10	34	346	0.47	--	<0.010	0.610	<0.010
631	--	--	--	--	--	--	--	<0.010	0.660	<0.010
636	--	--	--	--	--	--	--	<0.010	<0.100	0.660
636	--	--	--	--	--	--	--	<0.010	<0.100	1.20
638	--	--	--	--	--	--	--	--	--	--
638	--	--	--	--	--	--	--	<0.010	0.930	0.100
638	--	--	--	--	--	--	--	<0.010	0.540	<0.010
639	--	--	--	--	--	--	8.19	0.010	8.20	0.010
639	--	--	--	--	--	--	--	<0.010	0.770	0.090
643	32	14	<0.10	46	251	0.34	--	<0.010	1.70	0.040
643	--	--	--	--	--	--	--	<0.010	2.40	<0.010
647	58	66	0.10	29	437	0.59	--	--	2.90	--
647	--	--	--	--	--	--	--	<0.010	2.70	0.010
630	--	--	--	--	--	--	--	<0.010	2.00	0.030
273	--	--	--	--	--	--	--	<0.010	3.50	<0.010
632	--	--	--	--	--	--	1.48	0.020	1.50	0.030
592	--	--	--	--	--	--	--	--	--	--
592	--	--	--	--	--	--	--	<0.010	1.20	0.030
599	--	--	--	--	--	--	--	<0.010	2.00	<0.010
649	--	--	--	--	--	--	2.08	0.020	2.10	0.160

ANALYSIS OF GROUND-WATER SAMPLES COLLECTED AT MISCELLANEOUS SITES--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

LOCAL IDENTIFIER	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)
				ADAMS COUNTY--Continued						
591	--	0.20	--	7	71	<0.5	<1	<10	<10	100
593	--	0.30	--	--	--	--	--	--	--	99
593	0.97	1.0	--	--	--	--	--	--	--	--
594	--	<0.20	--	1	15	<0.5	<1	<10	<10	<8
596	--	--	--	--	--	--	--	--	--	--
596	--	--	--	--	--	--	--	--	--	--
596	0.67	0.70	--	--	--	--	--	--	--	--
596	--	1.0	--	--	--	--	--	--	--	--
598	0.27	0.30	--	--	<2	--	--	--	--	63
598	--	0.50	--	--	--	--	--	--	--	--
598	--	--	--	--	--	--	--	--	--	--
601	0.68	0.70	--	--	--	--	--	--	--	240
601	--	--	--	--	--	--	--	--	--	--
601	0.47	0.50	--	--	--	--	--	--	--	--
608	--	0.60	--	--	--	--	--	--	--	--
608	--	0.50	--	--	<2	--	--	--	--	51
609	--	0.40	--	--	--	--	--	--	--	15
612	--	1.2	--	--	--	--	--	--	--	--
612	1.7	1.7	--	--	<2	--	--	--	--	4
618	--	--	--	--	--	--	--	--	--	--
618	0.55	0.60	--	14	300	<0.5	1	<10	<10	15
620	--	--	--	--	--	--	--	--	--	--
620	--	1.0	--	--	--	--	--	--	--	--
620	--	1.1	--	--	--	--	--	--	--	--
623	--	0.50	--	--	--	--	--	--	--	--
625	--	1.1	--	--	--	--	--	--	--	--
625	--	0.50	--	--	--	--	--	--	--	--
625	--	--	--	--	--	--	--	--	--	--
631	--	0.30	--	--	--	--	--	--	--	84
631	--	0.20	--	--	--	--	--	--	--	--
636	14	15	--	--	--	--	--	--	--	--
636	0.70	1.9	--	--	--	--	--	--	--	--
638	--	--	--	--	--	--	--	--	--	--
638	0.70	0.80	--	--	--	--	--	--	--	--
638	--	0.80	--	--	--	--	--	--	--	--
639	0.89	0.90	--	--	--	--	--	--	--	--
639	0.41	0.50	--	--	--	--	--	--	--	--
643	0.46	0.50	--	--	<2	--	--	--	--	820
643	--	0.70	--	--	--	--	--	--	--	--
647	--	--	0.020	--	--	--	--	--	--	17
647	0.59	0.60	--	--	--	--	--	--	--	--
630	0.67	0.70	--	--	--	--	--	--	--	--
273	--	0.60	--	--	--	--	--	--	--	--
632	0.57	0.60	--	--	--	--	--	--	--	--
592	--	--	--	--	--	--	--	--	--	--
592	--	<0.20	--	--	--	--	--	--	--	--
599	--	0.30	--	--	--	--	--	--	--	--
649	0.64	0.80	--	--	--	--	--	--	--	--

ANALYSIS OF GROUND-WATER SAMPLES COLLECTED AT MISCELLANEOUS SITES--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

LOCAL IDENT-I-FIER	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	BENZENE TOTAL (UG/L)	BROMO-FORM TOTAL (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)
				ADAMS COUNTY--Continued						
591	<10	<1	<0.1	<100	<1	17	--	<0.20	<0.20	<0.20
593	--	6	--	--	--	--	--	--	--	--
593	--	--	--	--	--	--	--	--	--	--
594	<10	2	<0.1	<100	<1	26	--	--	--	--
596	--	--	--	--	--	--	--	--	--	--
596	--	--	--	--	--	--	--	--	--	--
596	--	--	--	--	--	--	--	--	--	--
596	--	--	--	--	--	--	--	--	--	--
598	--	<1	--	--	--	--	--	--	--	--
598	--	--	--	--	--	--	--	--	--	--
598	--	--	--	--	--	--	--	<0.20	<0.20	<0.20
601	--	590	--	--	--	--	--	--	--	--
601	--	--	--	--	--	--	--	--	--	--
601	--	--	--	--	--	--	--	--	--	--
608	--	--	--	--	--	--	--	--	--	--
608	--	5	--	--	--	--	--	<0.20	<0.20	<0.20
609	--	<1	--	--	--	--	--	--	--	--
612	--	--	--	--	--	--	--	--	--	--
612	--	<1	--	--	--	--	--	--	--	--
618	--	--	--	--	--	--	--	--	--	--
618	<10	6	<0.1	<100	<1	32	--	<0.20	<0.20	<0.20
620	--	--	--	--	--	--	--	--	--	--
620	--	--	--	--	--	--	--	--	--	--
620	--	--	--	--	--	--	--	--	--	--
623	--	--	--	--	--	--	--	<0.20	<0.20	<0.20
625	--	--	--	--	--	--	2.6	--	--	--
625	--	--	--	--	--	--	--	--	--	--
625	--	--	--	--	--	--	--	--	--	--
631	--	10	--	--	--	--	--	<0.20	<0.20	<0.20
631	--	--	--	--	--	--	--	--	--	--
636	--	--	--	--	--	--	--	--	--	--
636	--	--	--	--	--	--	--	--	--	--
638	--	--	--	--	--	--	--	--	--	--
638	--	--	--	--	--	--	--	--	--	--
638	--	--	--	--	--	--	--	--	--	--
639	--	--	--	--	--	--	--	--	--	--
639	--	--	--	--	--	--	--	--	--	--
643	--	9	--	--	--	--	--	--	--	--
643	--	--	--	--	--	--	--	--	--	--
647	--	1	--	--	--	--	--	--	--	--
647	--	--	--	--	--	--	--	--	--	--
630	--	--	--	--	--	--	--	--	--	--
273	--	--	--	--	--	--	--	--	--	--
632	--	--	--	--	--	--	--	--	--	--
592	--	--	--	--	--	--	--	--	--	--
592	--	--	--	--	--	--	--	--	--	--
599	--	--	--	--	--	--	--	--	--	--
649	--	--	--	--	--	--	--	--	--	--

ANALYSIS OF GROUND-WATER SAMPLES COLLECTED AT MISCELLANEOUS SITES--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

LOCAL IDENTIFIER	CHLOROBENZENE TOTAL (UG/L)	CHLORODIBROMOMETHANE TOTAL (UG/L)	CHLOROETHANE TOTAL (UG/L)	CHLOROFORM TOTAL (UG/L)	DICHLOROBROMOMETHANE TOTAL (UG/L)	DICHLORODIFLUOROMETHANE TOTAL (UG/L)	ETHYLBENZENE TOTAL (UG/L)	METHYLBROMIDE TOTAL (UG/L)	METHYLCHLORIDE TOTAL (UG/L)	METHYLENE CHLORIDE TOTAL (UG/L)
				ADAMS COUNTY--Continued						
591	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
593	--	--	--	--	--	--	--	--	--	--
593	--	--	--	--	--	--	--	--	--	--
594	--	--	--	--	--	--	--	--	--	--
596	--	--	--	--	--	--	--	--	--	--
596	--	--	--	--	--	--	--	--	--	--
596	--	--	--	--	--	--	--	--	--	--
596	--	--	--	--	--	--	--	--	--	--
598	--	--	--	--	--	--	--	--	--	--
598	--	--	--	--	--	--	--	--	--	--
598	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
601	--	--	--	--	--	--	--	--	--	--
601	--	--	--	--	--	--	--	--	--	--
601	--	--	--	--	--	--	--	--	--	--
608	--	--	--	--	--	--	--	--	--	--
608	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
609	--	--	--	--	--	--	--	--	--	--
612	--	--	--	--	--	--	--	--	--	--
612	--	--	--	--	--	--	--	--	--	--
618	--	--	--	--	--	--	--	--	--	--
618	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50
620	--	--	--	--	--	--	--	--	--	--
620	--	--	--	--	--	--	--	--	--	--
620	--	--	--	--	--	--	--	--	--	--
623	<0.20	<0.20	<0.20	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
625	--	--	--	--	--	--	--	--	--	--
625	--	--	--	--	--	--	--	--	--	--
625	--	--	--	--	--	--	--	--	--	--
631	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
631	--	--	--	--	--	--	--	--	--	--
636	--	--	--	--	--	--	--	--	--	--
636	--	--	--	--	--	--	--	--	--	--
638	--	--	--	--	--	--	--	--	--	--
638	--	--	--	--	--	--	--	--	--	--
638	--	--	--	--	--	--	--	--	--	--
639	--	--	--	--	--	--	--	--	--	--
639	--	--	--	--	--	--	--	--	--	--
643	--	--	--	--	--	--	--	--	--	--
643	--	--	--	--	--	--	--	--	--	--
647	--	--	--	--	--	--	--	--	--	--
647	--	--	--	--	--	--	--	--	--	--
630	--	--	--	--	--	--	--	--	--	--
273	--	--	--	--	--	--	--	--	--	--
632	--	--	--	--	--	--	--	--	--	--
592	--	--	--	--	--	--	--	--	--	--
592	--	--	--	--	--	--	--	--	--	--
599	--	--	--	--	--	--	--	--	--	--
649	--	--	--	--	--	--	--	--	--	--

ANALYSIS OF GROUND-WATER SAMPLES COLLECTED AT MISCELLANEOUS SITES--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

LOCAL IDENT-I-FIER	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)	PCB, TOTAL (UG/L)	STYRENE TOTAL (UG/L)	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	XYLENE TOTAL WATER WHOLE TOT REC (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)
					ADAMS COUNTY--Continued					
591	--	--	<0.2	<0.20	<0.20	0.5	<0.20	<0.20	--	<0.20
593	--	--	--	--	--	--	--	--	--	--
593	<0.10	<0.1	--	--	--	--	--	--	--	--
594	--	--	--	--	--	--	--	--	--	--
596	--	--	--	--	--	--	--	--	--	--
596	--	--	--	--	--	--	--	--	--	--
596	--	--	--	--	--	--	--	--	--	--
596	<0.10	<0.1	--	--	--	--	--	--	--	--
598	<0.10	<0.1	--	--	--	--	--	--	--	--
598	<0.10	<0.1	--	--	--	--	--	--	--	--
598	--	--	<0.2	<0.20	<0.20	<0.2	<0.20	<0.20	<0.2	<0.20
601	--	--	--	--	--	--	--	--	--	--
601	--	--	--	--	--	--	--	--	--	--
601	<0.10	<0.1	--	--	--	--	--	--	--	--
608	--	--	--	--	--	--	--	--	--	--
608	--	--	<0.2	<0.20	<0.20	<0.2	<0.20	<0.20	<0.2	<0.20
609	--	--	--	--	--	--	--	--	--	--
612	<0.10	<0.1	--	--	--	--	--	--	--	--
612	--	--	--	--	--	--	--	--	--	--
618	--	--	--	--	--	--	--	--	--	--
618	--	--	<0.2	<0.20	<0.20	<0.2	<0.20	<0.20	--	<0.20
620	--	--	--	--	--	--	--	--	--	--
620	--	--	--	--	--	--	--	--	--	--
620	--	--	--	--	--	--	--	--	--	--
623	--	--	<0.2	<0.20	<0.20	<0.2	<0.20	<0.20	--	<0.20
625	--	--	--	--	--	--	--	--	--	--
625	<0.10	<0.1	--	--	--	--	--	--	--	--
625	--	--	--	--	--	--	--	--	--	--
631	--	--	<0.2	<0.20	<0.20	<0.2	<0.20	<0.20	--	<0.20
631	--	--	--	--	--	--	--	--	--	--
636	--	--	--	--	--	--	--	--	--	--
636	--	--	--	--	--	--	--	--	--	--
638	--	--	--	--	--	--	--	--	--	--
638	--	--	--	--	--	--	--	--	--	--
638	--	--	--	--	--	--	--	--	--	--
639	--	--	--	--	--	--	--	--	--	--
639	--	--	--	--	--	--	--	--	--	--
643	--	--	--	--	--	--	--	--	--	--
643	--	--	--	--	--	--	--	--	--	--
647	--	--	--	--	--	--	--	--	--	--
647	--	--	--	--	--	--	--	--	--	--
630	--	--	--	--	--	--	--	--	--	--
273	--	--	--	--	--	--	--	--	--	--
632	--	--	--	--	--	--	--	--	--	--
592	--	--	--	--	--	--	--	--	--	--
592	--	--	--	--	--	--	--	--	--	--
599	<0.10	<0.1	--	--	--	--	--	--	--	--
649	<0.10	<0.1	--	--	--	--	--	--	--	--

ANALYSIS OF GROUND-WATER SAMPLES COLLECTED AT MISCELLANEOUS SITES--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

LOCAL IDENTIFIER	1,1-DICHLOROETHANE TOTAL (UG/L)	1,1,1-TRICHLOROETHANE TOTAL (UG/L)	1,1,2-TRICHLOROETHANE TOTAL (UG/L)	1,1,2,2 TETRACHLOROETHANE TOTAL (UG/L)	1,2-DIBROMO ETHYLENE TOTAL (UG/L)	1,2-DICHLOROBENZENE TOTAL (UG/L)	1,3-DICHLOROBENZENE TOTAL (UG/L)	1,4-DICHLOROBENZENE TOTAL (UG/L)	1,2-DICHLOROETHANE TOTAL (UG/L)	1,2-DICHLOROPROPANE TOTAL (UG/L)
					ADAMS COUNTY--Continued					
591	<0.20	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20
593	--	--	--	--	--	--	--	--	--	--
593	--	--	--	--	--	--	--	--	--	--
594	--	--	--	--	--	--	--	--	--	--
596	--	--	--	--	--	--	--	--	--	--
596	--	--	--	--	--	--	--	--	--	--
596	--	--	--	--	--	--	--	--	--	--
596	--	--	--	--	--	--	--	--	--	--
598	--	--	--	--	--	--	--	--	--	--
598	--	--	--	--	--	--	--	--	--	--
598	<0.20	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20
601	--	--	--	--	--	--	--	--	--	--
601	--	--	--	--	--	--	--	--	--	--
601	--	--	--	--	--	--	--	--	--	--
608	--	--	--	--	--	--	--	--	--	--
608	<0.20	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20
609	--	--	--	--	--	--	--	--	--	--
612	--	--	--	--	--	--	--	--	--	--
612	--	--	--	--	--	--	--	--	--	--
618	--	--	--	--	--	--	--	--	--	--
618	<0.20	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20
620	--	--	--	--	--	--	--	--	--	--
620	--	--	--	--	--	--	--	--	--	--
620	--	--	--	--	--	--	--	--	--	--
623	<0.20	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20
625	--	--	--	--	--	--	--	--	--	--
625	--	--	--	--	--	--	--	--	--	--
625	--	--	--	--	--	--	--	--	--	--
631	<0.20	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20
631	--	--	--	--	--	--	--	--	--	--
636	--	--	--	--	--	--	--	--	--	--
636	--	--	--	--	--	--	--	--	--	--
638	--	--	--	--	--	--	--	--	--	--
638	--	--	--	--	--	--	--	--	--	--
638	--	--	--	--	--	--	--	--	--	--
639	--	--	--	--	--	--	--	--	--	--
639	--	--	--	--	--	--	--	--	--	--
643	--	--	--	--	--	--	--	--	--	--
643	--	--	--	--	--	--	--	--	--	--
647	--	--	--	--	--	--	--	--	--	--
647	--	--	--	--	--	--	--	--	--	--
630	--	--	--	--	--	--	--	--	--	--
273	--	--	--	--	--	--	--	--	--	--
632	--	--	--	--	--	--	--	--	--	--
592	--	--	--	--	--	--	--	--	--	--
592	--	--	--	--	--	--	--	--	--	--
599	--	--	--	--	--	--	--	--	--	--
649	--	--	--	--	--	--	--	--	--	--

ANALYSIS OF GROUND-WATER SAMPLES COLLECTED AT MISCELLANEOUS SITES--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

LOCAL IDENTIFIER	1,3-DICHLOROPROPENE TOTAL (UG/L)	1,2-TRANSDICHLOROETHENE TOTAL (UG/L)	CIS 1,3-DICHLOROPROPENE TOTAL (UG/L)	TRANS-1,3-DICHLOROPROPENE TOTAL (UG/L)	2-CHLOROETHYLVINYLETHER TOTAL (UG/L)	DICAMBA (MEDIBEN) (BANVEL D) TOTAL (UG/L)	PICLORAM (TORDON) (AMDON) TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)
				ADAMS COUNTY--Continued						
591	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	--	--	--
593	--	--	--	--	--	--	--	--	--	--
593	--	--	--	--	--	<0.01	<0.01	<0.01	<0.01	<0.01
594	--	--	--	--	--	--	--	--	--	--
596	--	--	--	--	--	--	--	--	--	--
596	--	--	--	--	--	<0.01	<0.01	<0.01	<0.01	<0.01
596	--	--	--	--	--	--	--	--	--	--
596	--	--	--	--	--	<0.01	<0.01	<0.01	<0.01	<0.01
598	--	--	--	--	--	--	--	--	--	--
598	--	--	--	--	--	--	--	--	--	--
598	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	--	--	--
601	--	--	--	--	--	--	--	--	--	--
601	--	--	--	--	--	<0.01	<0.01	<0.01	<0.01	<0.01
601	--	--	--	--	--	--	--	--	--	--
608	--	--	--	--	--	--	--	--	--	--
608	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	--	--	--
609	--	--	--	--	--	--	--	--	--	--
612	--	--	--	--	--	<0.01	<0.01	<0.01	<0.01	<0.01
612	--	--	--	--	--	<0.01	<0.01	<0.01	<0.01	<0.01
618	--	--	--	--	--	--	--	--	--	--
618	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	--	--	--
620	--	--	--	--	--	--	--	--	--	--
620	--	--	--	--	--	<0.01	0.01	<0.01	<0.01	<0.01
620	--	--	--	--	--	--	--	--	--	--
623	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	--	--	--
625	--	--	--	--	--	--	--	--	--	--
625	--	--	--	--	--	--	--	--	--	--
625	--	--	--	--	--	<0.01	<0.01	<0.01	<0.01	<0.01
631	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	--	--	--
631	--	--	--	--	--	<0.01	<0.01	<0.01	<0.01	<0.01
636	--	--	--	--	--	--	--	--	--	--
636	--	--	--	--	--	--	--	--	--	--
638	--	--	--	--	--	--	--	--	--	--
638	--	--	--	--	--	--	--	--	--	--
638	--	--	--	--	--	--	--	--	--	--
639	--	--	--	--	--	--	--	--	--	--
639	--	--	--	--	--	--	--	--	--	--
643	--	--	--	--	--	--	--	--	--	--
643	--	--	--	--	--	<0.01	<0.01	<0.01	<0.01	<0.01
647	--	--	--	--	--	--	--	--	--	--
647	--	--	--	--	--	--	--	--	--	--
630	--	--	--	--	--	--	--	--	--	--
273	--	--	--	--	--	--	--	--	--	--
632	--	--	--	--	--	--	--	--	--	--
592	--	--	--	--	--	--	--	--	--	--
592	--	--	--	--	--	--	--	--	--	--
599	--	--	--	--	--	--	--	--	--	--
649	--	--	--	--	--	0.03	<0.01	0.01	0.01	<0.01

ANLYSIS OF GROUND-WATER SAMPLES COLLECTED AT MISCELLANEOUS SITES--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

LOCAL IDENT-I-FIER	2,4,5-T TOTAL (UG/L)	ALA-CHLOR TOTAL RECOVER (UG/L)	AME-TRYNE TOTAL	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)	PRO-PAZINE TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	SIME-TRYNE TOTAL (UG/L)
				ADAMS COUNTY--Continued						
591	--	--	--	--	--	--	--	--	--	--
593	--	--	--	--	--	--	--	--	--	--
593	<0.01	<0.10	<0.10	<0.10	<0.10	<0.1	<0.1	<0.10	<0.10	<0.1
594	--	--	--	--	--	--	--	--	--	--
596	--	--	--	--	--	--	--	--	--	--
596	<0.01	--	<0.10	<0.10	<0.10	<0.1	<0.1	<0.10	<0.10	<0.1
596	--	--	--	--	--	--	--	--	--	--
596	<0.01	<0.10	<0.10	<0.10	<0.10	<0.1	<0.1	<0.10	<0.10	<0.1
598	--	--	<0.10	<0.10	<0.10	<0.1	<0.1	<0.10	<0.10	<0.1
598	--	<0.10	<0.10	<0.10	<0.10	<0.1	<0.1	<0.10	<0.10	<0.1
598	--	--	--	--	--	--	--	--	--	--
601	--	--	--	--	--	--	--	--	--	--
601	<0.01	--	<0.10	0.10	<0.10	<0.1	<0.1	<0.10	<0.10	<0.1
601	--	--	--	--	--	--	--	--	--	--
608	--	--	--	--	--	--	--	--	--	--
608	--	--	<0.10	<0.10	<0.10	<0.1	<0.1	<0.10	<0.10	<0.1
609	--	--	<0.10	<0.10	<0.10	<0.1	<0.1	<0.10	<0.10	<0.1
612	<0.01	--	--	--	--	--	--	--	--	--
612	<0.01	--	<0.10	<0.10	<0.10	<0.1	<0.1	<0.10	<0.10	<0.1
618	--	--	--	--	--	--	--	--	--	--
618	--	--	--	--	--	--	--	--	--	--
620	--	--	--	--	--	--	--	--	--	--
620	<0.01	--	<0.10	<0.10	<0.10	<0.1	<0.1	<0.10	<0.10	<0.1
620	--	<0.10	<0.10	<0.10	<0.10	<0.1	<0.1	<0.10	<0.10	<0.1
623	--	--	--	--	--	--	--	--	--	--
625	--	--	--	--	--	--	--	--	--	--
625	--	--	<0.10	<0.10	<0.10	<0.1	<0.1	<0.10	<0.10	<0.1
625	<0.01	--	--	--	--	--	--	--	--	--
631	--	--	--	--	--	--	--	--	--	--
631	<0.01	<0.10	<0.10	<0.10	<0.10	<0.1	<0.1	<0.10	<0.10	<0.1
636	--	--	--	--	--	--	--	--	--	--
636	--	--	--	--	--	--	--	--	--	--
638	--	--	--	--	--	--	--	--	--	--
638	--	--	--	--	--	--	--	--	--	--
638	--	<0.10	<0.10	<0.10	<0.10	<0.1	<0.1	<0.10	<0.10	<0.1
639	--	<0.10	<0.10	<0.10	<0.10	<0.1	<0.1	<0.10	<0.10	<0.1
639	--	--	--	--	--	--	--	--	--	--
643	--	--	--	--	--	--	--	--	--	--
643	<0.01	--	--	--	--	--	--	--	--	--
647	--	--	--	--	--	--	--	--	--	--
647	--	--	--	--	--	--	--	--	--	--
630	--	--	--	--	--	--	--	--	--	--
273	--	--	--	--	--	--	--	--	--	--
632	--	<0.10	<0.10	<0.10	<0.10	<0.1	<0.1	<0.10	<0.10	<0.1
592	--	--	--	--	--	--	--	--	--	--
592	--	--	--	--	--	--	--	--	--	--
599	--	<0.10	<0.10	<0.10	<0.10	0.2	<0.1	<0.10	<0.10	<0.1
649	<0.01	--	--	--	--	--	--	--	--	--

ANALYSIS OF GROUND-WATER SAMPLES COLLECTED AT MISCELLANEOUS SITES--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

LOCAL IDENTIFIER	ALDICARB TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CARBOFURAN (UG/L)	CHLORDANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DIAZINON, TOTAL (UG/L)	DIELDRIN TOTAL (UG/L)	ENDOSULFAN, TOTAL (UG/L)
				ADAMS COUNTY--Continued						
591	--	--	--	--	--	--	--	--	--	--
593	--	--	--	--	--	--	--	--	--	--
593	--	<0.010	--	<0.1	<0.010	<0.010	<0.010	0.01	<0.010	<0.010
594	--	--	--	--	--	--	--	--	--	--
596	--	--	--	--	--	--	--	--	--	--
596	--	--	--	--	--	--	--	--	--	--
596	--	--	--	--	--	--	--	--	--	--
596	--	<0.010	--	<0.1	<0.010	<0.010	<0.010	<0.01	<0.010	<0.010
598	--	<0.010	--	<0.1	<0.010	<0.010	<0.010	<0.01	<0.010	<0.010
598	--	<0.010	--	<0.1	<0.010	<0.010	<0.010	<0.01	<0.010	<0.010
598	--	--	--	--	--	--	--	--	--	--
601	--	--	--	--	--	--	--	--	--	--
601	--	--	--	--	--	--	--	--	--	--
601	--	<0.010	--	<0.1	<0.010	<0.010	<0.010	<0.01	<0.010	<0.010
608	--	--	--	--	--	--	--	--	--	--
608	--	--	--	--	--	--	--	--	--	--
609	--	--	--	--	--	--	--	--	--	--
612	--	<0.010	--	<0.1	<0.010	<0.010	<0.010	<0.01	<0.010	<0.010
612	--	--	--	--	--	--	--	--	--	--
618	--	--	--	--	--	--	--	--	--	--
618	--	--	--	--	--	--	--	--	--	--
620	--	--	--	--	--	--	--	--	--	--
620	--	--	--	--	--	--	--	--	--	--
620	--	--	--	--	--	--	--	--	--	--
623	--	--	--	--	--	--	--	--	--	--
625	--	--	--	--	--	--	--	--	--	--
625	--	<0.010	--	<0.1	<0.010	<0.010	<0.010	<0.01	<0.010	<0.010
625	--	--	--	--	--	--	--	--	--	--
631	--	--	--	--	--	--	--	--	--	--
631	--	--	--	--	--	--	--	--	--	--
636	--	--	--	--	--	--	--	--	--	--
636	--	--	--	--	--	--	--	--	--	--
638	--	--	--	--	--	--	--	--	--	--
638	--	--	--	--	--	--	--	--	--	--
638	--	--	--	--	--	--	--	--	--	--
639	--	--	--	--	--	--	--	--	--	--
639	--	--	--	--	--	--	--	--	--	--
643	--	--	--	--	--	--	--	--	--	--
643	--	--	--	--	--	--	--	--	--	--
647	--	--	--	--	--	--	--	--	--	--
647	<0.5	--	<0.50	--	--	--	--	--	--	--
630	--	--	--	--	--	--	--	--	--	--
273	--	--	--	--	--	--	--	--	--	--
632	--	--	--	--	--	--	--	--	--	--
592	--	--	--	--	--	--	--	--	--	--
592	--	--	--	--	--	--	--	--	--	--
599	--	<0.010	--	<0.1	<0.010	<0.010	<0.010	<0.01	<0.010	<0.010
649	--	<0.010	--	<0.1	<0.010	<0.010	<0.010	0.01	<0.010	<0.010

ANALYSIS OF GROUND-WATER SAMPLES COLLECTED AT MISCELLANEOUS SITES--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

LOCAL IDENTIFIER	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	HEPTACHLOR, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALATHION, TOTAL (UG/L)	METHOMYL TOTAL (UG/L)	METHOXYCHLOR, TOTAL (UG/L)	METHYL PARATHION, TOTAL (UG/L)	METHYL TRITHION, TOTAL (UG/L)
				ADAMS COUNTY--Continued						
591	--	--	--	--	--	--	--	--	--	--
593	--	--	--	--	--	--	--	--	--	--
593	0.010	<0.01	<0.010	<0.010	<0.010	0.01	--	<0.01	<0.01	<0.01
594	--	--	--	--	--	--	--	--	--	--
596	--	--	--	--	--	--	--	--	--	--
596	--	--	--	--	--	--	--	--	--	--
596	--	--	--	--	--	--	--	--	--	--
596	0.010	<0.01	<0.010	<0.010	<0.010	<0.01	--	<0.01	<0.01	<0.01
598	0.010	<0.01	<0.010	<0.010	<0.010	<0.01	--	<0.01	<0.01	<0.01
598	0.010	<0.01	<0.010	<0.010	<0.010	<0.01	--	<0.01	<0.01	<0.01
598	--	--	--	--	--	--	--	--	--	--
601	--	--	--	--	--	--	--	--	--	--
601	--	--	--	--	--	--	--	--	--	--
601	0.010	<0.01	<0.010	<0.010	<0.010	<0.01	--	<0.01	<0.01	<0.01
608	--	--	--	--	--	--	--	--	--	--
608	--	--	--	--	--	--	--	--	--	--
609	--	--	--	--	--	--	--	--	--	--
612	0.010	<0.01	<0.010	<0.010	<0.010	<0.01	--	<0.01	<0.01	<0.01
612	--	--	--	--	--	--	--	--	--	--
618	--	--	--	--	--	--	--	--	--	--
618	--	--	--	--	--	--	--	--	--	--
620	--	--	--	--	--	--	<2.0	--	--	--
620	--	--	--	--	--	--	--	--	--	--
620	--	--	--	--	--	--	--	--	--	--
623	--	--	--	--	--	--	--	--	--	--
625	--	--	--	--	--	--	--	--	--	--
625	0.010	<0.01	<0.010	<0.010	<0.010	<0.01	--	<0.01	<0.01	<0.01
625	--	--	--	--	--	--	--	--	--	--
631	--	--	--	--	--	--	--	--	--	--
631	--	--	--	--	--	--	--	--	--	--
636	--	--	--	--	--	--	--	--	--	--
636	--	--	--	--	--	--	--	--	--	--
638	--	--	--	--	--	--	--	--	--	--
638	--	--	--	--	--	--	--	--	--	--
638	--	--	--	--	--	--	--	--	--	--
639	--	--	--	--	--	--	--	--	--	--
639	--	--	--	--	--	--	--	--	--	--
643	--	--	--	--	--	--	--	--	--	--
643	--	--	--	--	--	--	--	--	--	--
647	--	--	--	--	--	--	<2.0	--	--	--
647	--	--	--	--	--	--	<2.0	--	--	--
630	--	--	--	--	--	--	--	--	--	--
273	--	--	--	--	--	--	--	--	--	--
632	--	--	--	--	--	--	--	--	--	--
592	--	--	--	--	--	--	--	--	--	--
592	--	--	--	--	--	--	--	--	--	--
599	0.010	<0.01	<0.010	<0.010	<0.010	<0.01	--	<0.01	<0.01	<0.01
649	0.010	<0.01	<0.010	<0.010	<0.010	<0.01	--	<0.01	<0.01	<0.01

ANALYSIS OF GROUND-WATER SAMPLES COLLECTED AT MISCELLANEOUS SITES--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

LOCAL IDENT-I-FIER	METOLA-CHLOR WATER WHOLE TOT.REC (UG/L)	METRI-BUZIN WATER WHOLE TOT.REC (UG/L)	MIREX, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)	PER-THANE TOTAL (UG/L)	PROPHAM TOTAL (UG/L)	SEVIN, TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)	TOTAL TRI-THION (UG/L)	TRI-FLURA-LIN TOTAL RECOVER (UG/L)
					ADAMS COUNTY--Continued					
591	--	--	--	--	--	--	--	--	--	--
593	--	--	--	--	--	--	--	--	--	--
593	<0.1	--	<0.01	<0.01	<0.1	--	--	<1	<0.01	--
594	--	--	--	--	--	--	--	--	--	--
596	--	--	--	--	--	--	--	--	--	--
596	<0.1	--	--	--	--	--	--	--	--	--
596	--	--	--	--	--	--	--	--	--	--
596	<0.1	--	<0.01	<0.01	<0.1	--	--	<1	<0.01	--
598	<0.1	--	<0.01	<0.01	<0.1	--	--	<1	<0.01	--
598	<0.1	<0.1	<0.01	<0.01	<0.1	--	--	<1	<0.01	<0.10
598	--	--	--	--	--	--	--	--	--	--
601	--	--	--	--	--	--	--	--	--	--
601	--	--	--	--	--	--	--	--	--	--
601	--	--	<0.01	<0.01	<0.1	--	--	<1	<0.01	--
608	--	--	--	--	--	--	--	--	--	--
608	<0.1	--	--	--	--	--	--	--	--	--
609	<0.1	--	--	--	--	--	--	--	--	--
612	--	--	<0.01	<0.01	<0.1	--	--	<1	<0.01	--
612	<0.1	--	--	--	--	--	--	--	--	--
618	--	--	--	--	--	--	--	--	--	--
618	--	--	--	--	--	--	--	--	--	--
620	--	--	--	--	--	<2.0	<2.0	--	--	--
620	<0.1	--	--	--	--	--	--	--	--	--
620	<0.1	<0.1	--	--	--	--	--	--	--	<0.10
623	--	--	--	--	--	--	--	--	--	--
625	--	--	--	--	--	--	--	--	--	--
625	<0.1	--	<0.01	<0.01	<0.1	--	--	<1	<0.01	--
625	--	--	--	--	--	--	--	--	--	--
631	--	--	--	--	--	--	--	--	--	--
631	<0.1	--	--	--	--	--	--	--	--	--
636	--	--	--	--	--	--	--	--	--	--
636	--	--	--	--	--	--	--	--	--	--
638	--	--	--	--	--	--	--	--	--	--
638	--	--	--	--	--	--	--	--	--	--
638	<0.1	<0.1	--	--	--	--	--	--	--	<0.10
639	<0.1	<0.1	--	--	--	--	--	--	--	<0.10
639	--	--	--	--	--	--	--	--	--	--
643	--	--	--	--	--	--	--	--	--	--
643	--	--	--	--	--	--	--	--	--	--
647	--	--	--	--	--	<2.0	<2.0	--	--	--
647	--	--	--	--	--	<2.0	<2.0	--	--	--
630	--	--	--	--	--	--	--	--	--	--
273	--	--	--	--	--	--	--	--	--	--
632	<0.1	<0.1	--	--	--	--	--	--	--	<0.10
592	--	--	--	--	--	--	--	--	--	--
592	--	--	--	--	--	--	--	--	--	--
599	<0.1	<0.1	<0.01	<0.01	<0.1	--	--	<1	<0.01	<0.10
649	--	--	<0.01	<0.01	<0.1	--	--	<1	<0.01	--

CALENDAR FOR WATER YEAR 1987

1986

OCTOBER

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

NOVEMBER

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

DECEMBER

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

1987

JANUARY

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

FEBRUARY

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

MARCH

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

APRIL

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

MAY

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

JUNE

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

JULY

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

AUGUST

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

SEPTEMBER

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

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